



**ROHDE & SCHWARZ**

SERVICEUNTERLAGEN

Frontmodul mit Rechner VAR 04

1035.5440

Variantenerklärung des Gesamtmoduls:

1035.5440.02 SMP

1035.5440.03 SME

1035.5440.04 SMT

1035.5440.05 SMIQ



# Inhaltsverzeichnis

|   |           |
|---|-----------|
| <b>7. PRÜFEN UND INSTANDSETZEN DER BAUGRUPPE</b>        | <b>5</b>  |
| <b>7.1 Funktionsbeschreibung</b>                        | <b>5</b>  |
| 7.1.1 CPU: 80960SB-16                                   | 6         |
| 7.1.2 512K-Byte batteriegepuffertes RAM                 | 6         |
| 7.1.3 Batterietest                                      | 6         |
| 7.1.4 FLASH-EPROMs (Firmware-Update)                    | 6         |
| 7.1.5 IEC-Bus Interface                                 | 7         |
| 7.1.6 SERBUS-Interface                                  | 7         |
| 7.1.7 RS232- / V.24-Interface                           | 7         |
| 7.1.8 Timer   | 7         |
| 7.1.9 Interruptcontroller                               | 7         |
| 7.1.10 ACFAIL.SYSRESET                                  | 8         |
| 7.1.11 Verarbeitung externer Triggersignale             | 8         |
| 7.1.12 LCD-Interface                                    | 8         |
| 7.1.13 Helligkeits- und Kontrasteinstellung für LCD     | 8         |
| 7.1.14 Drehknopfinterface                               | 9         |
| 7.1.15 Anschluß für die Tastaturmatrix                  | 9         |
| 7.1.16 Diagnose A/D-Wandler                             | 9         |
| 7.1.17 X-Ausgang  | 10        |
| 7.1.18 Varianten-/Änderungszustandserkennung            | 10        |
| 7.1.19 Steuersignale, Tastenbeep                        | 10        |
| 7.1.20 Standby Schalter und -LED                        | 10        |
| <b>7.2 Meßgeräte und Hilfsmittel</b>                    | <b>10</b> |
| <b>7.3 Fehlersuche</b>                                  | <b>11</b> |
| <b>7.4 Prüfen und Abgleich</b>                          | <b>11</b> |
| 7.4.1 Prüfen der Versorgungsspannung des DC/AC-Wandlers | 11        |
| 7.4.2 Prüfen der Kontrastspannung                       | 11        |
| 7.4.3 Prüfen des Drehgebers                             | 11        |
| 7.4.4 Prüfen des RESET und ACFAIL-Signales              | 11        |
| 7.4.5 Prüfen des Diagnosezweiges                        | 12        |
| 7.4.6 Prüfen und Auslesen der Diagnosemeßpunkte         | 12        |
| 7.4.7 Prüfen der Position der Steckbrücken              | 12        |
| <b>7.5 Zerlegung und Zusammenbau</b>                    | <b>13</b> |
| <b>7.6 Externe Schnittstellen</b>                       | <b>14</b> |
| 7.6.1 Schnittstelle Rechner                             | 14        |
| 7.6.2 Schnittstelle Drehgeber                           | 16        |
| 7.6.3 Schnittstelle LCD                                 | 16        |

Schaltteilliste  
Koordinatenliste  
Stromlauf  
Bestückungsplan



## 7. Prüfen und Instandsetzen der Baugruppe

Achtung !! Im Frontmodul sind viele betriebsnotwendige Daten gespeichert. Die im RAM gespeicherten Daten können vom Gerät selbst, die Daten im Flash-EPROM jedoch nur mit Hilfsmitteln wieder hergestellt werden. Besteht die Gefahr, den Speicherinhalt der Flash-EPROMs zu verlieren, muss sichergestellt sein, dass

- 1) neue Firmware geladen werden kann,
- 2) eine Pegelkalibration durchgeführt werden kann (Kap. 6.4 des Service-Handbuches),
- 3) die Kalibrierdaten des Referenzoszillators wieder hergestellt oder eine Kalibration des Referenzoszillators durchgeführt werden kann (Kap. 2.11.8 des Betriebshandbuches),
- 4) die Betriebsdaten im Menue UTILITIES/DIAG/PARAM wieder hergestellt werden können.

Zu 3) und 4) sollten vor Arbeiten am Frontmodul die betreffenden Daten notiert werden. Zur Wiederherstellung muss für 3) der Passwortschutz Level 2 entriegelt werden (Kap. 2.11.7 des Betriebshandbuches). Das Passwort für Level 2 ist 250751. Danach kann im Menue UTILITIES/CALIB/REF OSC der notierte Wert wieder eingegeben und gespeichert werden. Für 4) muss der Passwortschutz Level 3 entriegelt werden, das Passwort erfragen Sie bitte bei Ihrer R&S-Vertretung. Das Menue UTILITIES/DIAG/SET PARAM wird dann sichtbar und die Daten können wieder eingegeben werden.

### 7.1 Funktionsbeschreibung

Das Frontmodul beinhaltet die Komponenten: Rechner, Drehgeber, Tastatur und das LC-Display.

Folgende Funktionen und Eigenschaften muß der Rechner zur Verfügung stellen:

- CPU: 80960SB-16
- 512K-Byte batteriegepuffertes RAM
- Batterietest
- Firmware in Flash-Eprom's mit der Möglichkeit des Updates
- IEC-Bus Interface
- SERBUS Interface
- RS232 / V.24 Interface
- Timer
- Interruptcontroller  
alle Interrupts entweder in der Quelle oder am Interruptcontroller einzeln maskierbar
- ACFAIL vom Netzteil löst maskierbaren Interrupt aus
- Verarbeitung externer Triggersignale  
(TRIGGER, AUX-TRIG) Polarität & Triggerart (dyn./stat.) wählbar
- LCD-Interface
- Helligkeits- und Kontrasteinstellung für LCD
- Drehknopf-Interface
- Anschluß für Tastaturmatrix
- Selbstdiagnose mit 12-Bit-Wandler und  
zwei Diagnoseeingänge (  $\pm 5V$  &  $\pm 15V$  )

- X-Ausgang ( 0 ... 10 V)
- Varianten-/Änderungszustandserkennung
- Einige Steuerleitungen für andere Baugruppen (MODCTRL-OUT, MODCTRL-IN)
- Digitale Aus- & Eingangssignale (BLANK, MARKER, SWEEP-STOP, TASTENBEEP)
- SYS-RESET vom Netzteil löst einen Reset des Systems aus
- Standby-Schalter und Standby-LED

### 7.1.1 CPU: 80960SB-16

Die Verwendung des Prozessors 80960 (Taktfrequ.: 16MHz) erfordert definierte RESET und Taktsignale für das gesamte Rechnersystem. Diese Signalerzeugung wird in einem ASIC (CLOCKGEN D120) realisiert. In diesem ASIC erfolgt auch die Ableitung einiger im System verwendeter Taktfrequenzen.

Da das Bus-Interface des 80960 auf BURST-Zugriffe ausgelegt ist, werden mehrere PLD's verwendet (D300, D402, D540, D600, D800, D950). Sie dienen der Umsetzung des BURST-Zugriffes in den für die angeschlossenen Bausteine entsprechende Ansteuerung. Zugleich erzeugen sie das READY-Signal zur Anpassung der Zugriffsgeschwindigkeit. Die Zusammenführung der verschiedenen READY-Signale zu einem gemeinsamen Signal für den Prozessor erfolgt über eine AND- Verknüpfung an D103.

Der Prozessor 80960 verfügt über einen gemultiplexten Adress- und Datenbus. Während des Adress-Cycle der CPU werden die Adressen A4 bis A15 in die Bausteine D204, D205 und D216 übernommen und stehen dann während der folgenden Data-/Wait-Cycle und des abschließenden Recovery-Cycle zur Verfügung.

Die beiden Datenbustreiber D208 und D209 werden benötigt, um eine Isolation des Datenbusses vom gemultiplexten Daten-/Adressbus des Prozessors zu erreichen. Dies ist beim Einsatz langsamer Peripheriebausteine notwendig.

### 7.1.2 512K-Byte batteriegepuffertes RAM

Dieser Speicher wird mittels vier 1M-Bit SRAM-Speicherbausteinen (D302, D304, D303, D305) in Form von zwei Bänken zu je 128K-Worten realisiert. (1 Wort=16bit). Der Zugriff auf diesen Speicher wird durch das Signal EN-MEM-P blockiert, wenn entweder das Resetsignal aktiv ist oder die Versorgungsspannung unter 4 V absinkt (V390, V391). Diese Überwachung der Versorgungsspannung ist nur für den Notfall gedacht, daß die Spannung plötzlich zusammenbricht, ohne daß vorher vom Netzteil das Signal SYSRESET generiert wurde. Die Schaltung aus den Transistoren V300 und V301 sowie der Diode V302 bewirkt ein Umschalten von UBATT auf +5V, sobald die Versorgungsspannung +5V größer als die Batteriespannung ist.

### 7.1.3 Batterietest

Um den Ladezustand der Batterie zu testen, wird durch das Signal TST-BATT mittels REED-Relais ein Belastungswiderstand von 39,2kOhm an die Batterie angeschlossen. Die Spannung am Widerstand wird der Selbstdiagnoseschaltung zugeführt und gibt Auskunft über den Zustand der Batterie.

### 7.1.4 FLASH-EPROMs (Firmware-Update)

Um Firmware-Updates ohne Eingriff von außen durchführen zu können, werden FLASH-EPROMs als Speicher verwendet. Es sind vier Bausteine

D404, D405 und D424, D425 vom Type 28F020 (512K-Worte), bzw. 29F040 (1024K-Worte), vorgesehen.

Die zum Programmieren nötige Spannung VPP wird durch den Baustein D400 aus +15V erzeugt. Dieser Linearregler kann durch das Signal VPP-EIN an- und abgeschaltet werden.

Der Update der Firmware erfolgt über eine RS232-Schnittstelle an der Rückseite des Gerätes.

Da die FLASH-EPROMs nur als ganzes gelöscht werden können, gibt es noch ein BOOT-EPROM (D301), welches den Urlader enthält. Zudem erlaubt das Vorhandensein des BOOT-EPROMs das Bestücken der FLASH-EPROMs als unprogrammierte Standardbauteile.

Ob ein Firmware Update erfolgen soll oder nicht, kann der Prozessor am Signal der Brücke X200 erkennen.

#### 7.1.5 IEC-Bus Interface

Als IEC-Bus-Controller wird der NEC Baustein uPD7210 (D602) mit den Bustreibern 75160 (D603) und 75162 (D604) verwendet. Seine 8MHz-Taktfrequenz erhält er vom "CLOCKGEN". Durch entsprechende Bestückung der Kurzschlußbrücke an X600 können auch alle Controller-Fähigkeiten des IEC-Bus realisiert werden.

#### 7.1.6 SERBUS-Interface

Für die Ansteuerung und Programmierung der einzelnen Baugruppen wird ein von R&S eigens entwickeltes serielles Bussystem (SERBUS) verwendet. Hierfür existieren bisher zwei Standard-ASIC's (SERBUS-M und SERBUS-D).

Auf dem Rechner befindet sich der Bus-Master-Baustein (SERBUS-M / D87). Er wird wortweise programmiert und mit einer Taktfrequenz von 32MHz betrieben. Zur seriellen Datenübertragung an die Baugruppen wird 4MHz verwendet.

#### 7.1.7 RS232- / V.24-Interface

Dieses Interface ist mit dem Controller-IC 82510 (D85) realisiert. Die Pegelumsetzung von TTL auf RS232 erfolgt im Baustein LT1181 (D860).

#### 7.1.8 Timer

Der Baustein 82C54 (D610) enthält drei 16-Bit Timer. Um lange Zeiten mit hoher Auflösung realisieren zu können, sind zwei dieser Timer kaskadiert (Timer1 und Timer2). Als Eingangstakt stehen 1kHz für Timer0 und 1MHz für Timer1/2 zur Verfügung.

#### 7.1.9 Interruptcontroller

Als Interruptcontrollers ist der Baustein UPD71059 (D86) eingesetzt. Folgende Interruptquellen sind angeschlossen, wobei jeder Eingang als dynamisch oder statisch verwendet werden kann:

| Interrupt-Eing. | Bedeutung   |
|-----------------|-------------|
| INTP0           | Trigger     |
| INTP1           | Aux-Trigger |
| INTP2           | IEC-INT-P   |
| INTP3           | T2-INT0     |
| INTP4           | T2-INT2     |
| INTP6           | INT-RS232   |

Alle statischen Interrupts werden an D830 zu einem zusammengefaßt und auf den Interrupteingang INTP5 gelegt:

1. - SERBUS-INT1
2. - SERBUS-INT2
3. - ACFAIL (Powerfail vom Netzteil)
4. - SERBUS-ACT-REQ.

Alle Interrupts sind im UPD71059 maskierbar. Die statischen Interrupts 3. und 4. sind an der Quelle und die verbleibenden können über das Portregister D810 maskiert werden.

#### 7.1.10 ACFAIL, SYSRESET

Das Signal ACFAIL wird im Netzteil erzeugt und ist eines der statischen Interruptsignale, welche nicht an der Quelle maskierbar ist. Die Maskierung erfolgt wie bei vorherigem Punkt beschrieben.

SYSRESET (ebenfalls vom Netzteil) wird über D106C/D an das ASIC CLKGEN geführt und löst dort die Resetschaltung aus. Zugleich wird über R108 und V102 der Kondensator C109 entladen. Wird das Signal SYSRESET wieder HIGH, lädt sich C109 über R129 auf und gibt nach Erreichen der Schwellspannung von D106C den Reseteingang des CLKGEN wieder frei.

#### 7.1.11 Verarbeitung externer Triggersignale

(TRIGGER, AUX-TRIG) Polarität & Triggerart (dyn./stat.) wählbar

Die Wahl der Triggerart erfolgt durch Programmierung des Interruptcontrollers UPD71059. Die Polarität des Triggersignales kann für beide Triggersignale getrennt an Port D810 eingestellt werden und erfolgt durch EXOR-Verknüpfung des Portsignales mit dem Triggersignal (D840).

#### 7.1.12 LCD-Interface

Zur Ansteuerung des LC-Displays wird der LCD-Controller SED1351F (D90) von SEIKO EPSON verwendet. Der Bildspeicher besteht aus den beiden SRAM's D960 und D970. Dieser Speicher ist ausreichend für vier Bildschirmseiten (640 x 200).

Um eine lineare Adressierung der Pixel (Pixel 0 ist LSB der untersten Adresse) zu erhalten, wurde der Datenbus an D90 byteweise in sich gespiegelt.

Zur Erhöhung der Treiberfähigkeit und zur Isolation des Bausteines D90 werden die Daten- und Clock-Signale für das LCD über D980 geführt.

#### Helligkeits- und Kontrasteinstellung für LCD

Leiterplatte: Drehgeber (1035.5592.01). Die Helligkeitseinstellung erfolgt über die Eingangsspannung des DC/AC-Wandlers für die CFL-



Beleuchtung. Die Eingangsspannung für diesen Wandler darf im Bereich von +6V bis +10V liegen. Höhere Spannung bedeutet höhere Helligkeit. Die Spannungsregelung erfolgt mittels eines LM317T (N50), und die Einstellung der Ausgangsspannung wird mit R990 vorgenommen.

Beim Einschalten des Gerätes ist es aber für ein sicheres Zünden der Leuchtstoffröhren nötig, die Eingangsspannung des Wandlers auf +10V zu bringen. Hierzu dient die Schaltung aus N51 und V52, die nach dem Einschalten kurzzeitig +10V zur Verfügung stellt. Zum Verbessern der Störabstrahlung des AC/DC Wandlers bzw. der Leuchtstoffröhren kann mit V48 die Beleuchtung ausgeschaltet werden.

Die Einstellung des Kontrastes erfolgt über die negative Versorgungsspannung VEE des LC-Displays. Diese Spannung wird mittels eines Switch-Capcitor-Voltage-Converters mit Regler (LT1054/N70) aus +15V erzeugt und kann mittels R995 im Bereich von -15V bis -22V eingestellt werden.

Zur Filterung der Störungen des DC/AC-Wandlers und des Converters LT1054 befinden sich noch zwei LC-Filter in pi-Form auf dieser Leiterplatte.

#### 7.1.14 Drehknopfinterface

Bei jedem Pegelwechsel des Signales KNOB2 (CLK) wird über die Laufzeitkette aus D566C/D und D562B/C am EXNOR-Gatter D566B ein LOW-Puls erzeugt. Mit diesem Puls wird die Richtungsinformation im Flip-Flop D565B gespeichert und mit D565A ein Interrupt ausgelöst.

#### 7.1.15 Anschluß für die Tastaturmatrix

Die Spaltenleitungen der Tastaturmatrix werden am Register D550, die Zeilenleitungen am Port D560 angeschlossen. Solange keine Taste betätigt wird, liegen die angeschlossenen Zeilenleitungen über die Pull-Up-Widerstände R560 auf HIGH-Potential. Die Spaltenleitungen werden von den Registerausgängen auf LOW-Potential gehalten. Wird nun eine Taste betätigt, wird die zugehörige Zeilenleitung auf LOW-Potential gebracht. Nach Entprellung wird ein Interrupt erzeugt, woraufhin nacheinander die Spalten einzeln auf LOW-Potential gelegt werden und an Hand des Pegels erkannt wird, welche Taste betätigt wurde.

#### 7.1.16 Diagnose A/D-Wandler

mit 12-Bit-Wandler und zwei Diagnoseeingängen ( $\pm 5V$  &  $\pm 15V$ )

Die beiden Diagnoseeingänge und einige Meßpunkte des Rechners werden über den Multiplexer D700, Impedanzwandler N701 und Eingangsverstärker dem A/D-Wandler D704 zugeführt. Folgende Spannungen für Vollaussteuerung des A/D-Wandlers sind einstellbar:  $\pm 15V$ ,  $\pm 5V$  und  $\pm 1V$ .

Die Wandlungszeit (max. 9 $\mu$ s) zeigt der ADC am BUSY-Ausgang an, welcher über D570 (Port1) eingelesen werden kann.

Für Zwecke der Selbstdiagnose können folgende Spannungen mit dem Selbstdiagnosewandler gemessen werden:

die Spannung des X-Ausgangs  
die Referenzspannung des D/A-Wandlers  
die Batteriespannung

Es existiert zudem die Möglichkeit an Stelle der Kurzschlußbrücke X700 Meßkabel anzuschließen und damit beliebige Meßpunkte an den A/D-Wandler anzuschließen. Dabei ist allerdings zu beachten, daß die Meßspannung  $\pm 15V$  nicht überschreitet.

#### 7.1.17 X-Ausgang

Der X-Ausgang erzeugt beim Sweep ein Ausgangssignal von 0V (Sweepanfänger) bis 10V (Sweepende), welches zur Ansteuerung von externen Geräten genutzt werden kann. Dieses Signal wird vom Prozessor durch entsprechende Einstellung des D/A-Wandlers D706 in Abhängigkeit vom Sweep generiert. Dem Schutz vor Überspannung dienen der Widerstand R707 und die Dioden V700.

#### 7.1.18 Varianten-/Änderungszustandserkennung

Dazu dient der Port D590. Je nach Bestückung der Widerstände R591 bis R594 können die verschiedenen Varianten kodiert werden. R595 bis R598 sind zur Kodierung des Änderungszustandes vorgesehen.

#### 7.1.19 Steuersignale, Tastenbeep

Die Signale MODCNTL-OUT und MODCNTL-IN ermöglichen eine Synchronisation zwischen dem Signalprozessor der Baugruppe Modulationsgenerator und dem Prozessor.

Die Ausgangssignale BLANK und MARKER sowie das Eingangssignal SWEEP-STOP dienen zur Steuerung- und Synchronisation von und mit externen Geräten.

Das Ausgangsport D213 liefert das Steuersignal (LAMP-OFF) für die Beleuchtungsabschaltung der Leuchtstoffröhren.

Zum Erzeugen eines Tastenbeep ist der Piezosummer H200 vorgesehen. Das Port D301 schaltet über D310 die Tonfrequenz 1kHz an V287.

#### 7.1.20 Standby Schalter und -LED

Der an der Frontseite des Generators angebrachte Standbyschalter wird direkt am Rechner angeschlossen und über das gemeinsame Flachbandkabel aufs Motherboard herausgeführt.

Die Standby-LED wird so zwischen +15V und VS12-P geschaltet, daß bei fehlenden +15V ein Strom von VS12-P über die LED auf die virtuelle Masse der +15V fließen kann.

#### 7.2 Meßgeräte und Hilfsmittel

|                    |                            |            |
|--------------------|----------------------------|------------|
| Oszilloskop        | 100MHz                     | z.B. BOL   |
| DC-Multimeter      | 0...+/-30V, Ri>1M $\Omega$ | z.B. UDL33 |
| DC-Spannungsquelle | ..10V                      | z.B. NGT20 |

### 7.3 Fehlersuche

|  |  |
|--|--|
| Standby-LED bleibt dunkel                        | Prüfen der Standby-Spannung an X312.5  |
| Nach dem Einschalten bleibt LC Display dunkel    | Prüfen der Spannung des DC/AC-Wandlers nach 7.4.1  |
| Keine Kontrasteinstellung möglich                | Prüfen der Kontrastspannung nach 7.4.2   |
| Drehgeber funktioniert nicht                     | Prüfen der Pulse des Drehgebers nach 7.4.3   |
| Keine Anzeige nach dem Einschalten               | Prüfen des RESET-Signales nach 7.4.4<br>Prüfen des ACFAIL-Signales nach 7.4.4                              |
| Keine Spannung an X-AXIS                         | Prüfen des Ausganges X-AXIS mit Diagnose nach 7.4.6<br>Prüfen der Referenzspannung mit Diagnose nach 7.4.6 |
| Keine Datenspeicherung nach dem Geräteabschalten | Prüfen der RAM-Spannung mit Diagnose nach 7.4.6  |

### 7.4 Prüfen und Abgleich

#### 7.4.1 Prüfen der Versorgungsspannung des DC/AC-Wandlers

Baugruppe Drehgeber:  
Am Stecker X6.4 ist in Abhängigkeit der Stellung des Helligkeitsreglers an der Gerätefrontseite die DC-Spannung zu messen: Sollwert: 6V...10V.

#### 7.4.2 Prüfen der Kontrastspannung

Baugruppe DREHGEBER:  
Am Stecker X7.5 und X10.5 ist in Abhängigkeit der Stellung des Kontrastreglers an der Gerätefrontseite die DC-Spannung zu messen: Sollwert: -15V...-22V.

#### 7.4.3 Prüfen des Drehgebers

Baugruppe RECHNER:  
Oszilloskop an X315.9 und X315.11 anschließen.  
Drehgeber drehen. Es müssen 2 zeitversetzte Signale zu messen sein.

#### 7.4.4 Prüfen des RESET und ACFAIL-Signales

Baugruppe RECHNER:  
Oszilloskop an X31.35 und D106 PIN2 anschließen.

Unmittelbar nach dem Einschalten des Gerätes muß beim ACFAIL-Signal ein L->H-Übergang stattfinden. Nach ca. 200-300ms muß das RESET-Signal (RES-N) den Pegelwechsel L->H zeigen. Beide Signale müssen bei allen Bedienzuständen den H-Pegel beibehalten.

#### 7.4.5 Prüfen des Diagnosezweiges

- Einstellungen: TPOINT 4
- An X700 eine DC-Spannung von 0,5V einspeisen.
- \_ Prüfen der Spannung an P710: 0,5V und P730: 1,5V.

#### 7.4.6 Prüfen und Auslesen der Diagnosemeßpunkte

| TPOINT | Spannung    | Bedeutung              |
|--------|-------------|------------------------|
| 0      | 0mV...50mV  | Referenzpunkt          |
| 1      | -15V...15V  | DIAG -15V              |
| 2      | -15V...15V  | DIAG -5V               |
| 3      | 0V...10V    | X-AXIS                 |
| 4      | -15V...15V  | Voltmeter              |
| 6      | 4.9V...5.1V | Referenzspannung X-D/A |
| 7      | 3.2V...4.0V | Batteriespannung       |

#### 7.4.7 Prüfen der Position der Steckbrücken

| Steckbrücke | Position | Bemerkung     |
|-------------|----------|---------------|
| X105        | 1 - 2    | Clock (CPU)   |
| X200        | 1 - 2    | SW-Update     |
| X300        | 1 - 2    | Batterie      |
| X900        | 1 - 2    | +5V-Spannung  |
| X700        | 1 - 2    | Voltmeter     |
| X600        | 1 - 2    | IEC-Control   |
| X800        | 2 - 3    | Timer-Int     |
| X85         | 1 - 2    | Clock (RS232) |

## 7.5 Zerlegung und Zusammenbau

Die 4 Schrauben an der Geräte-Vorderseite entfernen. Das Modul vorsichtig nach vorne klappen, um die Kabelverbindungen W20, W313 und W314 lösen zu können. Nach Trennen von W31 (Flachbandkabel z. Motherboard) kann das Frontmodul herausgenommen werden. Der rückseitige Blechdeckel ist mit 6 Schrauben befestigt. Die Platine RECHNER kann nach Entriegeln der Buchsen X316, X317 und Trennen der beiden Folien sowie der Buchse an X312 vorsichtig herausgenommen werden. Abschließend das Flachbandkabel W315 zur Leiterplatte DREHGEBER lösen.

Ausbau der LP DREHGEBER: Den Drehknopf abnehmen, und die Verbindung an X6 (z. DC/AC-Wandler) und X7 (Flachfolie z. LCD) trennen. 12pol. Buchsenhalter des Kabels W10 am LCD abziehen. Die LP kann nach Abschrauben von 4 Schrauben herausgenommen werden.

Ausbau des LCD: Kabel W10 sowie Flachfolie zur LP DREHGEBER an X7 abziehen. 4pol. Steckverbindung vom DC/AC-Wandler zur CFL-Beleuchtung auftrennen. Das LCD ist mit 4 Schrauben am Gußgehäuse befestigt und kann komplett herausgenommen werden.

Der Zusammenbau geschieht in umgekehrter Reihenfolge. Vor dem Zuschrauben des Deckels ist auf den korrekten Sitz der Baugruppe RECHNER zu achten, insbesondere auf das Anliegen der Dichtschnur.

## 7.6 Externe Schnittstellen

### 7.6.1 Schnittstelle Rechner

| Pin  | Name                 | Ein/Ausgang | Herkunft/Ziel         | Wertebereich                 | Signalbeschreibung                                |
|--|----------------------|-------------|-----------------------|------------------------------|---|
| X31.1<br>.5<br>X31.11<br>.15                 | VD-5P                | Eingang     | A2, POWS              | 5.10V...5.25V<br>max. 3000mA | Versorgungsspannung digital                       |
| X31.6,7<br>X31.16,17                         | VA15-P               | Eingang     | A2, POWS              | 14.7V...15.9V<br>max. 660mA  | Versorgungsspannung analog                        |
| X31.8  | VA15-N               | Eingang     | A2, POWS<br>max. 50mA | -15.9V...-14.7V              | Versorgungsspannung analog                        |
| X31.24<br>X31.4,5,14,15,7,17,18<br>X31.10,20 | VS12-P               | Eingang     | A2, POWS              | 11.6V...12.4V                | Standby-spannung<br>Masse digital<br>Masse analog |
| X31.38<br>X312.2                             | POWER-SWITCH         | Ausgang     | A2, POWS              |                              | Schalterkontakt                                   |
| X31.23<br>X312.1                             | POWER-SWITCH-<br>GND | Ausgang     | A2, POWS              |                              | Schalterkontakt                                   |
| X312.5                                       | STBY-LED1            | Ausgang     | A2, POWS              |                              | Anode Standby-LED                                 |
| X312.3                                       | STBY-LED2            | Eingang     | A2, POWS              |                              | Kathode Standby-LED                               |
| X312.4                                       | N.C.                 |             |                       |                              | Codierung   |
| X31.45                                       | SERBUS-CLK           | Ausgang     |                       | HCMOS-Pegel                  | Serbus-Clock                                      |
| X31.30                                       | SERBUS-DAT           | bidir.      |                       | HCMOS-Pegel                  | Serbus-Daten                                      |
| X31.29                                       | SERBUS-SYNC          | Ausgang     |                       | HCMOS-Pegel                  | Serbus-Synchronisation                            |
| X31.44                                       | SERBUS-INT           | Eingang     |                       | HCMOS-Pegel                  | Serbus-Interrupt                                  |
| X31.39                                       | RES-PAusgang         |             |                       | HCMOS-Pegel                  | Reset   |
| X31.47                                       | DIAG-5V              | Eingang     |                       | -5V...5V                     | Diagnose  |
| X31.32                                       | DIAG-15V             | Eingang     |                       | -15V...15V                   | Diagnose  |
| X31.46                                       | TRIGGER              | Eingang     | Rückwand              | HCMOS-Pegel                  | Trigger   |
| X31.31                                       | AUX-TRIG             | Eingang     | Rückwand              | HCMOS-Pegel                  | Trigger   |
| X31.43                                       | SYSRESET             | Eingang     | A2, POWS              | HCMOS-Pegel                  | System-Reset                                      |
| X31.28                                       | ACFAIL               | Eingang     | A2, POWS              | HCMOS-Pegel                  | Powerfail   |
| X31.42                                       | BLANK                | Ausgang     | Rückwand              | HCMOS-Pegel                  | Steuersignal                                      |
| X31.27                                       | MARKER               | Ausgang     | Rückwand              | HCMOS-Pegel                  | Steuersignal                                      |
| X31.41                                       | SWEEP-STOP           | Eingang     | Rückwand              | HCMOS-Pegel                  | Steuersignal                                      |
| X31.40                                       | MODCTRL-OUT          | Ausgang     | A5, MGEN X5.2         | HCMOS-Pegel                  | Steuerung Modulationsgenerator                    |
| X31.26                                       | MODCTRL-1H           | Eingang     | A5, MGEN X5.1         | HCMOS-Pegel                  | Steuerung Modulationsgenerator                    |
| X31.33                                       | X-AXIS               | Ausgang     | Rückwand              | 0...10V                      | Frequ.prop. Spannung                              |
| X37A.1<br>.<br>X37A.6                        | RETO<br><br>RET6     | Eingang     | Drehgeber             | HCMOS-Pegel                  | Tastatur  |
| X37A.8<br>.10<br>X37B.1                      | SCAN0                | Ausgang     | Drehgeber             | HCMOS-Pegel                  | Tastatur  |
| X37B.3                                       | SCAN5                |             |                       |                              |   |
| X36A.1<br>.10<br>X36B.1<br>X36B.3            | "GND"                |             |                       | 1kOhm Pulldown               | Tastatur  |
| X33B.3                                       | CTS                  | Eingang     | Rückwand              | RS232-Pegel                  | Serielle Schnittstelle                            |
| X33A.2                                       | RXD                  | Eingang     | Rückwand              | RS232-Pegel                  | Serielle Schnittstelle                            |
| X33A.3                                       | TXD                  | Ausgang     | Rückwand              | RS232-Pegel                  | Serielle Schnittstelle                            |
| X33B.2                                       | DTR                  | Ausgang     | Rückwand              | RS232-Pegel                  | Serielle Schnittstelle                            |
| X33A.4<br>X33A.5                             |                      |             |                       |                              | Masse digital                                     |

| Pin          | Name    | Ein/Ausgang | Herkunft/Ziel | Wertebereich                | Signalbeschreibung             |
|--------------|---------|-------------|---------------|-----------------------------|--------------------------------|
| X34A.1       | DIO-1   | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34A.2       | DIO-2   | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34A.3       | DIO-3   | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34A.4       | DIO-4   | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34B.1       | DIO-5   | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34B.2       | DIO-6   | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34B.3       | DIO-7   | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34B.4       | DIO-8   | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34A.5       | EOI     | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34B.5       | REN     | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34A.6       | DAV     | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34A.7       | NRFD    | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34A.8       | NDAC    | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34C.1       | IFC     | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34C.2       | SRQ     | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34C.3       | ATN     | bidir.      | Rückwand      | TTL 0.C.                    | IEC-Bus                        |
| X34B.6,7,8   |         |             |               |                             | Masse                          |
| X34D.1,2,3,4 |         |             |               |                             |                                |
| X35B.1       | VA15-P  | Eingang     | DREHGEBER     | 14.7V...15.9V<br>max. 650mA | Versorgungsspannung analog     |
| .            |         |             |               |                             |                                |
| X35B.4       |         |             |               |                             |                                |
| X35B.9       | +5V     | Eingang     | DREHGEBER     | 5.1V...5.3V<br>max.20mA     | Versorgungsspannung digital    |
| X35A.1       |         |             |               |                             | Masse                          |
| X35B.10      |         |             |               |                             |                                |
| X35C.1,2,3   |         |             |               |                             |                                |
| X35B.8       | LAMPOFF | Eingang     | DREHGEBER     | HCMOS-Pegel                 | Steuerung Beleuchtung          |
| X35A.2       | POT1    | bidir.      | DREHGEBER     |                             | Anschl.1 d. Kontrastreglers    |
| X35A.3       | POT2    | bidir.      | DREHGEBER     |                             | Anschl.2 d. Kontrastreglers    |
| X35A.4       | POT3    | bidir.      | DREHGEBER     |                             | Anschl.3 d. Kontrastreglers    |
| X35B.5       | POT4    | bidir.      | DREHGEBER     |                             | Anschl.1 d. Helligkeitsreglers |
| X35B.6       | POT5    | bidir.      | DREHGEBER     |                             | Anschl.2 d. Helligkeitsreglers |
| X35B.7       | POT6    | bidir.      | DREHGEBER     |                             | Anschl.3 d. Helligkeitsreglers |
| X35A.5       | KNOB1   | Eingang     | DREHGEBER     | HCMOS-Pegel                 | Anschl.1 d. Drehgebers         |
| X35A.6       | KNOB2   | Eingang     | DREHGEBER     | HCMOS-Pegel                 | Anschl.2 d. Drehgebers         |
| X35D.1       | LCD-D0  | Ausgang     | DREHGEBER     | HCMOS-Pegel                 | Daten LCD                      |
| X35D.2       | LCD-D1  | Ausgang     | DREHGEBER     | HCMOS-Pegel                 | Daten LCD                      |
| X35D.3       | LCD-D2  | Ausgang     | DREHGEBER     | HCMOS-Pegel                 | Daten LCD                      |
| X35A.7       | LCD-D3  | Ausgang     | DREHGEBER     | HCMOS-Pegel                 | Daten LCD                      |
| X35A.9       | LCD-CP1 | Ausgang     | DREHGEBER     | HCMOS-Pegel                 | Clock1 LCD                     |
| X35A.10      | LCD-CP2 | Ausgang     | DREHGEBER     | HCMOS-Pegel                 | Clock2 LCD                     |
| X35A.8       | LCD-CS  | Ausgang     | DREHGEBER     | HCMOS-Pegel                 | Chip-Select LCD                |

## 7.6.2

Schnittstelle Drehgeber

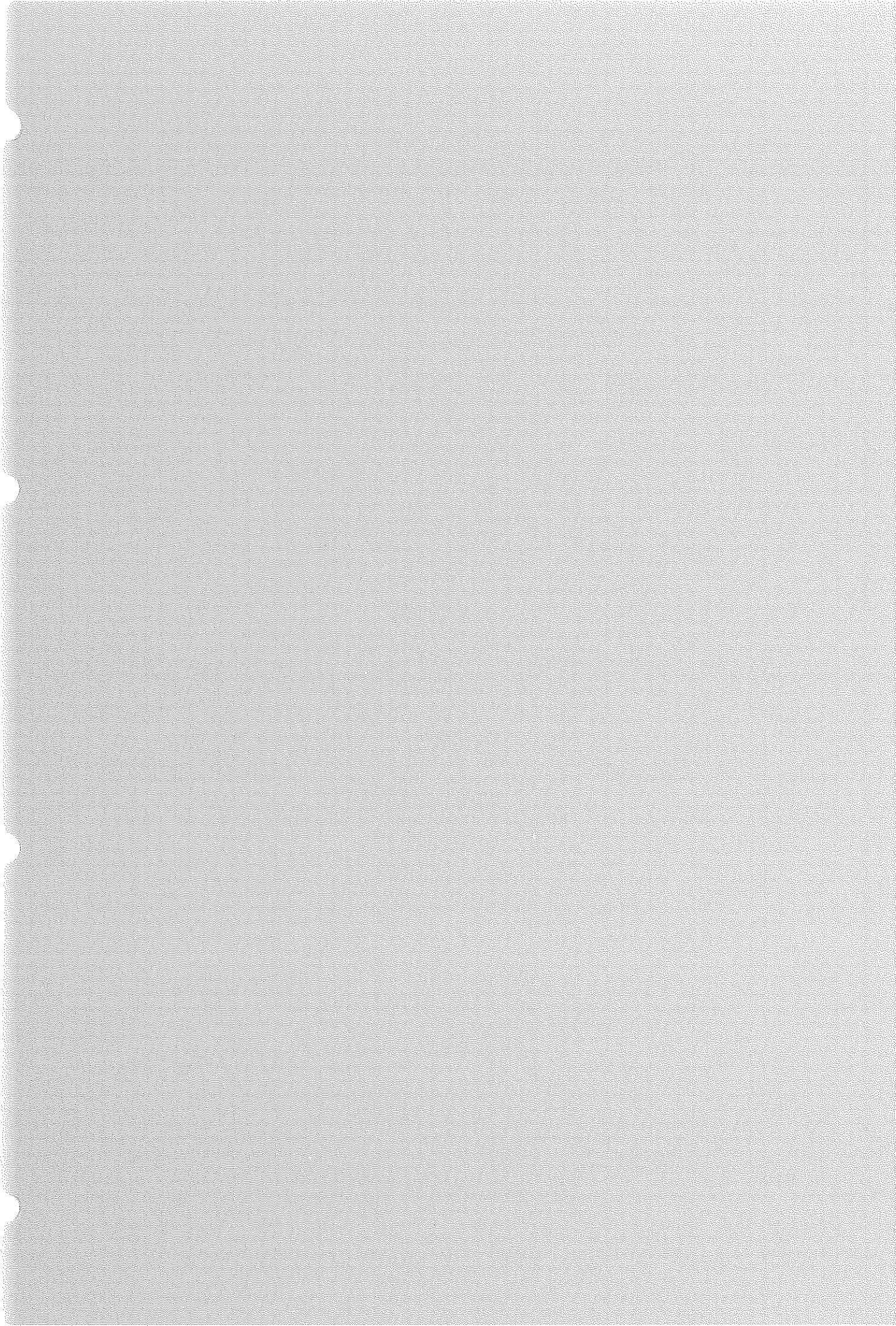
| Pin            | Name      | Ein/Ausgang | Herkunft/Ziel | Wertebereich             | Signalbeschreibung              |
|----------------|-----------|-------------|---------------|--------------------------|---------------------------------|
| X5.2,4         | +15V      | Eingang     | RECHNER       | 14.7V...15.9V            | Versorgungsspannung analog      |
| X5.6,8         |           |             |               | max. 600mA               |                                 |
| X5.18          | +5V       | Eingang     | RECHNER       | 5.1V...5.3V<br>max.20mA  | Versorgungsspannung digital     |
| X5.1           |           |             |               |                          | Masse                           |
| X5.20,21,23,25 |           |             |               |                          |                                 |
| X6.4           | V-DC/AC   | Ausgang     | DC/AC-Wandler | 6V...10V<br>max. 550mA   | Versorgungsspannung Beleuchtung |
| X6.1           | GND-DC/AC |             | DC/AC-Wandler |                          |                                 |
| X10.1          | VEE-LCD   | Ausgang     | LCD           | -15V...-22V<br>max. 20mA | Kontrastspannung                |
| X10.2          | VDD-LCD   | Ausgang     | LCD           | 5.1V...5.3V<br>max. 20mA | Versorgungsspannung digital     |
| X7.6           | VSS-LCD   |             |               |                          | Masse                           |
| X5.22          | LCD-D0    | Eingang     | RECHNER       | HCMOS-Pegel              | Daten LCD                       |
| X7.4           |           | Ausgang     | LCD           |                          |                                 |
| X5.24          | LCD-D1    | Eingang     | RECHNER       | HCMOS-Pegel              | Daten LCD                       |
| X7.3           |           | Ausgang     | LCD           |                          |                                 |
| X5.26          | LCD-D2    | Eingang     | RECHNER       | HCMOS-Pegel              | Daten LCD                       |
| X7.2           |           | Ausgang     | LCD           |                          |                                 |
| X5.13          | LCD-D3    | Eingang     | RECHNER       | HCMOS-Pegel              | Daten LCD                       |
| X7.1           |           | Ausgang     | LCD           |                          |                                 |
| X5.15          | LCD-CS    | Eingang     | RECHNER       | HCMOS-Pegel              | Chip-Select LCD                 |
| X7.10          |           | Ausgang     | LCD           |                          |                                 |
| X5.17          | LCD-CP1   | Eingang     | RECHNER       | HCMOS-Pegel              | Clock1 LCD                      |
| X7.8           |           | Ausgang     | LCD           |                          |                                 |
| X5.19          | LCD-CP2   | Eingang     | RECHNER       | HCMOS-Pegel              | Clock2 LCD                      |
| X7.9           |           | Ausgang     | LCD           |                          |                                 |
| X5.16          | LAMPOFF   | Eingang     | RECHNER       | HCMOS-Pegel              | Steuerung Beleuchtung           |
| X5.9           | KNOB1     | Ausgang     | RECHNER       | 0.C. 2,2kOhm             | Anschl.1 d. Drehgebers          |
| X5.11          | KNOB2     | Ausgang     | RECHNER       | 0.C. 2,2kOhm             | Anschl.2 d. Drehgebers          |
| X5.3,5,7       | POT1,2,3  | bidir.      | RECHNER       |                          | Anschl.1,2,3 d. Kontrastreglers |
| X5.10,12       | POT4,5,6  | bidir.      | RECHNER       |                          | Anschl.1,2,3 d. Helligk.reglers |
| 14             |           |             |               |                          |                                 |

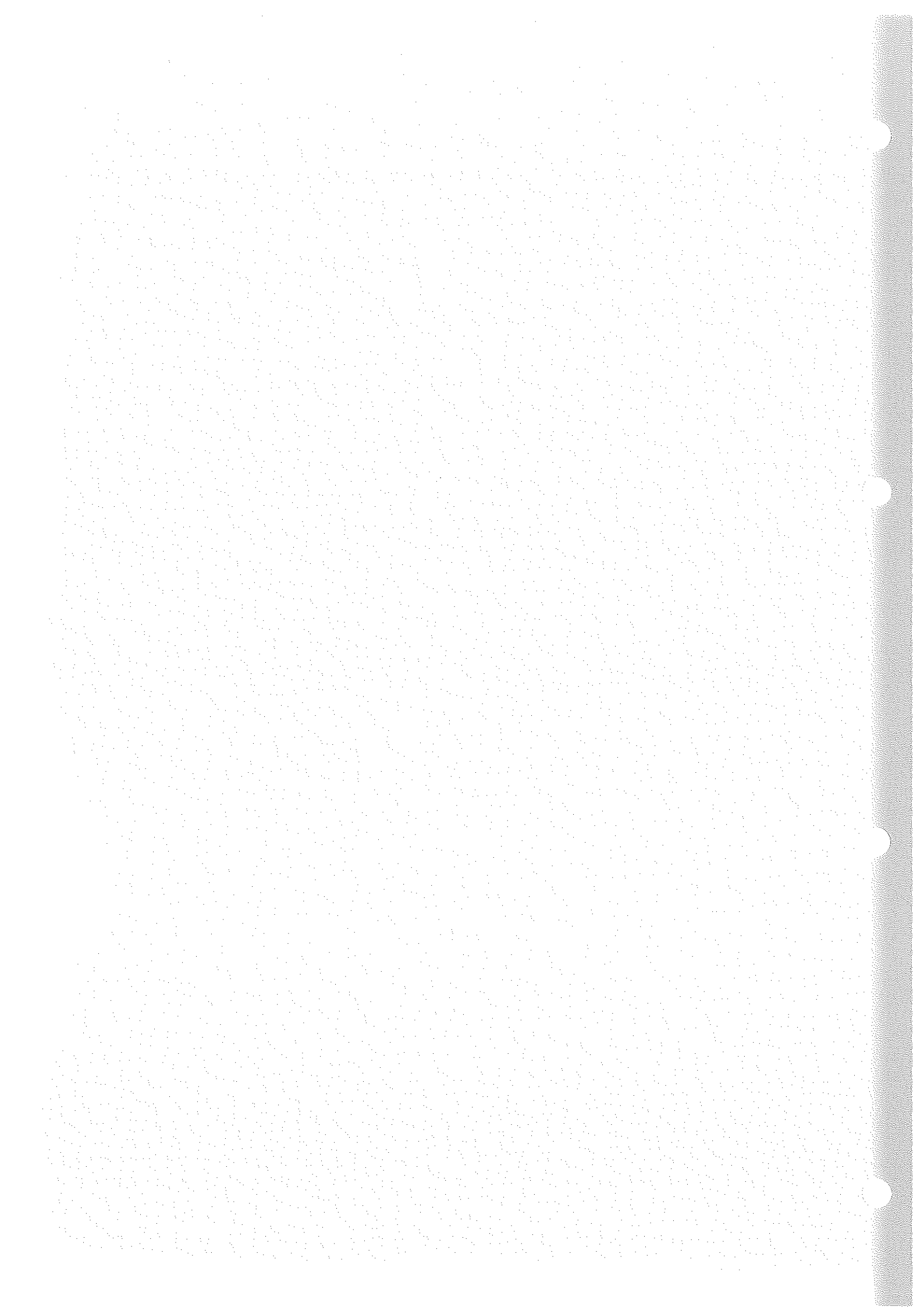
## 7.6.3

Schnittstelle LCD

| Pin      | Name    | Ein/Ausgang | Herkunft/Ziel | Wertebereich | Signalbeschreibung          |
|----------|---------|-------------|---------------|--------------|-----------------------------|
| CONN2.5  | VEE-LCD | Eingang     | DREHGEBER     | -15V...-22V  | Kontrastspannung            |
| CONN2.7  | VDD-LCD | Eingang     | DREHGEBER     | 5.1V...5.3V  | Versorgungsspannung digital |
| CONN1.6  | VSS-LCD |             |               |              | Masse                       |
| CONN1.4  | LCD-D0  | Eingang     | DREHGEBER     | HCMOS-Pegel  | Daten LCD                   |
| CONN1.3  | LCD-D1  | Eingang     | DREHGEBER     | HCMOS-Pegel  | Daten LCD                   |
| CONN1.2  | LCD-D2  | Eingang     | DREHGEBER     | HCMOS-Pegel  | Daten LCD                   |
| CONN1.1  | LCD-D3  | Eingang     | DREHGEBER     | HCMOS-Pegel  | Daten LCD                   |
| CONN1.10 | LCD-CS  | Eingang     | DREHGEBER     | HCMOS-Pegel  | Chip-Select LCD             |
| CONN1.8  | LCD-CP1 | Eingang     | DREHGEBER     | HCMOS-Pegel  | Clock1 LCD                  |
| CONN1.9  | LCD-CP2 | Eingang     | DREHGEBER     | HCMOS-Pegel  | Clock2 LCD                  |









**ROHDE & SCHWARZ**

SERVICE INSTRUCTIONS

Front Module with Controller VAR 04

1035.5440

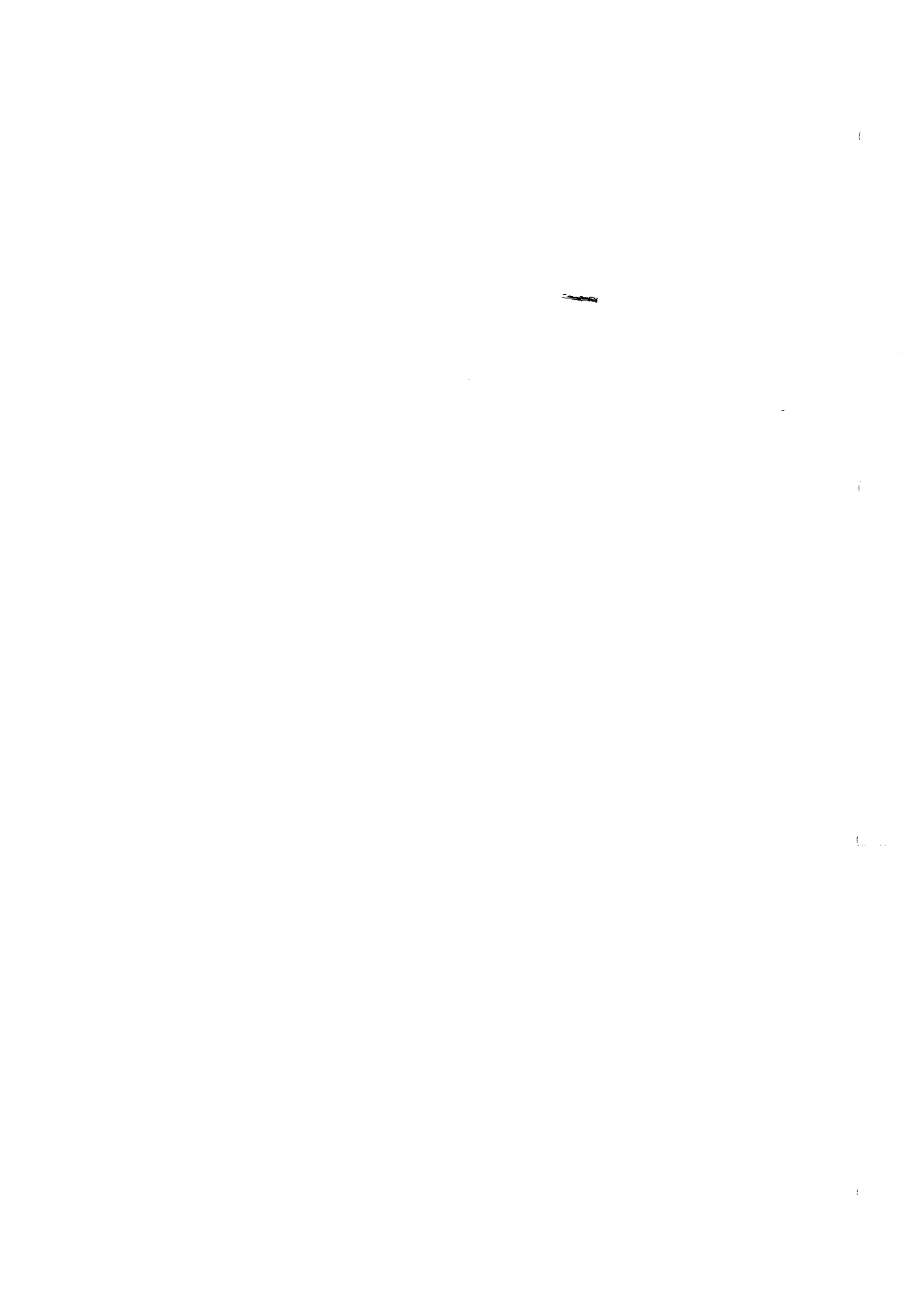
Variation Declaration of the entire Module:

1035.5440.02 SMP

1035.5440.03 SME

1035.5440.04 SMT

1035.5440.05 SMIQ



## Contents

|  |           |
|--|-----------|
| <b>7. TESTING AND REPAIR OF THE BOARD</b>                | <b>5</b>  |
| <b>7.1 Function Description</b>                          | <b>5</b>  |
| 7.1.1 CPU: 80960SB-16                                    | 6         |
| 7.1.2 512K-Byte RAM with Battery-backup                  | 6         |
| 7.1.3 Battery Test                                       | 6         |
| 7.1.4 FLASH-EPROMs (Firmware Update)                     | 6         |
| 7.1.5 IEEE-Bus Interface                                 | 7         |
| 7.1.6 SERBUS-Interface                                   | 7         |
| 7.1.7 RS232- / V.24-Interface                            | 7         |
| 7.1.8 Timer  | 7         |
| 7.1.9 Interrupt Controller                               | 7         |
| 7.1.10 ACFAIL.SYSRESET                                   | 8         |
| 7.1.11 Processing of External Trigger Signals            | 8         |
| 7.1.12 LCD Interface                                     | 8         |
| 7.1.13 Brightness and Contrast Control for LCD           | 8         |
| 7.1.14 Knob Interface                                    | 9         |
| 7.1.15 Connector for the Keyboard Matrix                 | 9         |
| 7.1.16 Diagnostics A/D Converter                         | 9         |
| 7.1.17 X-Output  | 9         |
| 7.1.18 Identification of Variant and Revision            | 10        |
| 7.1.19 Control Signals, Key Beep                         | 10        |
| 7.1.20 Standby Switch and LED                            | 10        |
| <b>7.2 Test Instruments and Utilities</b>                | <b>10</b> |
| <b>7.3 Troubleshooting</b>                               | <b>11</b> |
| <b>7.4 Testing and Adjustment</b>                        | <b>11</b> |
| 7.4.1 Checking the Supply Voltage of the DC/AC Converter | 11        |
| 7.4.2 Checking the Contrast Voltage                      | 11        |
| 7.4.3 Checking the Shaft Encoder                         | 11        |
| 7.4.4 Testing the RESET and the ACFAIL Signal            | 11        |
| 7.4.5 Checking the Diagnostic Path                       | 12        |
| 7.4.6 Check and Readout of the Diagnostic Test Points    | 12        |
| 7.4.7 Checking the Position of Jumpers                   | 12        |
| <b>7.5 Removal and Assembly</b>                          | <b>13</b> |
| <b>7.6 External Interfaces</b>                           | <b>14</b> |
| 7.6.1 Controller Interface                               | 14        |
| 7.6.2 Shaft encoder Interface                            | 16        |
| 7.6.3 LCD Interface                                      | 16        |

**PART LIST**  
**COORDINATES LIST**  
**CIRCUIT DIAGRAM**  
**LAYOUT DIAGRAM**



## 7. Testing and Repair of the Board

Caution ! ! In the Front Module many data are stored, which are necessary for operation. All data contained in the RAM may be reconstructed by the unit itself. To reconstruct data in the flash EPROM additional tools are necessary. If there is some danger to loose data of the flash EPROM, be shure, you can

- 1) load a new firmware,
- 2) perform a level calibration (refer to section 6.4 of service manual),
- 3) restore calibration data or calibrate the Reference Oscillator (refer to section 2.11.8 of operating manual),
- 4) reconstruct the operational data in the menue UTILITIES/DIAG/PARAM.

To do 3) and 4) the concerned data have to be noted down before work on the module. To restore data of reference oscillator, you got to unlock password protection level 2 (refer to section 2.11.7 of operating manual). The password is 250751. After this in the menue UTILITIES/CALIB/REF OSC the noted calibration data can be keyed in. To construct operational data (4), password protection level 3 is to be unlocked. Please contact your R&S representative to get the password. The menue UTILITIES/DIAG/SET PARAM will appear and allow to key in the noted data.

### 7.1 Function Description

The front module contains the following components: controller, shaft encoder, keyboard and LC display.

The controller must provide the following functions and features:

- CPU: 80960SB-16
- 512K-Byte RAM with battery-backup
- Battery test
- Firmware in flash-EPROMs which can be updated
- IEEE-bus interface
- SERBUS interface
- RS232 / V.24 interface
- Timers
- Interrupt controller  
all interrupts maskable either at the source or at the interrupt controller
- ACFAIL of the power supply triggers maskable interrupt
- Processing of external trigger signals  
(TRIGGER, AUX-TRIG) polarity & trigger type (dyn./stat.) selectable
- LCD interface
- brightness and contrast control for LCD
- spinwheel interface
- connector for keyboard matrix
- self diagnostics with 12-bit converter and two diagnostic inputs (  $\pm 5V$  &  $\pm 15V$  )

- X-output ( 0 to 10 V)
- identification of model/variation
- various control lines for other modules  
(MODCTRL-OUT, MODCTRL-IN)
- digital output and input signals  
(BLANK, MARKER, SWEEP-STOP, KEYBEEP)
- SYS-RESET by the power supply causes system reset
- standby switch and standby LED

### 7.1.1 CPU: 80960SB-16

Use of the processor 80960 (clock freq.: 16MHz) requires defined RESET and clock signals for the complete controller system. This signal-generation is realized by an ASIC (CLOCKGEN D120). Various clock frequencies used in the system are derived from this ASIC. Since the bus-interface of the 80960 is designed for BURST access, several PLDs have been used (D300, D402, D540, D600, D800, D950). The latter convert the BURST access into the corresponding control for the components connected. Besides, they generate the READY signal for adapting the access speed. The various READY signals are joined to a common signal for the processor via an AND logic at D103. The processor 80960 provides a multiplexed address and data bus. During the address cycle of the CPU, the addresses A4 to A15 are loaded into the components D204, D205 and D216 and are then available during the following data-/wait-cycles and the final recovery-cycle.

The two data-bus drivers D208 and D209 are required to achieve an isolation of the data bus from the multiplexed data-/address bus of the processor. This is necessary when using slow peripheral components.

### 7.1.2 512K-Byte RAM with Battery-backup

This memory is composed of four 1Mbit SRAM components (D302, D304, D303, D305) in two banks of 128K words, each. (1 word=16bits). The access to this memory is disabled by the signal EN-MEM-P, whenever the reset signal is active or the supply voltage drops below 4 V (V390, V391). This check of the supply voltage is intended for a sudden power failure, without prior generation of the SYSRESET signal by the power supply. The circuit consisting of the transistors V300 and V301 and the diode V302 initiates switchover from VBATT to +5V, as soon as the +5V-supply voltage exceeds the battery voltage.

### 7.1.3 Battery Test

The charge of the battery can be tested by connecting a load resistor of 39,2 kOhm to the battery by means of the REED relay, which is controlled by the signal TST-BATT. The voltage at the resistor is applied to the self-diagnostics circuit and thus informs on the discharge degree of the battery.

### 7.1.4 FLASH-EPROMs (Firmware Update)

The use of FLASH-EPROMs allows for making firmware updates without external access. Four components D404, D405, type 28F020 (256K-words), resp. 29F040 (1024K-words), are therefore provided. The voltage VPP required for programming is generated from +15V by the component D400. This linear controller can be switched on and off by means of the signal VPP-ON.



The firmware update is realized via an RS232 interface at the rear panel of the instrument.

Since the FLASH-EPROMs can only be deleted completely, a BOOT-EPROM (D301) is provided, which contains the IPL. This BOOT-EPROM additionally allows for fitting the FLASH-EPROMs as unprogrammed standard components.

The signal at bridge X200 indicates to the processor whether a firmware update is to be carried out or not.

#### 7.1.5 IEEE-Bus Interface

The NEC component  $\mu$ PD7210 (D602) with the bus drivers 75160 (D603) and 75162 (D604) is used as IEEE-bus controller. It is provided with an 8MHz clock frequency via "CLOCKGEN". The complete controller capability of the IEEE-bus can be realized by configuring the shorting jumper at X600 correspondingly.

#### 7.1.6 SERBUS-Interface

A serial bus system (SERBUS) developed by R&S is used for control and programming of the individual modules. Two standard ASICs are already available (SERBUS-M and SERBUS-D).

The controller accommodates the bus-master component (SERBUS-M / D87). It is programmed in words and operated at a clock frequency of 32 MHz. 4 MHz are used for serial data transmission to the boards.

#### 7.1.7 RS232- / V.24-Interface

This interface is implemented by controller IC 82510 (D85). Level conversion from TTL to RS232 is carried out in component LT1181 (D860).

#### 7.1.8 Timer

The component 82C54 (D610) contains three 16-bit timers. Two of them (timers 1 and 2) are cascaded to achieve a high resolution for long periods of time. The input clock is 1 kHz for timer 0 and 1 MHz for timers 1 and 2.

#### 7.1.9 Interrupt Controller

The interrupt controller is component UPD71059 (D86) with the following interrupt sources connected. Each input can be used as a dynamic or static input.

| Interrupt input | Definition  |
|-----------------|-------------|
| INTP0           | Trigger     |
| INTP1           | Aux-Trigger |
| INTP2           | IEC-INT-P   |
| INTP3           | T2-INT0     |
| INTP4           | T2-INT2     |
| INTP6           | INT-RS232   |

All static interrupts are combined to one interrupt at D830 and applied to interrupt input INTP5.

1. - SERBUS-INT1
2. - SERBUS-INT2
3. - ACFAIL (powerfail)
4. - SERBUS-ACT-REQ.

All interrupts are maskable in UPD71059. The static interrupts 3 and 4 are maskable at the source and the others via port register D810.

#### 7.1.10 ACFAIL, SYSRESET

The signal ACFAIL is generated in the power supply and belongs to those interrupt signals which are not maskable at the source. Masking is carried out as described under 7.1.9. SYSRESET (generated by the power supply, too) is applied to the ASIC CLKGEN via D106C/D and initiates the reset. Simultaneously, the capacitor C109 is discharged via R108 and V102. When the signal SYSRESET assumes HIGH level again, C109 charges via R129 and, subsequent to reaching the threshold voltage of D106C, enables the reset input of CLKGEN again.

#### 7.1.11 Processing of External Trigger Signals

(TRIGGER, AUX-TRIG) polarity & trigger type(dyn./stat.) are selectable

Selection of the type of trigger is made by programming the interrupt controller IPD71059. The polarity of the trigger signal can be set individually for both trigger signals at port D810 and is generated by an EXOR logic combining the port signal and the trigger signal(D840).

#### 7.1.12 LCD Interface

The LCD controller SED1351F (D90) of SEIKO EPSON is used to address the LC display. The display buffer/video RAM consists of the two SRAMs D960 and D970 and offers memory space for four screen pages (640 x 200).

Linear addressing of the pixels (pixel 0 is LSB of the lowest address) is achieved by mirroring the data bus at D90 byte by byte.

The data and clock signals for the LCD are routed via D980 to increase the driver capability and to isolate the component D90.

#### 7.1.13 Brightness and Contrast Control for LCD

PC board: Shaft Encoder (1035.5592.01)

Brightness is set via the input voltage of the DC/AC converter for the CFL illumination. The input voltage for this converter may vary between +6V and +10V. Increase of voltage means increase of brightness. The voltage is controlled by means of LM317T (N50), and the output voltage is set using R990.

The input voltage of the converter must assume +10V with switch-on of the instrument in order to ensure ignition of the fluorescent tubes. The circuit consisting of N51 and V52, which shortly provides +10V following switch-on, is available for this purpose.

The illumination can be switched off by means of V48 to improve the interference radiation of the AC/DC converter and of the fluorescent tubes.

The contrast is set via the negative supply voltage VEE of the LC display. This voltage is derived from +15V by means of a switch-capacitor-voltage-converter with controller (LT1054/N70) and can be set in the range from -15V to -22V using R995.

Two additional pi-type LC filters are contained on the board for filtering of the interferences radiated by the DC/AC converter and the converter LT1054.

#### 7.1.14 Knob Interface

With each change of level of the signal KNOB2 (CLK), a LOW pulse is generated via the runtime chain consisting of D566C/D and D562B/C at the EXNOR-gate D566B. This pulse is used to store the direction information in the flip-flop D565B and to trigger an interrupt using D565A.

#### 7.1.15 Connector for the Keyboard Matrix

The vertical lines are connected to the register D550, the horizontal lines to the port D560. If no key is pressed the connected horizontal lines are applied to HIGH potential via the pull-up resistors. The vertical lines are kept at LOW potential by the register outputs. As soon as a key is pressed, the associate horizontal line assumes LOW potential. Subsequent to debouncing, an interrupt is generated, which allows for applying the vertical lines individually to LOW potential. The level indicates, which key was pressed.

#### 7.1.16 Diagnostics A/D Converter

including 12-bit converter and two diagnostic inputs  
(+-5V & +-15V)

The two diagnostic inputs and a few test points of the controller are applied to the A/D converter D704 via the multiplexer D700, the impedance converter N701 and the input amplifier. The following voltages can be set for maximum range of the A/D converter: +-15V, +-5V and +-1V.

The conversion time (max. 9 us) is indicated by the BUSY output, which can be read in via D570 (port1).

The following voltages can be measured using the self-diagnostics converter for self-diagnostic purposes:

- the voltage at the X-output
- the reference voltage of the D/A converter
- the battery voltage

Moreover, test cables can be connected instead of the shorting jumper X700 and thus, any test point can be connected to the A/D converter. Make sure, that the test voltage does not exceed +-15V.

#### 7.1.17 X-Output

With sweeping, the X-output generates an output signal of 0V (sweep start) to 10V (end of sweep), which can be used to control external devices. This signal is generated by the processor by setting the D/A converter D706 correspondingly, depending on the

sweep. The resistor R707 and the diodes V700 are provided for overvoltage protection.

### 7.1.18 Identification of Variant and Revision

The port D590 is provided for identification of the module. The variant of the module is coded by the configuration of the resistors R591 to R594, the revision by R595 through R598.

### 7.1.19 Control Signals, Key Beep

The signals MODCNTL-OUT and MODCNTL-IN allow for synchronization between the signal processor of the modulation generator module and the processor.

The output signals BLANK and MARKER as well as the input signal SWEEP-STOP are used for control and synchronization of external devices.

The output port D213 supplies the control signal (LAMP-OFF) for switching off the tubular fluorescent lamps.

The piezo-buzzer H200 is provided for generation of a key beep. The port D301 switches the 1-kHz tone frequency to V287 via D310.

### 7.1.20 Standby Switch and LED

The standby switch fitted to the front panel of the generator is connected directly to the controller and routed to the motherboard via the common ribbon cable.

The standby LED is switched between +15V and VS12-P such that in case of a cut of +15V a current may flow from VS12-P via the LED to the virtual ground of the +15V.

## 7.2 Test Instruments and Utilities

|                   |                      |             |
|-------------------|----------------------|-------------|
| Oscilloscope      | 100MHz               | e.g., BOL   |
| DC multimeter     | 0 to +-30V, Ri>1MOhm | e.g., UDL33 |
| DC voltage source | ..10V                | e.g., NGT20 |

### 7.3 Troubleshooting

|   |  |
|---|--|
| Standby LED does not light up                         | Check the standby voltage at X312.5  |
| Subsequent to switch-on, the LC-Display remains dark  | Check the voltage of the DC/AC converter acc.to 7.4.1  |
| Setting of contrast not possible                      | Check the contrast voltage acc. to 7.4.2   |
| Shaft encoder does not work                           | Check the pulses of the shaft encoder acc. to 7.4.3  |
| No display following switch-on                        | Check the RESET signal acc. to 7.4.4<br>Check the ACFAIL signal acc. to 7.4.4  |
| No voltage at X-AXIS                                  | Check the output X-AXIS using diagnostics acc. to 7.4.6<br>Check the reference voltage using the diagnostics acc. to 7.4.6 |
| No storage of data after switching off the instrument | Check the RAM voltage using diagnostics acc. to 7.4.6  |

### 7.4 Testing and Adjustment

#### 7.4.1 Checking the Supply Voltage of the DC/AC Converter

Shaft encoder module:

Measure the DC voltage at the connector X6.4 depending on the position of the brightness control at the front panel of the instrument: rated value: 6V to 10V.

#### 7.4.2 Checking the Contrast Voltage

SHAFT ENCODER module:

Measure the DC voltage at the connectors X7.5 and X10.5 depending on the position of the contrast controller at the front panel of the instrument: rated value: -15V to -22V.

#### 7.4.3 Checking the Shaft Encoder

CONTROLLER module:

Connect an oscilloscope to X315.9 and X315.11.

Turn the shaft encoder. There must be 2 signals with different timing.

#### 7.4.4 Testing the RESET and the ACFAIL Signal

CONTROLLER module:

Connect an oscilloscope to X31.35 and D106 PIN2.

Just upon switching on the instrument, the level of the ACFAIL signal must change from L to H. This change of level must be indicated by the RESET signal (RES-N) after approx. 200 to 300 ms. Both signals must remain HIGH-level with all operating states.

#### 7.4.5 Checking the Diagnostic Path

- Settings: TPOINT 4
- Apply a DC voltage of 0.5V to X700.
- \_ Check the voltage at P710: 0.5V and P730: 1.5V.

#### 7.4.6 Check and Readout of the Diagnostic Test Points

| TPOINT | Voltage      | Meaning                 |
|--------|--------------|-------------------------|
| 0      | 0mV to 50mV  | Reference point         |
| 1      | -15V to 15V  | DIAG -15V               |
| 2      | -15V to 15V  | DIAG -5V                |
| 3      | 0V to 10V    | X-AXIS                  |
| 4      | -15V to 15V  | Voltmeter               |
| 6      | 4.9V to 5.1V | Reference voltage X-D/A |
| 7      | 3.2V to 4.0V | Battery voltage         |

#### 7.4.7 Checking the Position of Jumpers

| Jumper | Position | Remark        |
|--------|----------|---------------|
| X105   | 1 - 2    | Clock (CPU)   |
| X200   | 1 - 2    | SW-Update     |
| X300   | 1 - 2    | Battery       |
| X900   | 1 - 2    | +5V-voltage   |
| X700   | 1 - 2    | Voltmeter     |
| X600   | 1 - 2    | IEC-Control   |
| X800   | 2 - 3    | Timer-Int     |
| X85    | 1 - 2    | Clock (RS232) |

## 7.5 Removal and Assembly

Remove the 4 screws at the front panel of the instrument. Carefully swing out the module to the front, in order to be able to disconnect the cable connections W20, W313 and W314. Subsequent to disconnecting W31 (ribbon cable to the motherboard), the front module can be withdrawn. The metal cover on the rear is fixed by 6 screws. The CONTROLLER board can be removed carefully after unlocking the sockets X316, X317 and separating the two foils as well as the socket at X312. Finally, disconnect the ribbon cable W315 to the ENCODER board.

Removal of the p.c.b. SHAFT ENCODER: remove the rotary knob, and disconnect the connection at X6 (to. DC/AC converter) and X7 (ribbon cable to LCD). Disconnect 12-pin connector support of the cable W10 from the LCD. The p.c.b. can be removed after unscrewing of 4 screws.

Removal of the LCD: disconnect the cable W10 as well as the flat foil to the PCB SHAFT ENCODER from X7. Disconnect the 4-pin connector between the DC/AC converter and the CFL illumination. The LCD is fixed to the cast housing by 4 screws and can be taken out completely.

Assembly has to be carried out in the reverse order. Prior to fixing the cover again, make sure that the PROCESSOR board has locked in place correctly and that the seal cord is correctly applied.

## 7.6 External Interfaces

### 7.6.1 Controller Interface

| Pin  | Name                | Input/Output | Origin/Destin. | Specified range               | Signal description                                   |
|--|---------------------|--------------|----------------|-------------------------------|--|
| X31.1<br>X31.5<br>X31.11<br>X31.15           | VD-5P               | Input        | A2, POWS       | 5.10V to 5.25V<br>max. 3000mA | Supply voltage, digital                              |
| X31.6,7,<br>.16,17                           | VA15-P              | Input        | A2, POWS       | 14.7V to 15.9V<br>max. 660mA  | Supply voltage, analog                               |
| X31.8  | VA15-N              | Input        | A2, POWS       | -15.9V to -14.7V<br>max. 50mA | Supply voltage, analog                               |
| X31.24<br>X31.4,5,14,15,7,17,18<br>X31.10,20 | VS12-P              | Input        | A2, POWS       | 11.6V to 12.4V                | Standby-voltage<br>Ground, digital<br>Ground, analog |
| X31.38<br>X312.2                             | POWER-SWITCH        | Output       | A2, POWS       |                               | Switch contact                                       |
| X31.23<br>X312.1                             | POWER-SWITCH<br>GND | Output       | A2, POWS       |                               | Switch contact                                       |
| X312.5                                       | STBY-LED1           | Output       | A2, POWS       |                               | Anode of standby-LED                                 |
| X312.3                                       | STBY-LED2           | Input        | A2, POWS       |                               | Cathode of standby-LED                               |
| X312.4                                       | N.C.                |              |                |                               | Coding   |
| X31.45                                       | SERBUS-CLK          | Output       | HCMOS level    |                               | Serbus Clock   |
| X31.30                                       | SERBUS-DAT          | bidir.       | HCMOS level    |                               | Serbus data  |
| X31.29                                       | SERBUS-SYNC         | Output       | HCMOS level    |                               | Serbus synchronization                               |
| X31.44                                       | SERBUS-INT          | Input        | HCMOS level    |                               | Serbus interrupt                                     |
| X31.39                                       | RES-P               | Output       | HCMOS level    |                               | Reset  |
| X31.47                                       | DIAG-5V             | Input        | -5V to 5V      |                               | Diagnostics  |
| X31.32                                       | DIAG-15V            | Input        | -15V to 15V    |                               | Diagnostics  |
| X31.46                                       | TRIGGER             | Input        | Rear panel     | HCMOS level                   | Trigger  |
| X31.31                                       | AUX-TRIG            | Input        | Rear panel     | HCMOS level                   | Trigger  |
| X31.43                                       | SYSRESET            | Input        | A2, POWS       | HCMOS level                   | System reset   |
| X31.28                                       | ACFAIL              | Input        | A2, POWS       | HCMOS level                   | Power fail   |
| X31.42                                       | BLANK               | Output       | Rear panel     | HCMOS level                   | Control signal                                       |
| X31.27                                       | MARKER              | Output       | Rear panel     | HCMOS level                   | Control signal                                       |
| X31.41                                       | SWEEP-STOP          | Input        | Rear panel     | HCMOS level                   | Control signal                                       |
| X31.40                                       | MODCTRL-OUT         | Output       | A5, MGEN X5.2  | HCMOS level                   | Modulation generator control                         |
| X31.26                                       | MODCTRL-IN          | Input        | A5, MGEN X5.1  | HCMOS level                   | Modulation generator control                         |
| X31.33                                       | X-AXIS              | Output       | Rear panel     | 0 to 10V                      | Frequ.-prop. voltage                                 |
| X37A.1                                       | RETO                | Input        | Shaft encoder  | HCMOS level                   | Keyboard   |
| X37A.6                                       | RET6                |              |                |                               |  |
| X37A.8<br>X37A.10                            | SCAN0               | Output       | Shaft encoder  | HCMOS level                   | Keyboard   |
| X37B.1                                       |                     |              |                |                               |  |
| X317.3                                       | SCAN5               |              |                |                               |  |
| X36A.1<br>X36A.10                            | "GND"               |              |                | 1kOhm Pulldown                | Keyboard   |
| X36B.1<br>X316.3                             |                     |              |                |                               |  |
| X33B.3                                       | CTS                 | Input        | Rear panel     | RS232 level                   | Serial interface                                     |
| X33A.2                                       | RXD                 | Input        | Rear panel     | RS232 level                   | Serial interface                                     |
| X33A.3                                       | TXD                 | Output       | Rear panel     | RS232 level                   | Serial interface                                     |
| X33B.2                                       | DTR                 | Output       | Rear panel     | RS232 level                   | Serial interface                                     |
| X33A.4<br>X33A.5                             |                     |              |                |                               | Ground, digital                                      |



| Pin          | Name    | Input/Output | Origin/Destin. | Specified range              | Signal description           |
|--------------|---------|--------------|----------------|------------------------------|------------------------------|
| X34A.1       | DIO-1   | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34A.2       | DIO-2   | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34A.3       | DIO-3   | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34A.4       | DIO-4   | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34B.1       | DIO-5   | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34B.2       | DIO-6   | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34B.3       | DIO-7   | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34B.4       | DIO-8   | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34A.5       | EOI     | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34B.5       | REN     | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34A.6       | DAV     | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34A.7       | NRFD    | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34A.8       | NDAC    | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34C.1       | IFC     | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34C.2       | SRQ     | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34C.3       | ATN     | bidir.       | Rear panel     | TTL 0.C.                     | IEEE bus                     |
| X34B.6,7,8   |         |              |                |                              | Ground                       |
| X34D.1,2,3,4 |         |              |                |                              |                              |
| X35B.        | VA15-P  | Input        | SHAFT ENCODER  | 14.7V to 15.9V<br>max. 650mA | Supply voltage, analog       |
| X35B.4       |         |              |                |                              |                              |
| X35.9        | +5V     | Input        | SHAFT ENCODER  | 5.1V...5.3V<br>max.20mA      | Supply voltage, digital      |
| X35A.1       |         |              |                |                              | Ground                       |
| X35B.10      |         |              |                |                              |                              |
| X35C.1,2,3   |         |              |                |                              |                              |
| X35B.8       | LAMPOFF | Input        | SHAFT ENCODER  | HCMOS level                  | Illumination control         |
| X35A.2       | POT1    | bidir.       | SHAFT ENCODER  |                              | Conn.1 of contrast control   |
| X35A.3       | POT2    | bidir.       | SHAFT ENCODER  |                              | Conn.2 of contrast control   |
| X35A.4       | POT3    | bidir.       | SHAFT ENCODER  |                              | Conn.3 of contrast control   |
| X35B.5       | POT4    | bidir.       | SHAFT ENCODER  |                              | Conn.1 of brightness control |
| X35B.6       | POT5    | bidir.       | SHAFT ENCODER  |                              | Conn.2 of brightness control |
| X35B.7       | POT6    | bidir.       | SHAFT ENCODER  |                              | Conn.3 of brightness control |
| X35A.5       | KNOB1   | Input        | SHAFT ENCODER  | HCMOS level                  | Conn.1 of the shaft encoder  |
| X35A.6       | KNOB2   | Input        | SHAFT ENCODER  | HCMOS level                  | Conn.2 of the shaft encoder  |
| X35D.1       | LCD-D0  | Output       | SHAFT ENCODER  | HCMOS level                  | Data LCD                     |
| X35D.2       | LCD-D1  | Output       | SHAFT ENCODER  | HCMOS level                  | Data LCD                     |
| X35D.3       | LCD-D2  | Output       | SHAFT ENCODER  | HCMOS level                  | Data LCD                     |
| X35A.7       | LCD-D3  | Output       | SHAFT ENCODER  | HCMOS level                  | Data LCD                     |
| X35A.9       | LCD-CP1 | Output       | SHAFT ENCODER  | HCMOS level                  | Clock1 LCD                   |
| X35A.10      | LCD-CP2 | Output       | SHAFT ENCODER  | HCMOS level                  | Clock2 LCD                   |
| X35A.8       | LCD-CS  | Output       | SHAFT ENCODER  | HCMOS level                  | Chip-Select LCD              |

### 7.6.2 Shaft encoder Interface

| Pin            | Name      | Input/Output    | Origin/Destination | Specified range           | Signal description              |
|----------------|-----------|-----------------|--------------------|---------------------------|---------------------------------|
| X5.2           | +15V      | Input           | Controller         | 14.7V to 15.9V            | Supply voltage, analog          |
| X5.6,8         |           |                 |                    |                           |                                 |
| X5A.18         | +5V       | Input           | CONTROLLER         | 5.1V..5.3V<br>max.20mA    | Supply voltage, digital         |
| X5.1           |           |                 |                    |                           | Ground                          |
| X5.20,21,23,25 |           |                 |                    |                           |                                 |
| X6.4           | V-DC/AC   | Output          | DC/AC converter    | 6V...10V<br>max. 550mA    | Supply voltage for illumination |
| X6.1           | GND-DC/AC | DC/AC-converter |                    |                           |                                 |
| X10.1          | VEE-LCD   | Output          | LCD                | -15V to -22V<br>max. 20mA | Contrast voltage                |
| X10.2          | VDD-LCD   | Output          | LCD                | 5.1V to 5.3V<br>max. 20mA | Supply voltage, digital         |
| X7.6           | VSS-LCD   |                 |                    |                           | Ground                          |
| X5.22          | LCD-D0    | Input           | CONTROLLER         | HCMOS level               | Data LCD                        |
| X7.4           |           | Output          | LCD                |                           |                                 |
| X5.24          | LCD-D1    | Input           | CONTROLLER         | HCMOS level               | Data LCD                        |
| X7.3           |           | Output          | LCD                |                           |                                 |
| X5.26          | LCD-D2    | Input           | CONTROLLER         | HCMOS level               | Data LCD                        |
| X7.2           |           | Output          | LCD                |                           |                                 |
| X5.13          | LCD-D3    | Input           | CONTROLLER         | HCMOS level               | Data LCD                        |
| X7.1           |           | Output          | LCD                |                           |                                 |
| X5.15          | LCD-CS    | Input           | CONTROLLER         | HCMOS level               | Chip-Select LCD                 |
| X7.10          |           | Output          | LCD                |                           |                                 |
| X5.17          | LCD-CP1   | Input           | CONTROLLER         | HCMOS level               | Clock1 LCD                      |
| X7.8           |           | Output          | LCD                |                           |                                 |
| X5.19          | LCD-CP2   | Input           | CONTROLLER         | HCMOS level               | Clock2 LCD                      |
| X7.9           |           | Output          | LCD                |                           |                                 |
| X5.16          | LAMPOFF   | Input           | CONTROLLER         | HCMOS level               | Illumination control of         |
| X5.9           | KNOB1     | Output          | CONTROLLER         | 0.C. 2,2kOhm              | Connect.1 of the shaft encoder  |
| X5.11          | KNOB2     | Output          | CONTROLLER         | 0.C. 2,2kOhm              | Connect.2 of the shaft encoder  |
| X5.3           | POT1,2,3  | bidir.          | CONTROLLER         |                           | Conn.1,2,3 of contrast contr.   |
| X5.5           |           |                 |                    |                           |                                 |
| X5.7           |           |                 |                    |                           |                                 |
| X5.10          | POT4,5,6  | bidir.          | CONTROLLER         |                           | Conn.1,2,3 of brightnes control |
| X5.12          |           |                 |                    |                           |                                 |
| X5.14          |           |                 |                    |                           |                                 |

### 7.6.3 LCD Interface

| Pin      | Name    | Input/Output | Origin/Destin. | Specified range | Signal description     |
|----------|---------|--------------|----------------|-----------------|------------------------|
| CONN2.5  | VEE-LCD | Input        | SHAFT ENCODER  | -15V to -22V    | Contrast voltage       |
| CONN2.7  | VDD-LCD | Input        | SHAFT ENCODER  | 5.1V to 5.3V    | Supply voltage digital |
| CONN1.6  | VSS-LCD |              |                |                 | Ground                 |
| CONN1.4  | LCD-D0  | Input        | SHAFT ENCODER  | HCMOS level     | Data LCD               |
| CONN1.3  | LCD-D1  | Input        | SHAFT ENCODER  | HCMOS level     | Data LCD               |
| CONN1.2  | LCD-D2  | Input        | SHAFT ENCODER  | HCMOS level     | Data LCD               |
| CONN1.1  | LCD-D3  | Input        | SHAFT ENCODER  | HCMOS level     | Data LCD               |
| CONN1.10 | LCD-CS  | Input        | SHAFT ENCODER  | HCMOS level     | Chip-Select LCD        |
| CONN1.8  | LCD-CP1 | Input        | SHAFT ENCODER  | HCMOS level     | Clock1 LCD             |
| CONN1.9  | LCD-CP2 | Input        | SHAFT ENCODER  | HCMOS level     | Clock2 LCD             |



**ROHDE & SCHWARZ**

Schalteillisten  
numerisch geordnet


Part lists  
in numerical order

Listes des pièces détachées  
par numéros de référence



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| Kennz.<br>Comp. No. | Benennung<br>Designation                                 | Sachnummer<br>Stock No. | Hersteller<br>Manufacturer | Bezeichnung<br>Designation | enthalten in<br>contained in |
|---------------------|--|-------------------------|----------------------------|----------------------------|------------------------------|
| A31                 | ED RECHNER<br>PROCESSOR BOARD<br>NUR VAR/ONLY MOD: 02 04 | 1035.7250.04            |                            |                            |                              |
| A31                 | ED RECHNER<br>PROCESSOR BOARD<br>NUR VAR/ONLY MOD: 03 05 | 1035.7766.06            |                            |                            |                              |
| A31                 | ED RECHNER (FC)<br>CPU (FC)<br>NUR VAR/ONLY MOD: 13 15   | 1084.8504.08            |                            |                            |                              |
| A34                 | BV E1256 DC/AC-WANDLER<br>DC/AC-CONVERTER                | 0840.5698.00            | ERG                        | 0840.5698                  |                              |
| A35                 | ED DREHGEBER<br>SYNCHRO GENERATOR                        | 1035.5592.02            |                            |                            |                              |
| A36                 | SB SCHALTFOLE F.34TASTEN<br>KEY PAD                      | 1036.4354.00            | HOF_KRIPPEN                | 1036.4354 ZUST.07          |                              |
| C100                | CE 22UF+-20%50V RM2,5<br>ELECTROLYTIC CAPACITOR          | CE 0008.7533.00         | PHILIPS_CO                 | 2222 116 11229             |                              |
| C101                | CE 22UF+-20%50V RM2,5<br>ELECTROLYTIC CAPACITOR          | CE 0008.7533.00         | PHILIPS_CO                 | 2222 116 11229             |                              |
| H2                  | AF HLMP1719 LED3 GE585N<br>LED                           | 0099.9140.00            | QUALITY                    | HLMP-1719.7420D            | 1035.5486.00                 |
| P1                  | BP DMF50161NFUFW FSTN S/W<br>DISPLAY WITH ILLUMINATION   | 0008.9094.00            | OPTREX                     | DMF50161NFU-FW             |                              |
| W10                 | DY KABEL W10   | 1035.5686.00            |                            |                            |                              |
| W11                 | DF FLEX-STRIPVERB. 10P                                   | 1035.5634.00            |                            |                            |                              |
| W11                 | DF FLEX-STRIPVERB. 10P.<br>FLEX-STRIP 10P.               | 1036.4625.00            | SUMITOMO                   | SMCD-10X170-ADX10-P1       | 1035.5634.00                 |
| X2                  | SB NETZSCHALTER 2XU 0.KN.<br>POWER SWITCH                | SB 0007.5143.00         | ITT-SEL                    | NE18 2U E E                | 1035.5486.00                 |

|   |                            |    |               |                                       |                         |                   |
|---|----------------------------|----|---------------|---------------------------------------|-------------------------|-------------------|
| MENP1   | 502 3PU-D                  | ÄI | Datum<br>Date | Schaltteilliste für<br>Parts list for | Sachnummer<br>Stock No. | Blatt-Nr.<br>Page |
|  | <b>ROHDE &amp; SCHWARZ</b> | 19 | 04.02.98      | ZE FRONTMODUL                         | <b>1035.5440.01 SA</b>  | 1-                |

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| Kennz. Comp. No. | Benennung Designation                             | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|------------------|---|----------------------|-------------------------|-------------------------|---------------------------|
| C11              | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C12              | CE 10UF+-20%50V RM2,5 ELECTROLYTIC CAPACITOR      | CE 0008.7427.00      | PHILIPS_CO              | 2222 116 11109          |                           |
| C13              | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C50              | CE 470UF+-20%25V12,5X12,5 ELECTROLYTIC CAPACITOR  | 0803.0715.00         | NAT_PANASO              | ECA-1EM471              |                           |
| .53<br>C54       | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| .58<br>C59       | CC 10NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR   | CC 0099.8521.00      | MURATA                  | GRM42-6X7R103K 50PT     |                           |
| C60              | CE 22UF+-20%50V RM2,5 ELECTROLYTIC CAPACITOR      | CE 0008.7533.00      | PHILIPS_CO              | 2222 116 11229          |                           |
| C61              | CE 47UF+-20%50V RM2,5 ELECTROLYTIC CAPACITOR      | CE 0008.7479.00      | PANASONIC               | ECA-1HFG470I            |                           |
| C70              | CE 100UF+-20%25V RM2.5 ELECTROLYTIC CAPACITOR     | CE 0008.7891.00      | PANASONIC               | ECA-1EFG101I            |                           |
| C71              | CE 10UF+-20%50V RM2,5 ELECTROLYTIC CAPACITOR      | CE 0008.7427.00      | PHILIPS_CO              | 2222 116 11109          |                           |
| C72              | CE 10UF+-20%50V RM2,5 ELECTROLYTIC CAPACITOR      | CE 0008.7427.00      | PHILIPS_CO              | 2222 116 11109          |                           |
| C73              | CE 47UF+-20%50V RM2,5 ELECTROLYTIC CAPACITOR      | CE 0008.7479.00      | PANASONIC               | ECA-1HFG470I            |                           |
| C74              | CE 47UF+-20%50V RM2,5 ELECTROLYTIC CAPACITOR      | CE 0008.7479.00      | PANASONIC               | ECA-1HFG470I            |                           |
| C75              | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C76              | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C77              | CC 2,2NF+-10%50VX7R 1206 CERAMIC CHIP CAPACITOR   | CC 0099.8444.00      | PHILIPS_CO              | 2222 581 16618          |                           |
| C79              | CE 10UF +-10% 25V 7343 TANTALUM SMD-CAPACITOR     | CE 0007.7246.00      | KEMET                   | T491D106K025AS          |                           |
| E1               | BS UGN3120U HALL-EFF.SW. HALL-EFF.SWITCH          | BJ 0336.4750.00      | ALLEGRO                 | UGN3120U                |                           |
| E2               | BS UGN3120U HALL-EFF.SW. HALL-EFF.SWITCH          | BJ 0336.4750.00      | ALLEGRO                 | UGN3120U                |                           |
| L10              | LD 4,70UH10%1,200HMO,239A CHOKE                   | LD 0067.2940.00      | DALE                    | IM2                     |                           |
| L50              | LD 100UH 20% 1A 0,6500HM CHOKE                    | LD 0155.9446.00      | SIEMENS                 | B82111-E-C25            |                           |
| L51              | LD 100UH 20% 1A 0,6500HM CHOKE                    | LD 0155.9446.00      | SIEMENS                 | B82111-E-C25            |                           |
| N50              | BO LM317T +ADJ1A5 VREGL VOLTAGE REGULATOR         | BO 0339.4080.00      | NSC                     | LM-317T                 |                           |
| N51              | BO LM2903D 2XLP COMPAR DUAL                       | 0520.7734.00         | SIGNETICS               | LM2903(D)               |                           |
| N70              | BO LT1054CS INV SCH.REGL IC SWITCHED CAP. REGULAT | 1036.4519.00         | LINEAR_TEC              | LT1054CSW               |                           |
| R1               | RG 2,21KOHM+-1%TK100 1206 RESISTOR CHIP           | RG 0007.5743.00      | ROEDERSTEI              | D25                     |                           |
| R2               | RG 2,21KOHM+-1%TK100 1206 RESISTOR CHIP           | RG 0007.5743.00      | ROEDERSTEI              | D25                     |                           |
| R48              | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR        | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R49              | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR        | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R50              | RG 100 OHM+-1%TK100 1206 CHIP RESISTOR            | RG 0006.8884.00      | PHILIPS_CO              | RC02                    |                           |
| R53              | RG 221 OHM+-1%TK100 1206 RESISTOR CHIP            | RG 0007.5614.00      | ROEDERSTEI              | D25                     |                           |
| R54              | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR            | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R55              | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP           | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| R56              | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP           | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| R57              | RG 0-OHM WIDERSTAND-CHIP RESISTOR CHIP 0-OHM      | RG 0007.5108.00      | DRALORIC                | CR 1206                 |                           |
| R58              | RG 0-OHM WIDERSTAND-CHIP RESISTOR CHIP 0-OHM      | RG 0007.5108.00      | DRALORIC                | CR 1206                 |                           |
| R59              | RG 243 KOHM+-1%TK100 1206 RESISTOR CHIP           | RG 0007.6010.00      | ROEDERSTEI              | D25                     |                           |

MENP1

502 3PU-D

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Datum

Date

Schaltteilliste für  
Parts list for

Sachnummer  
Stock No.

Blatt-Nr.  
Page



**ROHDE & SCHWARZ**

13 04.02.98


ED DREHGEBER

**1035.5592.01 SA**

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| Kennz.<br>Comp. No. | Benennung<br>Designation                         | Sachnummer<br>Stock No. | Hersteller<br>Manufacturer | Bezeichnung<br>Designation | enthalten in<br>contained in |
|---------------------|--|-------------------------|----------------------------|----------------------------|------------------------------|
| R60                 | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR        | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R61                 | RG 243 OHM+-1%TK100 1206<br>RESISTOR CHIP        | RG 0007.5620.00         | ROEDERSTEI                 | D25                        |                              |
| R72                 | RL 0,60W4,75 OHM+-1%TK50<br>METALFILMRESISTOR    | RL 0099.8021.00         | ROEDERSTEI                 | MK2                        |                              |
| R73                 | RG 0-OHM WIDERSTAND-CHIP<br>RESISTOR CHIP 0-OHM  | RG 0007.5108.00         | DRALORIC                   | CR 1206                    |                              |
| R74                 | RL 0,60W4,75 OHM+-1%TK50<br>METALFILMRESISTOR    | RL 0099.8021.00         | ROEDERSTEI                 | MK2                        |                              |
| R75                 | RG 432 KOHM+-1%TK100 1206<br>RESISTOR CHIP       | RG 0007.6062.00         | ROEDERSTEI                 | D25                        |                              |
| R76                 | RG 33,2KOHM+-1%TK100 1206<br>RESISTOR CHIP       | RG 0007.5914.00         | ROEDERSTEI                 | D25                        |                              |
| R77                 | RG 39,2KOHM+-1%TK100 1206<br>RESISTOR CHIP       | RG 0007.5937.00         | ROEDERSTEI                 | D25                        |                              |
| R78                 | RG 20,0KOHM+-1%TK100 1206<br>RESISTOR CHIP       | RG 0007.5866.00         | ROEDERSTEI                 | D25                        |                              |
| S1                  | EM DREHIMPULSGEBER<br>ROTARY MAGNET              | EM 0336.3348.00         |                            |                            |                              |
| V48                 | AK BC337-40 N 45V 800MA<br>TRANSISTOR            | AK 0815.7684.00         | PHILIPS                    | BC337-40 GEGURTET          |                              |
| V50                 | AE BZV55/C5V1 0.5W ZDI<br>ZENER DIODE            | AE 0006.9839.00         | PHILIPS_SE                 | BZV55B5V1 (GEG)            |                              |
| V51                 | AE BZV55/C4V3 0.5W ZDI<br>ZENER DIODE            | AE 0709.0168.00         | PHILIPS_SE                 | BZV55B4V3                  |                              |
| V52                 | AK BC337-40 N 45V 800MA<br>TRANSISTOR            | AK 0815.7684.00         | PHILIPS                    | BC337-40 GEGURTET          |                              |
| V70                 | AG 1N4007 GL1000V 1A0<br>RECTIFIER               | AG 0013.0310.00         | ITT-SEMICO                 | 1N4007                     |                              |
| V71                 | AG 1N4007 GL1000V 1A0<br>RECTIFIER               | AG 0013.0310.00         | ITT-SEMICO                 | 1N4007                     |                              |
| V75                 | AK BC337-40 N 45V 800MA<br>TRANSISTOR            | AK 0815.7684.00         | PHILIPS                    | BC337-40 GEGURTET          |                              |
| X5                  | FP STIFTLISTE 26P.2REIH.<br>CONNECTOR 26P.       | FP 0520.6544.00         | BINDER                     | 11-0213-00-26              |                              |
| X6                  | FP BUCHSENLEISTE 4POL.<br>ANGLE SOCKET CONNECTOR | FP 2007.5069.00         | DUPONT CON                 | 67232-004                  |                              |
| X7                  | FP LEITERPLATTENVERB.10P.<br>CONNECTOR 10POL.    | 1051.4397.00            | MOLEX                      | 5597-10APB                 |                              |
| X10                 | FP STIFTL.WIN 3P.R2,54<br>ANGLE PIN CONNECTOR    | FP 0009.7195.00         |                            |                            |                              |

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|  |                 |    |               |                                       |                        |                  |
|--|-----------------|----|---------------|---------------------------------------|------------------------|------------------|
| MENP1  | 502 3PU-D       | AI | Datum<br>Date | Schaltteilliste für<br>Parts list for | Sachnummer<br>Stock No | Blatt-Nr<br>Page |
|  | ROHDE & SCHWARZ | 13 | 04.02.98      | ED DREHGEBER                          | 1035.5592.01 SA        | 2-               |

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| Kennz. Comp. No. | Benennung Designation                            | Sachnummer Stock No.                             | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |  |
|------------------|--|--|-------------------------|-------------------------|---------------------------|--|
| C102             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C103             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C106             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C109             | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR  | 0803.0667.00                                     | NAT_PANASO              | ECE-A1VKS-100           |                           |  |
| C110             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| ..113            | C120   | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00         | PHILIPS_CO              | 2238 581 55649            |  |
| C121             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C122             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C132             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C200             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C201             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C202             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C204             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C205             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C207             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C208             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C212             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C213             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C214             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C215             | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00                                  | MURATA                  | GRM42-6COG 100 C50PT    |                           |  |
| C216             | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00                                  | MURATA                  | GRM42-6COG 100 C50PT    |                           |  |
| C290             | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00                                  | MURATA                  | GRM42-6COG 100 C50PT    |                           |  |
| C310             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| ..316            | C400   | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR  | 0803.0667.00            | NAT_PANASO              | ECE-A1VKS-100             |  |
| C411             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| ..413            | C420   | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00         | PHILIPS_CO              | 2238 581 55649            |  |
| C421             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C422             | CC 10NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0099.8521.00                                  | MURATA                  | GRM42-6X7R103K 50PT     |                           |  |
| C500             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C510             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C520             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C540             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C550             | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00                                  | MURATA                  | GRM42-6COG 100 C50PT    |                           |  |
| C551             | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00                                  | MURATA                  | GRM42-6COG 100 C50PT    |                           |  |
| C552             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| C560             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00                                  | PHILIPS_CO              | 2238 581 55649          |                           |  |
| ..563            | C565   | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00         | PHILIPS_CO              | 2238 581 55649            |  |
| ..569            | C570   | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00         | MURATA                  | GRM42-6COG 100 C50PT      |  |
| ..576            | C577   | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00         | PHILIPS_CO              | 2238 581 55649            |  |


|   |                            |    |            |                                    |                        |                |
|---|----------------------------|----|------------|------------------------------------|------------------------|----------------|
| MENP1   | 502 3PU-D                  | ÄI | Datum Date | Schaltteilliste für Parts list for | Sachnummer Stock No.   | Blatt-Nr. Page |
|  | <b>ROHDE &amp; SCHWARZ</b> | 18 | 04.02.98   | ED RECHNER                         | <b>1035.7250.01 SA</b> | 1+             |

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| Kennz. Comp. No. | Benennung Designation                             | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|------------------|---|----------------------|-------------------------|-------------------------|---------------------------|
| C580             | CC 220NF+-10%50V X7R 1210 CERAMIC CAPACITOR CHIP  | CC 0520.6850.00      | AVX                     | 1210 5C 224KA 11A       |                           |
| C590             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C610             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C631             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C632             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C636             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C638             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C700             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C701             | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR   | 0803.0667.00         | NAT_PANASO              | ECE-A1VKS-100           |                           |
| C702             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C703             | CC 10PF+-0,25 50V NPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00      | MURATA                  | GRM42-6COG 100 C5OPT    |                           |
| C704             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C705             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C706             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C710             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C711             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C720             | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR   | 0803.0667.00         | NAT_PANASO              | ECE-A1VKS-100           |                           |
| C721             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C722             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C730             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C731             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C735             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C736             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C737             | CE 22UF+-20%10V SAL ELECTR. CAPACITOR             | CE 0007.3940.00      | VALVO                   | 2222 128 34229          |                           |
| C738             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| .742             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C800             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C810             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C820             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C825             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C830             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C840             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C855             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C856             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C860             | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR   | 0803.0667.00         | NAT_PANASO              | ECE-A1VKS-100           |                           |
| .863             | CC 100PF+-1%50V NPO 1206 CERAMIC CHIP CAPACITOR   | CC 0099.8415.00      | MURATA                  | GRM42-6COG 101F 5OPT    |                           |
| C864             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| .867             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C868             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C869             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C875             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| .878             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C900             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR  | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |

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| MENP1  | 502 3PU-D                  | AI | Datum Date | Schaltteilliste für Parts list for | Sachnummer Stock No.   | Blatt-Nr. Page |
|  | <b>ROHDE &amp; SCHWARZ</b> | 18 | 04.02.98   | ED RECHNER                         | <b>1035.7250.01 SA</b> | 2+             |

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| Kennz. Comp. No. | Benennung Designation                               | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|------------------|---|----------------------|-------------------------|-------------------------|---------------------------|
| C901             | CE 470UF+-20%25V12,5X12,5 ELECTROLYTIC CAPACITOR    | 0803.0715.00         | NAT_PANASO              | ECA-1EM471              |                           |
| C902             | CE 470UF+-20%25V12,5X12,5 ELECTROLYTIC CAPACITOR    | 0803.0715.00         | NAT_PANASO              | ECA-1EM471              |                           |
| C904             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C910             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C911             | CE 470UF+-20%25V12,5X12,5 ELECTROLYTIC CAPACITOR    | 0803.0715.00         | NAT_PANASO              | ECA-1EM471              |                           |
| C912             | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR     | 0803.0667.00         | NAT_PANASO              | ECE-A1VKS-100           |                           |
| C914             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C920             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C921             | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR     | 0803.0667.00         | NAT_PANASO              | ECE-A1VKS-100           |                           |
| C924             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C925             | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR     | 0803.0667.00         | NAT_PANASO              | ECE-A1VKS-100           |                           |
| C950             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C955             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C956             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C960             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C970             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| C980             | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR    | CC 0007.5237.00      | PHILIPS_CO              | 2238 581 55649          |                           |
| D10              | BC N80960SB-16 RISC PROC RISC PROC W FLP UNIT       | 0008.7756.00         | INTEL                   | N80960SB-16             |                           |
| D60              | BC NAT7210APD GPIB IF CON GPIB INTERFACE CONTROLLER | 0010.9198.00         | NATIONAL/I              | NAT7210APD              |                           |
| D61              | BC D71054C INTERV.TIMER PROGR.INTERVAL TIMER        | BC 0006.9622.00      | NEC                     | D71054C                 |                           |
| D63              | BJ SN75160AN 8XBUS TRANSC BUS TRANSCEIVER           | BJ 0345.6517.00      | TEXAS                   | SN75160BN               |                           |
| D64              | BJ SN75162N 8XBUS TRANSC BUS TRANSCEIVER            | BJ 0359.3567.00      | TEXAS                   | SN75162BN               |                           |
| D85              | BC N82510 ASYNC SER CONTR ASYNC SERIAL CONTROLLER   | 0008.1764.10         |                         |                         |                           |
| D86              | BC 71059GB-10 INTERR.CONT INTERRUPT CONTROL UNIT    | 0854.4060.00         | NEC                     | (UP)D71059G(B10)        |                           |
| D87              | BG SERBUS-MZE ASIC IC GATEARRAY                     | 1066.1976.00         | FRAUNH_I FT             | SERBUSM2E               |                           |
| D90              | BC SED1351FOA LCD-CTRL LCD CONTROLLER               | 0008.7727.00         | SEIKO_EPSO              | SED1351FOA              |                           |
| D103             | BL 74F30D 8INP NAND GATE IC EIGHT-INP NAND GATE     | 0380.1482.00         | SIGNETICS               | N74F30D                 |                           |
| D106             | BL MM74HC132N 4X2IN.NAND QUAD 2INP.NAND SCHMITT TR  | 0099.9557.00         | PHILIPS_SE              | (PC)74HC132N(P)         |                           |
| D120             | BG L5A8666 CLKGEN ASIC GATEARRAY                    | 0008.7591.00         | VLSI                    | CLK-GEN(R&S-NR.)        |                           |
| D200             | BL PC74HCT541T 8XBUSDRIV OCTAL BUFFER/LINE DRIVER   | BL 1006.4104.00      | PHILIPS_SE              | (PC)74HCT541(D/T)       |                           |
| D201             | BL PC74HCT173T 4XD-FF 3S QUAD D-TYPE FLIPFLOP       | BL 0007.6933.00      | PHILIPS                 | (PC)74HCT173(T)         |                           |
| D202             | BL 74FCT244ASO 8XBUFF 3S OCTAL BUFFER/LINE DRIVER   | 0843.7240.00         | IDT                     | IDT74FCT244ASO          |                           |
| D204             | BL 74ACT573SC 8XTRLATCH3S IC OCTAL TRANSP.LATCH 3ST | BL 0008.0751.00      | HARRIS                  | CD74ACT573M             |                           |
| D205             | BL 74ACT573SC 8XTRLATCH3S IC OCTAL TRANSP.LATCH 3ST | BL 0008.0751.00      | HARRIS                  | CD74ACT573M             |                           |
| D208             | BL PC74HCT245T 8XTRANSC OCTAL BUS TRANSCEIVER       | BL 0007.5414.00      | PHILIPS_SE              | (PC)74HCT245(D/T)       |                           |
| D209             | BL PC74HCT245T 8XTRANSC OCTAL BUS TRANSCEIVER       | BL 0007.5414.00      | PHILIPS_SE              | (PC)74HCT245(D/T)       |                           |
| D213             | BL PC74HCT173T 4XD-FF 3S QUAD D-TYPE FLIPFLOP       | BL 0007.6933.00      | PHILIPS                 | (PC)74HCT173(T)         |                           |
| D214             | BL 74ACT138SC 3TO8 DECOD 3-TO-8 DECODER/DEMUX       | BL 2007.5017.00      | HARRIS                  | CD74ACT138(M)           |                           |

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|---|-----------|----------|------------|------------------------------------|----------------------|----------------|
| MENP 1  | 502 3PU-D | Äi       | Datum Date | Schaltteilliste für Parts list for | Sachnummer Stock No. | Blatt-Nr. Page |
|  | 18        | 04.02.98 | ED RECHNER | <b>1035.7250.01 SA</b>             | 3+                   |                |

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| Kennz. Comp. No. | Benennung Designation                                  | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|------------------|--|----------------------|-------------------------|-------------------------|---------------------------|
| D216             | BL 74ACT573SC 8XTRLATCH3S<br>IC OCTAL TRANSP.LATCH 3ST | BL 0008.0751.00      | HARRIS                  | CD74ACT573M             | 1035.7543.01              |
| D300             | HS 1035.7308-SOFTW.(D300)                              | 1035.7550.00         |                         |                         |                           |
| D301             | HS 1035.7766-SOFTW.(D301)                              | 1035.7895.00         |                         |                         |                           |
| D302             | BC TC551001FL 128KX8 SRAM<br>STATIC RAM 128KX8         | 1046.3938.00         | HYUNDAI                 | HY628100ALLG-70         | 1035.7543.01              |
| D310             | BL 74ACT139SC 2X 1A4DEMUX<br>IC DUAL 1-OF-4 DEMUX      | BL 2000.2412.00      | HARRIS                  | CD74ACT139M             |                           |
| D400             | BO LP2951CMLWDROP +VREGL<br>IC VOLTAGE REGULATOR       | 1020.0890.00         | NSC                     | LP2951CM                |                           |
| D402             | HS 1035.7308-SOFTW.(D402)<br>1035.7308 SOFTWARE (D402) | 1035.7566.00         |                         |                         | 1035.7543.01              |
| D404             | BC AM29F040 10% FL.EPROM<br>IC MEMORY                  | 0009.6818.00         | AMD                     | AM29F040B-120JC         |                           |
| D405             | BC AM29F040 10% FL.EPROM<br>IC MEMORY                  | 0009.6818.00         | AMD                     | AM29F040B-120JC         |                           |
| D410             | BL 74ACT139SC 2X 1A4DEMUX<br>IC DUAL 1-OF-4 DEMUX      | BL 2000.2412.00      | HARRIS                  | CD74ACT139M             | 1035.7543.01              |
| D424             | BC AM29F040 10% FL.EPROM<br>IC MEMORY                  | 0009.6818.00         | AMD                     | AM29F040B-120JC         |                           |
| D425             | BC AM29F040 10% FL.EPROM<br>IC MEMORY                  | 0009.6818.00         | AMD                     | AM29F040B-120JC         |                           |
| D500             | BL 74ACT138SC 3T08 DECOD<br>3-TO-8 DECODER/DEMUX       | BL 2007.5017.00      | HARRIS                  | CD74ACT138(M)           | 1035.7543.01              |
| D510             | BL 74ACT138SC 3T08 DECOD<br>3-TO-8 DECODER/DEMUX       | BL 2007.5017.00      | HARRIS                  | CD74ACT138(M)           |                           |
| D520             | BL 74ACT32SC 4X2-IN OR<br>IC QUAD 2-INPUT OR GATE      | BL 1012.9385.00      | HARRIS                  | CD74ACT32M              |                           |
| D540             | HS 1035.7308-SOFTW.(D540)                              | 1035.7572.00         |                         |                         | 1035.7543.01              |
| D550             | BL PC74HCT273T 8XD-FF<br>OCTAL D-TYPE FLIPFLOP         | BL 0007.6610.00      | PHILIPS_SE (PC)         | 74HCT273(D/T)           |                           |
| D560             | BL PC74HCT541T 8XBUSDRIV<br>OCTAL BUFFER/LINE DRIVER   | BL 1006.4104.00      | PHILIPS_SE (PC)         | 74HCT541(D/T)           |                           |
| D561             | BL PC74HCT4075T 3X3IN ORG<br>TRIPLE 3INPUT OR GATE     | BL 0007.6879.00      | PHILIPS                 | (PC)74HCT4075(T)        | 1035.7543.01              |
| D562             | BL PC74HCT4075T 3X3IN ORG<br>TRIPLE 3INPUT OR GATE     | BL 0007.6879.00      | PHILIPS                 | (PC)74HCT4075(T)        |                           |
| D563             | BL PC74HCT74T 2XD-FLIPFL<br>DUAL D-TYPE FLIP FLOP      | BL 0007.6262.00      | PHILIPS_SE (PC)         | 74HCT74D(T)             |                           |
| D565             | BL 74ACT74SC 2XRSFLIPFLOP<br>IC DUAL D-FLIPFLOP        | BL 0008.0680.00      | TOSHIBA                 | (TC74)ACT74(FN)         | 1035.7543.01              |
| D566             | BL PC74HC7266T4X2IN EXNOR<br>QUAD 2INPUT EXNOR GATE    | BL 0729.4630.00      | PHILIPS                 | (PC)74HC7266(T())       |                           |
| D567             | BL PC74HC14T 6XINV.SCHM<br>HEXINV.SCHMITT-TRIGGER      | BL 0007.4018.00      | PHILIPS_SE (PC)         | 74HC14(D/T)             |                           |
| D568             | BL PC74HC14T 6XINV.SCHM<br>HEXINV.SCHMITT-TRIGGER      | BL 0007.4018.00      | PHILIPS_SE (PC)         | 74HC14(D/T)             | 1035.7543.01              |
| D569             | BL PC74HCT123T 2XMONOFLOP<br>DUAL MULTIVIBRATOR        | BL 0007.6333.00      | PHILIPS_SE (PC)         | 74HCT123(D/T)           |                           |
| D570             | BL PC74HCT541T 8XBUSDRIV<br>OCTAL BUFFER/LINE DRIVER   | BL 1006.4104.00      | PHILIPS_SE (PC)         | 74HCT541(D/T)           |                           |
| D590             | BL PC74HCT541T 8XBUSDRIV<br>OCTAL BUFFER/LINE DRIVER   | BL 1006.4104.00      | PHILIPS_SE (PC)         | 74HCT541(D/T)           | 1035.7543.01              |
| D600             | HS 1035.7308-SOFTW.(D600)<br>NUR VAR/ONLY MOD: 02      | 1035.7589.00         |                         |                         |                           |
| D600             | HS SOFTWARE D600<br>NUR VAR/ONLY MOD: 03               | 1035.7614.00         |                         |                         |                           |
| D600             | BC N85C220-80 EPLD(GAL)<br>IC PROGR LOGIC ARRAY        | 0008.7740.00         | ALTERA                  | EP220LC-10A             | 1035.7614.00              |
| D621             | BL PC74HCT02T 4X2IN NORG<br>QUAD 2INPUT NORGATE        | BL 0007.5366.00      | PHILIPS_SE (PC)         | 74HCT02(D/T)            |                           |
| D700             | BS DG408DY 8CH.ANAL.MUX<br>IC 8 CH ANALOG MULTIPLEX    | 1036.4460.00         | SILICONIX               | DG408DY                 |                           |
| D701             | BS DG441DY 4XANALOGSCH<br>IC QUAD ANALOG SWITCH        | 1036.4454.00         | SILICONIX               | DG441DY                 | 1035.7543.01              |
| D702             | BL 74ACT20SC 2X4-IN NAND<br>IC DUAL 4-INPUT NAND GATE  | BL 0008.0700.00      | HARRIS                  | CD74ACT20M              |                           |
| D703             | BL PC74HCT273T 8XD-FF<br>OCTAL D-TYPE FLIPFLOP         | BL 0007.6610.00      | PHILIPS_SE (PC)         | 74HCT273(D/T)           |                           |
| D704             | BJ AD7870KP 1X12B-ADC<br>IC ANALOG DIGITAL CONV        | 1036.4402.00         | ANALOG_DEV              | AD7870KP                | 1035.7543.01              |
| D706             | BJ AD7245JP 1X12B-DAC<br>IC DIGITAL/ANALOG CONV        | 1036.4419.00         | ANALOG_DEV              | AD7245JP                |                           |
| D707             | BO 79L05ACM-5V5/0A1VREGL<br>VOLTAGE REGULATOR 5VDC     | 0851.6703.00         | NSC                     | LM79L05ACM              |                           |
| D800             | HS 1035.7308-SOFTW.(D800)                              | 1035.7595.00         |                         |                         | 1035.7543.01              |
| D810             | BL PC74HCT273T 8XD-FF<br>OCTAL D-TYPE FLIPFLOP         | BL 0007.6610.00      | PHILIPS_SE (PC)         | 74HCT273(D/T)           |                           |

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|--|----------------------------|-----|------------|-------------------------------------|------------------------|----------------|
| MENP1  | 502 3PU-D                  | Alt | Datum Date | Schaltteilleiste für Parts list for | Sachnummer Stock No.   | Blatt-Nr. Page |
|  | <b>ROHDE &amp; SCHWARZ</b> | 18  | 04.02.98   | ED RECHNER                          | <b>1035.7250.01 SA</b> | 4+             |

095 0026-0693

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| Kennz. Comp. No. | Benennung Designation                             | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|------------------|---|----------------------|-------------------------|-------------------------|---------------------------|
| D820             | BL PC74HCT00T 4X2IN.NAND NAND GATE                | BL 0007.6156.00      | PHILIPS_SE              | (PC)74HCT00D(T)         | 1035.7543.01              |
| D825             | BL PC74HCT00T 4X2IN.NAND NAND GATE                | BL 0007.6156.00      | PHILIPS_SE              | (PC)74HCT00D(T)         |                           |
| D830             | BL PC74HCT20T 2X4IN.NAND NAND GATE                | BL 0007.6210.00      | VALVO                   | PC74HCT20T              |                           |
| D840             | BL PC74HCT86T 4X2IN.EXOR EXOR GATE                | BL 0007.6291.00      | PHILIPS_SE              | (PC)74HCT86(D/T)        |                           |
| D860             | BJ LT1181ACS RS232 2TX2RX IC RS232-TRANSCEIVER    | 1008.2915.00         | LINEAR_TEC              | LT1181ACS               |                           |
| D950             | HS 1035.7308-SOFTW. (D950)                        | 1035.7608.00         |                         |                         |                           |
| D960             | BC 84256-12LP 32KX8 SRAM RAM                      | 0007.6985.00         | NEC                     | UAPD43256GU-12L         |                           |
| D970             | BC 84256-12LP 32KX8 SRAM RAM                      | 0007.6985.00         | NEC                     | UAPD43256GU-12L         |                           |
| D980             | BL PC74HCT541T 8XBUSDRIV OCTAL BUFFER/LINE DRIVER | BL 1006.4104.00      | PHILIPS_SE              | (PC)74HCT541(D/T)       |                           |
| G85              | EO 18,432MHZ-QU.OSZ 5V CLOCK OSCILLATOR           | 0008.1770.00         | PHILIPS                 | XOS5460W                |                           |
| G100             | EO 64,000MHZ-QU.OSZ TTL5V CLOCK OSCILLATOR        | 1036.4431.00         | TELEQUARZ               | MCO 1500 B              |                           |
| G300             | EB 3,4V LITHIUM-BATTERIE LI BATTERY               | 0565.1687.00         | ACCU_SONNE              | SL-750/P/009 1110750    |                           |
| H200             | EL TONGEBER 6V 40MIA WARNING DEVICE 6V            | 0836.8538.00         | DIGISOUND               | F/SWX-06                |                           |
| K300             | SR 5V 500 OHM 1X1 SIL RELAY 5V SIL                | 1012.9604.00         | HAMLIN                  | HE3621A0500             |                           |
| L900             | LD UKW-DR.Z=750 OHM 50MHZ CHOKE                   | LD 0026.4578.00      | FASTRON_GE              | 06H-751X-00             |                           |
| L910             | LD UKW-DR.Z=750 OHM 50MHZ CHOKE                   | LD 0026.4578.00      | FASTRON_GE              | 06H-751X-00             |                           |
| L920             | LD UKW-DR.Z=750 OHM 50MHZ CHOKE                   | LD 0026.4578.00      | FASTRON_GE              | 06H-751X-00             |                           |
| N700             | BO OP97FS LP PREC OPAMP OPAMP                     | 1036.4390.00         | PMI                     | OP97F(S)                |                           |
| N701             | BO OP97FS LP PREC OPAMP OPAMP                     | 1036.4390.00         | PMI                     | OP97F(S)                |                           |
| N702             | BO OP07CP OPAMP OPERATIONAL AMPLIFIER             | BO 0394.8884.00      | PMI                     | OP 07 CP                |                           |
| O1               | VL STECKLOETOESE 7,5X1,1 PLUG-IN SOLDERING LUG    | VL 0078.2747.00      | -                       | R&S-ZCHNG.078.2747      |                           |
| O2               | VL STECKLOETOESE 7,5X1,1 PLUG-IN SOLDERING LUG    | VL 0078.2747.00      | -                       | R&S-ZCHNG.078.2747      |                           |
| P300             | VL EINPRESSSTIFT L=6,8 PIN                        | VL 0010.7250.00      | AMP                     | 1-928776-5              |                           |
| P700             | VL EINPRESSSTIFT L=6,8 PIN                        | VL 0010.7250.00      | AMP                     | 1-928776-5              |                           |
| P710             | VL EINPRESSSTIFT L=6,8 PIN                        | VL 0010.7250.00      | AMP                     | 1-928776-5              |                           |
| P720             | VL EINPRESSSTIFT L=6,8 PIN                        | VL 0010.7250.00      | AMP                     | 1-928776-5              |                           |
| P730             | VL EINPRESSSTIFT L=6,8 PIN                        | VL 0010.7250.00      | AMP                     | 1-928776-5              |                           |
| R104             | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR            | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R107             | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR        | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R108             | RG 10,0 OHM+-1%TK100 1206 CHIP -RESISTOR          | RG 0006.8649.00      | PHILIPS_CO              | RC02                    |                           |
| R110             | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP           | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| R111             | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP           | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| R112             | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP           | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| R113             | RN 9X47 KOHM+-2% SIL10 H5 RESISTOR NETWORK        | RN 0341.9286.00      | BOURNS                  | 4610X-T09-473           |                           |
| R114             | RN 9X47 KOHM+-2% SIL10 H5 RESISTOR NETWORK        | RN 0341.9286.00      | BOURNS                  | 4610X-T09-473           |                           |

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Datum Date

Schaltteilleiste für Parts list for

Sachnummer Stock No.

Blatt-Nr. Page



**ROHDE & SCHWARZ**

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| Kennz. Comp. No. | Benennung Designation   | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|------------------|---|----------------------|-------------------------|-------------------------|---------------------------|
| R115             | RN 9X47 KOHM+-2% SIL10 H5<br>RESISTOR NETWORK   | RN 0341.9286.00      | BOURNS                  | 4610X-T09-473           |                           |
| R116             | RN 9X47 KOHM+-2% SIL10 H5<br>RESISTOR NETWORK   | RN 0341.9286.00      | BOURNS                  | 4610X-T09-473           |                           |
| R117             | RN 9X47 KOHM+-2% SIL10 H5<br>RESISTOR NETWORK   | RN 0341.9286.00      | BOURNS                  | 4610X-T09-473           |                           |
| R124             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR   | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R125             | RG 47,5KOHM+-1%TK100 1206<br>RESISTOR CHIP  | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| R128             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR   | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R129             | RG 22,1KOHM+-1%TK100 1206<br>RESISTOR CHIP  | RG 0007.5872.00      | ROEDERSTEI              | D25                     |                           |
| R131             | RG 4,75KOHM+-1%TK100 1206<br>RESISTOR CHIP  | RG 0007.5820.00      | ROEDERSTEI              | D25                     |                           |
| ..134            |   |                      |                         |                         |                           |
| R143             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R144             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R145             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R150             | RG 47,5KOHM+-1%TK100 1206<br>RESISTOR CHIP  | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| R151             | RG 47,5KOHM+-1%TK100 1206<br>RESISTOR CHIP  | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| R153             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R154             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R200             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R209             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR   | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R212             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR   | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R213             | RG 100 OHM+-1%TK100 1206<br>CHIP RESISTOR   | RG 0006.8884.00      | PHILIPS_CO              | RC02                    |                           |
| R214             | RG 100 OHM+-1%TK100 1206<br>CHIP RESISTOR   | RG 0006.8884.00      | PHILIPS_CO              | RC02                    |                           |
| R220             | RN 9X47 KOHM+-2% SIL10 H5<br>RESISTOR NETWORK   | RN 0341.9286.00      | BOURNS                  | 4610X-T09-473           |                           |
| R221             | RN 9X47 KOHM+-2% SIL10 H5<br>RESISTOR NETWORK   | RN 0341.9286.00      | BOURNS                  | 4610X-T09-473           |                           |
| R280             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R281             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R282             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R283             | RN 9X47 KOHM+-2% SIL10 H5<br>RESISTOR NETWORK   | RN 0341.9286.00      | BOURNS                  | 4610X-T09-473           |                           |
| R285             | RG 5,11KOHM+-1%TK100 1206<br>CHIP RESISTOR  | RG 0007.0729.00      | ROEDERSTEI              | D25                     |                           |
| R286             | RG 5,11KOHM+-1%TK100 1206<br>CHIP RESISTOR  | RG 0007.0729.00      | ROEDERSTEI              | D25                     |                           |
| R287             | RG 51,1 OHM+-1%TK100 1206<br>CHIP RESISTOR<br>TRIMMWERT/SELECTED"<br>VON 5R1 BIS 51R1"<br>FROM 5R1 UP TO 51R1"<br>LAUTSTAERKE/LOUDNESS H200<br>SOUND" | RG 0006.8810.00      | ROEDERSTEI              | D25                     |                           |
| R289             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R290             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR   | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R310             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R313             | RG 475 OHM+-1%TK100 1206<br>RESISTOR CHIP   | RG 0007.5695.00      | ROEDERSTEI              | D25                     |                           |
| R314             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R315             | RG 221 OHM+-1%TK100 1206<br>RESISTOR CHIP   | RG 0007.5614.00      | ROEDERSTEI              | D25                     |                           |
| R316             | RG 39,2KOHM+-1%TK100 1206<br>RESISTOR CHIP  | RG 0007.5937.00      | ROEDERSTEI              | D25                     |                           |

|  |                            |    |            |                                    |                        |               |
|--|----------------------------|----|------------|------------------------------------|------------------------|---------------|
| MENP1  | 502 3PU-D                  | ÄI | Datum Date | Schaltteilliste für Parts list for | Sachnummer Stock No.   | Blatt-Nr Page |
|  | <b>ROHDE &amp; SCHWARZ</b> | 18 | 04.02.98   | ED RECHNER                         | <b>1035.7250.01 SA</b> | 6+            |

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| Kennz. Comp. No. | Benennung Designation                           | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|------------------|---|----------------------|-------------------------|-------------------------|---------------------------|
| R318             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R320             | RG 100,0KOH+-1%TK100 1206<br>CHIP RESISTOR      | RG 0007.1948.00      | ROEDERSTEI              | D25                     |                           |
| R322             | RG 0-OHM WIDERSTAND-CHIP<br>RESISTOR CHIP 0-OHM | RG 0007.5108.00      | DRALORIC                | CR 1206                 |                           |
| R323             | RG 0-OHM WIDERSTAND-CHIP<br>RESISTOR CHIP 0-OHM | RG 0007.5108.00      | DRALORIC                | CR 1206                 |                           |
| R324             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R374             | RG 1,0 KO +-0,1%TK25 1206<br>SMD-RESISTOR       | 0009.7595.00         | PHILIPS_CO              | MPC 01                  |                           |
| R380             | RG 47,5KOHM+-1%TK100 1206<br>RESISTOR CHIP      | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| . . 384<br>R390  | RG 2,21KOHM+-1%TK100 1206<br>RESISTOR CHIP      | RG 0007.5743.00      | ROEDERSTEI              | D25                     |                           |
| R391             | RG 27,4KOHM+-1%TK100 1206<br>RESISTOR CHIP      | RG 0007.5895.00      | ROEDERSTEI              | D25                     |                           |
| R392             | RG 100,0KOH+-1%TK100 1206<br>CHIP RESISTOR      | RG 0007.1948.00      | ROEDERSTEI              | D25                     |                           |
| R410             | RG 0-OHM WIDERSTAND-CHIP<br>RESISTOR CHIP 0-OHM | RG 0007.5108.00      | DRALORIC                | CR 1206                 |                           |
| R412             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R413             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R414             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R415             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R416             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R418             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R419             | RG 5,62KOHM+-1%TK100 1206<br>CHIP RESISTOR      | RG 0007.0735.00      | ROEDERSTEI              | D25                     |                           |
| R420             | RG 88,7KOH+-0,1%TK25 1206<br>SMD-RESISTOR       | 0009.7650.00         | PHILIPS_CO              | MPC 01                  |                           |
| R422             | RG 10,2KOH+-0,1%TK25 1206<br>SMD-RESISTOR       | 0009.7614.00         | PHILIPS_CO              | MPC 01                  |                           |
| R430             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R431             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R436             | RG 0-OHM WIDERSTAND-CHIP<br>RESISTOR CHIP 0-OHM | RG 0007.5108.00      | DRALORIC                | CR 1206                 |                           |
| R510             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R515             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R540             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R550             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R551             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R552             | RG 100 OHM+-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.8884.00      | PHILIPS_CO              | RC02                    |                           |
| R553             | RG 100 OHM+-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.8884.00      | PHILIPS_CO              | RC02                    |                           |
| R558             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R560             | RN 9X 10KOHM+-SIL10 H5<br>RESISTOR NETWORK      | RN 0343.4523.00      | BI_TECHNOL              | L 10 1 S 103 M*         |                           |
| R561             | RG 100 OHM+-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.8884.00      | PHILIPS_CO              | RC02                    |                           |
| . . 567<br>R568  | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R569             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R573             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R575             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R576             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R580             | RG 100,0KOH+-1%TK100 1206<br>CHIP RESISTOR      | RG 0007.1948.00      | ROEDERSTEI              | D25                     |                           |

|   |                            |    |            |                                     |                        |               |
|---|----------------------------|----|------------|-------------------------------------|------------------------|---------------|
| MENP1   | 502 3PU-D                  | Ät | Datum Date | Schaltteilleiste für Parts list for | Sachnummer Stock No.   | Blatt-Nr Page |
|  | <b>ROHDE &amp; SCHWARZ</b> | 18 | 04.02.98   | ED RECHNER                          | <b>1035.7250.01 SA</b> | 7+            |

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| Kennz.<br>Comp. No. | Benennung<br>Designation                        | Sachnummer<br>Stock No. | Hersteller<br>Manufacturer | Bezeichnung<br>Designation | enthalten in<br>contained in |
|---------------------|---|-------------------------|----------------------------|----------------------------|------------------------------|
| R581<br>..585       | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00         | PHILIPS_CO                 | RC02                       |                              |
| R590                | RN 9X47 KOHM+-2% SIL10 H5<br>RESISTOR NETWORK   | RN 0341.9286.00         | BOURNS                     | 4610X-T09-473              |                              |
| R592                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R594                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R596                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R597                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R598                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R605                | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00         | PHILIPS_CO                 | RC02                       |                              |
| R606                | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00         | PHILIPS_CO                 | <del>RC02</del>            |                              |
| R607                | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00         | PHILIPS_CO                 | RC02                       |                              |
| R610                | RG 2,2KOHM+-1%TK100 1206<br>RESISTOR CHIP       | RG 0007.5743.00         | ROEDERSTEI                 | D25                        |                              |
| R611                | RG 10,0 OHM+-1%TK100 1206<br>CHIP -RESISTOR     | RG 0006.8649.00         | PHILIPS_CO                 | RC02                       |                              |
| R619                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R634                | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00         | PHILIPS_CO                 | RC02                       |                              |
| R700                | RG 0-OHM WIDERSTAND-CHIP<br>RESISTOR CHIP 0-OHM | RG 0007.5108.00         | DRALORIC                   | CR 1206                    |                              |
| R701                | RG 10,0 OHM+-1%TK100 1206<br>CHIP -RESISTOR     | RG 0006.8649.00         | PHILIPS_CO                 | RC02                       |                              |
| R702                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R703                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R705                | RG 0-OHM WIDERSTAND-CHIP<br>RESISTOR CHIP 0-OHM | RG 0007.5108.00         | DRALORIC                   | CR 1206                    |                              |
| R706                | RG 0-OHM WIDERSTAND-CHIP<br>RESISTOR CHIP 0-OHM | RG 0007.5108.00         | DRALORIC                   | CR 1206                    |                              |
| R707                | RG 182 OHM+-1%TK100 1206<br>RESISTOR CHIP       | RG 0007.5595.00         | ROEDERSTEI                 | D25                        |                              |
| R710<br>..718       | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R719                | RG 1,0 OHM+-1%TK100 1206<br>CHIP RESISTOR       | RG 0815.7532.00         | PHILIPS_CO                 | RC 02                      |                              |
| R720                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R725<br>..728       | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00         | PHILIPS_CO                 | RC02                       |                              |
| R730                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R731                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R732                | RG 12,0KOH+-0,1%TK25 1206<br>SMD-RESISTOR       | 0009.7620.00            | PHILIPS_CO                 | MPC 01                     |                              |
| R733                | RG 2,0KOHM+-0,1%TK25 1206<br>SMD-RESISTOR       | 0009.7608.00            | PHILIPS_CO                 | MPC 01                     |                              |
| R735                | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00         | PHILIPS_CO                 | RC02                       |                              |
| R736                | RG 10,0KOH+-0,1%TK25 1206<br>SMD-RESISTOR       | 0009.7666.00            | PHILIPS_CO                 | MPC 01                     |                              |
| R737                | RG 20,0KOH+-0,1%TK25 1206<br>SMD-RESISTOR       | 0009.7643.00            | PHILIPS_CO                 | MPC 01                     |                              |
| R800                | RG 47,5KOHM+-1%TK100 1206<br>RESISTOR CHIP      | RG 0007.5950.00         | ROEDERSTEI                 | D25                        |                              |
| R801                | RG 47,5KOHM+-1%TK100 1206<br>RESISTOR CHIP      | RG 0007.5950.00         | ROEDERSTEI                 | D25                        |                              |
| R802                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R805                | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR   | RG 0007.0793.00         | PHILIPS_CO                 | RC02                       |                              |
| R840                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R841                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |
| R849                | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR       | RG 0006.7271.00         | PHILIPS_CO                 | RC02                       |                              |

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|  |                            |    |               |  |                        |                   |
|--|----------------------------|----|---------------|--|------------------------|-------------------|
| MENP1  | 502 3PU-D                  | Äi | Datum<br>Date | Schaltteilleiste für<br>Parts list for | Sachnummer<br>Stock No | Blatt-Nr.<br>Page |
|  | <b>ROHDE &amp; SCHWARZ</b> | 18 | 04.02.98      | ED RECHNER                             | <b>1035.7250.01 SA</b> | 8+                |



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| Kennz. Comp. No. | Benennung Designation                               | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|------------------|---|----------------------|-------------------------|-------------------------|---------------------------|
| R851             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR       | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R852             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R853             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R857             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR       | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R859             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R860             | RG 47,5KOHM+-1%TK100 1206<br>RESISTOR CHIP          | RG 0007.5950.00      | ROEDERSTEI              | D25                     |                           |
| R861<br>. . 864  | RG 100 OHM+-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.8884.00      | PHILIPS_CO              | RC02                    |                           |
| R865             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR       | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R870             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR       | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R871<br>. . 874  | RG 47,5 OHM+-1%TK100 1206<br>RESISTOR CHIP          | RG 0007.5566.00      | ROEDERSTEI              | D25                     |                           |
| R875<br>. . 878  | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R879             | RG 681 OHM+-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.9080.00      | ROEDERSTEI              | D25                     |                           |
| R880             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR       | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R881             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R951             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R952             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR       | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R959             | RG 10,0KOHM+-1%TK100 1206<br>RG CHIP RESISTOR       | RG 0007.0793.00      | PHILIPS_CO              | RC02                    |                           |
| R960             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R980             | RG 150 OHM+-1%TK100 1206<br>RESISTOR CHIP           | RG 0007.5589.00      | ROEDERSTEI              | D25                     |                           |
| R981             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R982             | RG 1,0 KO +-1%TK100 1206<br>CHIP RESISTOR           | RG 0006.7271.00      | PHILIPS_CO              | RC02                    |                           |
| R990             | RS 0,5W 1K+-10% Q10XH5<br>CERMET TRIMMING POTENTIOM | 2027.1446.00         | DIPLOMATIC              | P67 1K 10%              |                           |
| R995             | RS 0,5W 200K+-10% Q10XH5<br>POTENTIOMETER           | 1036.4377.00         | DIPLOMATIC              | P67 200K 10%            |                           |
| V100             | AD BAS32 75V UDI<br>DIODE                           | AD 0006.7288.00      | PHILIPS                 | BAS32 (L)               |                           |
| V102             | AD BAS32 75V UDI<br>DIODE                           | AD 0006.7288.00      | PHILIPS                 | BAS32 (L)               |                           |
| V287             | AK BC860B P 45V 200MA<br>TRANSISTOR                 | AK 0007.7975.00      | MOTOROLA                | BC860B                  |                           |
| V300             | AK BC337-40 N 45V 800MA<br>TRANSISTOR               | AK 0815.7684.00      | PHILIPS                 | BC337-40 GEGURTET       |                           |
| V301             | AK BC327-40 P 45V 800MA<br>TRANSISTOR               | AK 0815.7678.00      | PHILIPS_SE              | BC327-40GEGURTET        |                           |
| V302             | AD BAS32 75V UDI<br>DIODE                           | AD 0006.7288.00      | PHILIPS                 | BAS32 (L)               |                           |
| V303             | AD BAS32 75V UDI<br>DIODE                           | AD 0006.7288.00      | PHILIPS                 | BAS32 (L)               |                           |
| V306             | AE HSMS2800 SCHOTTKY<br>DIODE                       | AE 0836.8421.00      | HEWLETT_PA              | HSMS-2800(#L31)         |                           |
| V390             | AE 1N4684 3V3 0.3W ZDI<br>ZENER DIODE               | 0641.7234.00         | MOTOROLA                | 1N4684                  |                           |
| V391             | AK BC327-40 P 45V 800MA<br>TRANSISTOR               | AK 0815.7678.00      | PHILIPS_SE              | BC327-40GEGURTET        |                           |
| V400             | AD BAS32 75V UDI<br>DIODE                           | AD 0006.7288.00      | PHILIPS                 | BAS32 (L)               |                           |
| V405             | AK BC850B N 45V 200MA<br>TRANSISTOR                 | AK 0007.7969.00      | VALVO                   | BC850B                  |                           |
| V550<br>. . 555  | AE HSMS2800 SCHOTTKY<br>DIODE                       | AE 0836.8421.00      | HEWLETT_PA              | HSMS-2800(#L31)         |                           |
| V611             | AD BAS32 75V UDI<br>DIODE                           | AD 0006.7288.00      | PHILIPS                 | BAS32 (L)               |                           |
| V700             | AD BAV99 70V DUO UDI<br>DIODE                       | AD 0911.0092.00      | VALVO                   | BAV99                   |                           |

MENP1

502 3PU-D

AI

Datum  
Date

Schaltteilliste für  
Parts list for

Sachnummer  
Stock No.

Blatt-Nr.  
Page



**ROHDE & SCHWARZ**

18

04.02.98

ED RECHNER

**1035.7250.01 SA**

9+

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| Kennz.<br>Comp. No. | Benennung<br>Designation   | Sachnummer<br>Stock No. | Hersteller<br>Manufacturer | Bezeichnung<br>Designation | enthalten in<br>contained in |
|---------------------|--|-------------------------|----------------------------|----------------------------|------------------------------|
| X31                 | DY BUCHSENLEISTE W31   | 1035.7320.00            |                            |                            |                              |
| X33                 | FP STECKERLEISTE 10P.GER<br>CONNECTOR 10P                        | 0846.4593.00            | SIEMENS                    | V23535-A2200-A102          |                              |
| X34                 | FP STECKERLEISTE 26P.GER<br>CONNECTOR 26P.                       | FP 0820.8610.00         | SIEMENS                    | V23535-A2200-A262          |                              |
| X35                 | DY BUCHSENLEISTE W35   | 1035.7337.00            |                            |                            |                              |
| X36                 | FP LEITERPLATTENVERB. 13P<br>CONNECTOR                           | 0840.6436.00            | DUPONT CON                 | 68100-013                  |                              |
| X37                 | FP LEITERPLATTENVERB. 13P<br>CONNECTOR                           | 0840.6436.00            | DUPONT CON                 | 68100-013                  |                              |
| X85                 | FP STIFTFLEISTE 36P.R2,54<br>PIN CONNECTOR<br>2-POLIG/2 PINS     | FP 0242.3600.00         | BINDER                     | 742-11-0179-00-36          |                              |
| X105                | FP STIFTL.WIN 36P.R2,54<br>ANGLE PIN CONNECTOR<br>2-POLIG/2 PINS | FP 0243.3578.00         | BINDER                     | 742-5-11-0187-00-36        |                              |
| X200                | FP STIFTFLEISTE 36P.R2,54<br>PIN CONNECTOR<br>2-POLIG/2 PINS     | FP 0242.3600.00         | BINDER                     | 742-11-0179-00-36          |                              |
| X300                | FP STIFTFLEISTE 36P.R2,54<br>PIN CONNECTOR<br>2-POLIG/2 PINS     | FP 0242.3600.00         | BINDER                     | 742-11-0179-00-36          |                              |
| X312                | FP STIFTL.WIN 36P.R2,54<br>ANGLE PIN CONNECTOR<br>5-POLIG/5 PINS | FP 0243.3578.00         | BINDER                     | 742-5-11-0187-00-36        |                              |
| X600                | FP STIFTFLEISTE 36P.R2,54<br>PIN CONNECTOR<br>3-POLIG/3 PINS     | FP 0242.3600.00         | BINDER                     | 742-11-0179-00-36          |                              |
| X700                | FP STIFTFLEISTE 36P.R2,54<br>PIN CONNECTOR<br>2-POLIG/2 PINS     | FP 0242.3600.00         | BINDER                     | 742-11-0179-00-36          |                              |
| X800                | FP STIFTFLEISTE 36P.R2,54<br>PIN CONNECTOR<br>3-POLIG/3 PINS     | FP 0242.3600.00         | BINDER                     | 742-11-0179-00-36          |                              |
| X900                | FP STIFTFLEISTE 36P.R2,54<br>PIN CONNECTOR<br>2-POLIG/2 PINS     | FP 0242.3600.00         | BINDER                     | 742-11-0179-00-36          |                              |

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|--|-----------------|----|---------------|---------------------------------------|------------------------|------------------|
| MENP1  | 502 3PU-D       | AI | Datum<br>Date | Schaltteilliste für<br>Parts list for | Sachnummer<br>Stock No | Blatt-Nr<br>Page |
|  | ROHDE & SCHWARZ | 18 | 04.02.98      | ED RECHNER                            | <b>1035.7250.01 SA</b> | 10-              |



## XY-Liste

## XY List

### Erklärung der Spaltenbezeichnungen:

- Part:** Bauelement-Kennzeichen.
- Side:** Leiterplatten-Seite, auf der sich das Bauelement befindet.
- XY:** Koordinaten (Millimeter) des Bauelementes auf der Leiterplatte bezogen auf den Nullpunkt.
- SQR, PG:** Planquadrat und Seite des Schaltbildes für das jeweilige Bauelement.

### Explanation of column designations:

- Part:** Identification of instrument part.
- Side:** Side of the PC board on which instrument part is positioned.
- XY:** Coordinates (millimeter) of the component on the PC board in reference to zero point.
- SQR, PG:** Square and page of the diagram for the respective instrument part.



| Service-Relevante Bauteile / Service-Relevant Components |      |    |    |     |    |      |      |    |    |     |    |      |      |    |    |     |    |
|--|------|----|----|-----|----|------|------|----|----|-----|----|------|------|----|----|-----|----|
| Part   | Side | X  | Y  | Sqr | Pg | Part | Side | X  | Y  | Sqr | Pg | Part | Side | X  | Y  | Sqr | Pg |
| E1   | A    | 36 | 27 | 7D  | 1  | S1   | A    | 22 | 43 | 7D  | 1  | X7   | B    | 73 | 97 | 6B  | 1  |
| E2   | A    | 41 | 34 | 7C  | 1  | X5   | B    | 76 | 35 | 1F  | 1  |      |      |    |    |     |    |
| R71  | B    | 25 | 10 | 5C  | 1  | X6   | B    | 4  | 95 | 6E  | 1  |      |      |    |    |     |    |

|                       |    |               |                               |   |                         |               |
|-----------------------|----|---------------|-------------------------------|---|-------------------------|---------------|
| ROHDE<br>&<br>SCHWARZ | -I | Datum<br>Date |                               | XY-Liste f <sup>nr</sup><br>XY-list for | Sach-Nummer<br>Stock-Nr | Blatt<br>Page |
|                       | 06 | 07.04.94      | ED DREHGEBER<br>KNOB_ASSEMBLY |   | 1035.5592.01 XY         | 1+            |

| Nicht-Service-Relevante Bauteile / Non-Service-Relevant Components |      |    |    |     |    |       |      |    |    |     |    |      |      |    |    |     |    |
|--|------|----|----|-----|----|-------|------|----|----|-----|----|------|------|----|----|-----|----|
| Part   | Side | X  | Y  | Sqr | Pg | Part  | Side | X  | Y  | Sqr | Pg | Part | Side | X  | Y  | Sqr | Pg |
| C11  | A    | 60 | 46 | 1C  | 1  | C76   | A    | 32 | 10 | 5C  | 1  | R57  | A    | 52 | 98 | 3D  | 1  |
| C12  | B    | 55 | 41 | 2C  | 1  | C77   | A    | 39 | 4  | 4C  | 1  | R58  | A    | 45 | 93 | 4D  | 1  |
| C13  | A    | 59 | 37 | 2C  | 1  | C79   | A    | 67 | 45 | 4B  | 1  | R59  | A    | 22 | 91 | 4D  | 1  |
| C50  | B    | 53 | 51 | 2D  | 1  | L10   | B    | 58 | 33 | 2C  | 1  | R60  | A    | 19 | 88 | 5E  | 1  |
| C51  | B    | 58 | 66 | 2D  | 1  | L50   | B    | 45 | 68 | 2D  | 1  | R61  | A    | 24 | 85 | 5E  | 1  |
| C52  | B    | 51 | 81 | 5E  | 1  | L51   | B    | 36 | 95 | 6E  | 1  | R72  | B    | 52 | 6  | 3C  | 1  |
| C53  | B    | 39 | 79 | 6E  | 1  | N50   | B    | 29 | 76 | 4E  | 1  | R73  | A    | 25 | 7  | 5C  | 1  |
| C54  | A    | 53 | 54 | 1D  | 1  | N51-A | A    | 55 | 95 | 3D  | 1  | R74  | B    | 58 | 3  | 3C  | 1  |
| C55  | A    | 59 | 70 | 2D  | 1  | N51-B |      |    |    | 4D  | 1  | R75  | A    | 32 | 7  | 5C  | 1  |
| C56  | A    | 14 | 85 | 5E  | 1  | N51-C |      |    |    | 2A  | 1  | R76  | A    | 42 | 6  | 4B  | 1  |
| C57  | A    | 42 | 79 | 6E  | 1  | N70   | A    | 37 | 10 | 3B  | 1  | R77  | A    | 65 | 28 | 4B  | 1  |
| C58  | A    | 45 | 96 | 2A  | 1  | MAS   | B    | 56 | 58 | 2D  | 1  | R78  | A    | 65 | 34 | 4B  | 1  |
| C59  | A    | 17 | 85 | 5E  | 1  | R1    | A    | 39 | 27 | 7D  | 1  | V48  | B    | 34 | 90 | 3E  | 1  |
| C60  | B    | 29 | 97 | 4D  | 1  | R2    | A    | 44 | 29 | 7C  | 1  | V50  | A    | 50 | 88 | 3D  | 1  |
| C61  | B    | 27 | 90 | 4D  | 1  | R48   | A    | 41 | 88 | 3E  | 1  | V51  | A    | 59 | 93 | 3D  | 1  |
| C70  | B    | 45 | 23 | 3B  | 1  | R49   | A    | 38 | 85 | 3E  | 1  | V52  | B    | 16 | 90 | 5D  | 1  |
| C71  | B    | 62 | 9  | 3C  | 1  | R50   | A    | 19 | 83 | 5E  | 1  | V70  | B    | 57 | 10 | 4C  | 1  |
| C72  | B    | 51 | 21 | 4C  | 1  | R53   | A    | 22 | 79 | 5E  | 1  | V71  | B    | 48 | 7  | 4C  | 1  |
| C73  | B    | 51 | 11 | 4C  | 1  | R54   | A    | 41 | 90 | 3E  | 1  | V75  | B    | 68 | 25 | 4B  | 1  |
| C74  | B    | 53 | 29 | 5C  | 1  | R55   | A    | 33 | 92 | 4E  | 1  | X10  | B    | 72 | 3  | 6C  | 1  |
| C75  | A    | 49 | 24 | 3B  | 1  | R56   | A    | 30 | 93 | 4E  | 1  |      |      |    |    |     |    |

|                       |    |               |                               |                         |               |
|-----------------------|----|---------------|-------------------------------|-------------------------|---------------|
| ROHDE<br>&<br>SCHWARZ | -I | Datum<br>Date | XY-Liste für<br>XY-list for   | Sach-Nummer<br>Stock-Nr | Blatt<br>Page |
|                       | 06 | 07.04.94      | ED DREHGEBER<br>KNOB_ASSEMBLY | 1035.5592.01 XY         | 2-            |

| Nicht-Service-Relevante Bauteile / Non-Service-Relevant Components |      |     |     |     |    |      |      |     |     |     |    |        |      |     |     |     |    |
|--|------|-----|-----|-----|----|------|------|-----|-----|-----|----|--------|------|-----|-----|-----|----|
| Part   | Side | X   | Y   | Sqr | Pg | Part | Side | X   | Y   | Sqr | Pg | Part   | Side | X   | Y   | Sqr | Pg |
| 1  | B    | 276 | 11  | 3E  | 4  | C566 | B    | 10  | 91  | 4A  | 7  | C864   | A    | 103 | 86  | 10D | 10 |
| 2  | B    | 240 | 11  | 3E  | 4  | C567 | B    | 33  | 119 | 5A  | 7  | C865   | A    | 103 | 83  | 11D | 10 |
| C102   | B    | 229 | 48  | 6A  | 2  | C568 | B    | 32  | 116 | 6A  | 7  | C866   | A    | 103 | 81  | 11D | 10 |
| C103   | B    | 213 | 33  | 7A  | 2  | C569 | B    | 13  | 128 | 6A  | 7  | C867   | A    | 103 | 78  | 11D | 10 |
| C106   | A    | 237 | 29  | 7A  | 2  | C570 | B    | 34  | 106 | 3D  | 7  | C868   | B    | 134 | 85  | 7A  | 10 |
| C109   | B    | 222 | 42  | 3E  | 2  | C571 | B    | 36  | 106 | 4D  | 7  | C869   | A    | 95  | 107 | 8D  | 10 |
| C110   | A    | 231 | 98  | 4A  | 2  | C572 | B    | 39  | 106 | 4D  | 7  | C875   | A    | 136 | 105 | 2A  | 10 |
| C111   | A    | 226 | 90  | 4A  | 2  | C573 | B    | 41  | 106 | 4D  | 7  | C876   | A    | 142 | 91  | 3A  | 10 |
| C112   | A    | 236 | 76  | 4A  | 2  | C574 | B    | 44  | 110 | 3D  | 7  | C877   | A    | 159 | 106 | 3A  | 10 |
| C113   | A    | 247 | 81  | 4A  | 2  | C575 | B    | 46  | 110 | 4D  | 7  | C878   | A    | 143 | 114 | 3A  | 10 |
| C120   | A    | 235 | 133 | 1A  | 2  | C576 | B    | 49  | 110 | 4D  | 7  | C900   | A    | 155 | 27  | 2E  | 12 |
| C121   | A    | 232 | 123 | 2A  | 2  | C577 | A    | 58  | 128 | 2A  | 7  | C901   | B    | 157 | 27  | 2E  | 12 |
| C122   | B    | 243 | 136 | 2A  | 2  | C580 | B    | 10  | 131 | 7C  | 7  | C902   | B    | 161 | 68  | 2E  | 12 |
| C132   | A    | 258 | 139 | 4D  | 2  | C590 | A    | 25  | 137 | 6A  | 6  | C904   | A    | 155 | 51  | 3E  | 12 |
| C200   | A    | 269 | 54  | 2A  | 3  | C610 | A    | 65  | 13  | 5A  | 9  | C910   | A    | 167 | 27  | 2D  | 12 |
| C201   | A    | 337 | 37  | 3A  | 3  | C631 | A    | 90  | 45  | 4A  | 9  | C911   | B    | 170 | 27  | 2D  | 12 |
| C202   | A    | 207 | 76  | 3A  | 3  | C632 | A    | 76  | 34  | 4A  | 9  | C912   | B    | 173 | 65  | 2D  | 12 |
| C204   | A    | 231 | 85  | 4A  | 3  | C636 | A    | 116 | 21  | 2A  | 9  | C914   | A    | 163 | 51  | 3D  | 12 |
| C205   | A    | 258 | 24  | 4A  | 3  | C638 | A    | 69  | 69  | 3A  | 9  | C920   | A    | 168 | 37  | 2D  | 12 |
| C207   | A    | 250 | 62  | 5A  | 3  | C700 | A    | 116 | 57  | 7E  | 8  | C921   | B    | 173 | 68  | 2D  | 12 |
| C208   | A    | 283 | 144 | 6A  | 3  | C701 | B    | 121 | 37  | 7F  | 8  | C924   | A    | 172 | 56  | 3D  | 12 |
| C212   | B    | 248 | 55  | 6A  | 3  | C702 | A    | 118 | 39  | 7F  | 8  | C925   | B    | 170 | 39  | 2D  | 12 |
| C213   | A    | 310 | 35  | 7A  | 3  | C703 | A    | 120 | 73  | 8E  | 8  | C950   | A    | 22  | 74  | 5A  | 11 |
| C214   | A    | 247 | 79  | 7A  | 3  | C704 | A    | 135 | 64  | 9E  | 8  | C955   | A    | 34  | 38  | 7A  | 11 |
| C215   | A    | 302 | 24  | 11D | 3  | C705 | A    | 135 | 67  | 9E  | 8  | C956   | A    | 36  | 64  | 7A  | 11 |
| C216   | A    | 321 | 20  | 11D | 3  | C706 | A    | 165 | 86  | 5A  | 8  | C960   | A    | 30  | 38  | 6A  | 11 |
| C290   | A    | 269 | 45  | 8C  | 3  | C710 | B    | 129 | 41  | 5C  | 8  | C970   | A    | 32  | 14  | 8A  | 11 |
| C310   | A    | 263 | 128 | 3A  | 4  | C711 | B    | 133 | 37  | 6C  | 8  | C980   | A    | 13  | 43  | 5A  | 11 |
| C311   | A    | 320 | 120 | 3A  | 4  | C720 | B    | 152 | 58  | 3D  | 8  | D10A   | B    | 236 | 73  | 3B  | 2  |
| C312   | B    | 336 | 63  | 4A  | 4  | C721 | A    | 166 | 53  | 3D  | 8  | D60A   | B    | 116 | 65  | 8E  | 9  |
| C313   | B    | 336 | 84  | 5A  | 4  | C722 | A    | 156 | 61  | 3D  | 8  | D60B   | B    | 116 | 65  | 8E  | 9  |
| C314   | B    | 337 | 27  | 5A  | 4  | C730 | A    | 147 | 41  | 8C  | 8  | D60C   | B    | 116 | 65  | 6E  | 9  |
| C315   | B    | 336 | 44  | 6A  | 4  | C731 | A    | 149 | 39  | 8B  | 8  | D60D   | B    | 116 | 65  | 8D  | 9  |
| C316   | B    | 276 | 104 | 7A  | 4  | C735 | A    | 138 | 46  | 10C | 8  | D61A   | B    | 65  | 25  | 5C  | 9  |
| C400   | B    | 340 | 137 | 5E  | 5  | C736 | A    | 148 | 64  | 10D | 8  | D61B   | B    | 65  | 25  | 4C  | 9  |
| C411   | A    | 280 | 128 | 1A  | 5  | C737 | B    | 152 | 66  | 11C | 8  | D61C   | B    | 65  | 25  | 5C  | 9  |
| C412   | A    | 284 | 100 | 2A  | 5  | C738 | A    | 133 | 18  | 7C  | 8  | D61D   | B    | 65  | 25  | 4C  | 9  |
| C413   | A    | 288 | 79  | 2A  | 5  | C739 | A    | 126 | 10  | 7D  | 8  | D63A   | B    | 83  | 40  | 9E  | 9  |
| C420   | A    | 337 | 129 | 3E  | 5  | C740 | B    | 141 | 27  | 3A  | 8  | D63B   | B    | 83  | 40  | 9E  | 9  |
| C421   | A    | 333 | 119 | 5E  | 5  | C741 | B    | 141 | 21  | 4A  | 8  | D64A   | B    | 76  | 26  | 9D  | 9  |
| C422   | A    | 333 | 137 | 4E  | 5  | C742 | A    | 155 | 87  | 4A  | 8  | D64B   | B    | 76  | 26  | 4A  | 9  |
| C500   | A    | 92  | 125 | 3A  | 6  | C800 | A    | 126 | 134 | 8A  | 10 | D64C   | B    | 76  | 26  | 9C  | 9  |
| C510   | B    | 54  | 122 | 4A  | 6  | C810 | A    | 106 | 128 | 4A  | 10 | D64D   | B    | 76  | 26  | 9C  | 9  |
| C520   | B    | 58  | 109 | 5A  | 6  | C820 | A    | 150 | 138 | 5A  | 10 | D85-A  | B    | 107 | 113 | 7E  | 10 |
| C540   | A    | 77  | 117 | 4A  | 6  | C825 | A    | 149 | 131 | 5A  | 10 | D85-B  |      |     |     | 4A  | 10 |
| C550   | A    | 9   | 81  | 9E  | 7  | C830 | B    | 161 | 138 | 6A  | 10 | D86A   | B    | 101 | 109 | 8B  | 10 |
| C551   | A    | 6   | 81  | 9E  | 7  | C840 | A    | 163 | 128 | 6A  | 10 | D87A   | B    | 143 | 94  | 1A  | 10 |
| C552   | A    | 65  | 82  | 1A  | 7  | C855 | A    | 88  | 136 | 7E  | 10 | D90A   | B    | 36  | 41  | 7A  | 11 |
| C560   | A    | 30  | 127 | 2A  | 7  | C856 | A    | 113 | 115 | 4A  | 10 | D103-A | B    | 227 | 53  | 3C  | 2  |
| C561   | B    | 32  | 141 | 3A  | 7  | C860 | B    | 140 | 83  | 9E  | 10 | D103-B |      |     |     | 6A  | 2  |
| C562   | B    | 19  | 90  | 3A  | 7  | C861 | B    | 130 | 76  | 9D  | 10 | D106-A | B    | 234 | 38  | 5E  | 4  |
| C563   | B    | 25  | 102 | 4A  | 7  | C862 | B    | 121 | 80  | 10E | 10 | D106-B |      |     |     | 6E  | 4  |
| C565   | B    | 10  | 102 | 5A  | 7  | C863 | B    | 123 | 76  | 10D | 10 | D106-C |      |     |     | 3E  | 2  |

|                       |    |               |                             |                         |               |
|-----------------------|----|---------------|-----------------------------|-------------------------|---------------|
| ROHDE<br>&<br>SCHWARZ | -I | Datum<br>Date | XY-Liste für<br>XY-list for | Sach-Nummer<br>Stock-Nr | Blatt<br>Page |
|                       | 02 | 04.03.94      | ED RECHNER<br>PROCESSOR     | 1035.7250.01 XY         | 1+            |

| Part     | Side | X   | Y | Sqr | Pg | Part     | Side | X   | Y | Sqr | Pg | Part     | Side | X   | Y | Sqr | Pg |
|----------|------|-----|---|-----|----|----------|------|-----|---|-----|----|----------|------|-----|---|-----|----|
| D106-D   |      |     |   | 4E  | 2  | D500-B   |      |     |   | 3A  | 6  | D600-B   |      |     |   | 2A  | 9  |
| D106-E   |      |     |   | 7A  | 2  | D510-A A | 57   | 118 |   | 3D  | 6  | D621-A A | 85   | 69  |   | 3E  | 9  |
| D120-A B | 228  | 135 |   | 5E  | 2  | D510-B   |      |     |   | 4A  | 6  | D621-B   |      |     |   | 3E  | 9  |
| D120-B   |      |     |   | 2A  | 2  | D520-A A | 60   | 106 |   | 5E  | 6  | D621-C   |      |     |   | 8C  | 9  |
| D200-A A | 266  | 44  |   | 9C  | 3  | D520-B   |      |     |   | 5D  | 6  | D621-D   |      |     |   | 6A  | 9  |
| D200-B   |      |     |   | 2A  | 3  | D520-C   |      |     |   | 5C  | 6  | D621-E   |      |     |   | 5A  | 9  |
| D201-A A | 335  | 30  |   | 10E | 3  | D520-D   |      |     |   | 4D  | 6  | D700 A   | 126  | 39  |   | 5D  | 8  |
| D201-B   |      |     |   | 3A  | 3  | D520-E   |      |     |   | 5A  | 6  | D701-A A | 145  | 17  |   | 7C  | 8  |
| D202-A A | 217  | 80  |   | 3C  | 3  | D540-A B | 70   | 117 |   | 3C  | 6  | D701-B   |      |     |   | 7C  | 8  |
| D202-B   |      |     |   | 3C  | 3  | D540-B   |      |     |   | 4A  | 6  | D701-C   |      |     |   | 7B  | 8  |
| D202-C   |      |     |   | 3A  | 3  | D550-A A | 65   | 68  |   | 2C  | 7  | D701-D   |      |     |   | 7B  | 8  |
| D204-A A | 233  | 98  |   | 3F  | 3  | D550-B   |      |     |   | 1A  | 7  | D701-E   |      |     |   | 3A  | 8  |
| D204-B   |      |     |   | 4A  | 3  | D560-A A | 33   | 136 |   | 7D  | 7  | D702-A A | 165  | 77  |   | 5E  | 8  |
| D205-A A | 261  | 34  |   | 3D  | 3  | D560-B   |      |     |   | 2A  | 7  | D702-B   |      |     |   | 5B  | 8  |
| D205-B   |      |     |   | 4A  | 3  | D561-A B | 36   | 135 |   | 5C  | 7  | D702-C   |      |     |   | 5A  | 8  |
| D208-A A | 252  | 69  |   | 5E  | 3  | D561-B   |      |     |   | 5C  | 7  | D703-A A | 155  | 74  |   | 3C  | 8  |
| D208-B   |      |     |   | 5A  | 3  | D561-C   |      |     |   | 6C  | 7  | D703-B   |      |     |   | 4A  | 8  |
| D209-A B | 275  | 146 |   | 5D  | 3  | D561-D   |      |     |   | 3A  | 7  | D704 B   | 138  | 55  |   | 9C  | 8  |
| D209-B   |      |     |   | 6A  | 3  | D562-A A | 20   | 93  |   | 8A  | 7  | D706 B   | 121  | 55  |   | 6F  | 8  |
| D213-A A | 313  | 36  |   | 10D | 3  | D562-B   |      |     |   | 10D | 7  | D707 A   | 163  | 65  |   | 3D  | 8  |
| D213-B   |      |     |   | 8A  | 3  | D562-C   |      |     |   | 11D | 7  | D800-A B | 125  | 132 |   | 3F  | 10 |
| D214-A B | 239  | 55  |   | 8F  | 3  | D562-D   |      |     |   | 3A  | 7  | D800-B   |      |     |   | 8A  | 10 |
| D214-B   |      |     |   | 6A  | 3  | D563-A A | 27   | 98  |   | 10C | 7  | D810-A A | 107  | 142 |   | 3E  | 10 |
| D216-A A | 252  | 88  |   | 3E  | 3  | D563-B   |      |     |   | 10C | 7  | D810-B   |      |     |   | 4A  | 10 |
| D216-B   |      |     |   | 7A  | 3  | D563-C   |      |     |   | 4A  | 7  | D820-A A | 147  | 135 |   | 4D  | 10 |
| D300-A B | 259  | 124 |   | 3C  | 4  | D565-A A | 11   | 98  |   | 11E | 7  | D820-B   |      |     |   | 4D  | 10 |
| D300-B   |      |     |   | 3A  | 4  | D565-B   |      |     |   | 11E | 7  | D820-C   |      |     |   | 4D  | 10 |
| D301-A B | 316  | 121 |   | 5D  | 4  | D565-C   |      |     |   | 5A  | 7  | D820-D   |      |     |   | 4D  | 10 |
| D301-B   |      |     |   | 3A  | 4  | D566-A A | 11   | 86  |   | 9E  | 7  | D820-E   |      |     |   | 5A  | 10 |
| D302-A B | 333  | 82  |   | 7E  | 4  | D566-B   |      |     |   | 10E | 7  | D825-A A | 147  | 124 |   | 4E  | 10 |
| D302-B   |      |     |   | 4A  | 4  | D566-C   |      |     |   | 9D  | 7  | D825-B   |      |     |   | 4D  | 10 |
| D303-A B | 333  | 102 |   | 9E  | 4  | D566-D   |      |     |   | 10D | 7  | D825-C   |      |     |   | 5E  | 10 |
| D303-B   |      |     |   | 5A  | 4  | D566-E   |      |     |   | 4A  | 7  | D825-D   |      |     |   | 5D  | 10 |
| D304-A B | 333  | 41  |   | 7D  | 4  | D567-A A | 36   | 121 |   | 4D  | 7  | D825-E   |      |     |   | 5A  | 10 |
| D304-B   |      |     |   | 6A  | 4  | D567-B   |      |     |   | 4D  | 7  | D830-A A | 161  | 135 |   | 5D  | 10 |
| D305-A B | 333  | 62  |   | 9D  | 4  | D567-C   |      |     |   | 4D  | 7  | D830-B   |      |     |   | 11C | 10 |
| D305-B   |      |     |   | 6A  | 4  | D567-D   |      |     |   | 4D  | 7  | D830-C   |      |     |   | 6A  | 10 |
| D310-A B | 270  | 100 |   | 3D  | 4  | D567-E   |      |     |   | 4D  | 7  | D840-A A | 160  | 124 |   | 5C  | 10 |
| D310-B   |      |     |   | 11F | 3  | D567-F   |      |     |   | 4D  | 7  | D840-B   |      |     |   | 5C  | 10 |
| D310-C   |      |     |   | 7A  | 4  | D567-G   |      |     |   | 5A  | 7  | D840-C   |      |     |   | 7A  | 10 |
| D400 A   | 334  | 123 |   | 3E  | 5  | D568-A B | 36   | 115 |   | 4D  | 7  | D840-D   |      |     |   | 7A  | 10 |
| D402-A B | 277  | 124 |   | 4C  | 5  | D568-B   |      |     |   | 7A  | 7  | D840-E   |      |     |   | 6A  | 10 |
| D402-B   |      |     |   | 1A  | 5  | D568-C   |      |     |   | 7A  | 7  | D860-A A | 133  | 79  |   | 9E  | 10 |
| D404-A B | 288  | 98  |   | 7D  | 5  | D568-D   |      |     |   | 8A  | 7  | D860-B   |      |     |   | 7A  | 10 |
| D404-B   |      |     |   | 2A  | 5  | D568-E   |      |     |   | 7A  | 7  | D950-A B | 26   | 77  |   | 6E  | 11 |
| D405-A B | 288  | 77  |   | 7F  | 5  | D568-F   |      |     |   | 7A  | 7  | D950-B   |      |     |   | 5A  | 11 |
| D405-B   |      |     |   | 2A  | 5  | D568-G   |      |     |   | 6A  | 7  | D960-A A | 30   | 23  |   | 10E | 11 |
| D410-A B | 283  | 13  |   | 4D  | 5  | D569-A B | 14   | 119 |   | 7C  | 7  | D960-B   |      |     |   | 6A  | 11 |
| D410-B   |      |     |   | 6A  | 5  | D569-B   |      |     |   | 7C  | 7  | D970-A A | 29   | 6   |   | 10D | 11 |
| D410-C   |      |     |   | 6A  | 5  | D569-C   |      |     |   | 6A  | 7  | D970-B   |      |     |   | 7A  | 11 |
| D424-A B | 288  | 34  |   | 9F  | 5  | D570-A A | 60   | 136 |   | 7E  | 7  | D980-A A | 14   | 57  |   | 10C | 11 |
| D424-B   |      |     |   | 4A  | 5  | D570-B   |      |     |   | 2A  | 7  | D980-B   |      |     |   | 5A  | 11 |
| D425-A B | 288  | 55  |   | 9D  | 5  | D590-A A | 25   | 124 |   | 9D  | 6  | G85 B    | 84   | 142 |   | 8F  | 10 |
| D425-B   |      |     |   | 5A  | 5  | D590-B   |      |     |   | 6A  | 6  | G100 B   | 268  | 145 |   | 4D  | 2  |
| D500-A A | 95   | 131 |   | 3E  | 6  | D600-A B | 120  | 19  |   | 4D  | 9  | G300 B   | 276  | 11  |   | 3E  | 4  |

|                       |    |               |                             |                         |               |
|-----------------------|----|---------------|-----------------------------|-------------------------|---------------|
| ROHDE<br>&<br>SCHWARZ | -I | Datum<br>Date | XY-Liste für<br>XY-list for | Sach-Nummer<br>Stock-Nr | Blatt<br>Page |
|                       | 02 | 04.03.94      | ED RECHNER<br>PROCESSOR     | 1035.7250.01 XY         | 2+            |



| Part   | Side | X   | Y   | Sqr | Pg | Part   | Side | X   | Y   | Sqr | Pg | Part   | Side | X   | Y   | Sqr | Pg |
|--------|------|-----|-----|-----|----|--------|------|-----|-----|-----|----|--------|------|-----|-----|-----|----|
| H200   | B    | 309 | 141 | 12E | 3  | R117-D |      |     |     | 11D | 2  | R286   | A    | 311 | 134 | 11F | 3  |
| K300-A | B    | 237 | 24  | 3E  | 4  | R117-E |      |     |     | 11D | 2  | R287   | A    | 311 | 137 | 12F | 3  |
| K300-B |      |     |     | 3E  | 4  | R117-F |      |     |     | 11D | 2  | R289   | A    | 274 | 104 | 11E | 3  |
| L900   | B    | 155 | 55  | 2E  | 12 | R117-G |      |     |     | 11D | 2  | R290   | A    | 255 | 33  | 8C  | 3  |
| L910   | B    | 163 | 55  | 2D  | 12 | R124   | A    | 229 | 78  | 9D  | 2  | R310   | A    | 307 | 124 | 4D  | 4  |
| L920   | B    | 173 | 60  | 2D  | 12 | R125   | A    | 227 | 83  | 8D  | 2  | R313   | A    | 248 | 31  | 2E  | 4  |
| N700   | A    | 147 | 30  | 8C  | 8  | R128   | A    | 235 | 123 | 5E  | 2  | R314   | A    | 243 | 36  | 1E  | 4  |
| N701   | A    | 129 | 13  | 6C  | 8  | R129   | A    | 213 | 38  | 3E  | 2  | R315   | A    | 278 | 22  | 3E  | 4  |
| N702   | B    | 131 | 72  | 8E  | 8  | R131   | A    | 212 | 102 | 7D  | 2  | R316   | A    | 230 | 24  | 3E  | 4  |
| P300   | B    | 255 | 30  | 2F  | 4  | R132   | A    | 212 | 100 | 7D  | 2  | R318   | B    | 257 | 115 | 3C  | 4  |
| P700   | B    | 121 | 64  | 7E  | 8  | R133   | A    | 212 | 105 | 7D  | 2  | R320   | A    | 232 | 35  | 5E  | 4  |
| P710   | B    | 130 | 15  | 6C  | 8  | R134   | A    | 212 | 97  | 7D  | 2  | R322   | A    | 311 | 120 | 4C  | 4  |
| P720   | B    | 159 | 57  | 4D  | 8  | R143   | B    | 216 | 50  | 3C  | 2  | R323   | A    | 311 | 116 | 5C  | 4  |
| P730   | B    | 144 | 39  | 9C  | 8  | R144   | B    | 216 | 53  | 3C  | 2  | R324   | A    | 307 | 127 | 6C  | 4  |
| R104   | B    | 243 | 128 | 5E  | 2  | R145   | B    | 212 | 45  | 3C  | 2  | R374   | A    | 147 | 27  | 7B  | 8  |
| R107   | A    | 211 | 32  | 3F  | 2  | R150   | A    | 224 | 107 | 10D | 2  | R380   | A    | 339 | 76  | 4E  | 4  |
| R108   | A    | 214 | 35  | 3E  | 2  | R151   | A    | 226 | 107 | 10D | 2  | R381   | A    | 339 | 54  | 5E  | 4  |
| R110   | A    | 229 | 107 | 10E | 2  | R153   | B    | 216 | 55  | 2C  | 2  | R382   | A    | 339 | 70  | 5E  | 4  |
| R111   | A    | 231 | 107 | 10E | 2  | R154   | B    | 216 | 48  | 2C  | 2  | R383   | A    | 339 | 51  | 5E  | 4  |
| R112   | A    | 234 | 107 | 10E | 2  | R200   | A    | 211 | 76  | 2B  | 3  | R384   | A    | 339 | 73  | 5E  | 4  |
| R113-A | B    | 266 | 87  | 10E | 2  | R209   | B    | 233 | 48  | 7F  | 3  | R390   | A    | 244 | 43  | 4F  | 4  |
| R113-B |      |     |     | 10E | 2  | R212   | A    | 258 | 35  | 1D  | 3  | R391   | A    | 239 | 39  | 4F  | 4  |
| R113-C |      |     |     | 10E | 2  | R213   | A    | 310 | 32  | 11D | 3  | R392   | A    | 232 | 42  | 5E  | 4  |
| R113-D |      |     |     | 10E | 2  | R214   | A    | 321 | 23  | 11D | 3  | R410   | B    | 283 | 25  | 4D  | 5  |
| R113-E |      |     |     | 10E | 2  | R220-A | B    | 276 | 63  | 6E  | 3  | R411   | B    | 280 | 25  | 4D  | 5  |
| R113-F |      |     |     | 10E | 2  | R220-B |      |     |     | 6E  | 3  | R412   | B    | 281 | 14  | 4D  | 5  |
| R113-G |      |     |     | 10E | 2  | R220-C |      |     |     | 6E  | 3  | R413   | A    | 283 | 10  | 6A  | 5  |
| R114-A | B    | 248 | 58  | 10E | 2  | R220-D |      |     |     | 6E  | 3  | R414   | A    | 283 | 8   | 6A  | 5  |
| R114-B |      |     |     | 10E | 2  | R220-E |      |     |     | 6E  | 3  | R415   | A    | 341 | 123 | 5F  | 5  |
| R114-C |      |     |     | 10E | 2  | R220-F |      |     |     | 6E  | 3  | R416   | A    | 283 | 13  | 6A  | 5  |
| R114-D |      |     |     | 10E | 2  | R220-G |      |     |     | 6E  | 3  | R418   | A    | 335 | 100 | 3E  | 5  |
| R114-E |      |     |     | 10D | 2  | R220-H |      |     |     | 6E  | 3  | R419   | A    | 328 | 128 | 3E  | 5  |
| R114-F |      |     |     | 10D | 2  | R220-I |      |     |     | 6E  | 3  | R420   | A    | 333 | 139 | 4E  | 5  |
| R114-G |      |     |     | 10D | 2  | R221-A | B    | 293 | 145 | 6D  | 3  | R422   | A    | 329 | 134 | 4E  | 5  |
| R114-H |      |     |     | 10D | 2  | R221-B |      |     |     | 6D  | 3  | R430   | B    | 276 | 115 | 3B  | 5  |
| R114-I |      |     |     | 10D | 2  | R221-C |      |     |     | 6D  | 3  | R431   | B    | 282 | 114 | 3B  | 5  |
| R115-A | B    | 229 | 119 | 7E  | 2  | R221-D |      |     |     | 6D  | 3  | R435   | B    | 329 | 131 | 5E  | 5  |
| R115-B |      |     |     | 7E  | 2  | R221-E |      |     |     | 6D  | 3  | R436   | B    | 276 | 83  | 5E  | 5  |
| R115-C |      |     |     | 7E  | 2  | R221-F |      |     |     | 6D  | 3  | R510   | A    | 50  | 115 | 3D  | 6  |
| R115-D |      |     |     | 7E  | 2  | R221-G |      |     |     | 6D  | 3  | R515   | A    | 34  | 89  | 7B  | 12 |
| R115-E |      |     |     | 7E  | 2  | R221-H |      |     |     | 6D  | 3  | R540   | A    | 65  | 111 | 3B  | 6  |
| R115-F |      |     |     | 7E  | 2  | R221-I |      |     |     | 6D  | 3  | R550   | A    | 3   | 77  | 9E  | 7  |
| R115-G |      |     |     | 7E  | 2  | R280   | A    | 340 | 25  | 9E  | 3  | R551   | A    | 10  | 74  | 9E  | 7  |
| R116-A | B    | 266 | 112 | 7E  | 2  | R281   | A    | 340 | 27  | 9E  | 3  | R552   | A    | 8   | 74  | 9E  | 7  |
| R116-B |      |     |     | 7E  | 2  | R282   | A    | 340 | 22  | 9E  | 3  | R553   | A    | 5   | 74  | 9E  | 7  |
| R116-C |      |     |     | 7E  | 2  | R283-A | B    | 268 | 39  | 8D  | 3  | R558   | A    | 17  | 91  | 8A  | 7  |
| R116-D |      |     |     | 7E  | 2  | R283-B |      |     |     | 8D  | 3  | R560-A | B    | 31  | 102 | 2D  | 7  |
| R116-E |      |     |     | 7E  | 2  | R283-C |      |     |     | 8D  | 3  | R560-B |      |     |     | 2D  | 7  |
| R116-F |      |     |     | 7E  | 2  | R283-D |      |     |     | 8D  | 3  | R560-C |      |     |     | 2D  | 7  |
| R116-G |      |     |     | 7E  | 2  | R283-E |      |     |     | 8D  | 3  | R560-D |      |     |     | 2D  | 7  |
| R116-H |      |     |     | 7D  | 2  | R283-F |      |     |     | 8D  | 3  | R560-E |      |     |     | 3D  | 7  |
| R116-I |      |     |     | 7D  | 2  | R283-G |      |     |     | 9D  | 3  | R560-F |      |     |     | 3D  | 7  |
| R117-A | B    | 222 | 58  | 11D | 2  | R283-H |      |     |     | 9D  | 3  | R560-G |      |     |     | 3D  | 7  |
| R117-B |      |     |     | 11D | 2  | R283-I |      |     |     | 9D  | 3  | R560-H |      |     |     | 3D  | 7  |
| R117-C |      |     |     | 11D | 2  | R285   | A    | 308 | 144 | 11E | 3  | R560-I |      |     |     | 3D  | 7  |

| ROHDE   | -I | Datum       | XY-Liste f#r            | Sach-Nummer     | Blatt |
|---------|----|-------------|-------------------------|-----------------|-------|
| &       |    | Date        | XY-list for             | Stock-Nr        | Page  |
| SCHWARZ |    | 02 04.03.94 | ED RECHNER<br>PROCESSOR | 1035.7250.01 XY | 3+    |

| Part   | Side | X   | Y   | Sqr | Pg | Part | Side | X   | Y   | Sqr | Pg | Part | Side | X   | Y   | Sqr | Pg |
|--------|------|-----|-----|-----|----|------|------|-----|-----|-----|----|------|------|-----|-----|-----|----|
| R561   | A    | 34  | 106 | 3D  | 7  | R716 | A    | 135 | 27  | 4C  | 8  | TP1  | B    | 227 | 125 | 5E  | 2  |
| R562   | A    | 36  | 106 | 3D  | 7  | R717 | A    | 137 | 27  | 4C  | 8  | TP2  | B    | 230 | 125 | 5E  | 2  |
| R563   | A    | 39  | 106 | 3D  | 7  | R718 | A    | 128 | 21  | 5C  | 8  | TP3  | B    | 232 | 125 | 5E  | 2  |
| R564   | A    | 41  | 106 | 3D  | 7  | R719 | A    | 131 | 21  | 5C  | 8  | TP4  | B    | 240 | 126 | 5E  | 2  |
| R565   | A    | 44  | 106 | 3D  | 7  | R720 | A    | 159 | 61  | 4D  | 8  | TP5  | B    | 245 | 138 | 5E  | 2  |
| R566   | A    | 46  | 106 | 3D  | 7  | R725 | A    | 159 | 74  | 5E  | 8  | TP6  | B    | 225 | 140 | 6E  | 2  |
| R567   | A    | 49  | 106 | 3D  | 7  | R726 | A    | 161 | 74  | 5E  | 8  | TP7  | B    | 164 | 121 | 8E  | 3  |
| R568   | A    | 17  | 104 | 10C | 7  | R727 | A    | 164 | 74  | 5E  | 8  | TP8  | B    | 44  | 8   | 3D  | 3  |
| R569   | A    | 31  | 108 | 10C | 7  | R728 | A    | 168 | 76  | 5C  | 8  | TP9  | B    | 34  | 74  | 3D  | 3  |
| R573   | A    | 14  | 91  | 10D | 7  | R730 | A    | 144 | 42  | 9D  | 8  | TP10 | B    | 41  | 32  | 3D  | 3  |
| R575   | A    | 14  | 104 | 10F | 7  | R731 | A    | 123 | 8   | 7C  | 8  | TP11 | B    | 168 | 107 | 3D  | 3  |
| R576   | A    | 3   | 95  | 11F | 7  | R732 | A    | 143 | 15  | 7C  | 8  | TP20 | B    | 175 | 133 | 4E  | 10 |
| R580   | B    | 6   | 125 | 6C  | 7  | R733 | A    | 149 | 15  | 7C  | 8  | TP21 | B    | 172 | 133 | 4E  | 10 |
| R581   | B    | 6   | 123 | 6C  | 7  | R735 | A    | 149 | 21  | 8C  | 8  | TP22 | B    | 83  | 112 | 7B  | 10 |
| R582   | B    | 6   | 120 | 7C  | 7  | R736 | A    | 153 | 32  | 8C  | 8  | V100 | A    | 216 | 38  | 3E  | 2  |
| R583   | B    | 10  | 128 | 7C  | 7  | R737 | A    | 153 | 35  | 8C  | 8  | V102 | A    | 220 | 35  | 3E  | 2  |
| R584   | A    | 17  | 107 | 10B | 7  | R800 | A    | 171 | 123 | 3C  | 10 | V287 | A    | 316 | 140 | 11E | 3  |
| R585   | A    | 28  | 107 | 10B | 7  | R801 | A    | 171 | 126 | 3C  | 10 | V300 | B    | 250 | 28  | 2E  | 4  |
| R590-A | B    | 29  | 117 | 7D  | 6  | R802 | A    | 132 | 143 | 3E  | 10 | V301 | B    | 245 | 28  | 2E  | 4  |
| R590-B |      |     |     | 8D  | 6  | R805 | A    | 125 | 128 | 3E  | 10 | V302 | A    | 241 | 27  | 2F  | 4  |
| R590-C |      |     |     | 8D  | 6  | R840 | A    | 167 | 128 | 7A  | 10 | V303 | A    | 226 | 27  | 3D  | 4  |
| R590-D |      |     |     | 8D  | 6  | R841 | A    | 165 | 131 | 7A  | 10 | V306 | A    | 254 | 25  | 2E  | 4  |
| R590-E |      |     |     | 8D  | 6  | R849 | A    | 180 | 127 | 10C | 10 | V390 | B    | 237 | 42  | 4E  | 4  |
| R590-F |      |     |     | 8D  | 6  | R851 | A    | 112 | 108 | 8E  | 10 | V391 | B    | 239 | 37  | 5F  | 4  |
| R590-G |      |     |     | 8D  | 6  | R852 | A    | 175 | 127 | 10C | 10 | V400 | A    | 341 | 131 | 5E  | 5  |
| R590-H |      |     |     | 8D  | 6  | R853 | A    | 165 | 133 | 10C | 10 | V405 | A    | 336 | 119 | 3E  | 5  |
| R590-I |      |     |     | 8D  | 6  | R857 | A    | 139 | 90  | 2D  | 11 | V550 | A    | 57  | 95  | 3C  | 7  |
| R591   | A    | 27  | 114 | 7C  | 6  | R859 | A    | 177 | 127 | 10C | 10 | V551 | A    | 54  | 95  | 3C  | 7  |
| R592   | A    | 24  | 114 | 8C  | 6  | R860 | B    | 120 | 87  | 9D  | 10 | V552 | A    | 50  | 95  | 3C  | 7  |
| R593   | A    | 22  | 114 | 8C  | 6  | R861 | A    | 110 | 78  | 10D | 10 | V553 | A    | 46  | 95  | 3B  | 7  |
| R594   | A    | 19  | 114 | 8C  | 6  | R862 | A    | 110 | 81  | 10D | 10 | V554 | A    | 42  | 95  | 3B  | 7  |
| R595   | A    | 17  | 114 | 8C  | 6  | R863 | A    | 110 | 83  | 10D | 10 | V555 | A    | 38  | 95  | 3B  | 7  |
| R596   | A    | 14  | 114 | 8C  | 6  | R864 | A    | 110 | 86  | 10D | 10 | V611 | A    | 316 | 20  | 10F | 12 |
| R597   | A    | 11  | 114 | 8C  | 6  | R865 | A    | 88  | 123 | 7C  | 10 | V700 | A    | 132 | 68  | 8E  | 8  |
| R598   | A    | 9   | 114 | 8C  | 6  | R870 | A    | 164 | 110 | 2E  | 11 | X31A | B    | 173 | 15  | 2E  | 12 |
| R605   | A    | 45  | 16  | 3B  | 9  | R871 | A    | 161 | 98  | 3D  | 11 | X33A | B    | 84  | 78  | 2B  | 12 |
| R606   | A    | 40  | 16  | 4B  | 9  | R872 | A    | 162 | 107 | 3C  | 11 | X33B | B    | 84  | 78  | 2B  | 12 |
| R607   | A    | 40  | 19  | 4B  | 9  | R873 | A    | 161 | 96  | 3C  | 11 | X34A | B    | 105 | 22  | 4F  | 12 |
| R610   | A    | 237 | 5   | 10E | 12 | R874 | A    | 160 | 114 | 3C  | 11 | X34B | B    | 105 | 22  | 4F  | 12 |
| R611   | A    | 311 | 27  | 10B | 12 | R875 | A    | 135 | 101 | 2C  | 11 | X34C | B    | 105 | 22  | 4D  | 12 |
| R619   | A    | 101 | 72  | 6E  | 9  | R876 | A    | 137 | 101 | 2C  | 11 | X34D | B    | 105 | 22  | 4D  | 12 |
| R634   | A    | 81  | 80  | 6A  | 9  | R877 | A    | 140 | 101 | 2C  | 11 | X35A | B    | 9   | 36  | 6F  | 12 |
| R700   | A    | 113 | 55  | 7F  | 8  | R878 | A    | 142 | 101 | 2C  | 11 | X35B | B    | 9   | 36  | 6F  | 12 |
| R701   | A    | 121 | 40  | 7E  | 8  | R879 | A    | 166 | 105 | 4D  | 11 | X35C | B    | 9   | 36  | 6D  | 12 |
| R702   | A    | 121 | 70  | 8E  | 8  | R880 | A    | 164 | 93  | 4D  | 11 | X35D | B    | 9   | 36  | 6D  | 12 |
| R703   | A    | 123 | 69  | 8E  | 8  | R881 | A    | 168 | 114 | 4D  | 11 | X36A | B    | 68  | 88  | 6C  | 12 |
| R705   | A    | 138 | 70  | 8F  | 8  | R951 | A    | 13  | 77  | 6E  | 11 | X36B | B    | 68  | 88  | 6B  | 12 |
| R706   | A    | 128 | 62  | 8E  | 8  | R952 | A    | 53  | 36  | 8E  | 11 | X37A | B    | 68  | 99  | 4C  | 12 |
| R707   | A    | 156 | 64  | 9E  | 8  | R959 | A    | 29  | 75  | 6E  | 11 | X37B | B    | 68  | 99  | 4B  | 12 |
| R710   | A    | 128 | 47  | 4C  | 8  | R960 | A    | 33  | 8   | 10B | 11 | X85  | B    | 105 | 122 | 8E  | 10 |
| R711   | A    | 131 | 47  | 4C  | 8  | R980 | A    | 24  | 41  | 11B | 11 | X105 | B    | 240 | 144 | 5D  | 2  |
| R712   | A    | 133 | 46  | 4C  | 8  | R981 | A    | 17  | 43  | 10B | 11 | X200 | B    | 250 | 37  | 8C  | 3  |
| R713   | A    | 136 | 46  | 4C  | 8  | R982 | A    | 18  | 62  | 10B | 11 | X300 | B    | 276 | 17  | 3E  | 4  |
| R714   | A    | 130 | 27  | 4C  | 8  | R990 | B    | 161 | 5   | 11B | 11 | X312 | B    | 292 | 14  | 10E | 12 |
| R715   | A    | 132 | 27  | 4C  | 8  | R995 | B    | 177 | 5   | 11B | 11 | X600 | B    | 77  | 86  | 8D  | 9  |

|                       |    |               |                             |                         |               |
|-----------------------|----|---------------|-----------------------------|-------------------------|---------------|
| ROHDE<br>&<br>SCHWARZ | -I | Datum<br>Date | XY-Liste f"r<br>XY-list for | Sach-Nummer<br>Stock-Nr | Blatt<br>Page |
|                       | 02 | 04.03.94      | ED RECHNER<br>PROCESSOR     | 1035.7250.01 XY         | 4+            |

| Part | Side | X   | Y  | Sqr | Pg | Part | Side | X   | Y   | Sqr | Pg | Part | Side | X   | Y  | Sqr | Pg |
|------|------|-----|----|-----|----|------|------|-----|-----|-----|----|------|------|-----|----|-----|----|
| X700 | B    | 132 | 24 | 4D  | 8  | X800 | B    | 177 | 133 | 3D  | 10 | X900 | B    | 158 | 18 | 2E  | 12 |

| ROHDE<br>&<br>SCHWARZ | -I | Datum<br>Date | XY-Liste für<br>XY-list for | Sach-Nummer<br>Stock-Nr | Blatt<br>Page |
|-----------------------|----|---------------|-----------------------------|-------------------------|---------------|
|                       | 02 | 04.03.94      | ED RECHNER<br>PROCESSOR     | 1035.7250.01 XY         | 5-            |

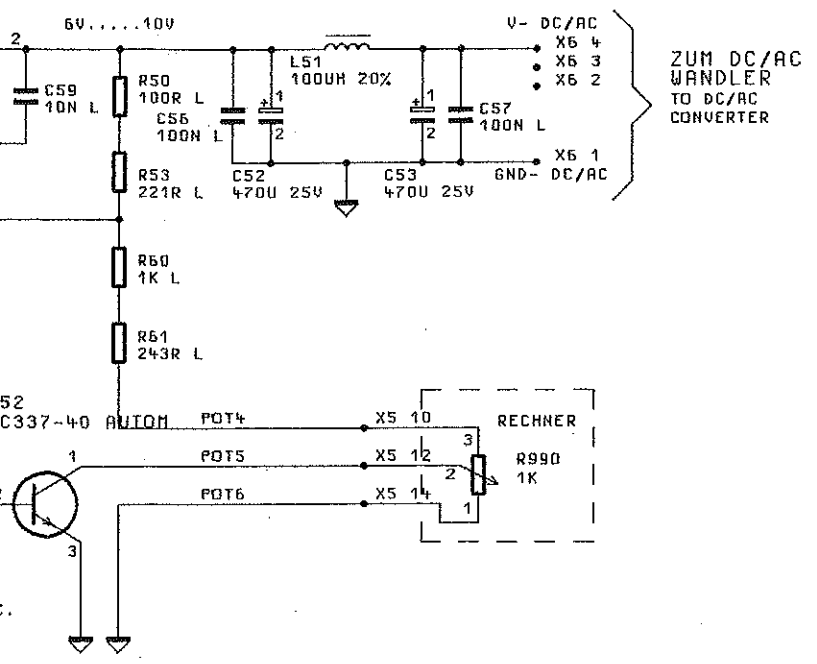




**ROHDE & SCHWARZ**

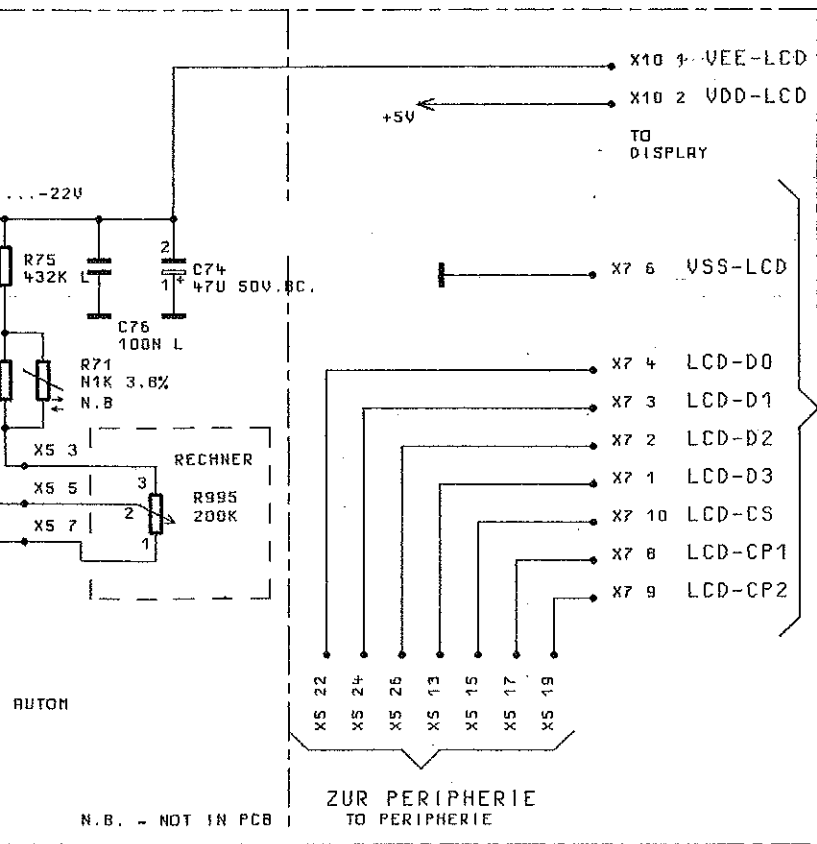
Stromläufe  
Bestückungspläne  
Circuit diagrams  
Components plans  
Schémas de circuit  
Plans des composants



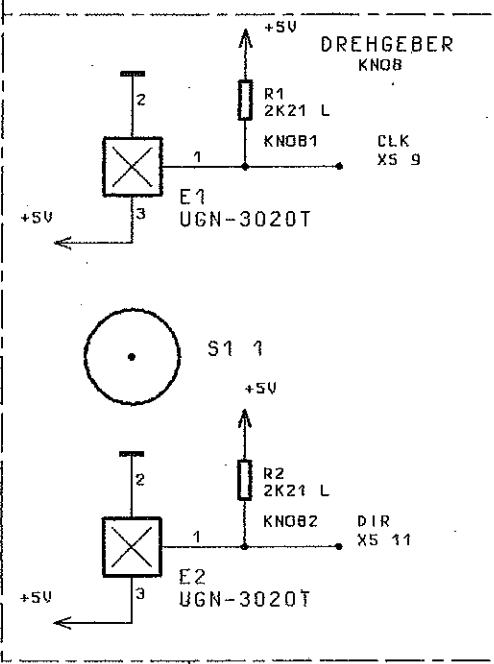


ZUM DC/AC WANDLER TO DC/AC CONVERTER

HELLIGKEITS- STEUERUNG BRIGHTNESS - CONTROL



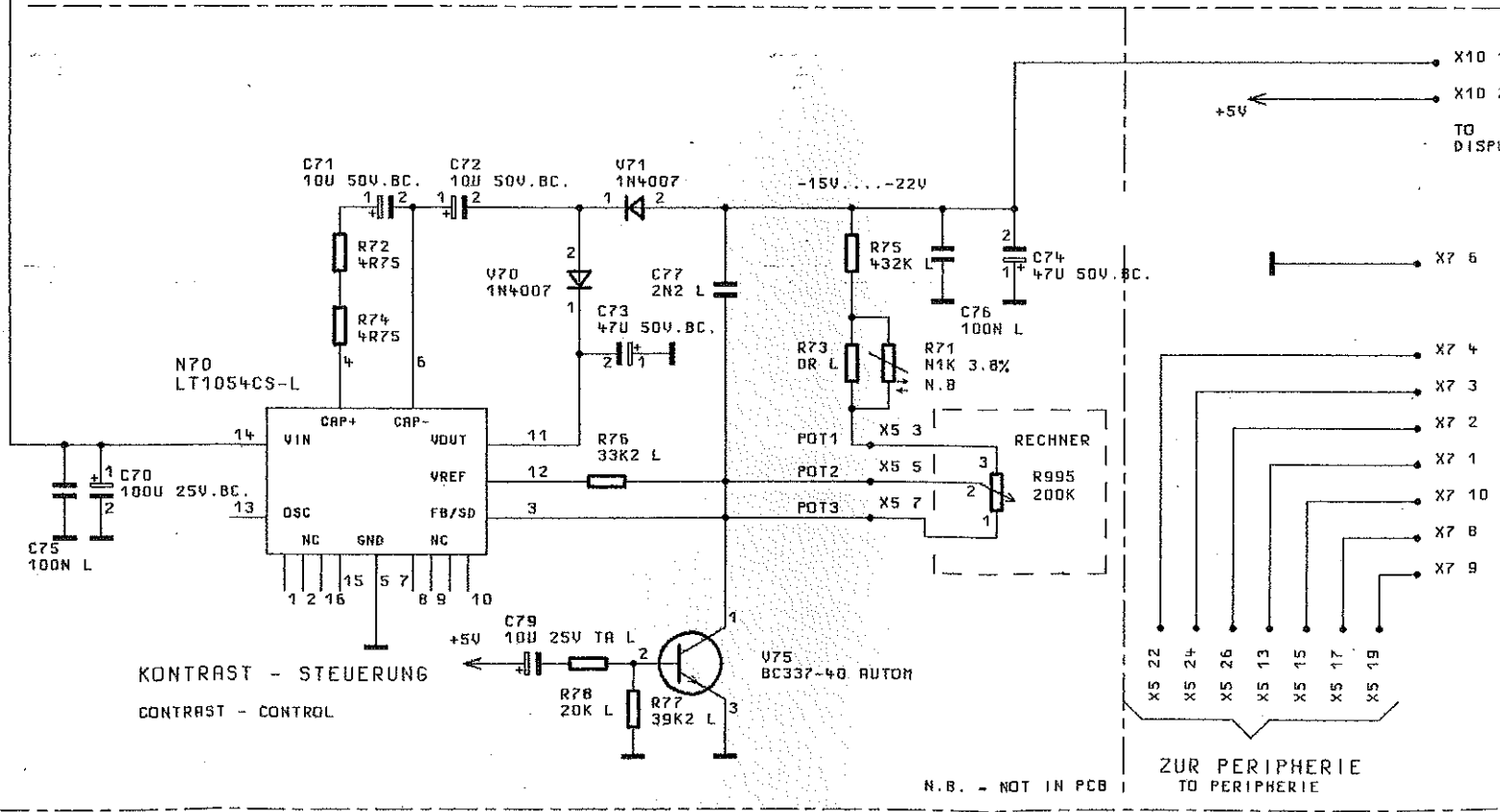
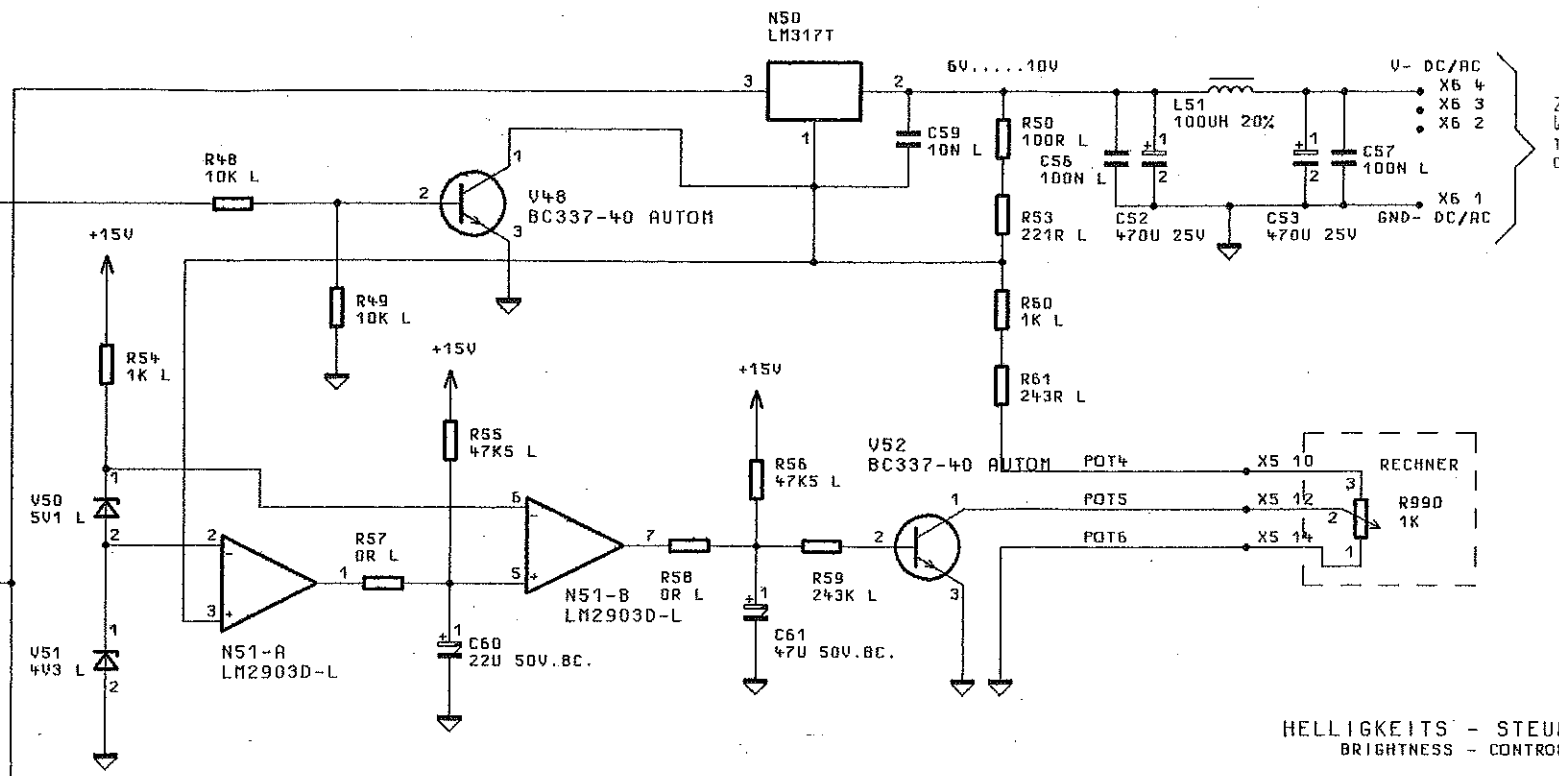
ZUR PERIPHERIE TO PERIPHERIE



ZUR PERIPHERIE TO PERIPHERIE

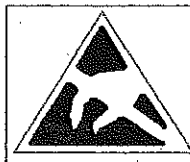
LCD

|               |                            |          |      |                            |          |               |                            |
|---------------|----------------------------|----------|------|----------------------------|----------|---------------|----------------------------|
| 04/           | 48730 90                   | 07.04.94 | JN   | 16PK                       | TAG      | NAME          | BENENNUNG                  |
|               |                            |          |      | BEARB.                     |          | JN            | DREHGEBER<br>KNOB ASSEMBLY |
|               |                            |          |      | GEPR.                      |          | DR            |                            |
|               |                            |          |      | NORN                       |          |               |                            |
|               |                            |          |      | PLOTT                      | 07.04.94 |               |                            |
|               |                            |          |      | <b>ROHDE &amp; SCHWARZ</b> |          | ZEICHN.-NR.   |                            |
|               |                            |          |      |                            |          | 1035.5592.015 |                            |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG. | DATUM    | NAME | ZU GERÄT                   | SMP      | REG. I. V.    | 1035.5005                  |
|               |                            |          |      |                            |          | ERSTE Z.      | 1035.5440                  |



### STROMLAUF GILT FUER VAR.02

CIRCUIT DIAGRAM IS VALID FOR MOD.02



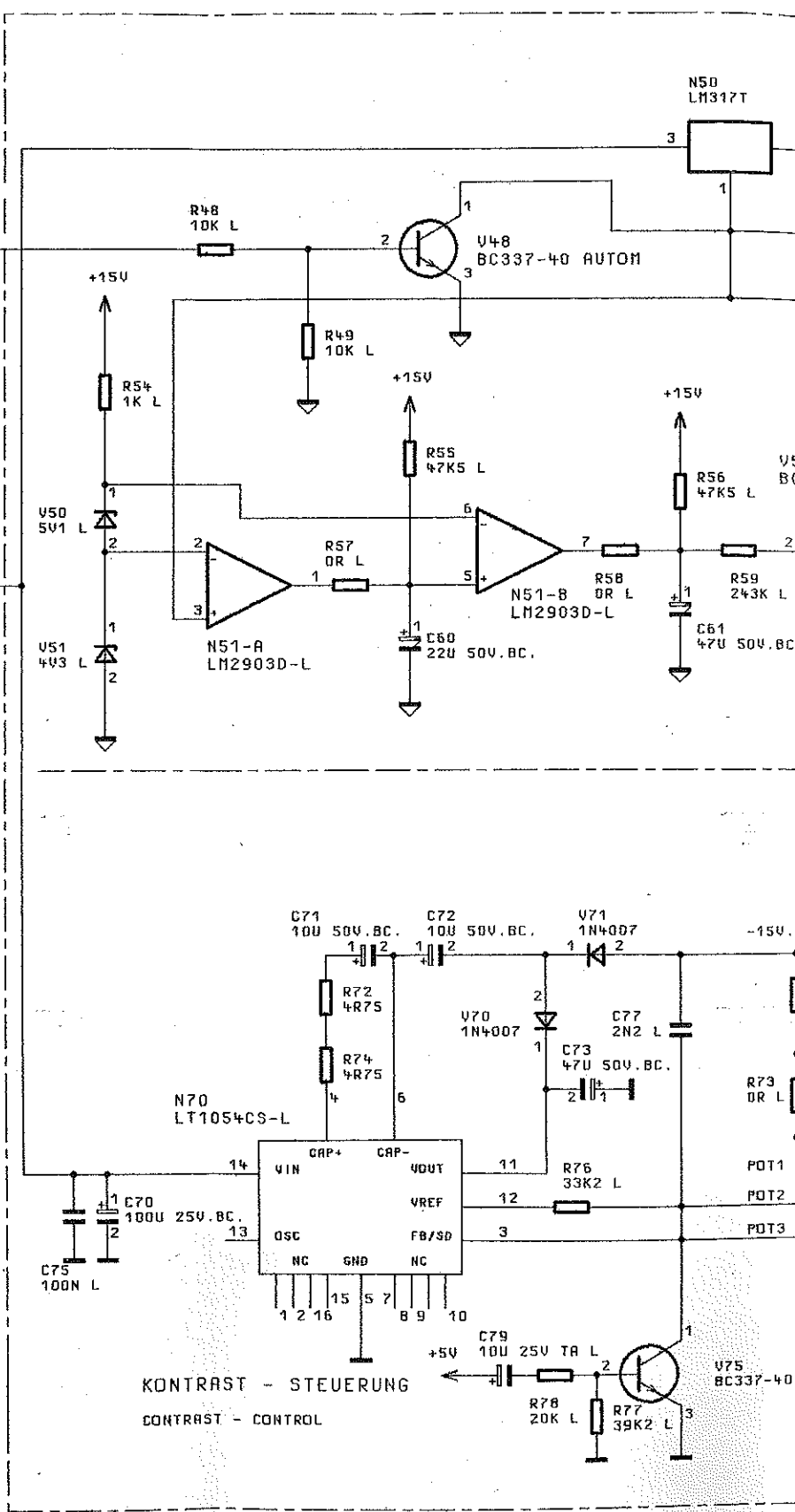
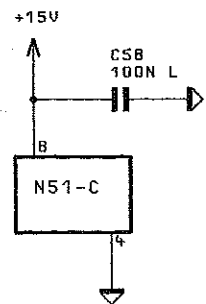
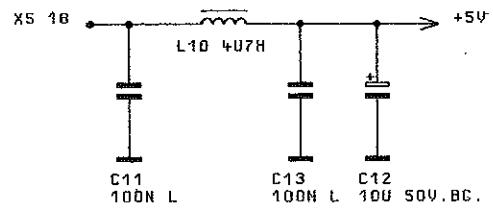
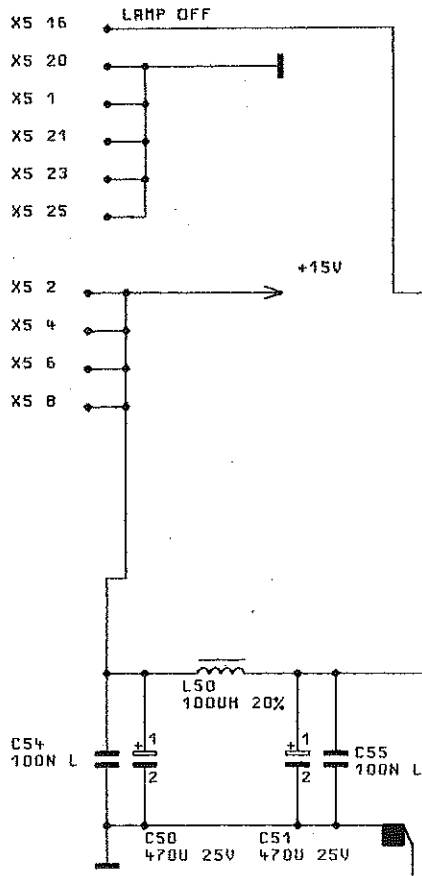
**ACHTUNG: EGB!**  
ELEKTROSTATISCH GEFÄHRDETE  
BAUELEMENTE ERFORDERN EINE  
BESONDERE HANDHABUNG.  
**ATTENTION ESD!**  
ELECTROSTATIC SENSITIVE DEVICES  
REQUIRE A SPECIAL HANDLING.

|            |                      |          |       |                 |         |
|------------|----------------------|----------|-------|-----------------|---------|
| D4/        | 48730 90             | 07.04.94 | JN    | 16PK            | TAG     |
|            |                      |          |       | BEARB.          |         |
|            |                      |          |       | GEPR.           |         |
|            |                      |          |       | NORM            |         |
|            |                      |          |       | PLOTT           | 07.04.9 |
|            |                      |          |       |                 |         |
|            |                      |          |       |                 |         |
| REND. IND. | ÄNDERUNGS-MITTEILUNG | DATUM    | NAMEN | <br>ZU GERÄT SM |         |
|            |                      |          |       |                 |         |




FUER DIESE UNTERLAGE  
BEHALTEN WIR UNS ALLE RECHTE VOR

ZEICHN.-NR.

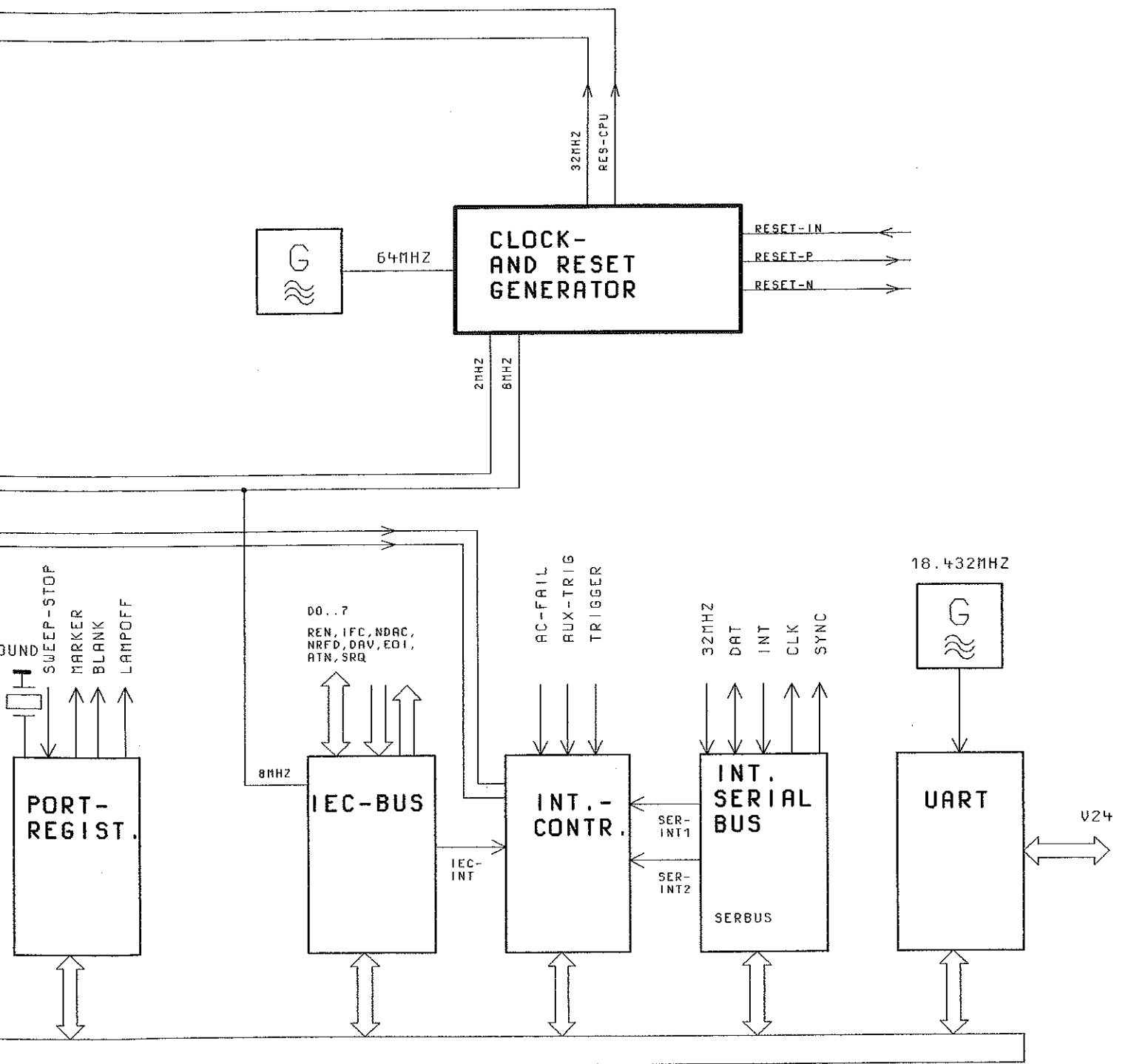


KONTRAST - STEUERUNG  
CONTRAST - CONTROL

STROMLAUF GILT FUER VAR.02  
CIRCUIT DIAGRAM IS VALID FOR MOD.02



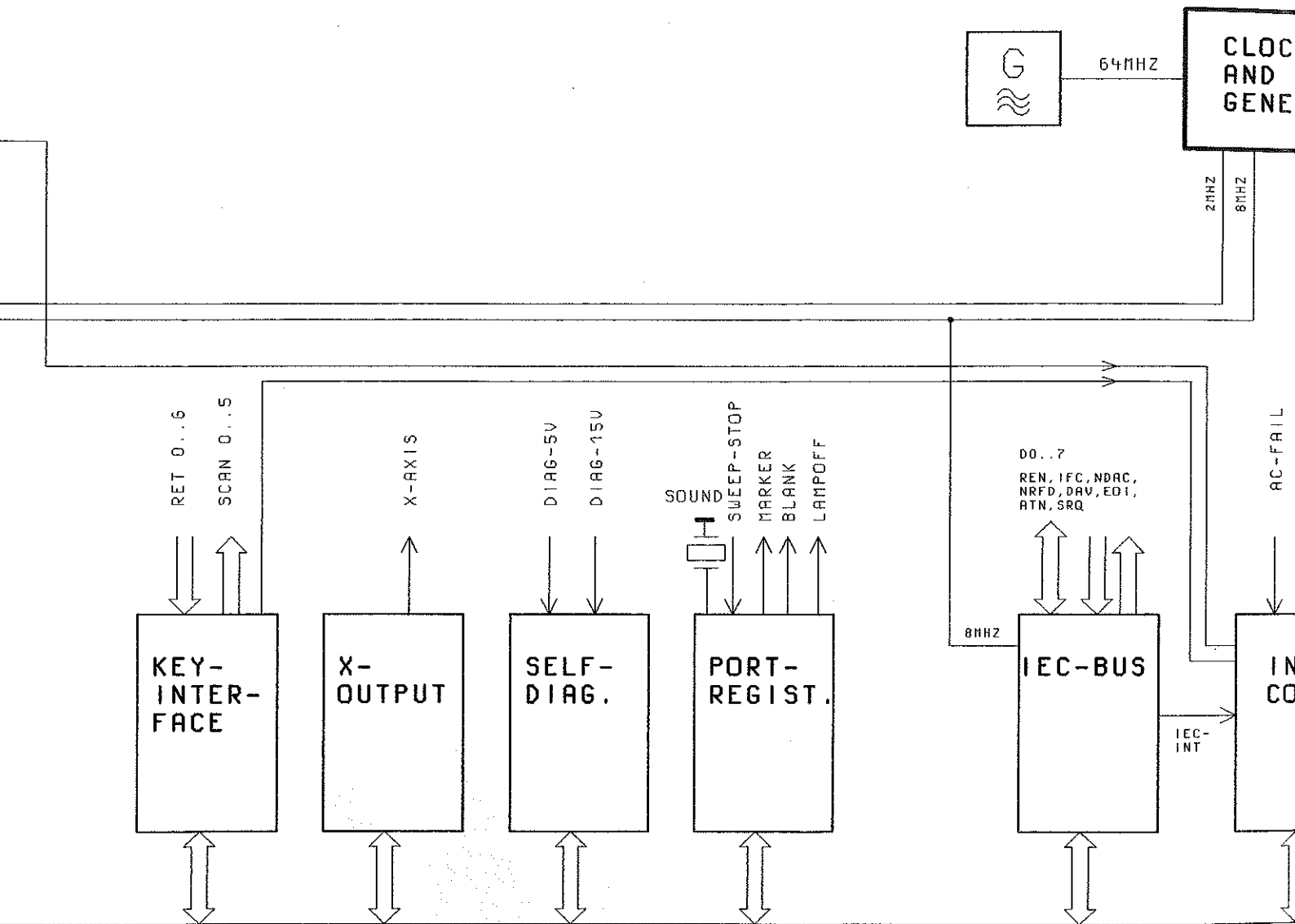
ACHTUNG: EGB!  
ELEKTROSTATISCH GEFAEHRDETE  
BAUELEMENTE ERFOEDERN EINE  
BESONDERE HANDHABUNG.  
ATTENTION ESD!  
ELECTROSTATIC SENSITIVE DEVICES  
REQUIRE A SPECIAL HANDLING



BINDENDE ANGABEN UEBER VARIANTEN,  
TRIMMWERTE, BAUTEILWERTE UND  
NICHT BESTUECKTE BAUTEILE SIEHE SA.

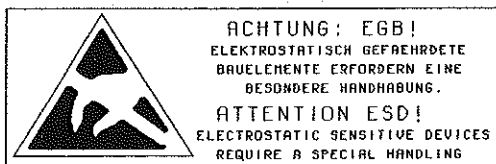
FOR BINDING INFORMATION ON MODELS,  
TRIMMING AND COMPONENTS VALUES AND  
NONFITTED COMPONENTS SEE PARTS LIST.

|               |                          |          |      |          |                          |      |                              |                             |
|---------------|--------------------------|----------|------|----------|--------------------------|------|------------------------------|-----------------------------|
| 08/13         |                          | 97-12-08 | E I  | MENP     | TAG                      | NAME | BENENNUNG                    |                             |
|               |                          |          |      | BEARB.   |                          | E I  | <b>RECHNER<br/>PROCESSOR</b> |                             |
|               |                          |          |      | GEPR.    |                          |      |                              |                             |
|               |                          |          |      | NORM     |                          |      |                              |                             |
|               |                          |          |      | PLOTT    | 09.12.97                 |      |                              |                             |
| 08/           |                          | 13.03.95 | DR   |          | <b>ROHDE&amp;SCHWARZ</b> |      | ZEICHN.-NR.                  | <b>1035.7250.01S</b>        |
| REND.<br>IND. | ÄNDERUNGS-<br>MITTEILUNG | DATUM    | NAME |          |                          |      | REG. I.V.                    |                             |
|               |                          |          |      | ZU GERÄT | SMP                      |      |                              | BLATT-NR.<br>1+<br>v. 39 L. |




BINDENDE ANGABEN UEBER VARIANTEN,  
TRIMMWERTE, BAUTEILWERTE UND  
NICHT BESTUECKTE BAUTEILE SIEHE SA.

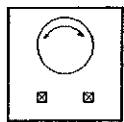
FOR BIN  
TRIMMIN  
NONFIT



|              |                          |       |        |          |  |
|--------------|--------------------------|-------|--------|----------|--|
| 08/13        | 97-12-08                 | EI    | MENP   | TAG      |  |
|              |                          |       | BEARB. |          |  |
|              |                          |       | GEPR.  |          |  |
|              |                          |       | NORM   |          |  |
|              |                          |       | PLOTT  | 09.12.97 |  |
| 08/          | 13.03.95                 | DR    |        |          |  |
| REND<br>IND. | ÄNDERUNGS-<br>MITTEILUNG | DATUM | NAME   |          |  |
|              |                          |       |        |          |  |

  
**ROHDE & SCHWAB**  
 ZU GERÄT SMP

**KNOB ASSEMBLY**



CP2  
CP1  
CS  
DO...3

**LCD  
DISPLAY  
CONTR.**

2MHZ  
8MHZ

VID.-  
MEM  
32KX16

**KEY-  
INTER-  
FACE**

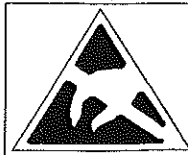
RET 0...6  
SCAN 0...5

**X-  
OUTPUT**

X-AXIS

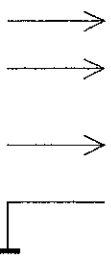
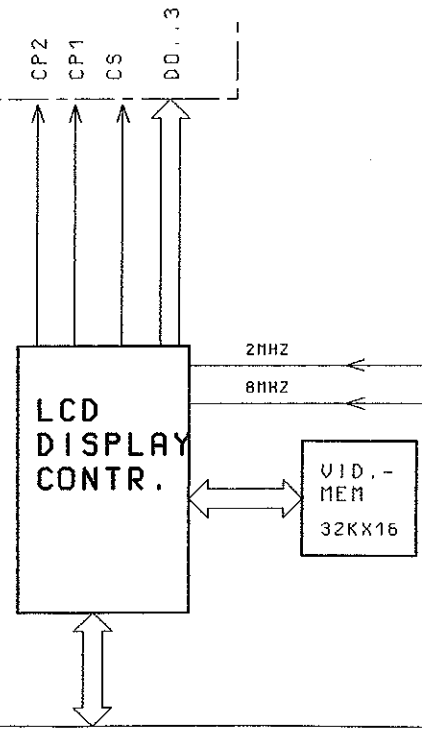
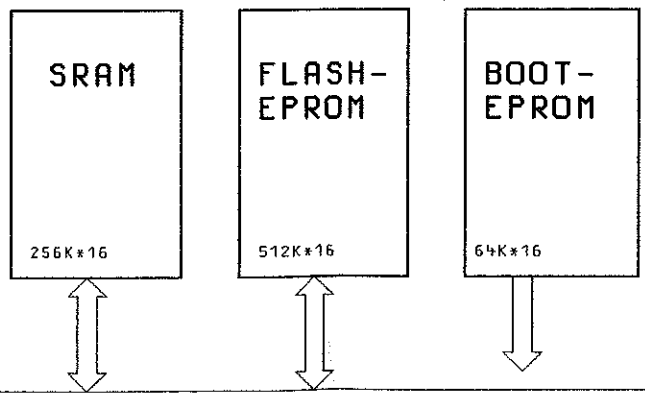
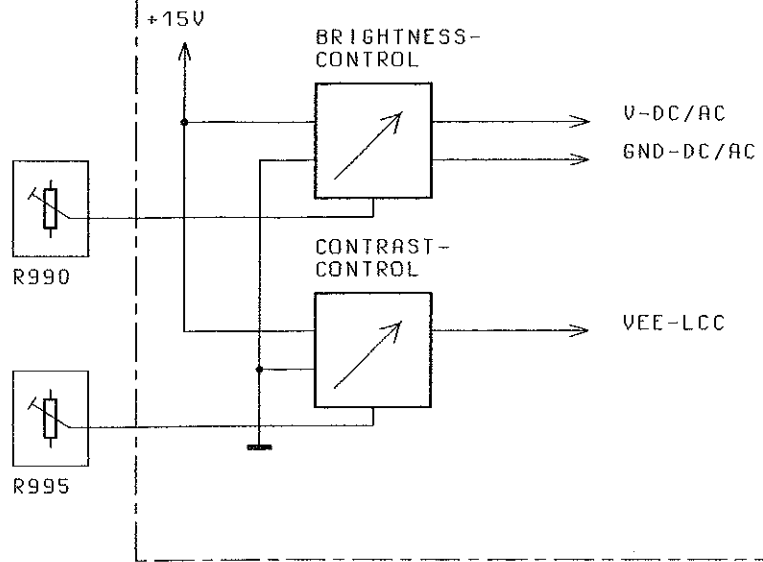
**SELF-  
DIAG.**

DIAG-5V  
DIAG-15V



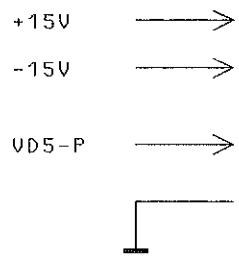
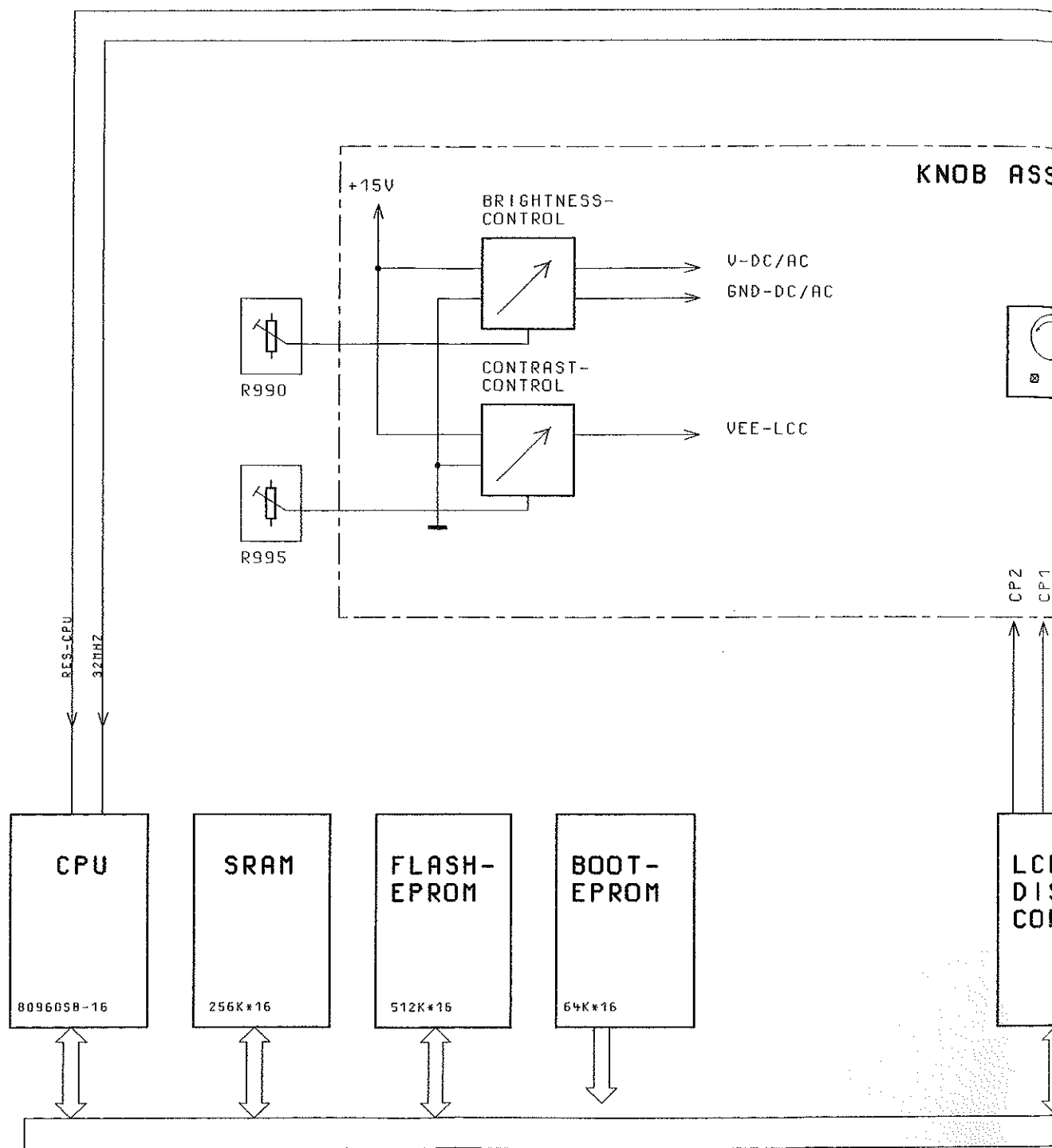
**ACHTUNG: EGB!**  
ELEKTROSTATISCH GEFÄHRDETE  
BAUELEMENTE ERFORDERN EINE  
BESONDERE HANDHABUNG.  
**ATTENTION ESD!**  
ELECTROSTATIC SENSITIVE DEVICE  
REQUIRE A SPECIAL HANDLING

# KNOB ASSEMBLY

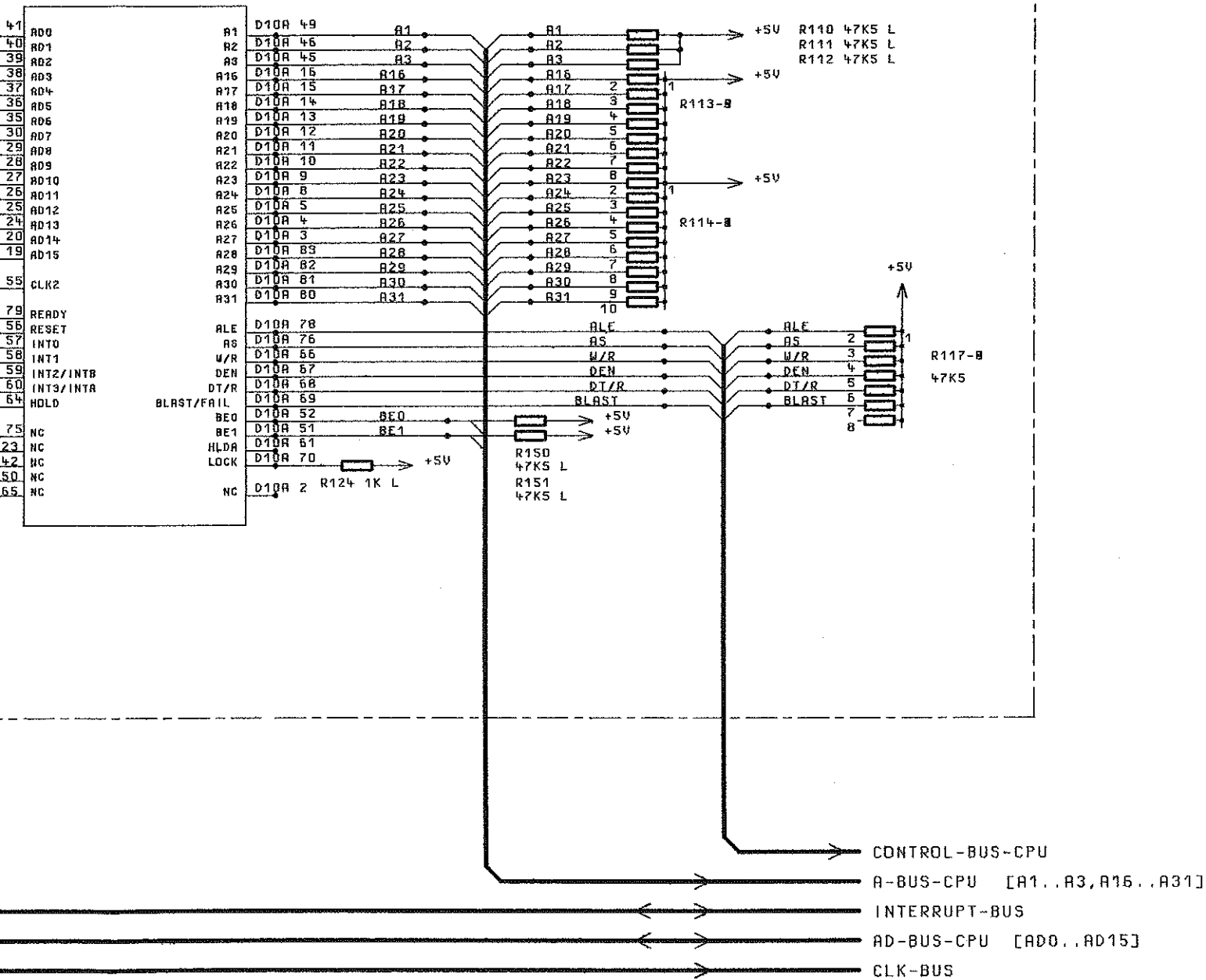


FUER DIESE UNTERLAGE  
BEHALTEN MIR UNS ALLE RECHTE VOR

ZEICHN.-NR.



D10  
N80960SB-16



| 05/           | 19.04.94                | DR    | 16PK   | TAG      | NAME | BENENNUNG            |           |
|---------------|-------------------------|-------|--------|----------|------|----------------------|-----------|
|               |                         |       | BEARB. |          | JN   | RECHNER<br>PROCESSOR |           |
|               |                         |       | GEPR.  |          |      |                      |           |
|               |                         |       | NORM   |          |      |                      |           |
|               |                         |       | PLOTT  | 03.05.94 |      |                      |           |
|               |                         |       |        |          |      | ZEICHN.-NR.          | BLATT-NR. |
|               |                         |       |        |          |      | 1035.7250.015        |           |
| REND.<br>IND. | BEREICHS-<br>MITTEILUNG | DATUM | NAME   | ZU GERÄT | SMP  | REG. I. V.           | ERSTE Z.  |
|               |                         |       |        |          |      | 1035.5005            | 1035.5005 |

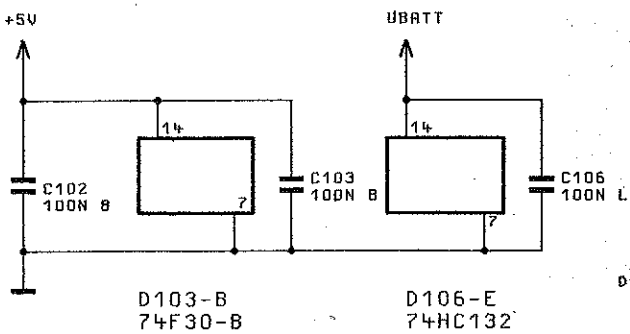
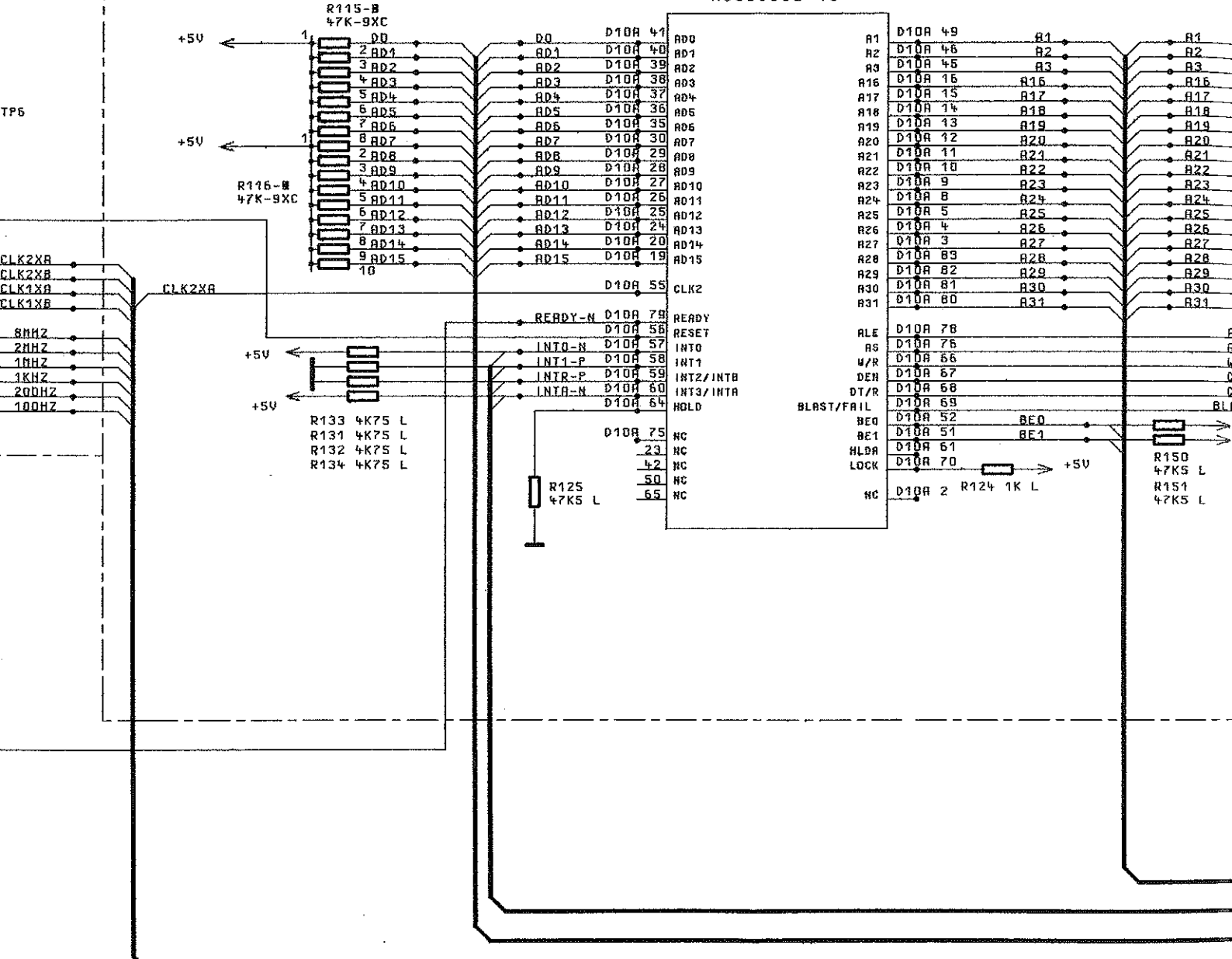
CPU

S-P

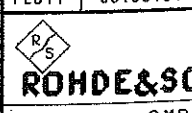
S-N

TP6

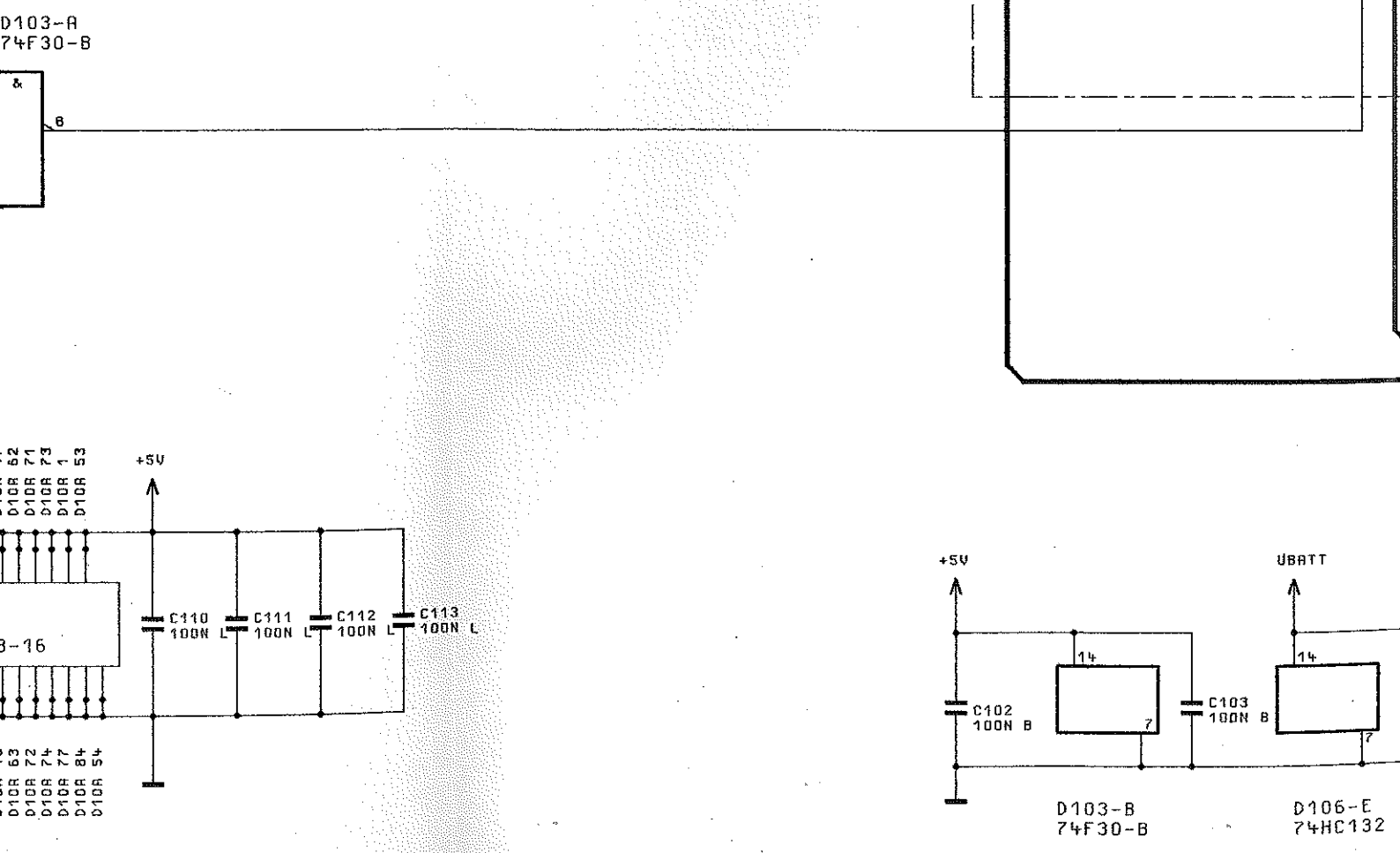
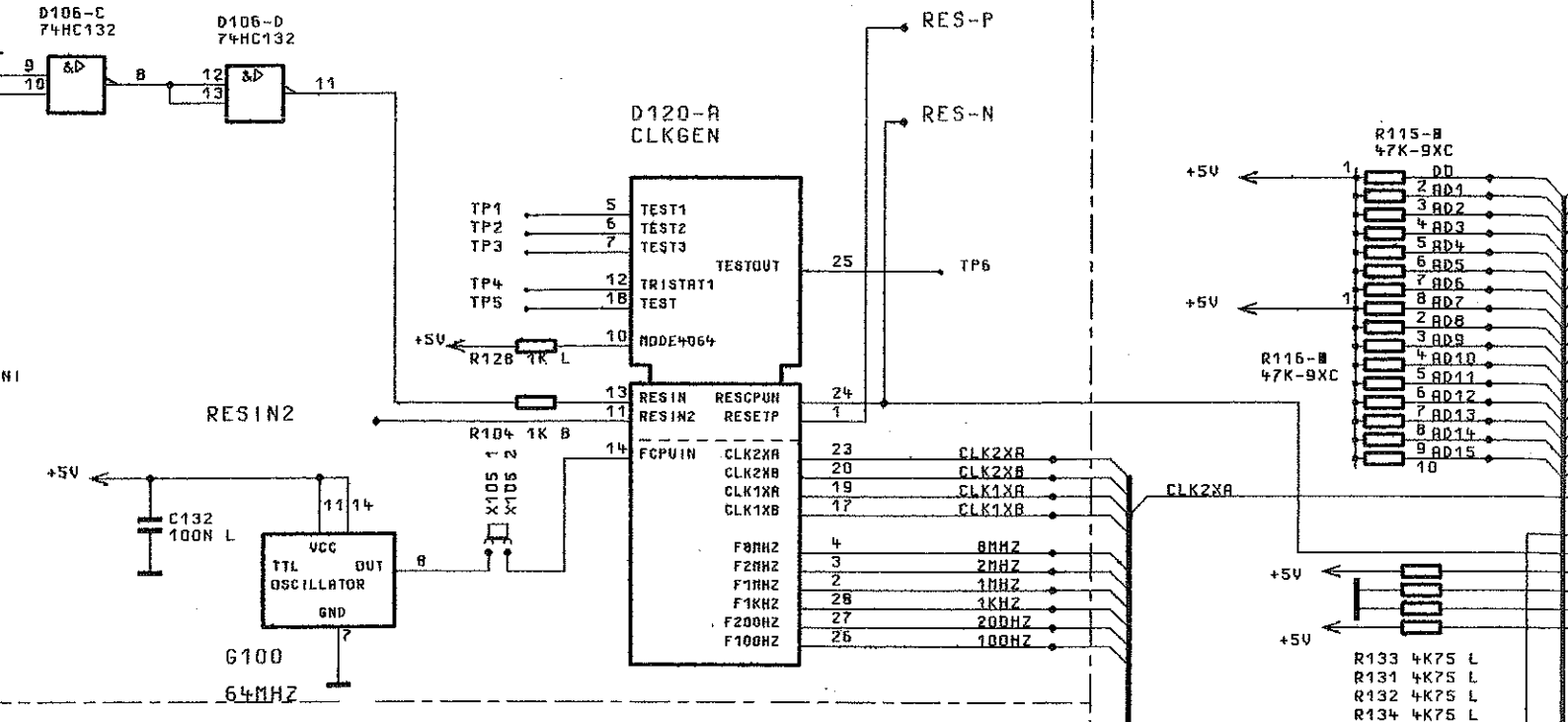
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N80960SB-16



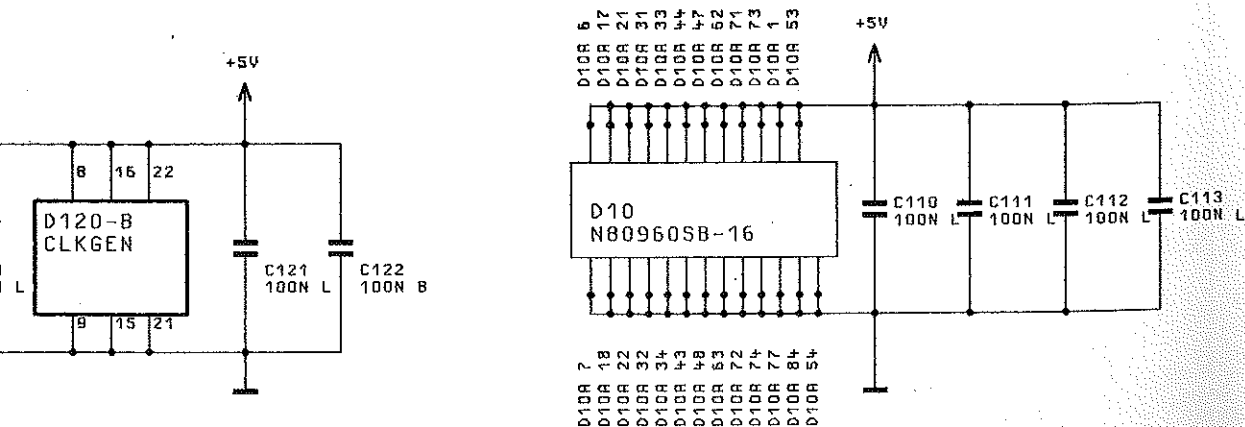
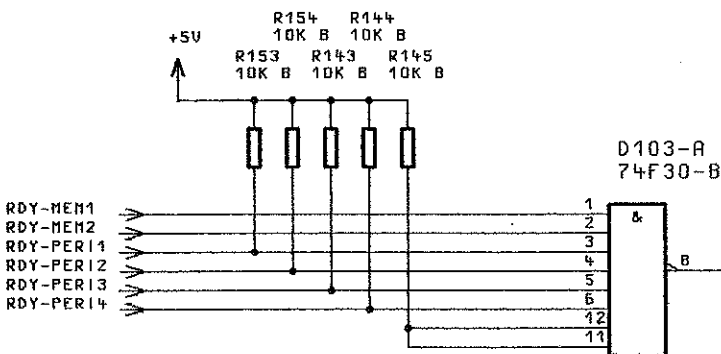
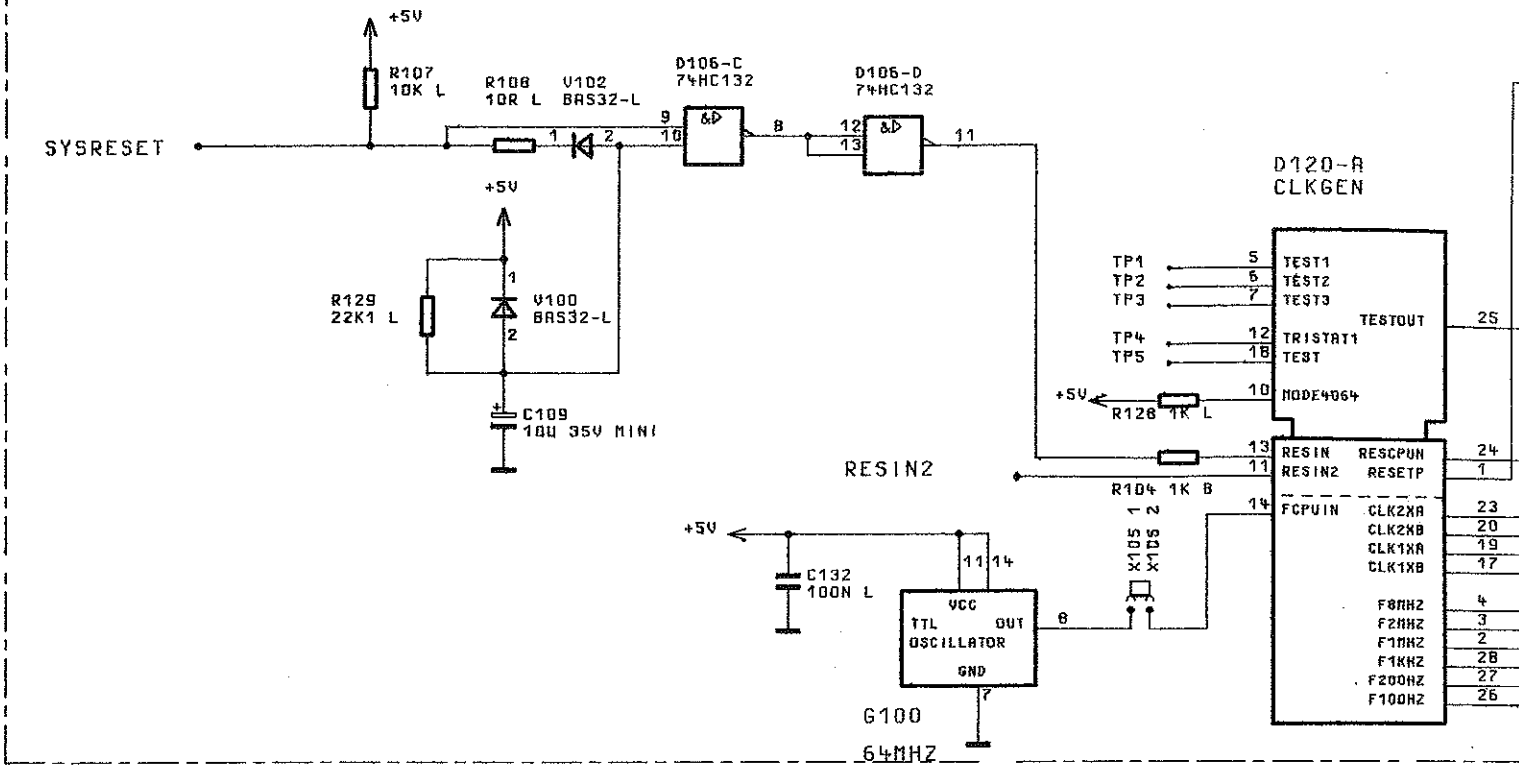
D106-R/B ON SHEET 4

|            |                       |          |      |  |          |
|------------|-----------------------|----------|------|--|----------|
| DS/        |                       | 19.04.94 | DR   | 16PK   | TAG      |
|            |                       |          |      | BEARD.   |          |
|            |                       |          |      | GEPR.  |          |
|            |                       |          |      | NORM   |          |
|            |                       |          |      | PLOTT  | 03.05.94 |
|            |                       |          |      |  |          |
|            |                       |          |      |  |          |
|            |                       |          |      |  |          |
| REND. IND. | RENDERUNGS-MITTEILUNG | DATUM    | NAME | <br>ROHDE & SCHWARZ<br>ZU GERÄT SMP |          |
|            |                       |          |      |  |          |

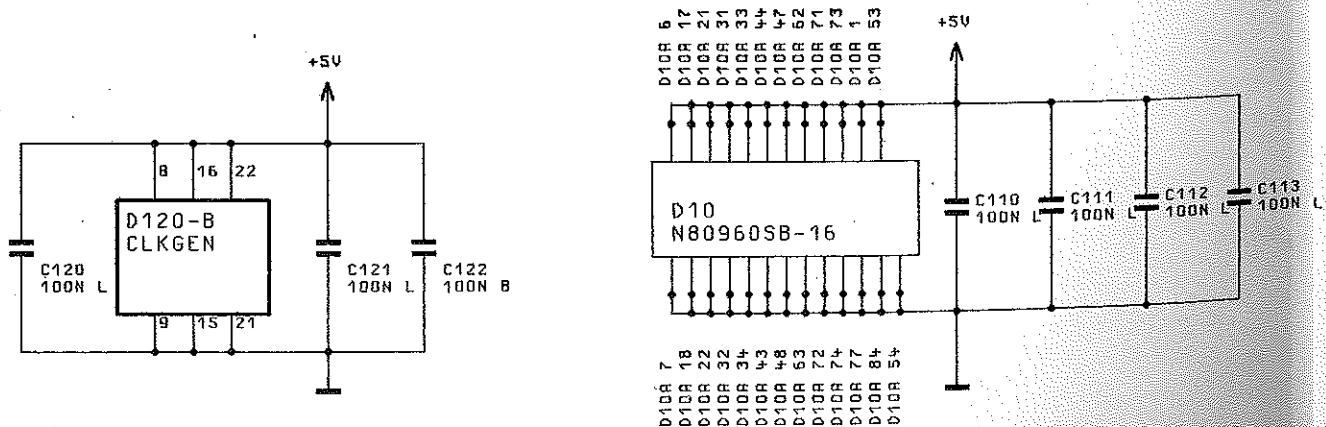
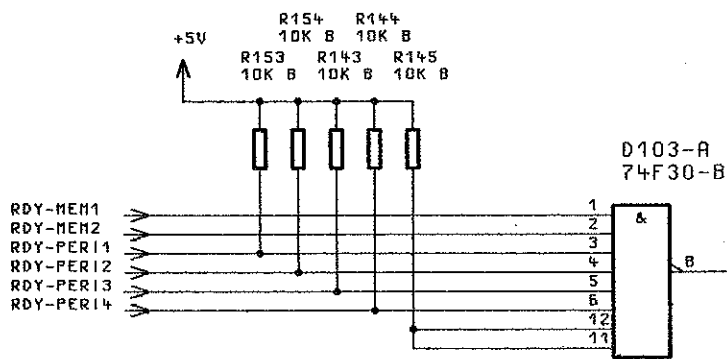
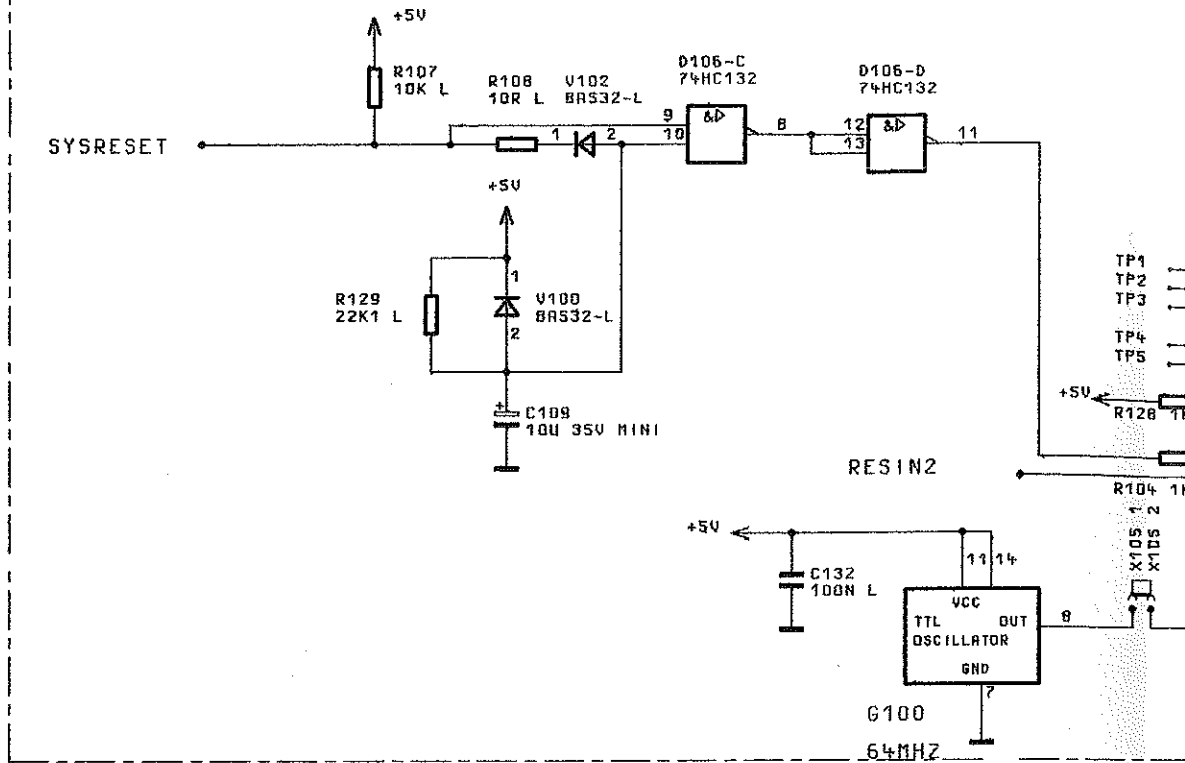




# CLOCK AND RESET GENERATOR



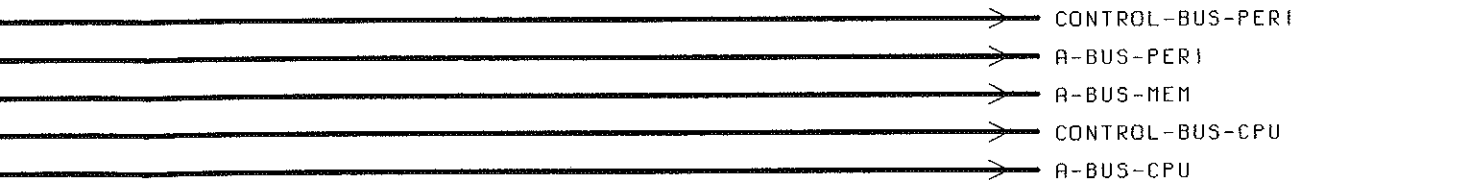
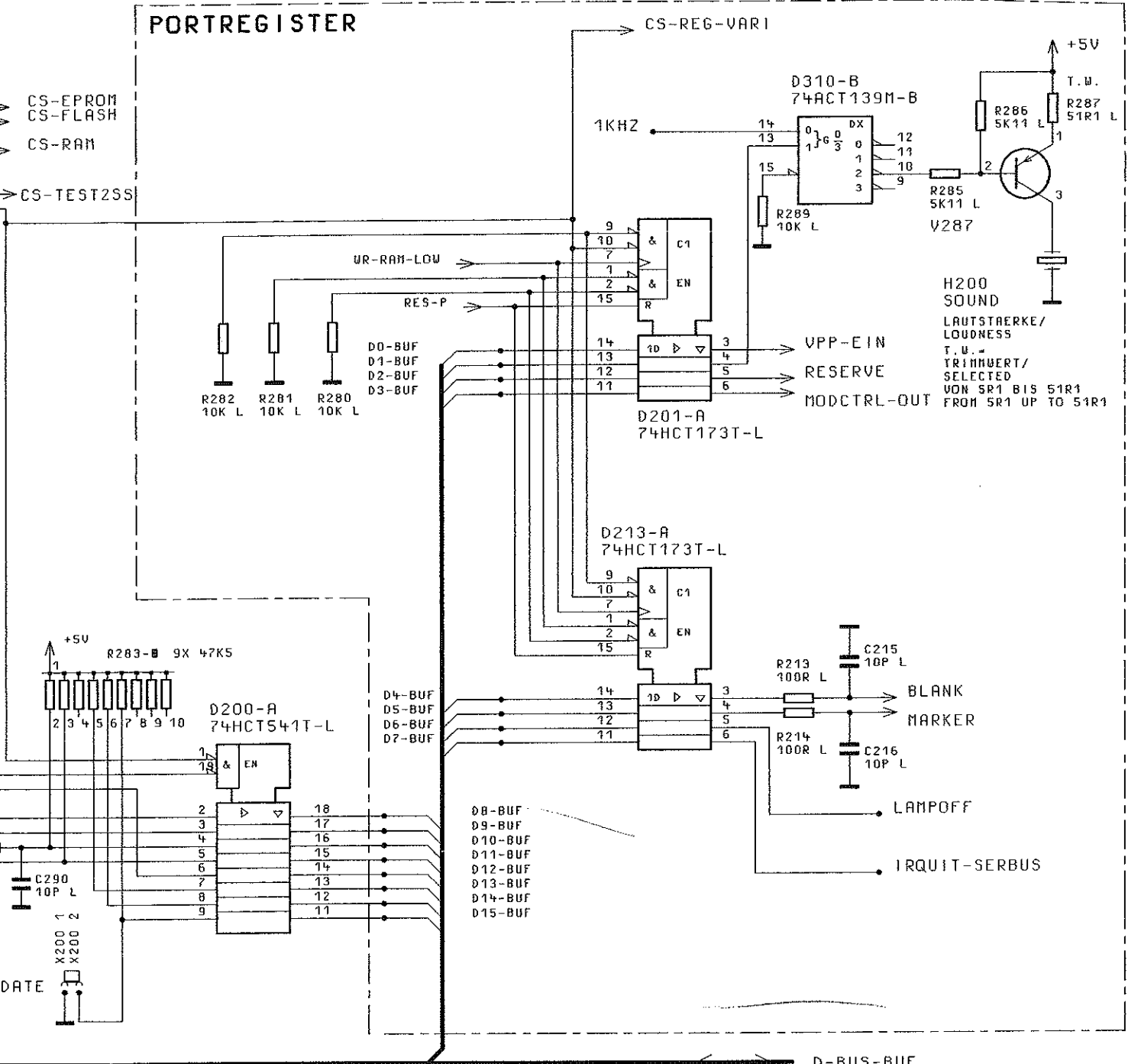
# CLOCK AND RESET GENERATOR



FUER DIESE UNTERLAGE  
 BEHALTEN WIR UNS ALLE RECHTE VOR

ZEICHN NR.

# PORTREGISTER



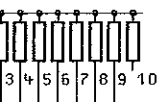
BINDENDE ANGABEN UEBER VARIANTEN,  
TRIMMWERTE, BAUTEILWERTE UND  
NICHT BESTUECKTE BAUTEILE SIEHE SA.

FOR BINDING INFORMATION ON MODELS,  
TRIMMING AND COMPONENTS VALUES AND  
NONFITTED COMPONENTS SEE PARTS LIST.

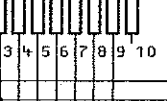
|               |                          |       |           |          |             |                      |                 |
|---------------|--------------------------|-------|-----------|----------|-------------|----------------------|-----------------|
| 08/13         | 97-12-08                 | EI    | MENP      | TAG      | NAME        | BENENNUNG            |                 |
|               |                          |       | BEARB.    |          | EI          | RECHNER<br>PROCESSOR |                 |
|               |                          |       | GEPR.     |          |             |                      |                 |
|               |                          |       | NORM      |          |             |                      |                 |
|               |                          |       | PLOTT     | 09.12.97 |             |                      |                 |
| 08/           | 13.03.95                 | DR    |           |          | ZEICHN.-NR. | 1035.7250.01S        |                 |
| REND.<br>IND. | ÄNDERUNGS-<br>MITTEILUNG | DATUM |           |          | NAME        |                      | BLATT-NR.<br>3+ |
| ZU GERÄT SMP  |                          |       | REG. I.V. |          | 1035.5005   | ERSTE Z.             | 1035.5005       |

SB!  
 MEHRERE  
 ERN EINE  
 ABUNG.  
 SD!  
 IVE DEVICES  
 HANDLING

R220-#  
 47K-9XC



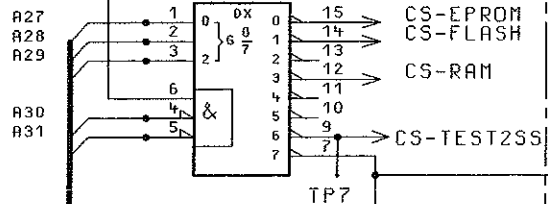
R221-#  
 47K-9XC



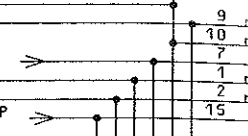
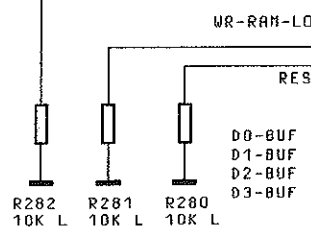
D15-BUF  
 D14-BUF  
 D13-BUF  
 D12-BUF  
 D11-BUF  
 D10-BUF  
 D9-BUF  
 D8-BUF

D7-BUF  
 D6-BUF  
 D5-BUF  
 D4-BUF  
 D3-BUF  
 D2-BUF  
 D1-BUF  
 D0-BUF

+5V  
 R209  
 1K B  
 D214-A  
 74ACT138M-B

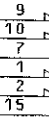


PORTREGISTER



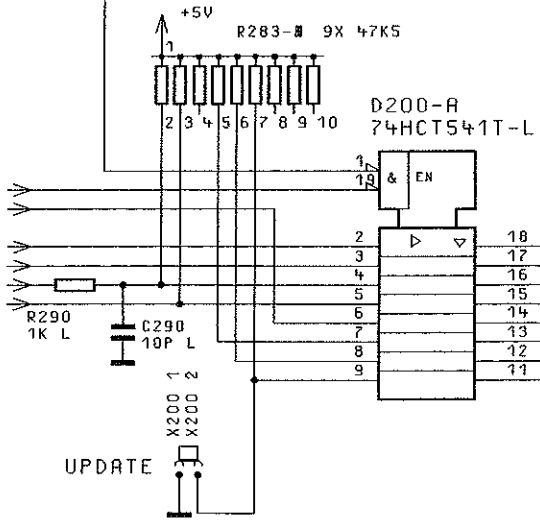
1KHZ

D21  
 74H



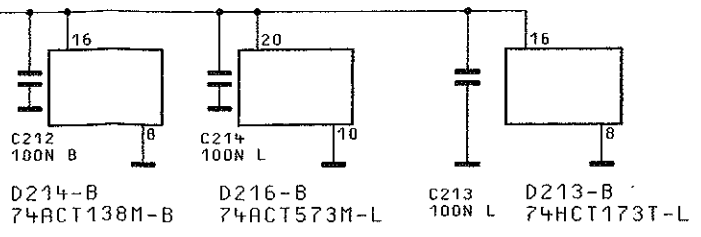
D4-BUF  
 D5-BUF  
 D6-BUF  
 D7-BUF  
 D8-BUF  
 D9-BUF  
 D10-BUF  
 D11-BUF  
 D12-BUF  
 D13-BUF  
 D14-BUF  
 D15-BUF

RD-MEM1  
 DIR-FF  
 KEY-INT-P  
 KNOB-INT-P  
 SWEEP-STOP  
 MODCTRL-IN

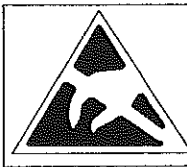


BINDENDE ANGABEN UEBER VARIANTEN,  
 TRIMMWERTE, BAUTEILWERTE UND  
 NICHT BESTUECKTE BAUTEILE SIEHE SA.

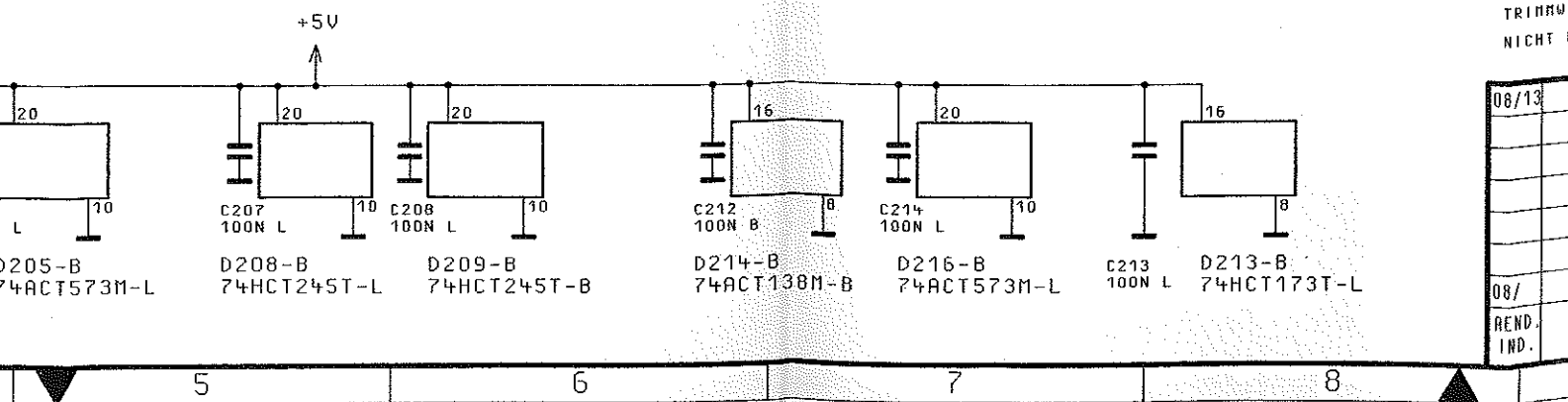
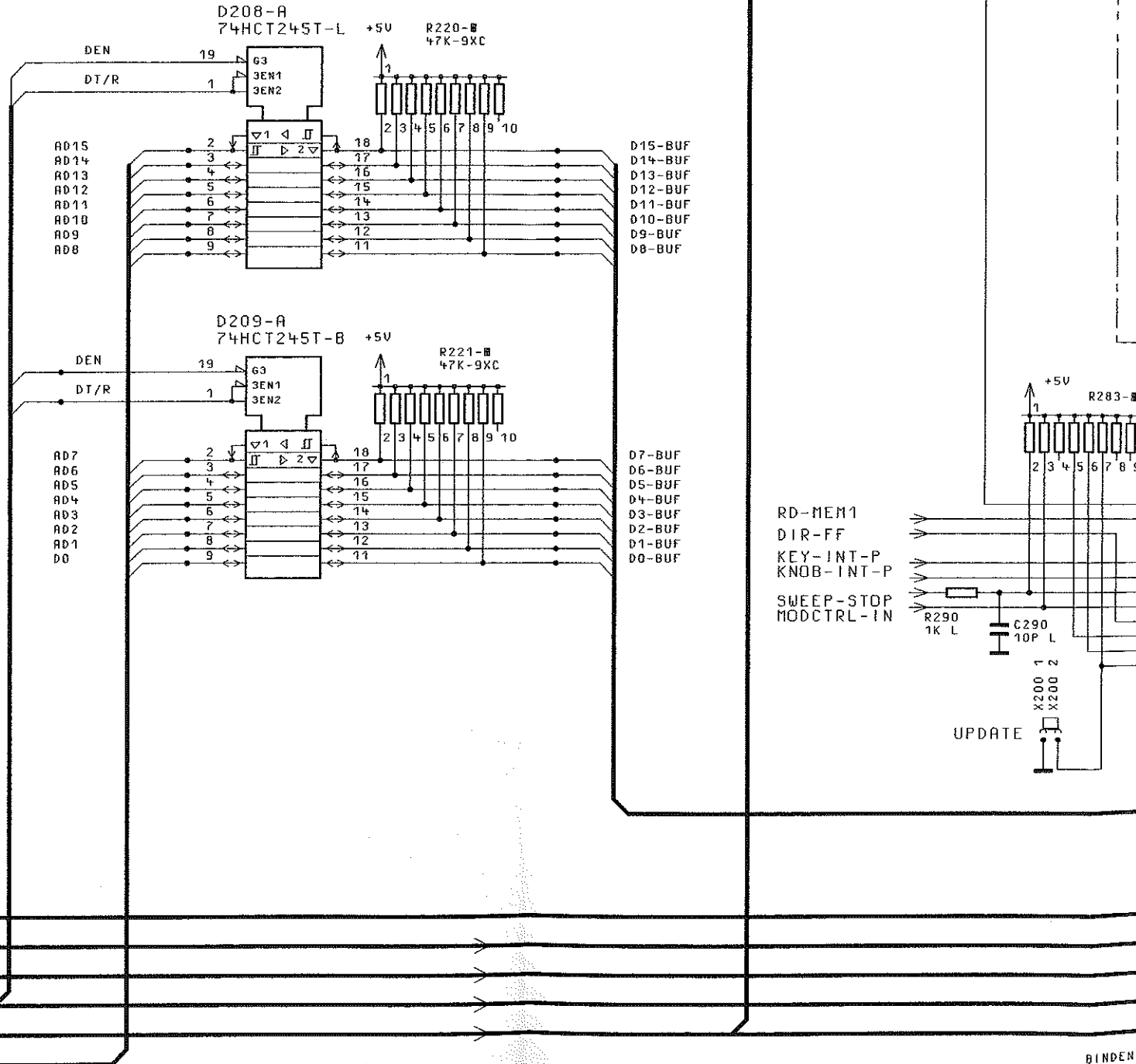
FOR BINDING I  
 TRIMMING AND  
 NONFITTED COR



|               |                           |       |          |                 |      |
|---------------|---------------------------|-------|----------|-----------------|------|
| 08/13         | 97-12-08                  | E I   | MENP     | TAG             | NAME |
|               |                           |       | BEARB.   |                 | E I  |
|               |                           |       | GEPR.    |                 |      |
|               |                           |       | NORN     |                 |      |
|               |                           |       | PLOTT    | 09.12.97        |      |
| 08/           | 13.03.95                  | DR    | RS       | ROHDE & SCHWARZ |      |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG | DATUM |          |                 |      |
|               |                           |       | ZU GERÄT | SMP             |      |



**ACHTUNG: EGB!**  
 ELEKTROSTATISCH GEFÄHRDETE  
 BAUELEMENTE ERFORDERN EINE  
 BESONDERE HANDHABUNG.  
**ATTENTION ESD!**  
 ELECTROSTATIC SENSITIVE DEVICES  
 REQUIRE A SPECIAL HANDLING

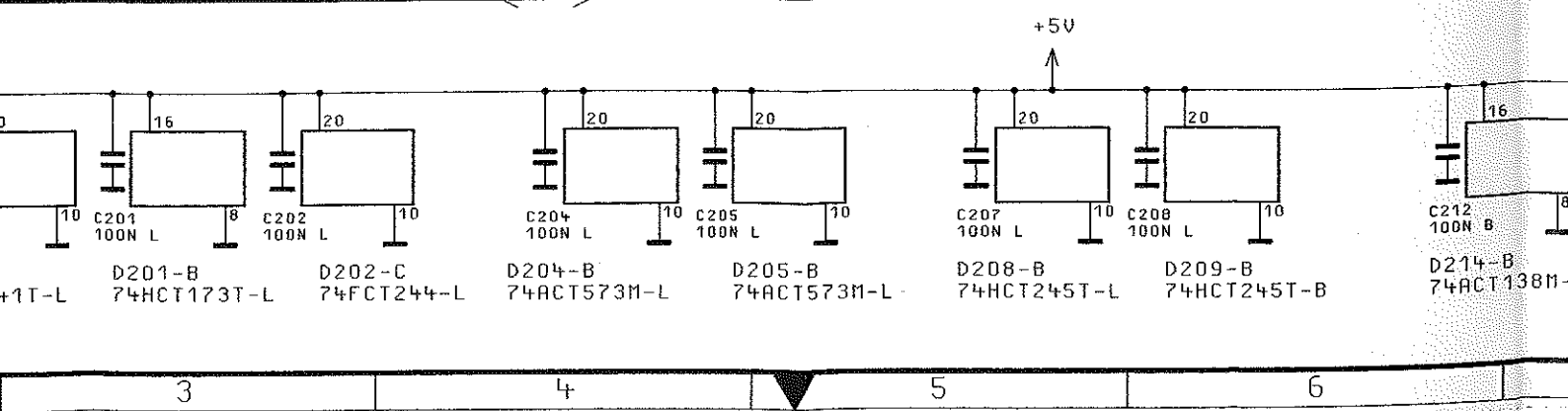
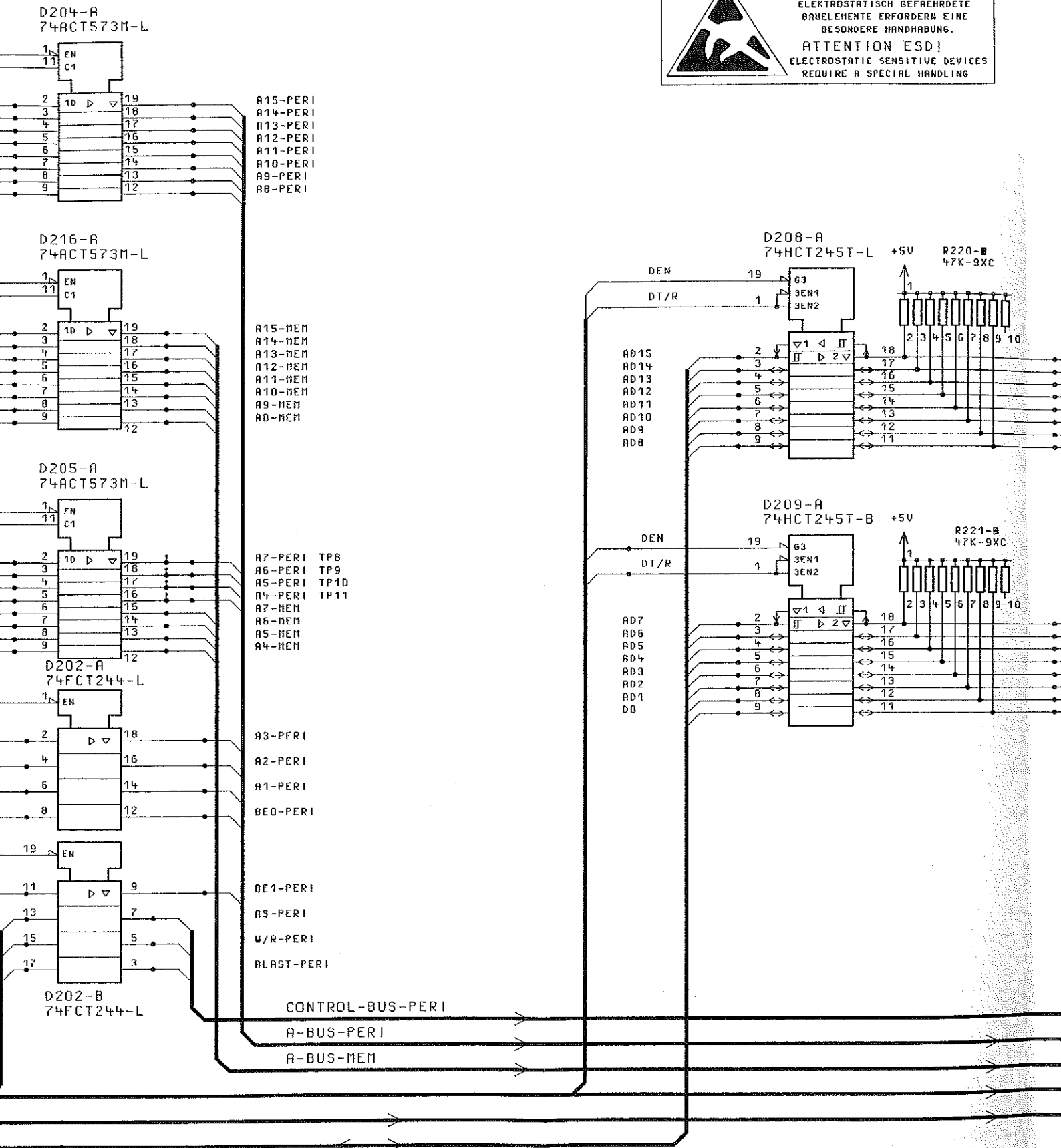


BINDEN  
TRINNV  
NICHT E

|       |  |
|-------|--|
| 08/13 |  |
| 08/   |  |
| REND. |  |
| IND.  |  |

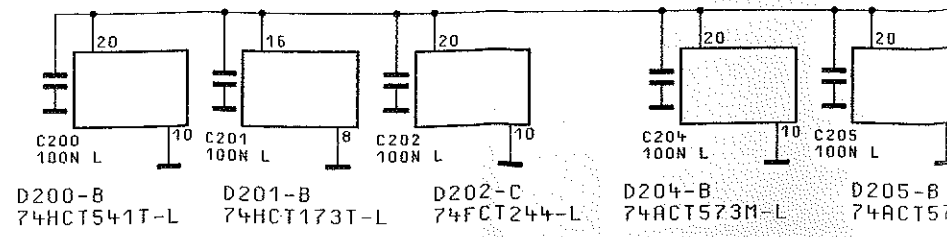
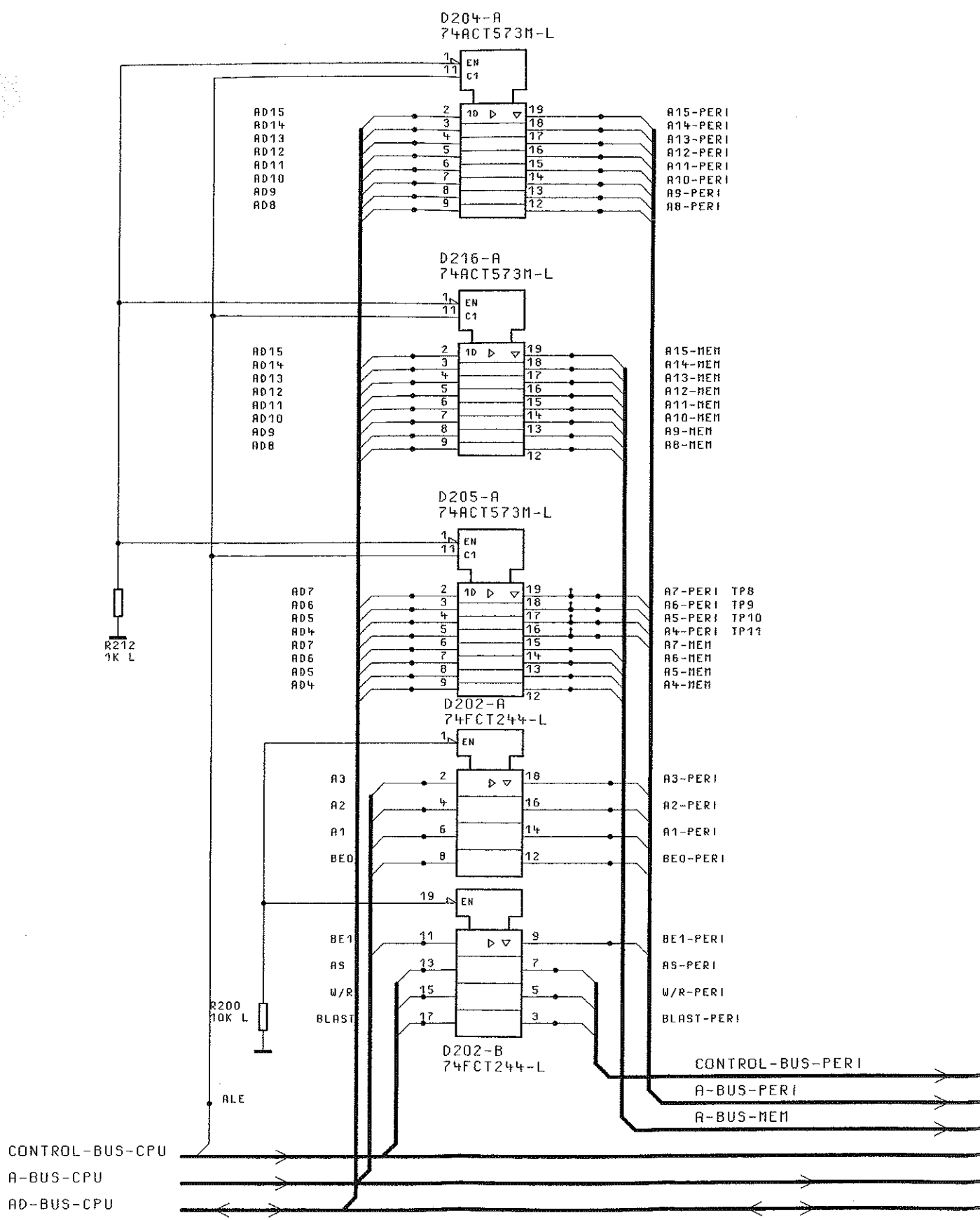


**ACHTUNG: EGB!**  
 ELEKTROSTATISCH GEFÄHRDETE  
 BAUELEMENTE ERFORDERN EINE  
 BESONDERE HANDHABUNG.  
**ATTENTION ESD!**  
 ELECTROSTATIC SENSITIVE DEVICES  
 REQUIRE A SPECIAL HANDLING



FÜR DIESE UNTERLAGE  
BEHALTEN WIR UNS ALLE RECHTE VOR

ZEICHN.-NR.

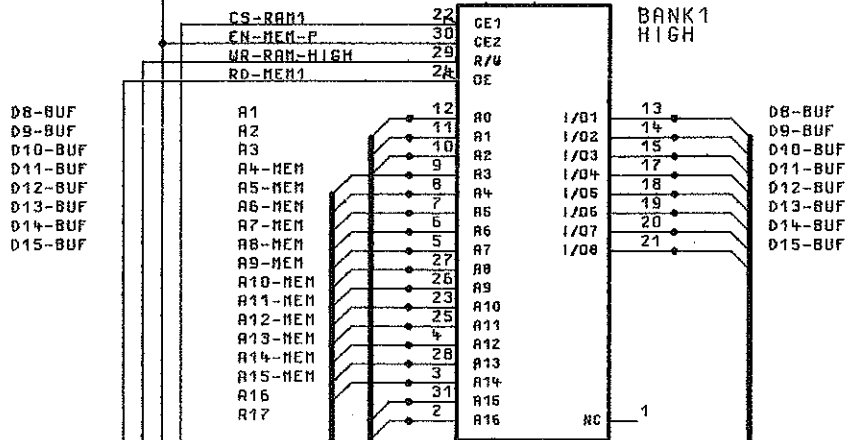




BANK0  
HIGH

D303-A  
TC551001FL-100-B

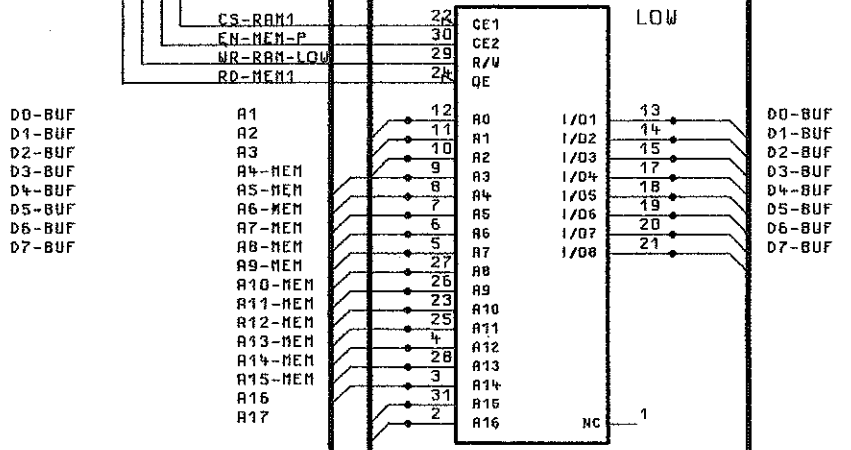
BANK1  
HIGH




-B  
LOW

D305-A  
TC551001FL-100-B

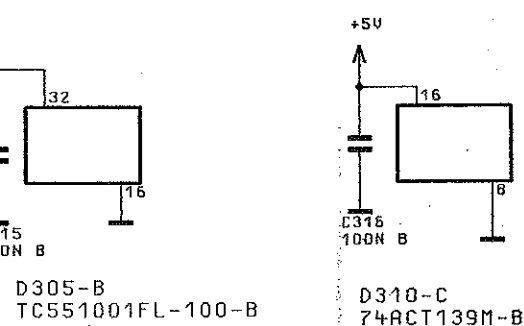
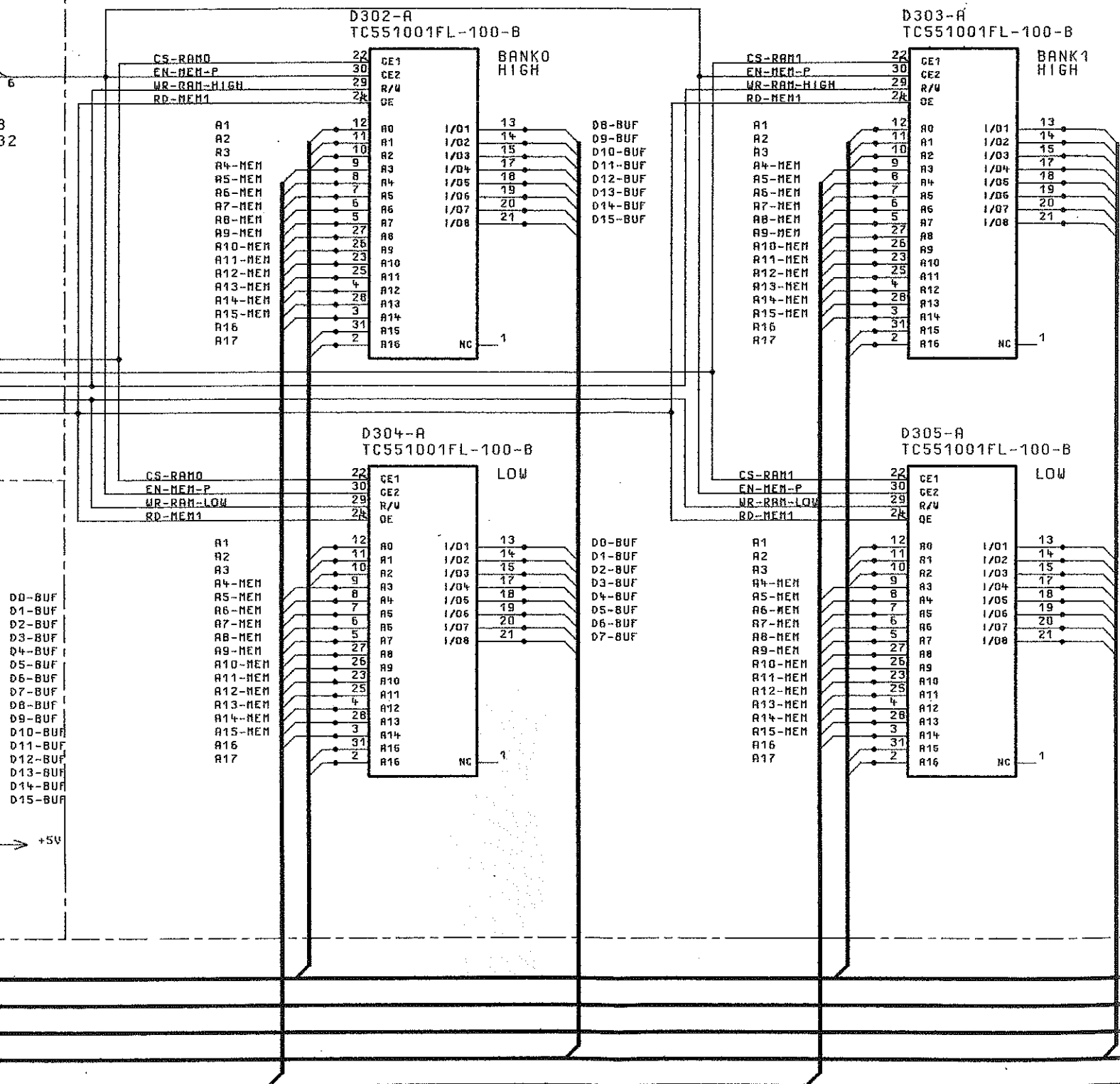
LOW



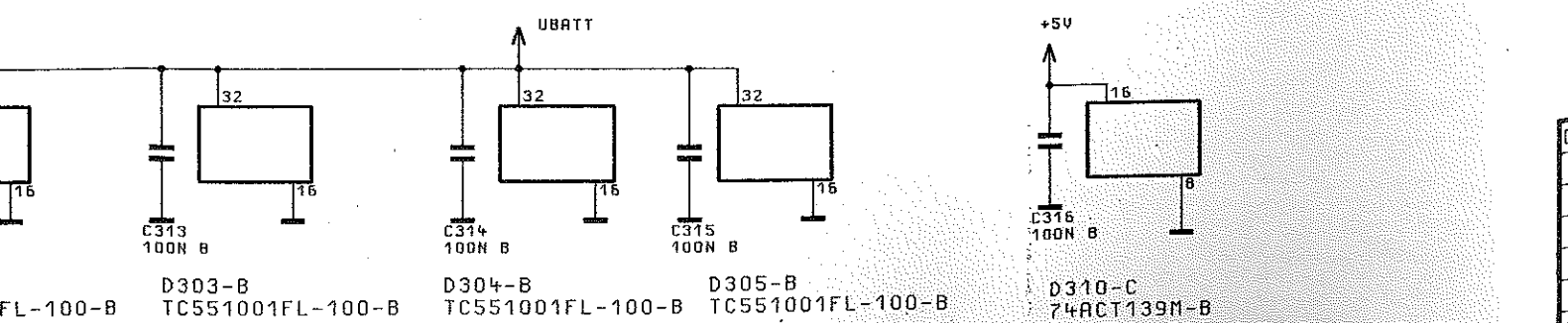
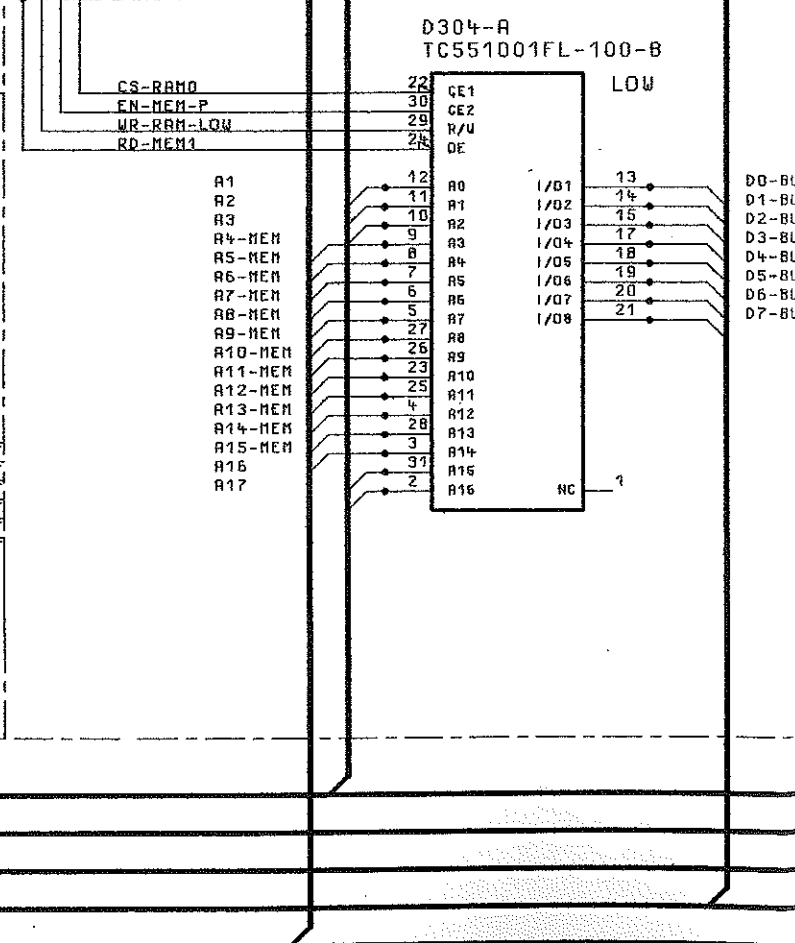
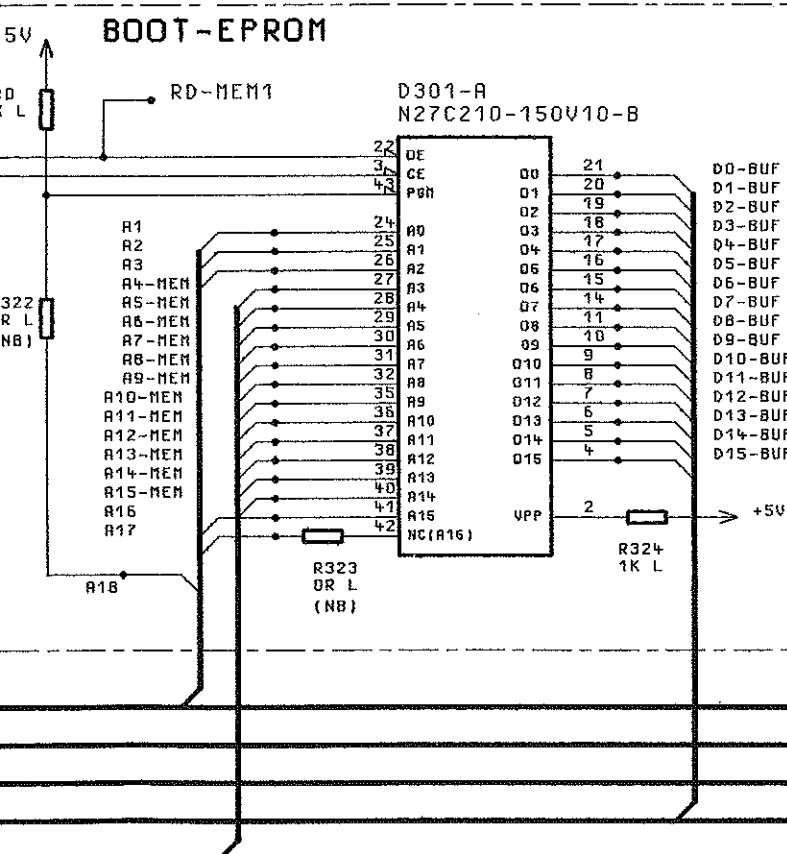
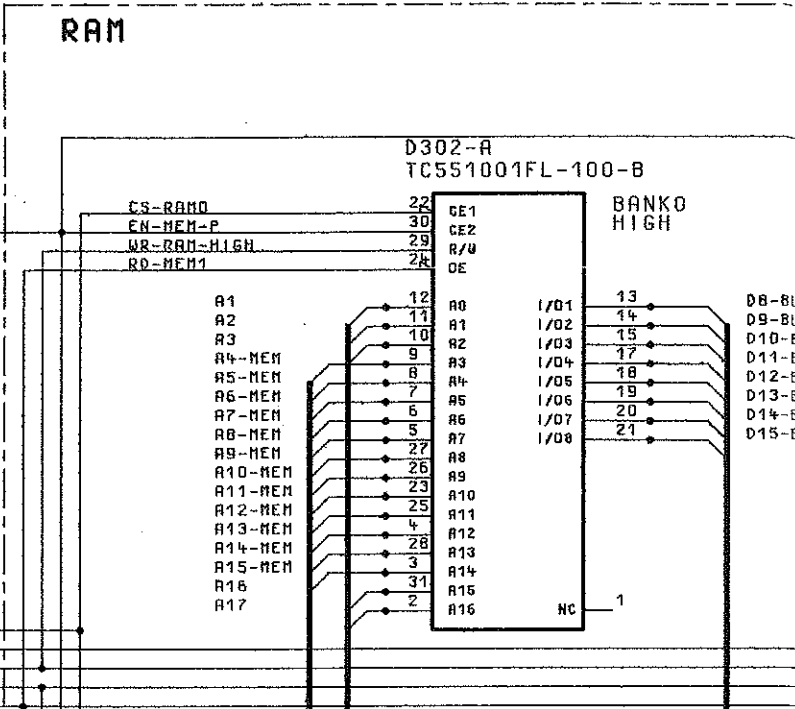
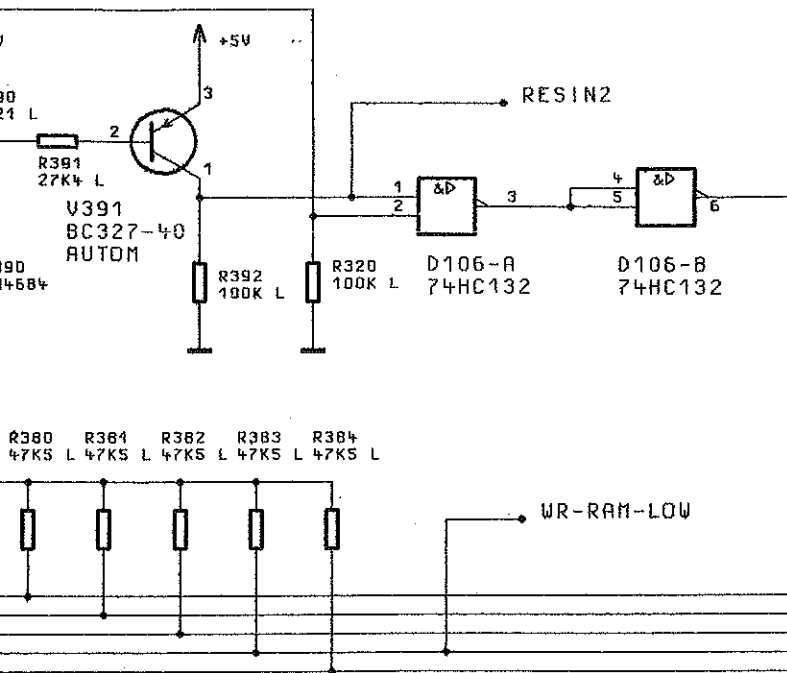
A-BUS-CPU  
CONTROL-BUS-CPU  
CLK-BUS  
D-BUS-BUF  
A-BUS-MEM

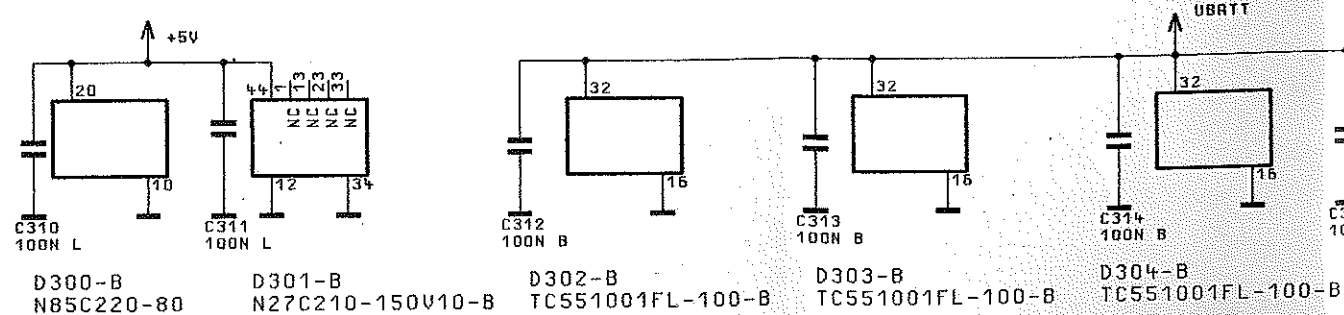
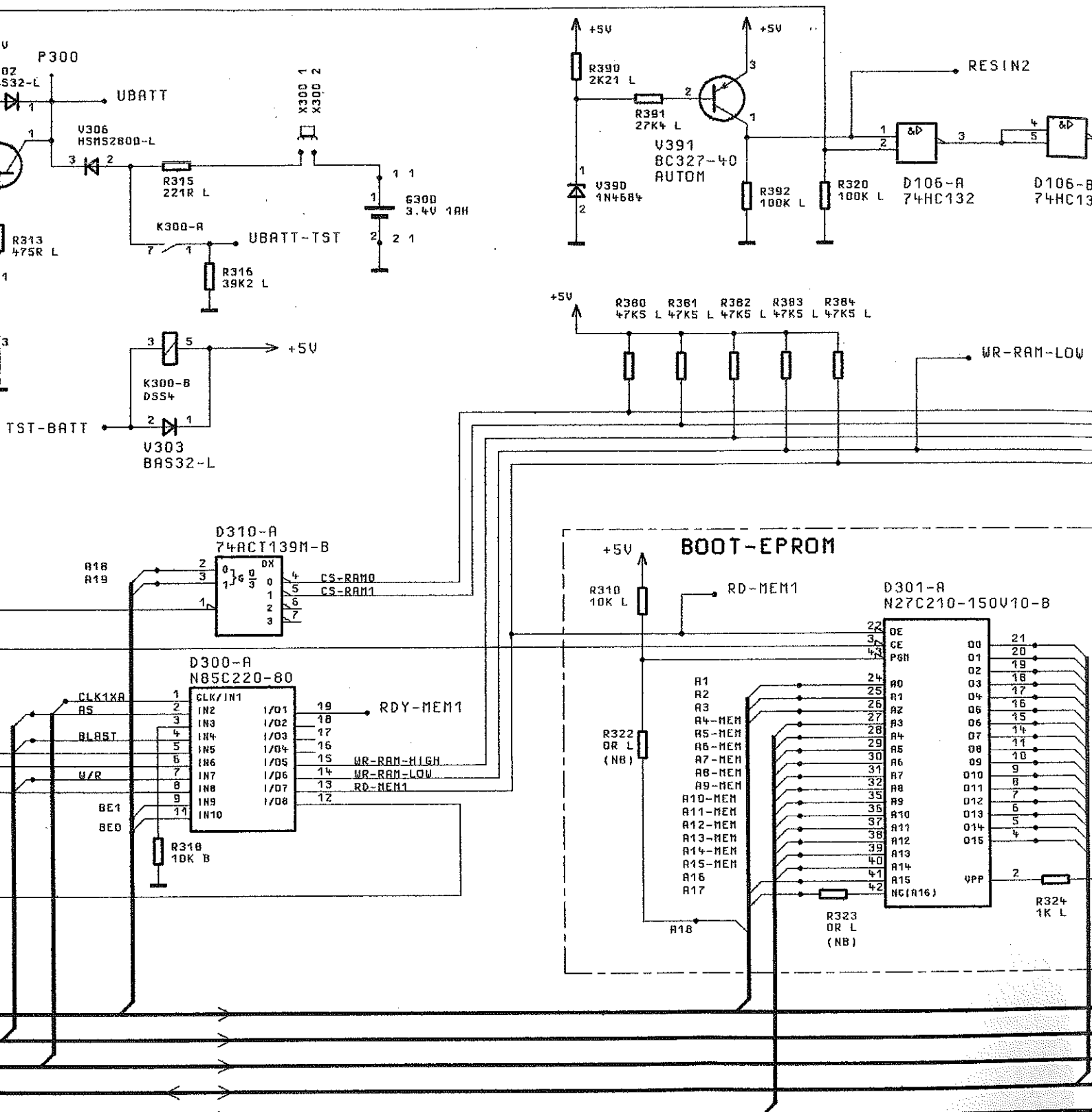
|               |                           |          |      |   |          |               |                      |           |           |
|---------------|---------------------------|----------|------|---|----------|---------------|----------------------|-----------|-----------|
| 05/           |                           | 19.04.94 | DR   | 1GPK  | TAG      | NAME          | BENENNUNG            |           |           |
|               |                           |          |      | BEARB.  |          | JN            | RECHNER<br>PROCESSOR |           |           |
|               |                           |          |      | GEPR.   |          |               |                      |           |           |
|               |                           |          |      | NORM  |          |               |                      |           |           |
|               |                           |          |      | PLOTT   | 03.05.94 |               |                      |           |           |
| /             |                           |          |      | <br><b>ROHDE &amp; SCHWARZ</b> |          | ZEICHN.-NR.   |                      | BLATT-NR. |           |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG | DATUM    | NAME |   |          | 1035.7250.015 |                      | 4+        |           |
|               |                           |          |      | ZU GERÄT  | SMP      | REG. I. V.    | 1035.5005            | ERSTE Z.  | 1035.5005 |

RAM



|            |                       |          |      |                                |          |      |
|------------|-----------------------|----------|------|--------------------------------|----------|------|
| 05/        |                       | 19.04.94 | DR   | 1GPK                           | TAG      | NAME |
|            |                       |          |      | BEARB.                         |          | JN   |
|            |                       |          |      | GEPR.                          |          |      |
|            |                       |          |      | NDRM                           |          |      |
|            |                       |          |      | PLOTT                          | 03.05.94 |      |
|            |                       |          |      |                                |          |      |
| REND. IND. | RENDERUNGS-MITTEILUNG | DATUM    | NAME | <br><b>ROHDE &amp; SCHWARZ</b> |          |      |
|            |                       |          |      |                                |          |      |





P300

RES-N

FUER DIESE UNTERLAGE  
BEHALTEN WIR UNS ALLE RECHTE VOR

ZEITPLAN: -NR.

A

B

C

D

E

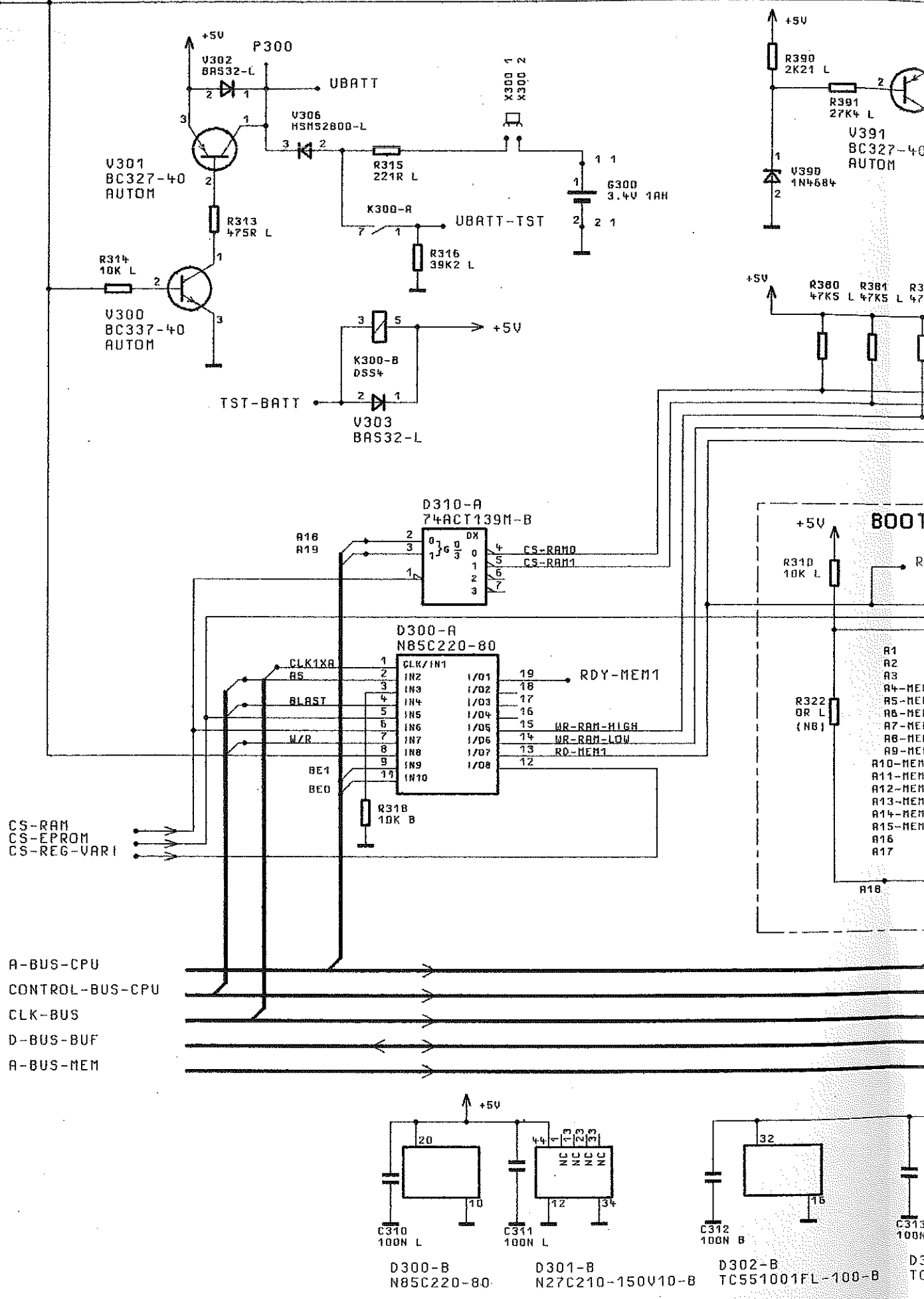
F

F

F

F

F

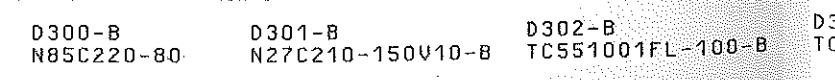


1

2

3

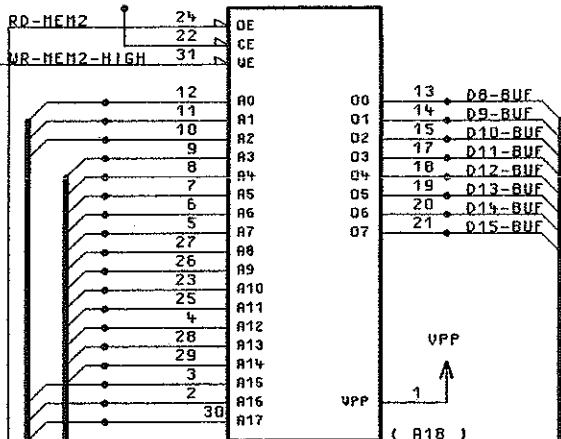
4



# FLASH-EPROM BANK2

CS-FLASH2

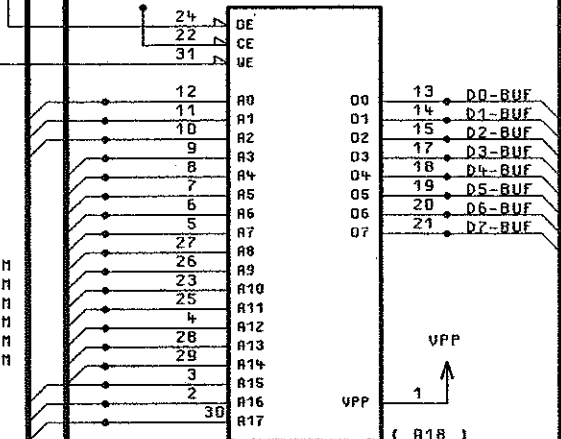
D424-A  
29F040-B



- A1
- A2
- A3
- A4-MEM
- A5-MEM
- A6-MEM
- A7-MEM
- A8-MEM
- A9-MEM
- A10-MEM
- A11-MEM
- A12-MEM
- A13-MEM
- A14-MEM
- A15-MEM
- A16
- A17
- A18

CS-FLASH2

D425-A  
29F040-B




- A1
- A2
- A3
- A4-MEM
- A5-MEM
- A6-MEM
- A7-MEM
- A8-MEM
- A9-MEM
- A10-MEM
- A11-MEM
- A12-MEM
- A13-MEM
- A14-MEM
- A15-MEM
- A16
- A17
- A18

A-BUS-CPU

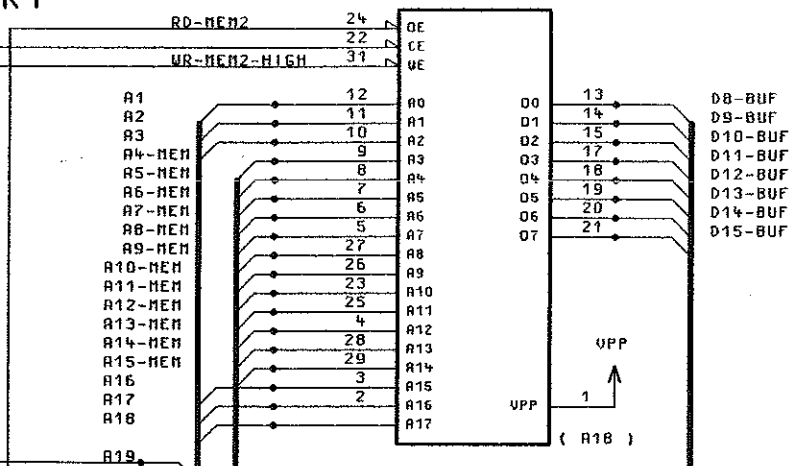
CLK-BUS

D-BUS-BUF

|               |                           |          |      |  |          |            |                      |                      |           |
|---------------|---------------------------|----------|------|--|----------|------------|----------------------|----------------------|-----------|
| 06/           | 49155 03                  | 07.10.94 | DR   | 16PK   | TAG      | NAME       | BENENNUNG            |                      |           |
|               |                           |          |      | BEARB.   |          | DR         | RECHNER<br>PROCESSOR |                      |           |
|               |                           |          |      | GEPR.  |          |            |                      |                      |           |
|               |                           |          |      | NORM   |          |            |                      |                      |           |
|               |                           |          |      | PLOTT  | 07.10.94 |            |                      |                      |           |
|               |                           |          |      |  <b>ROHDE &amp; SCHWARZ</b> |          |            | ZEICHN.-NR.          | BLATT-NR.            |           |
|               |                           |          |      |  |          |            |                      | <b>1035.7250.01S</b> | <b>5+</b> |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG | DATUM    | NAME | ZU GERÄT   | SMP      | REG. I. V. | 1035.5005            | ERSTE Z.             | 1035.5005 |

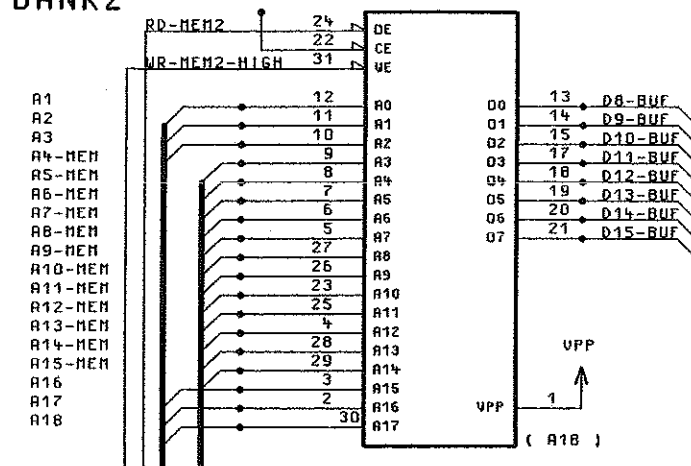
# SH-EPROM K1

D405-A  
29F040-B

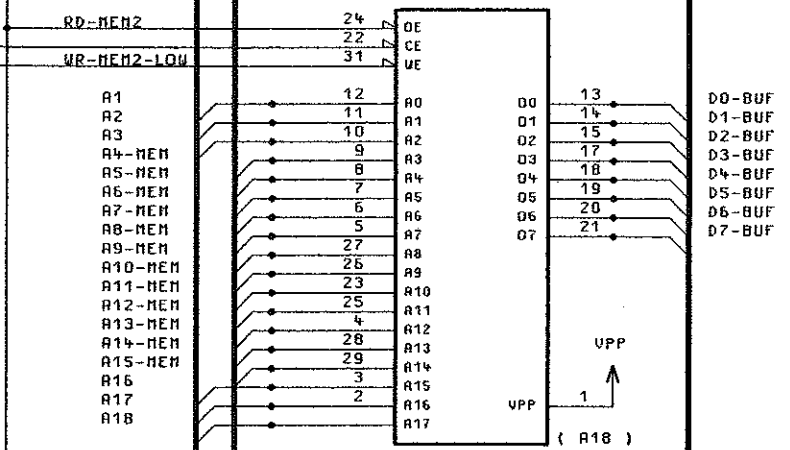


# FLASH-EPROM BANK 2

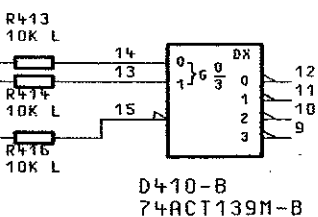
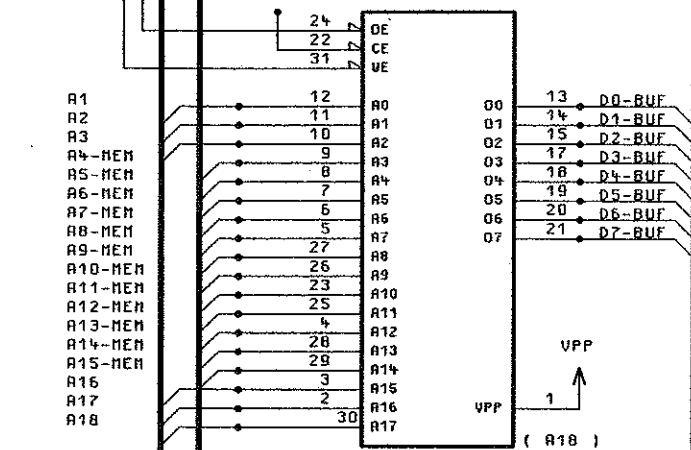
D424-A  
29F040-B



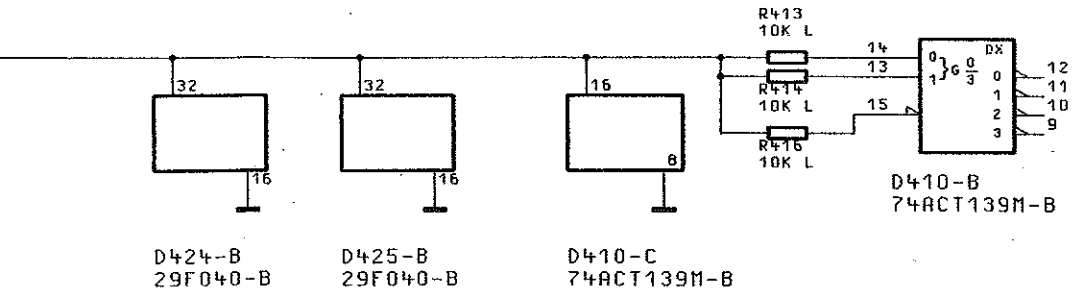
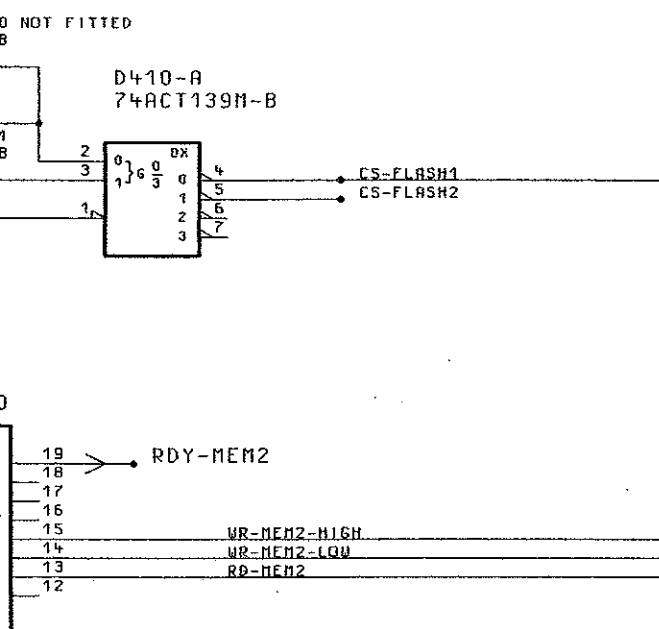
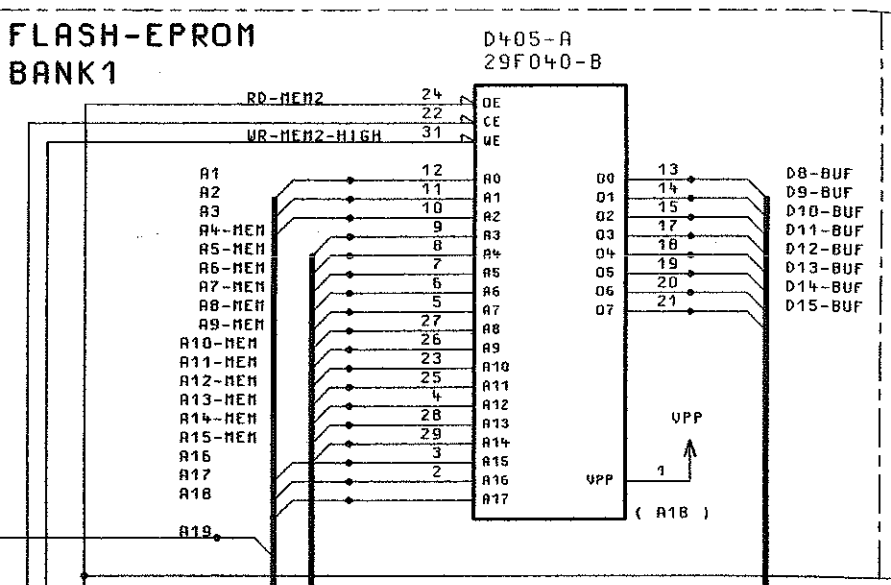
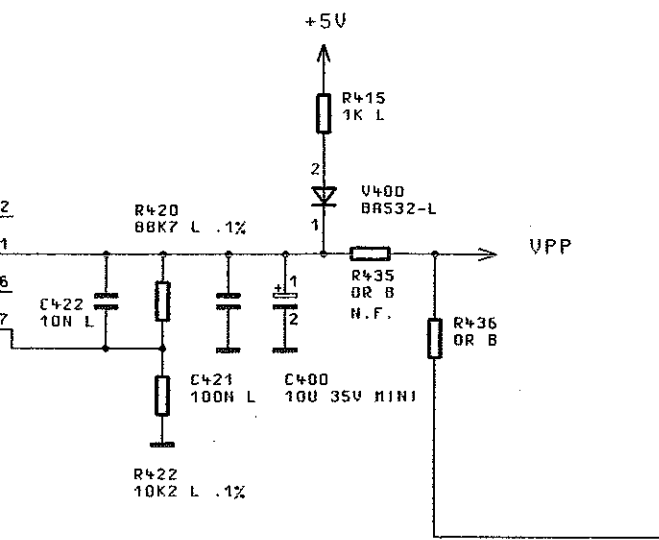
D404-A  
29F040-B



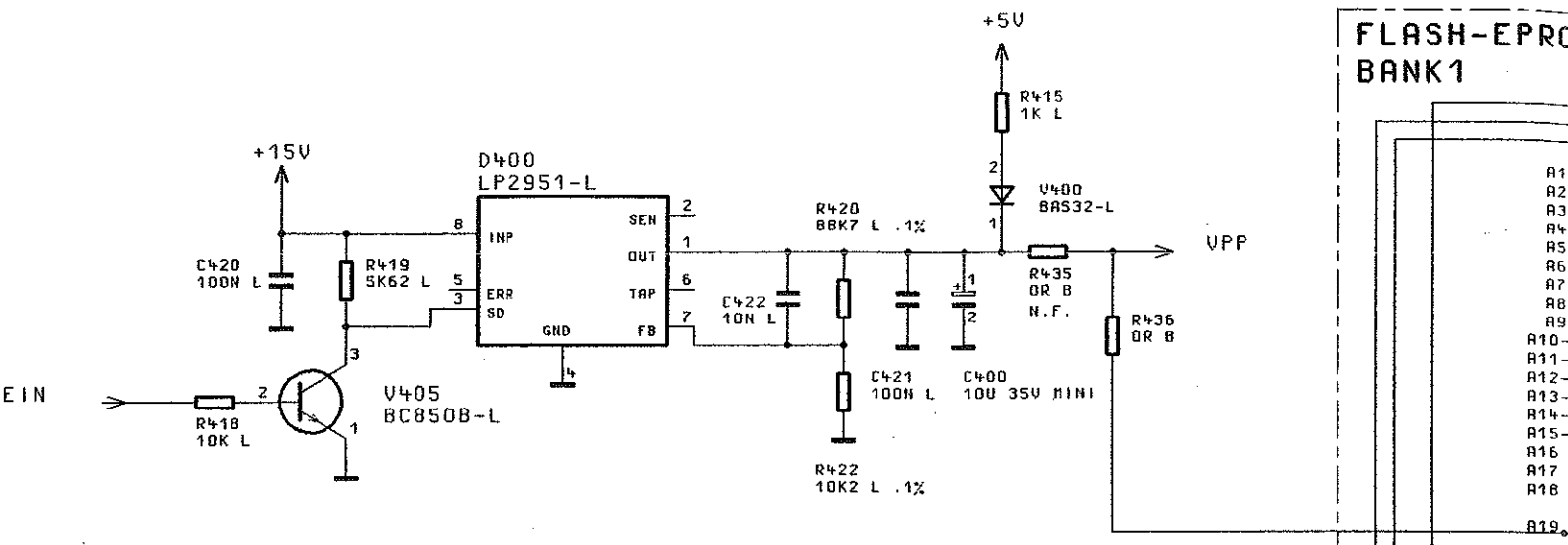
D425-A  
29F040-B



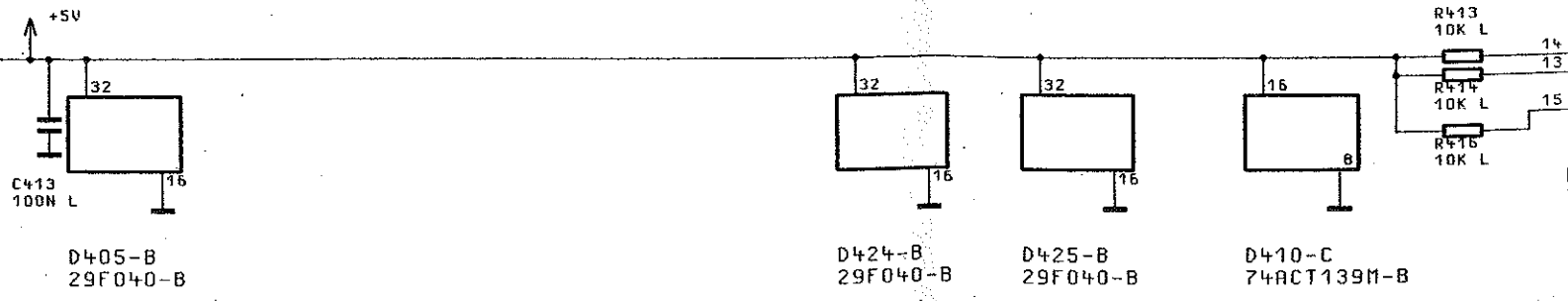
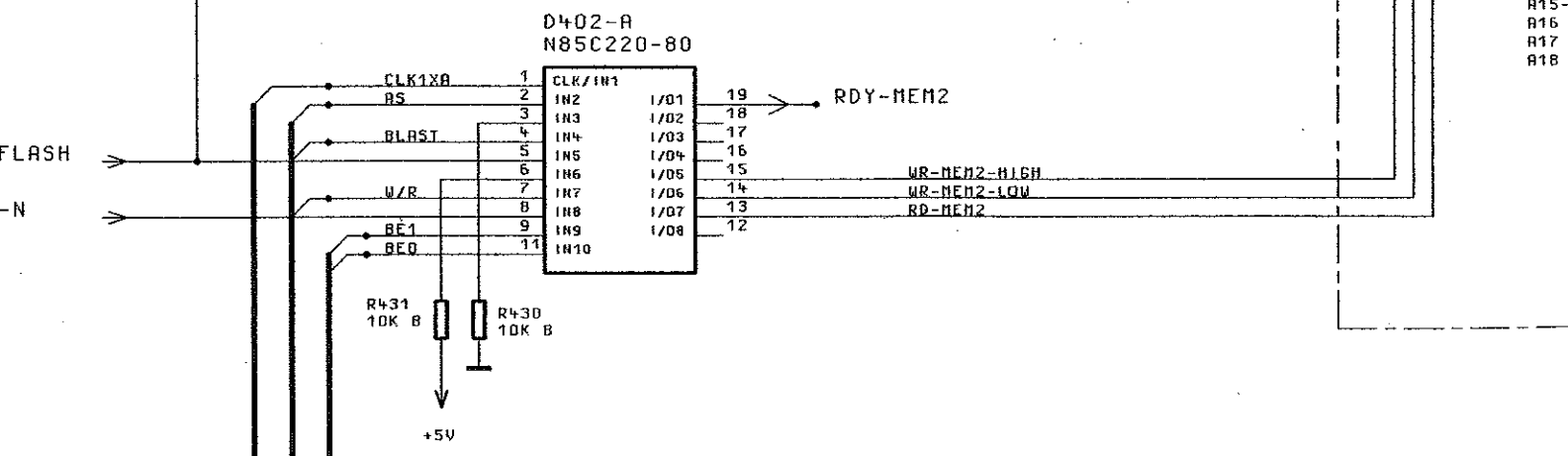
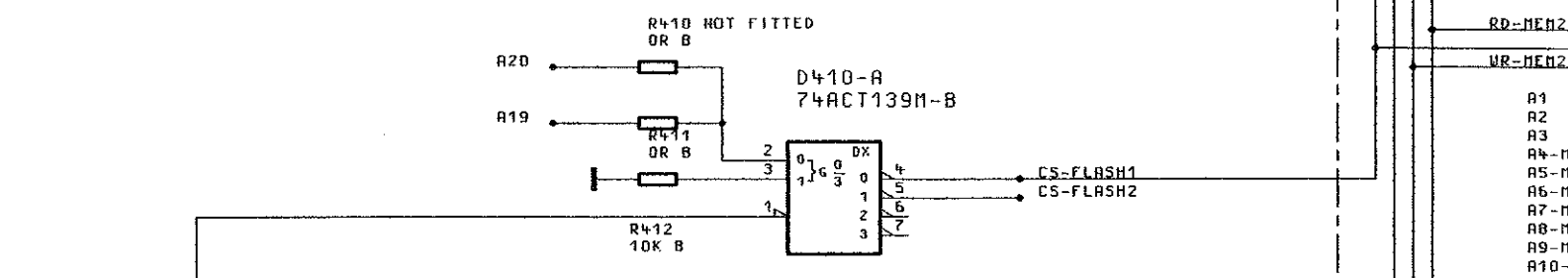
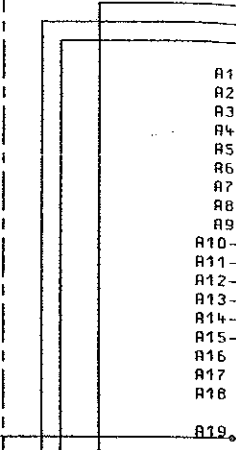
|            |                       |          |      |  |          |      |
|------------|-----------------------|----------|------|--|----------|------|
| 06/        | 49155 03              | 07.10.94 | DR   | 1GPK   | TAG      | NAME |
|            |                       |          |      | BEARB.   |          | DR   |
|            |                       |          |      | GEPR.  |          |      |
|            |                       |          |      | NORM   |          |      |
|            |                       |          |      | PLOTT  | 07.10.94 |      |
| REND. IND. | RENDERUNGS-NITTEILUNG | DATUR    | NAME | <br><b>ROHDE &amp; SCHWARZ</b><br>ZU GERÄT SMP |          |      |
|            |                       |          |      |  |          |      |

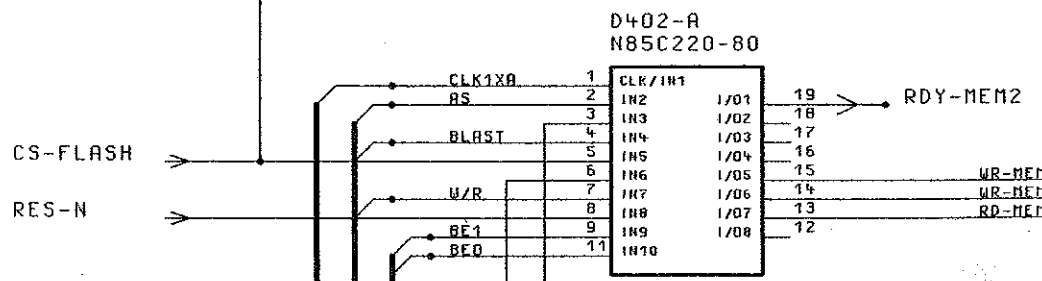
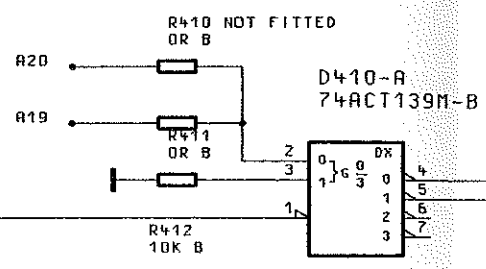
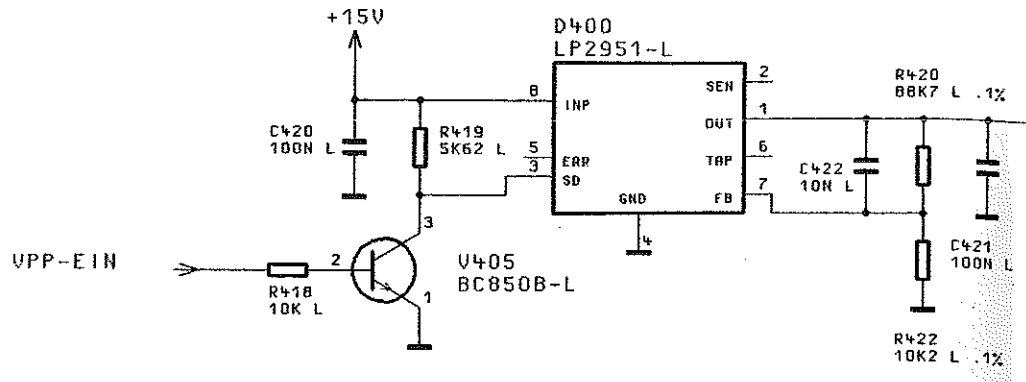




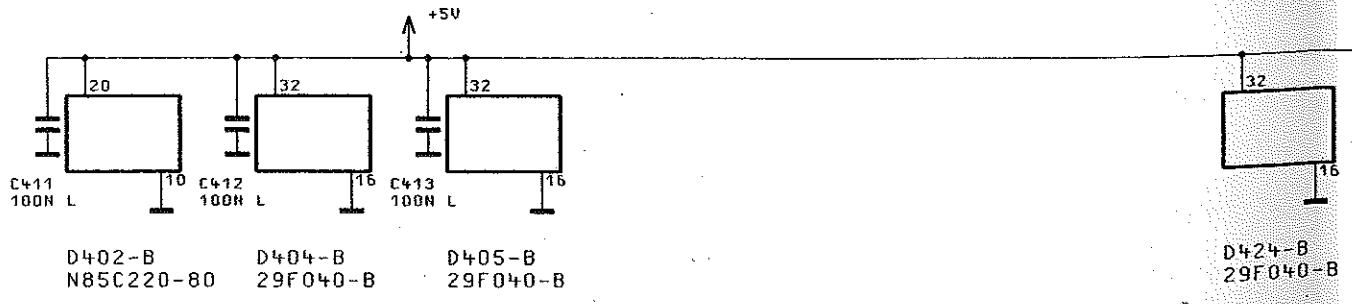


**FLASH-EPRC BANK 1**

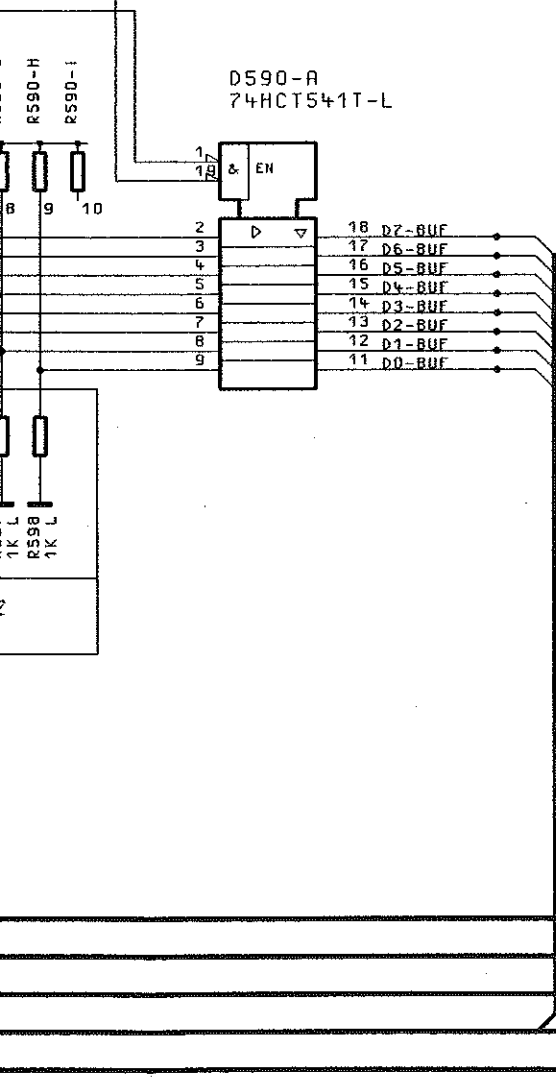
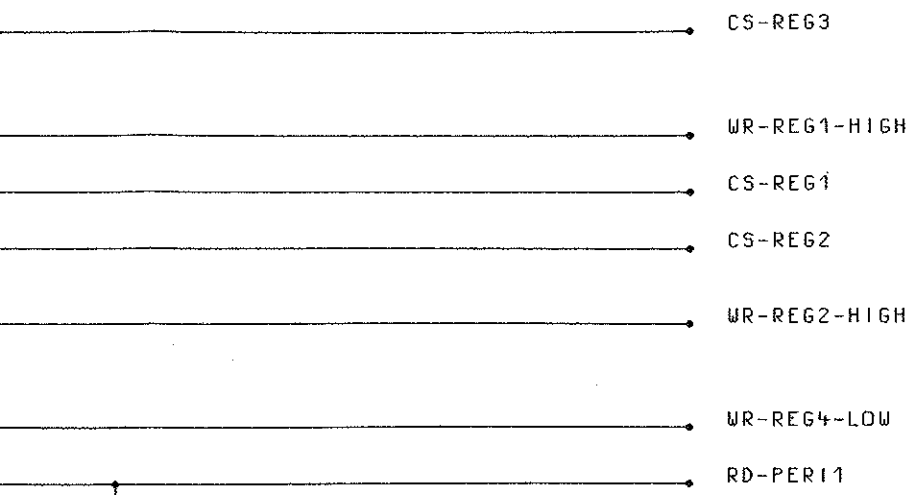




A-BUS-CPU  
 CONTROL-BUS-CPU  
 CLK-BUS  
 D-BUS-BUF  
 A-BUS-MEM



BEHALTEN WIR UNS ALLE RECHTE VOR

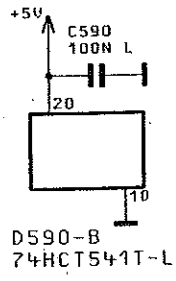
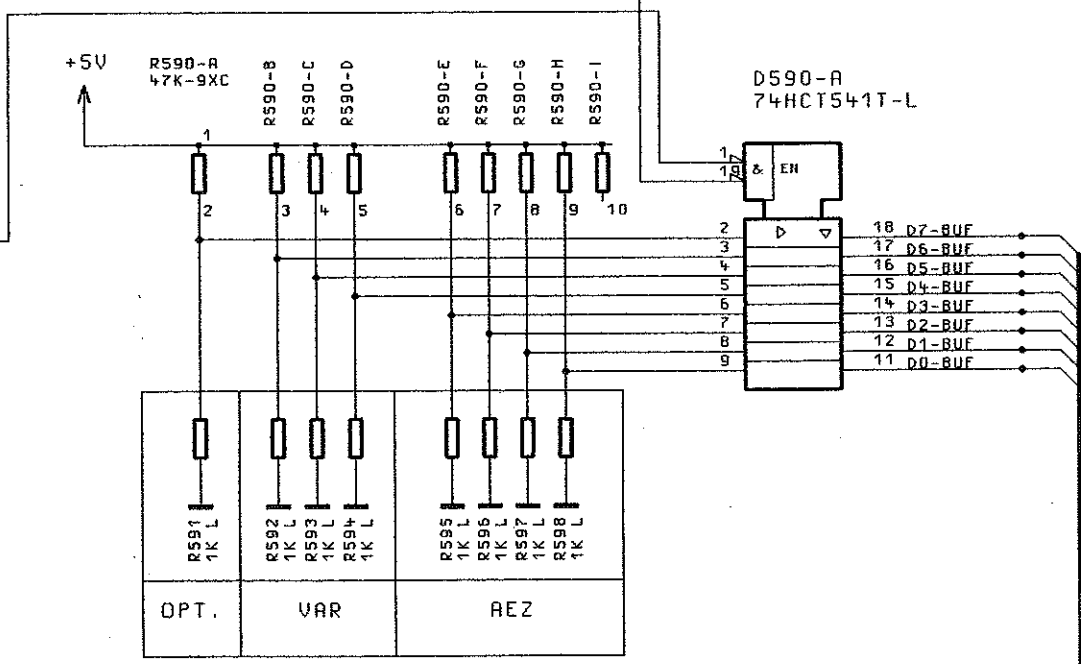
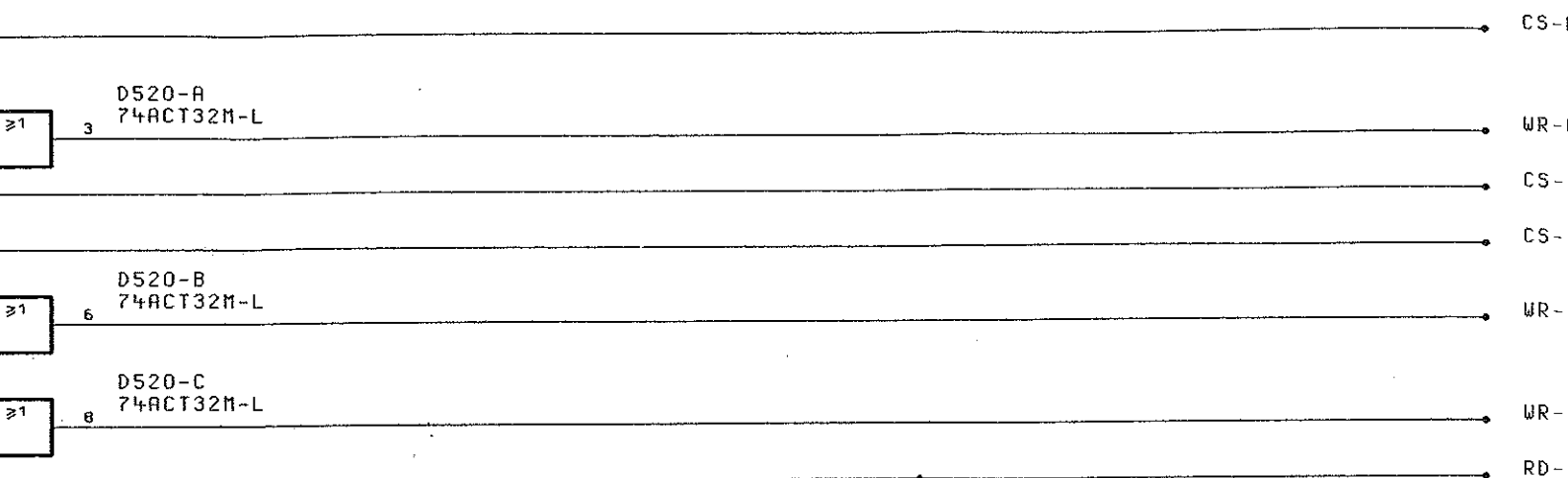


| VAR | R592                     | R593 | R594                     |
|-----|--------------------------|------|--------------------------|
| 04  | <input type="checkbox"/> | N.F. | <input type="checkbox"/> |

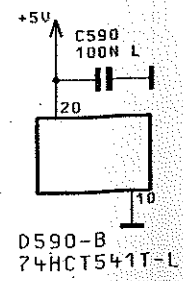
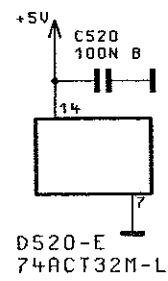
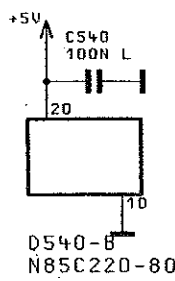
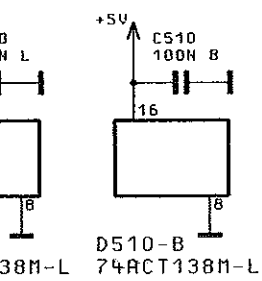
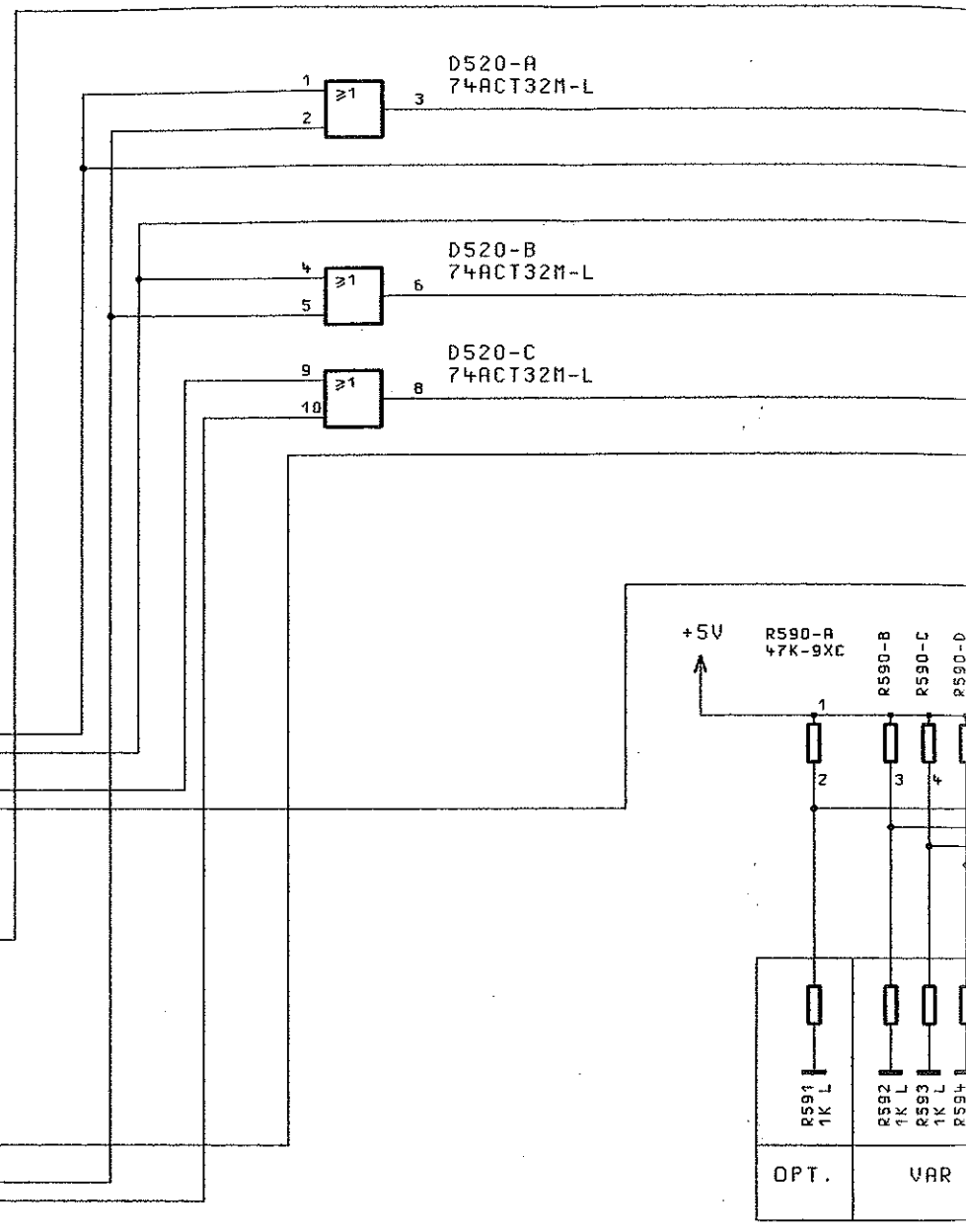
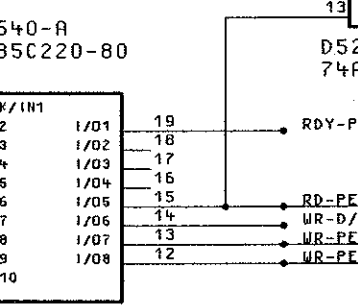
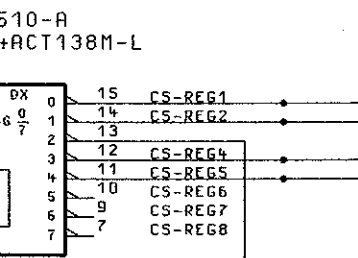
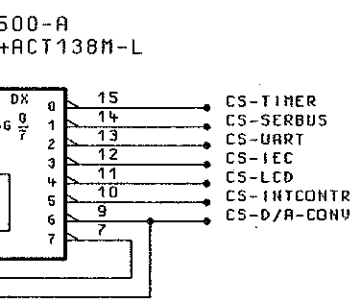
| REZ | R595                     | R596                     | R597                     | R598                     |
|-----|--------------------------|--------------------------|--------------------------|--------------------------|
| 01  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | N.F.                     |
| 02  | <input type="checkbox"/> | <input type="checkbox"/> | N.F.                     | <input type="checkbox"/> |
| 03  | <input type="checkbox"/> | <input type="checkbox"/> | N.F.                     | N.F.                     |
| 04  | <input type="checkbox"/> | N.F.                     | <input type="checkbox"/> | <input type="checkbox"/> |
| 05  | <input type="checkbox"/> | N.F.                     | <input type="checkbox"/> | N.F.                     |
| 06  | <input type="checkbox"/> | N.F.                     | N.F.                     | <input type="checkbox"/> |
| 07  | <input type="checkbox"/> | N.F.                     | N.F.                     | N.F.                     |
| 08  | N.F.                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ... |                          |                          |                          |                          |
| 15  | N.F.                     | N.F.                     | N.F.                     | N.F.                     |

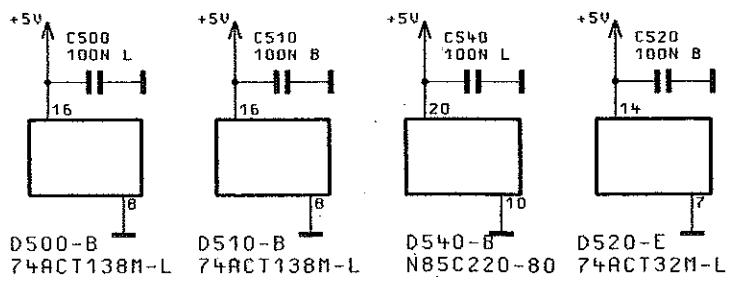
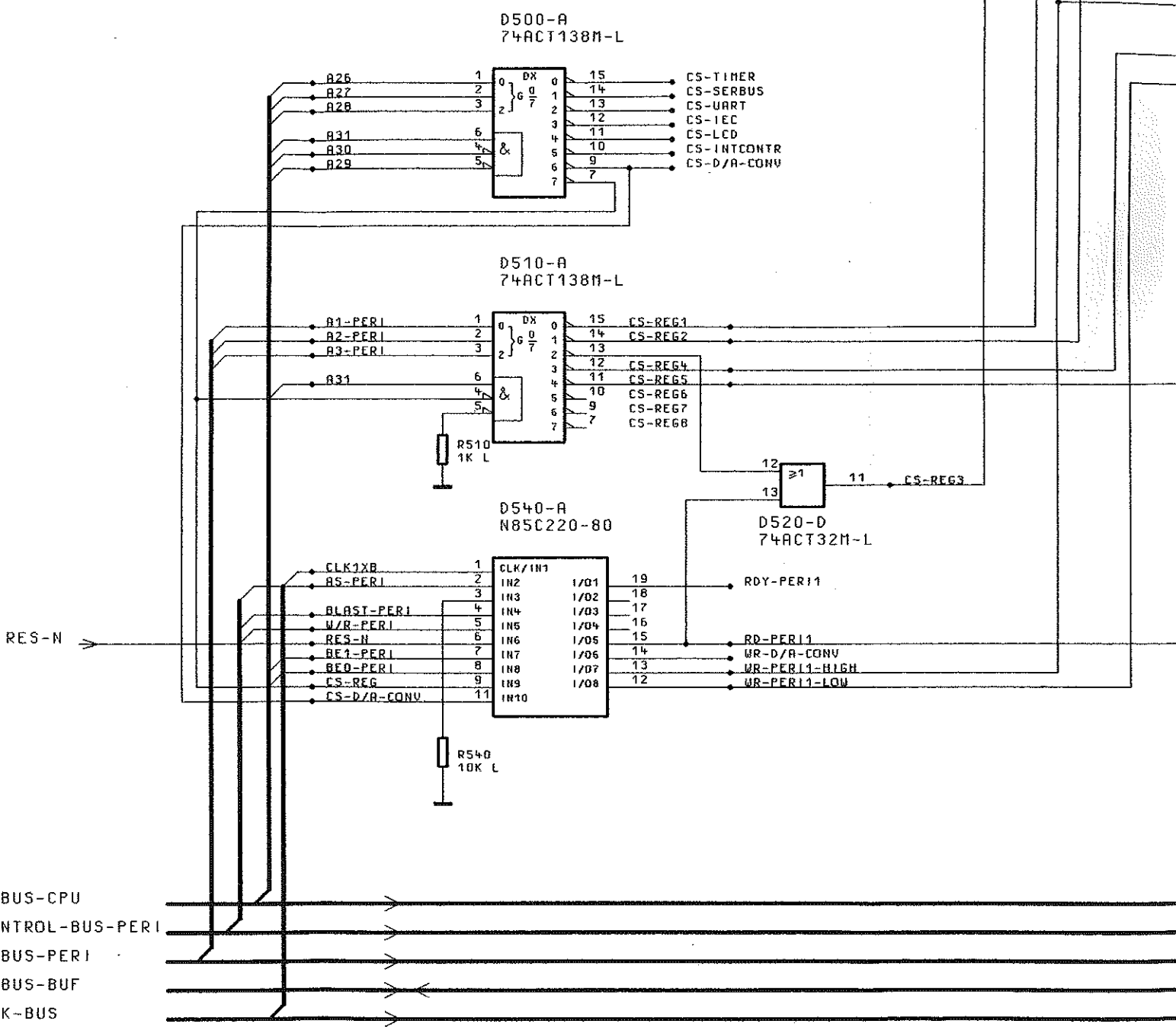
A-BUS-CPU  
 CONTROL-BUS-PERI  
 A-BUS-PERI  
 D-BUS-BUF  
 CLK-BUS

|            |                       |       |                                |          |      |                              |           |
|------------|-----------------------|-------|--------------------------------|----------|------|------------------------------|-----------|
| 08/        | 13.03.95              | DR    | 1GPK                           | TAG      | NAME | BENENNUNG                    |           |
|            |                       |       | BEARB.                         |          | DR   | <b>RECHNER<br/>PROCESSOR</b> |           |
|            |                       |       | GEPR.                          |          |      |                              |           |
|            |                       |       | NDRN                           |          |      |                              |           |
|            |                       |       | PLOTT                          | 13.03.95 |      |                              |           |
|            |                       |       | <br><b>ROHDE &amp; SCHWARZ</b> |          |      | ZEICHN.-NR.                  |           |
|            |                       |       |                                |          |      | <b>1035.7250.015</b>         |           |
| REND. IND. | RENDERUNGS-NITTEILUNG | DATUM | NAME                           | ZU GERÄT | SMP  | REG. I. V.                   | 1035.5005 |
|            |                       |       |                                |          |      | ERSTE Z.                     | 1035.5005 |

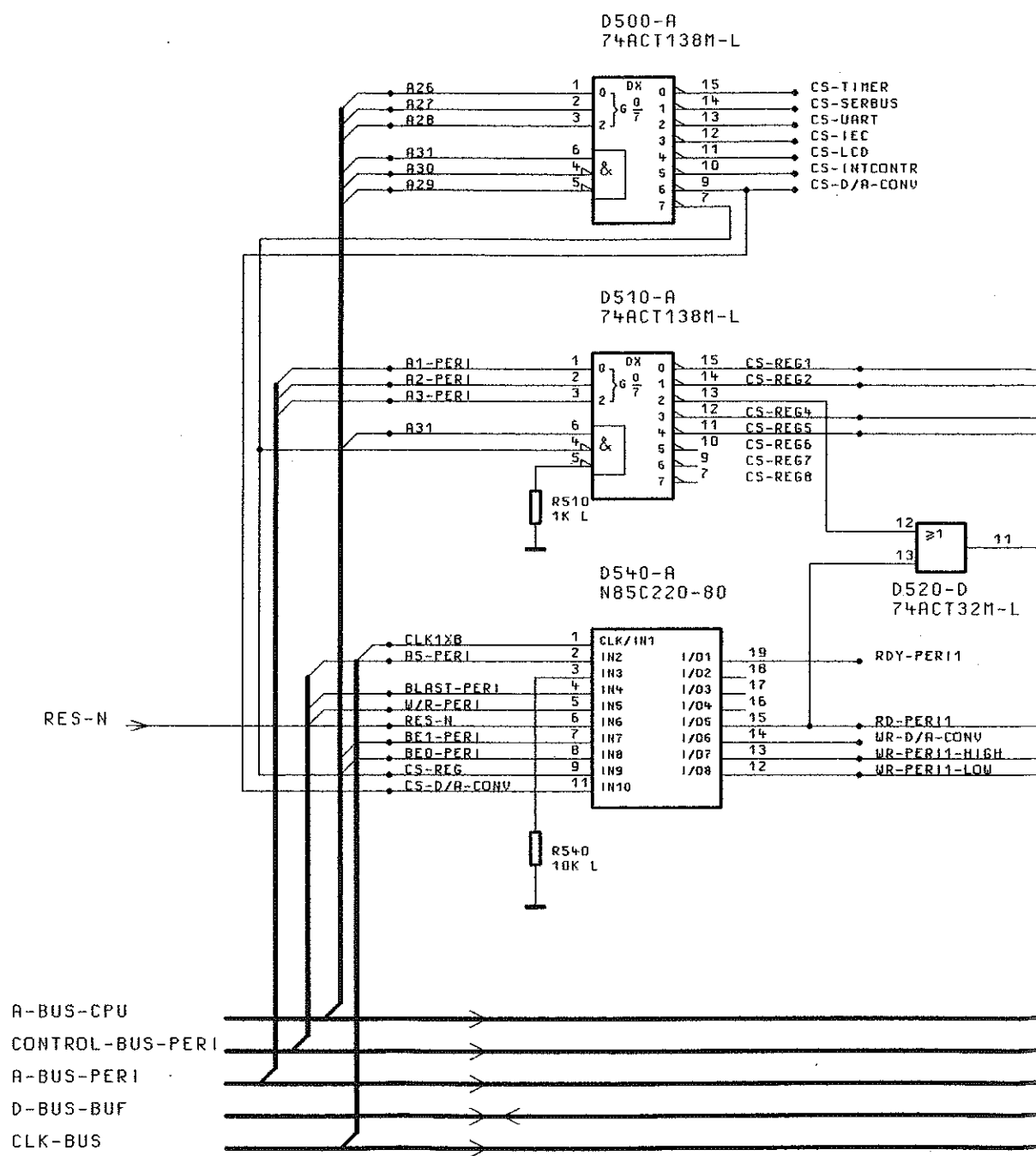


|            |                       |          |      |  |          |
|------------|-----------------------|----------|------|--|----------|
| DB/        |                       | 13.03.95 | DR   | 1GPK   | TAG      |
|            |                       |          |      | BEARB.   |          |
|            |                       |          |      | GEPR.  |          |
|            |                       |          |      | NORN   |          |
|            |                       |          |      | PLOTT  | 13.03.95 |
| /          |                       |          |      |  |          |
| REND. IND. | RENDERUNGS-MITTEILUNG | DATUM    | NAME | <br><b>ROHDE &amp; SCHMIDT</b><br>ZU GERÄT SMP |          |
|            |                       |          |      |  |          |

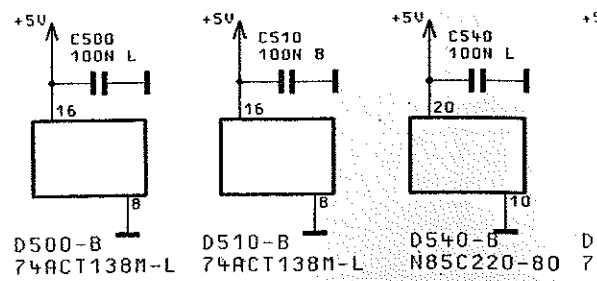




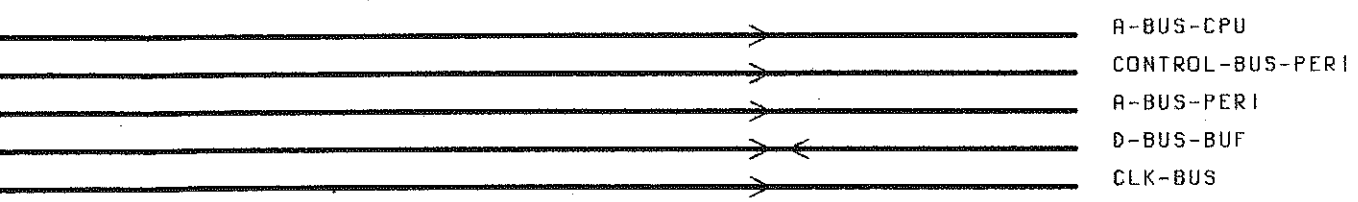
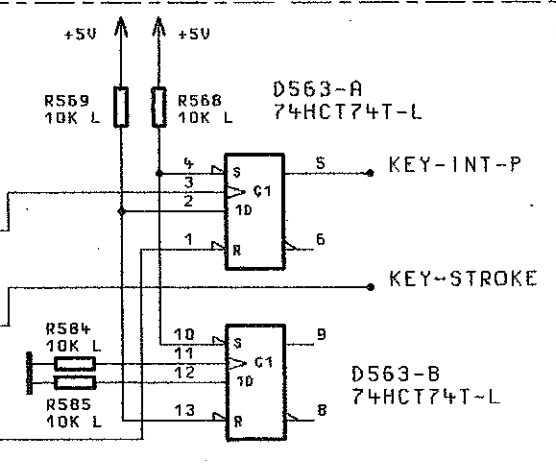
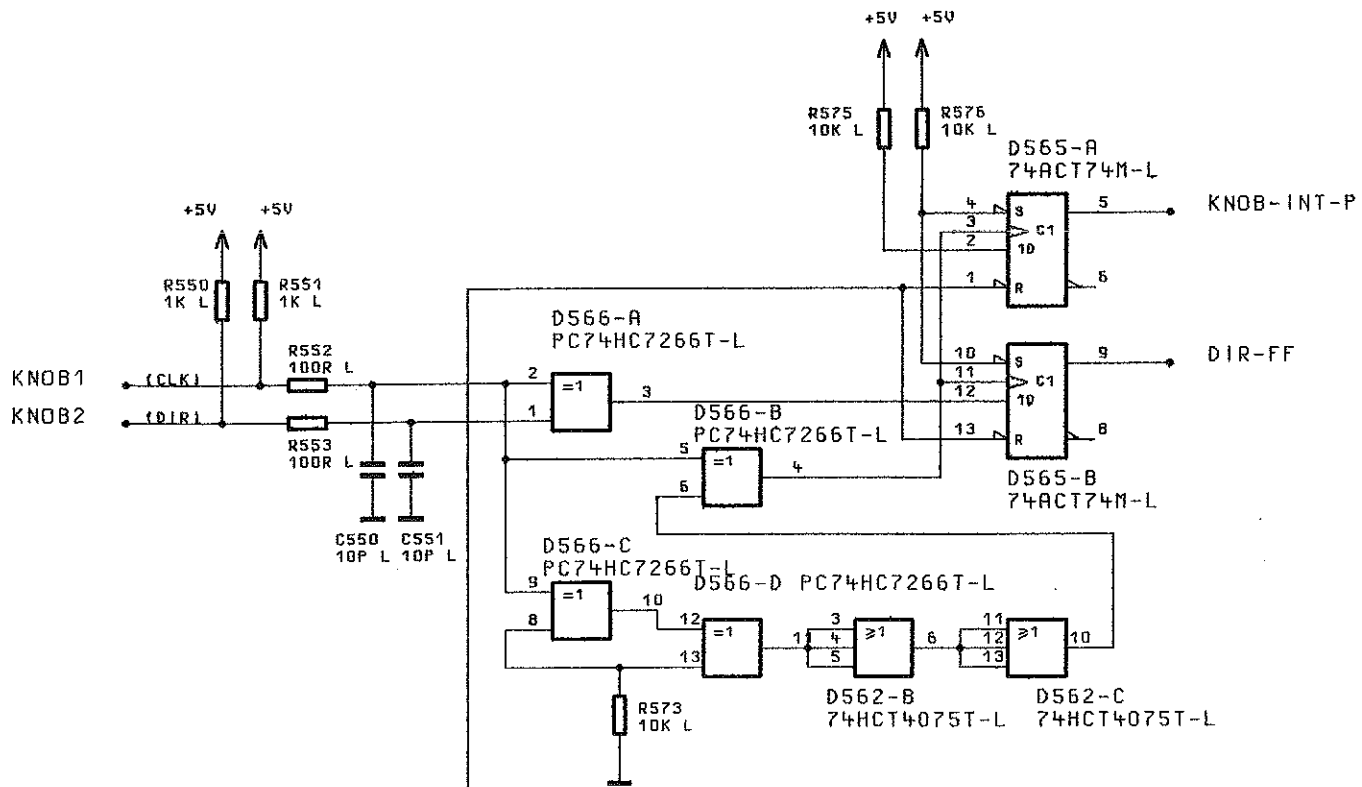
FUER DIESE UNTERLAGE  
BEHALTEN WIR UNS ALLE RECHTE VOR



A-BUS-CPU  
CONTROL-BUS-PERI  
A-BUS-PERI  
D-BUS-BUF  
CLK-BUS



ZEICHN.-NR.

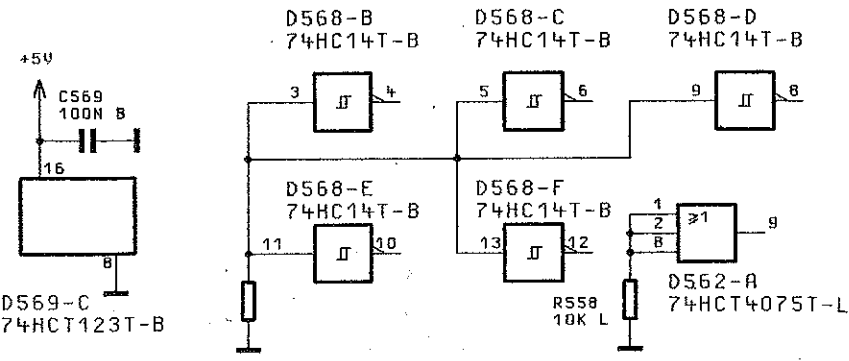
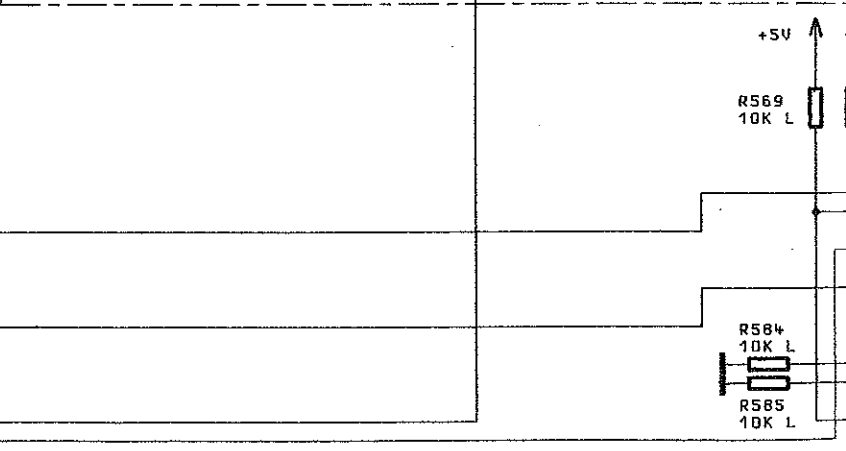
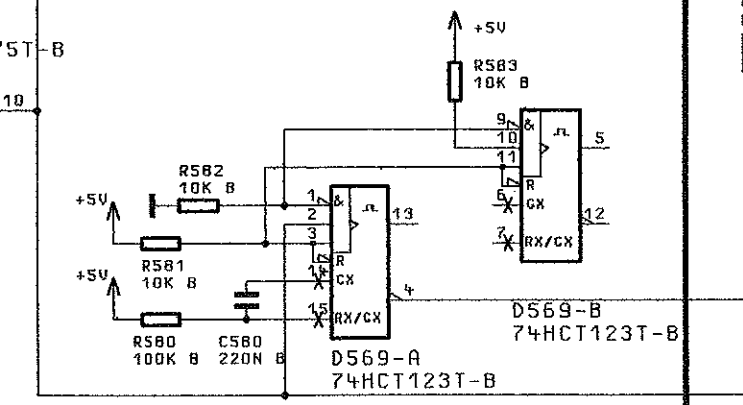
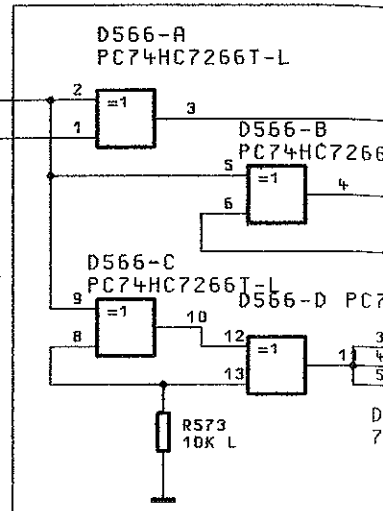
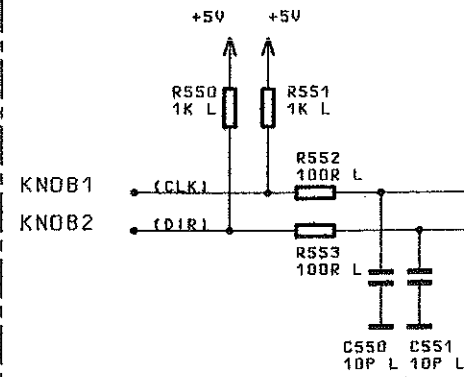
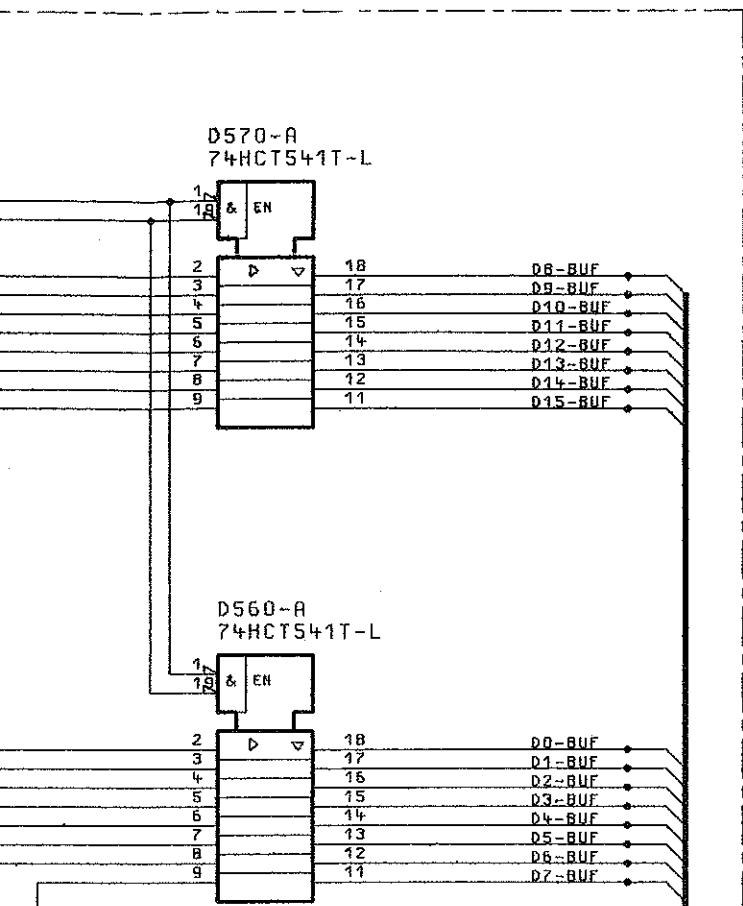


8-D  
C14T-B

2-A  
CT4075T-L

|               |                           |       |        |          |               |                      |           |  |
|---------------|---------------------------|-------|--------|----------|---------------|----------------------|-----------|--|
| 05/           | 19.04.94                  | DR    | 1GPK   | TAG      | NAME          | BENENNUNG            | BLATT-NR. |  |
|               |                           |       | BEARB. |          | JN            | RECHNER<br>PROCESSOR | 7+        |  |
|               |                           |       | GEPR.  |          |               |                      |           |  |
|               |                           |       | NORN   |          |               |                      |           |  |
|               |                           |       | PLOTT  | 03.05.94 |               |                      |           |  |
|               |                           |       |        |          | ZEICHN.-NR.   |                      | BLATT-NR. |  |
|               |                           |       |        |          | 1035.7250.015 |                      | 7+        |  |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG | DATUM | NAME   | ZU GERÄT | SMP           | REG.I.V.             | ERSTE Z.  |  |
|               |                           |       |        |          |               | 1035.5005            | 1035.5005 |  |



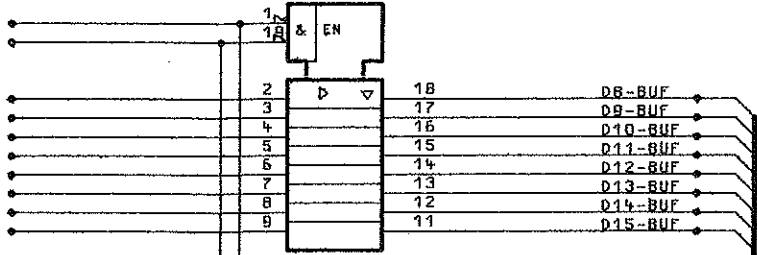


|       |             |          |      |                            |          |      |
|-------|-------------|----------|------|----------------------------|----------|------|
| 05/   |             | 19.04.94 | DR   | 1GPK                       | TAG      | NAME |
|       |             |          |      | BEARB.                     |          | JN   |
|       |             |          |      | GEPR.                      |          |      |
|       |             |          |      | NDRN                       |          |      |
|       |             |          |      | PLOTT                      | 03.05.94 |      |
|       |             |          |      |                            |          |      |
|       |             |          |      | <b>ROHDE &amp; SCHWARZ</b> |          |      |
| REND. | RENDERUNGS- | DATUM    | NAME | ZU GERÄT                   | SMP      |      |
| IND.  | MITTEILUNG  |          |      |                            |          |      |

CS-REG1  
RD-PER11

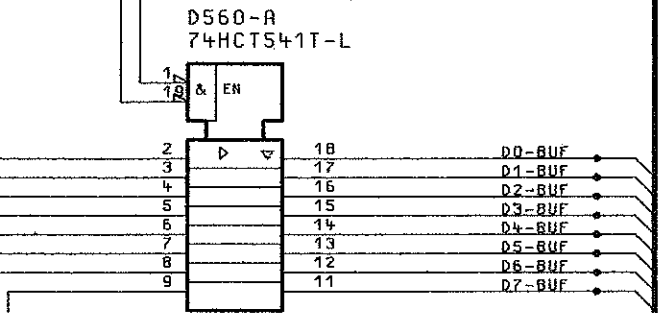
AC-FAIL  
BUSY-A/D  
SERBUS-ACTREQ  
SERBUS-WRBF  
SERBUS-RDBF  
SERBUS-BUSY  
SERBUS-INT2  
SERBUS-INT1

D570-A  
74HCT541T-L



KNOB1  
KNOB2

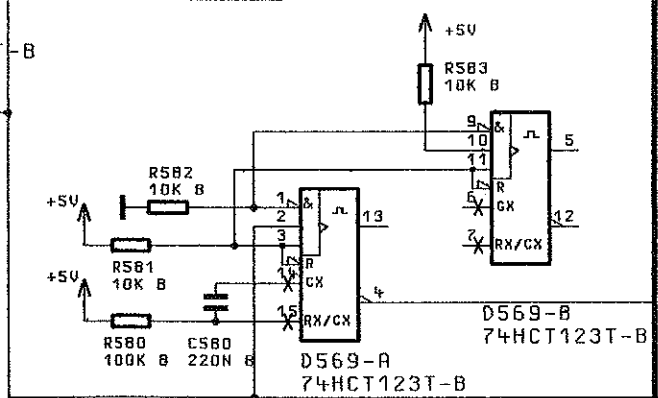
D560-A  
74HCT541T-L



D561-A  
74HCT4075T-B

D561-C  
74HCT4075T-B

D561-B  
74HCT4075T-B



D568-B  
74HC14T-B

D568-C  
74HC14T-B

D568-D  
74HC14T-B

D568-E  
74HC14T-B

D568-F  
74HC14T-B

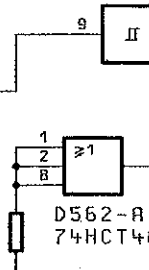
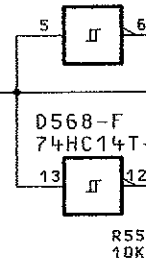
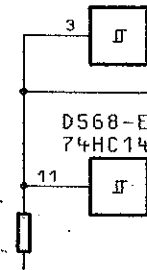
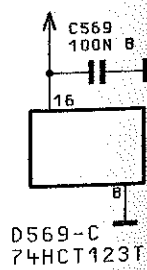
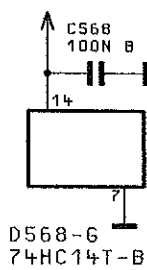
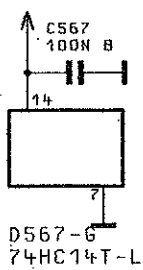
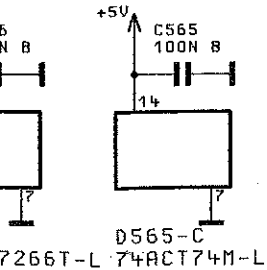
D562-A  
74HCT4075T-L

C565  
100N B

C567  
100N B

C568  
100N B

C569  
100N B

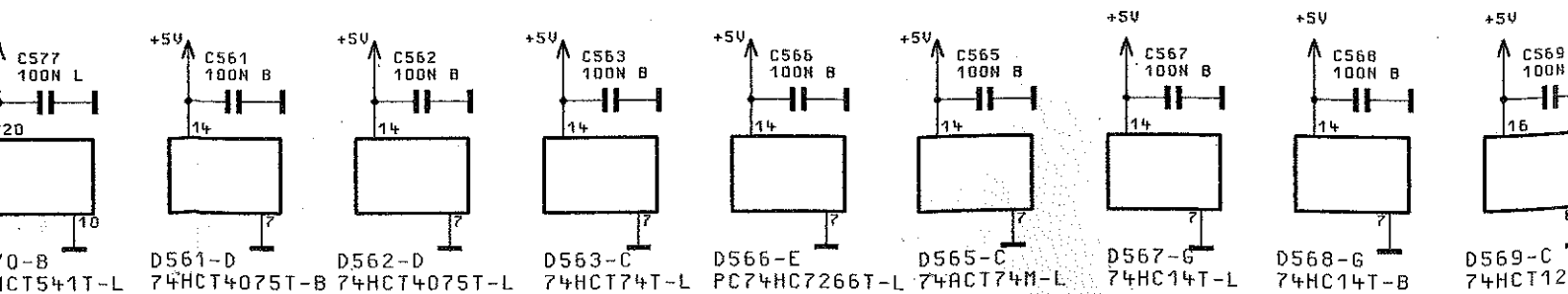
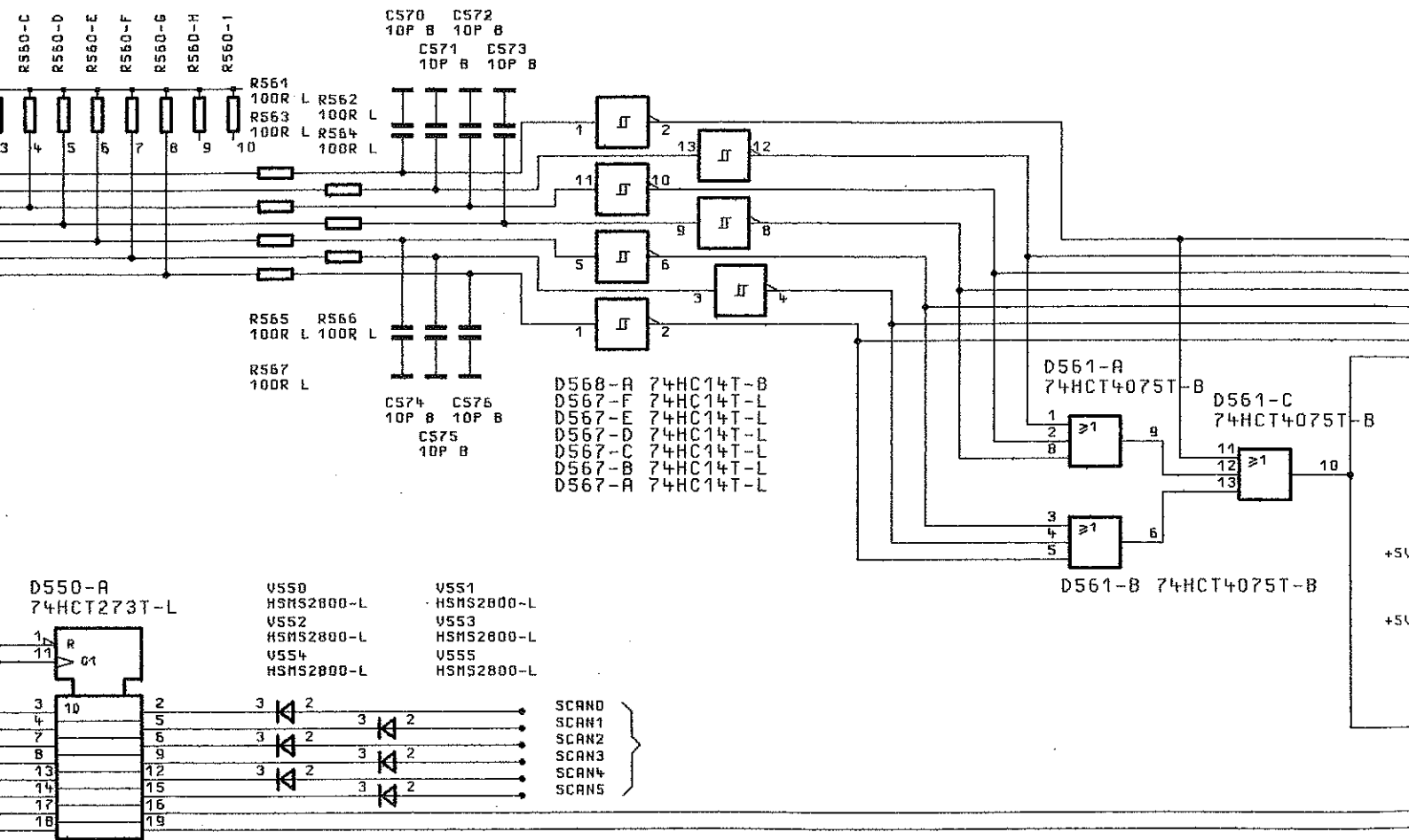


05/  
REND  
IND.

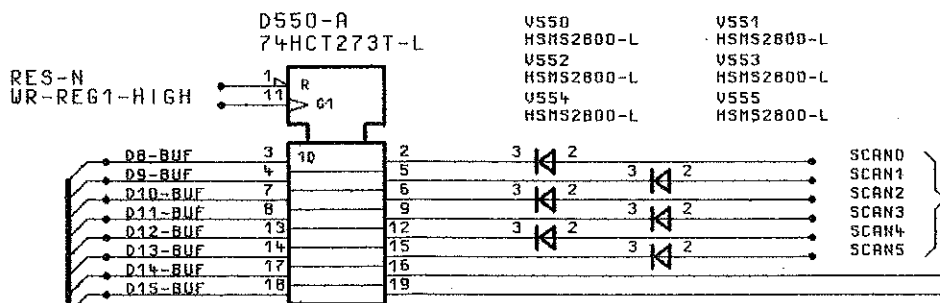
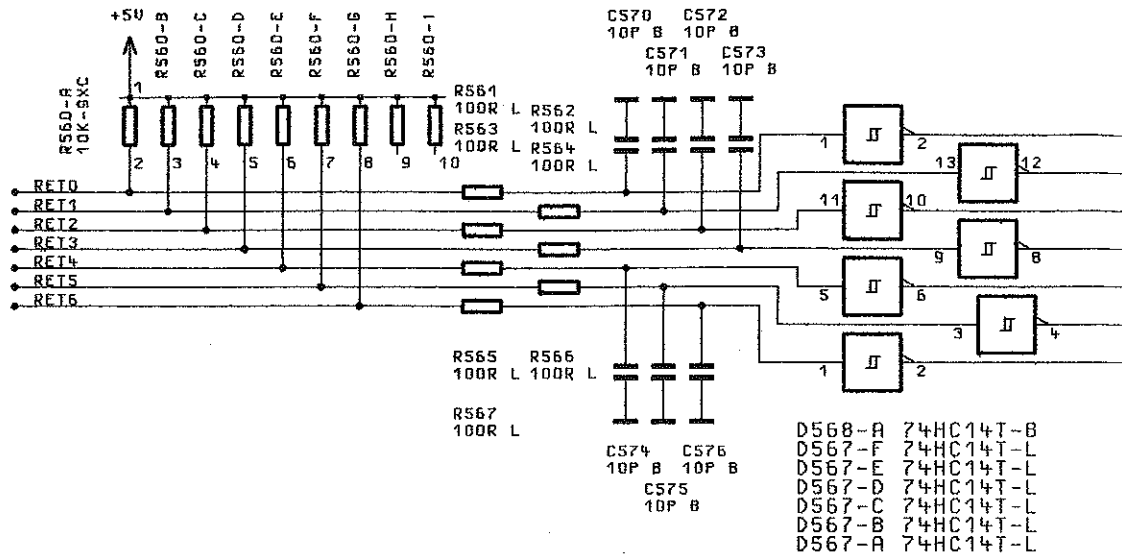
INTERFACE

CS-REG1  
RD-PER11

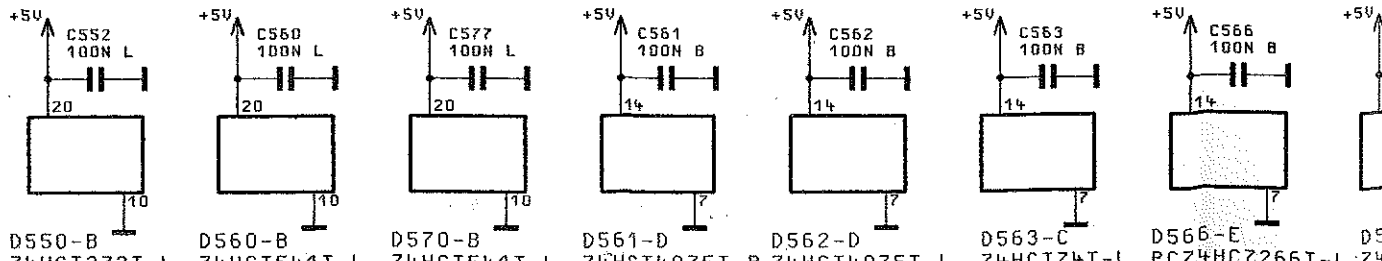
AC-FAIL  
BUSY-A/D  
SERBUS-ACTREQ  
SERBUS-WRBE  
SERBUS-RDBF  
SERBUS-BUSY  
SERBUS-INT2  
SERBUS-INT1



# KEY-INTERFACE



A-BUS-CPU  
 CONTROL-BUS-PERI  
 A-BUS-PERI  
 D-BUS-BUF  
 CLK-BUS

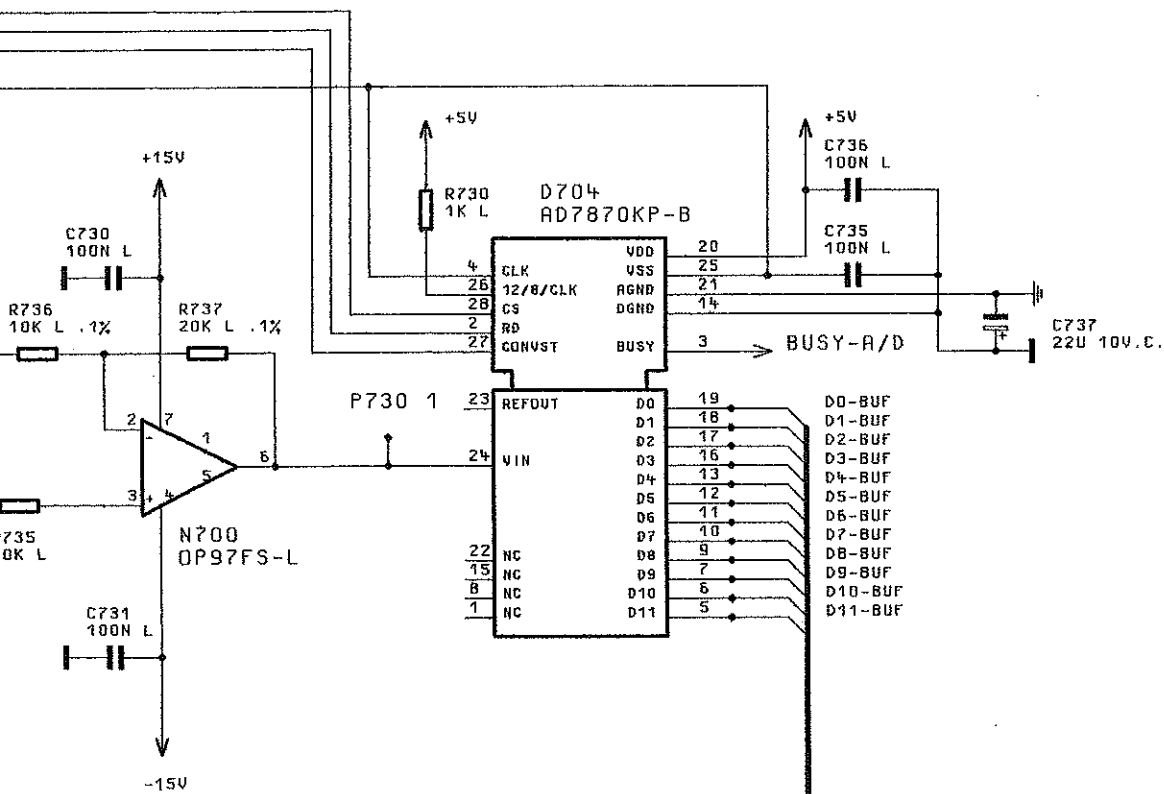
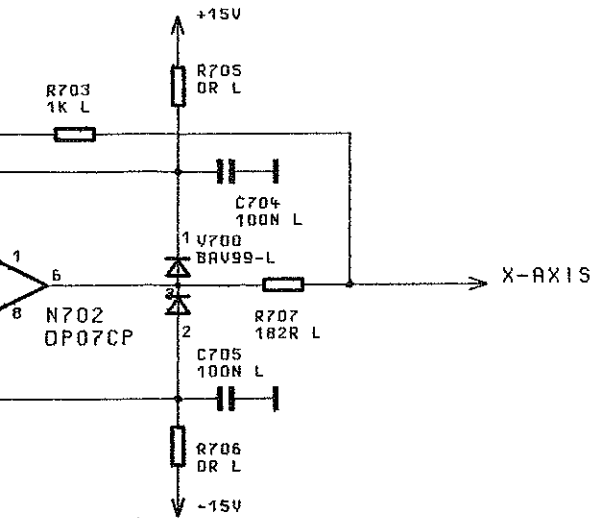


1 2 3 4



FUER DIESE UNTERLAGE  
 BEHALTEN SIE UNS ALLE RECHTE VOR

ZEICHN.-NR.

P730



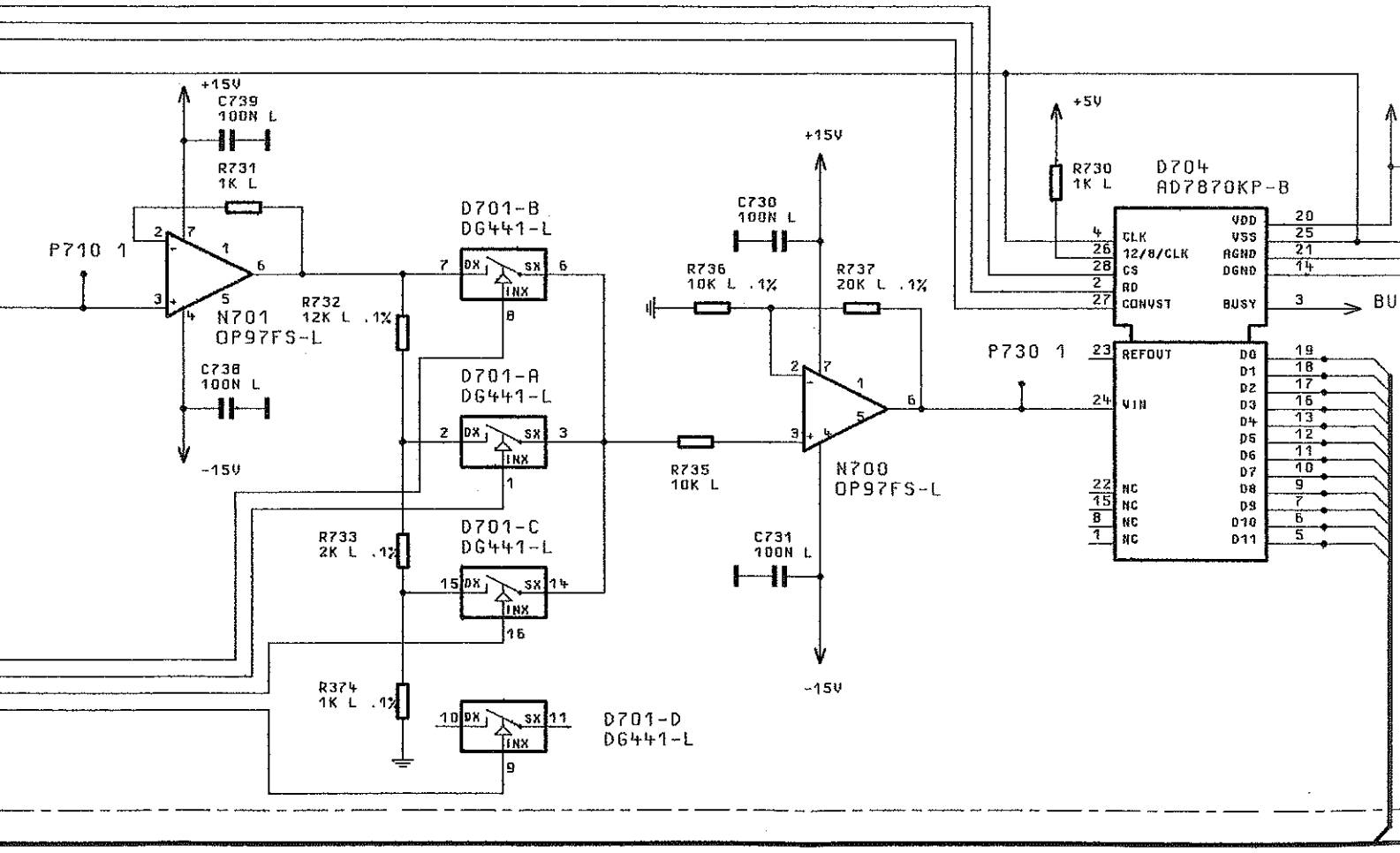
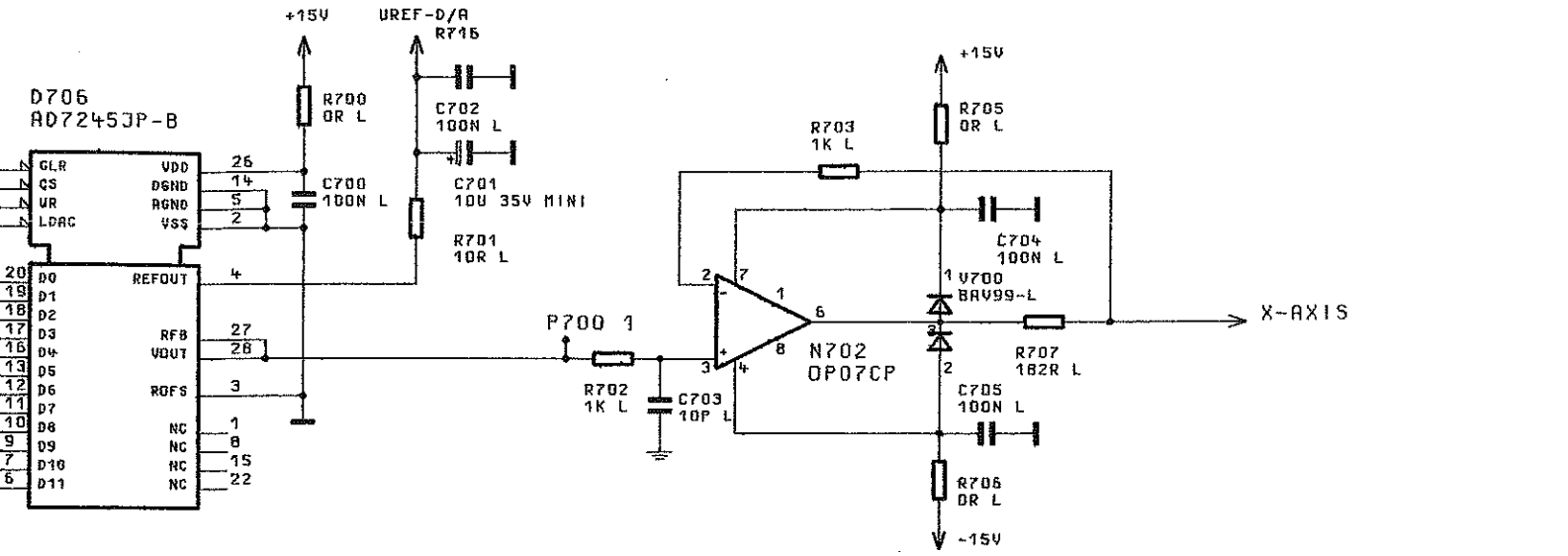
D-BUS-BUF  
A-BUS-PERI


| DS/   | 19.04.94                  | DR    | 1GPK  | TAG      | NAME        | BENENNUNG            |                 |
|---|---------------------------|-------|---|----------|-------------|----------------------|-----------------|
|   |                           |       | BEARB.  |          | JN          | RECHNER<br>PROCESSOR |                 |
|   |                           |       | GEPR.   |          |             |                      |                 |
|   |                           |       | NORM  |          |             |                      |                 |
|   |                           |       | PLOTT   | 03.05.94 |             |                      |                 |
|   |                           |       |  |          | ZEICHN.-NR. | 1035.7250.015        |                 |
| REND.<br>IND.   | RENDERUNGS-<br>MITTEILUNG | DATUM |   |          | NAME        |                      | REG. I. V.      |
|  |                           |       |   |          |             |                      | BLATT-NR.<br>8+ |
|   |                           |       |   |          |             |                      | V. BL.          |

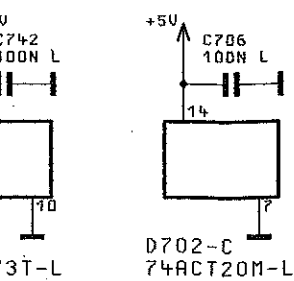
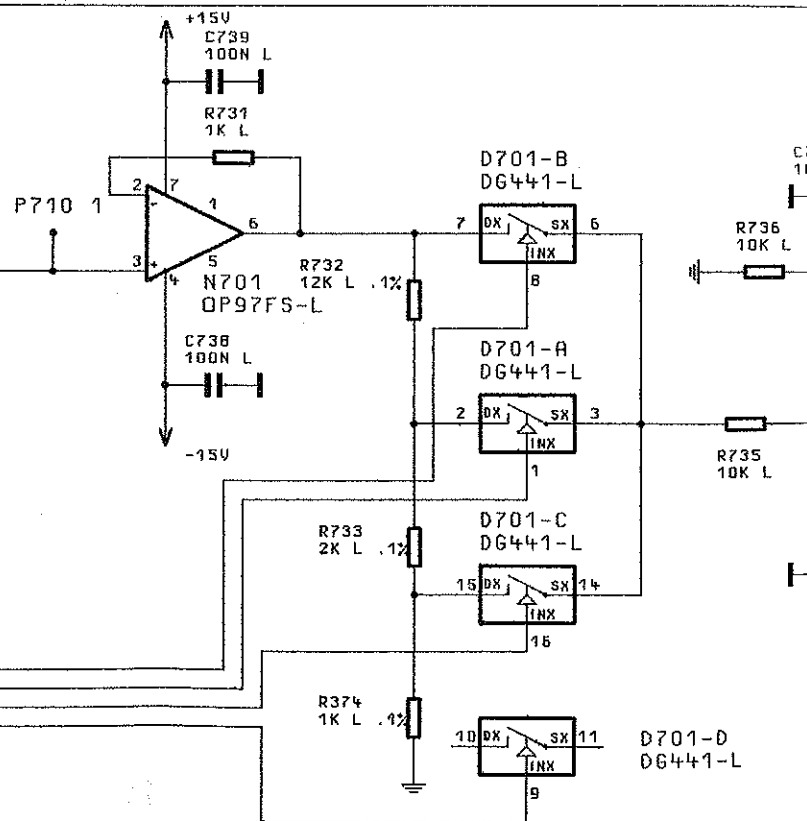
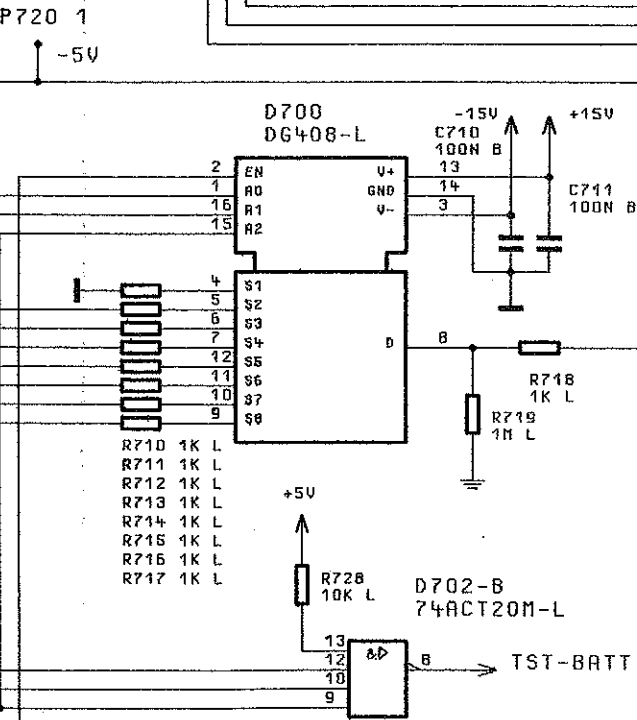
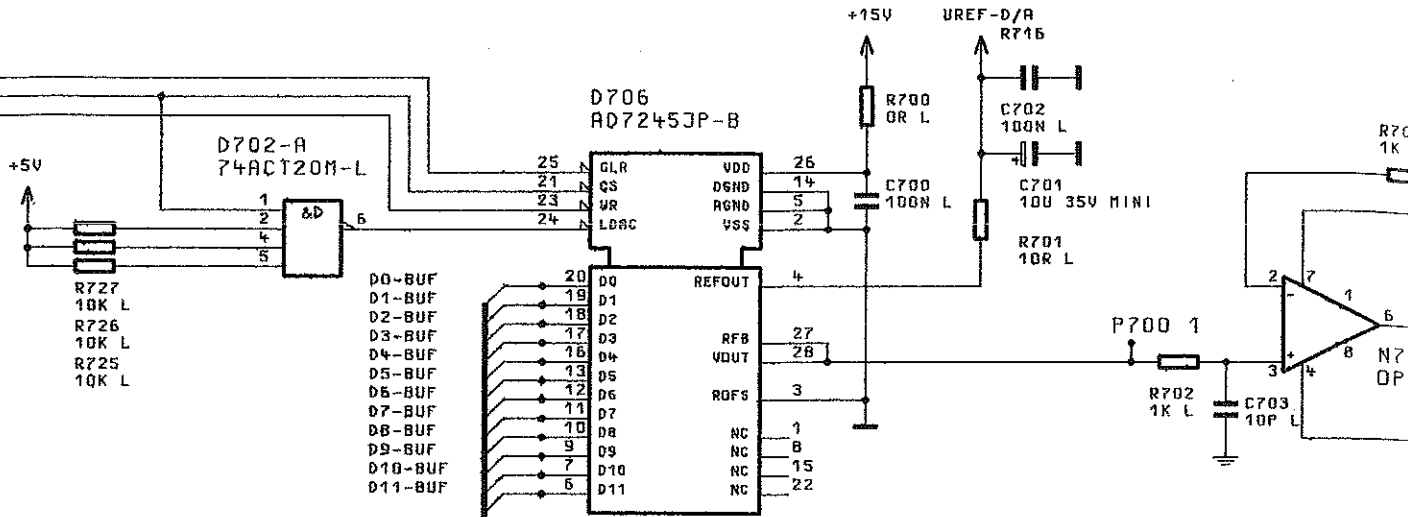
P710

P700

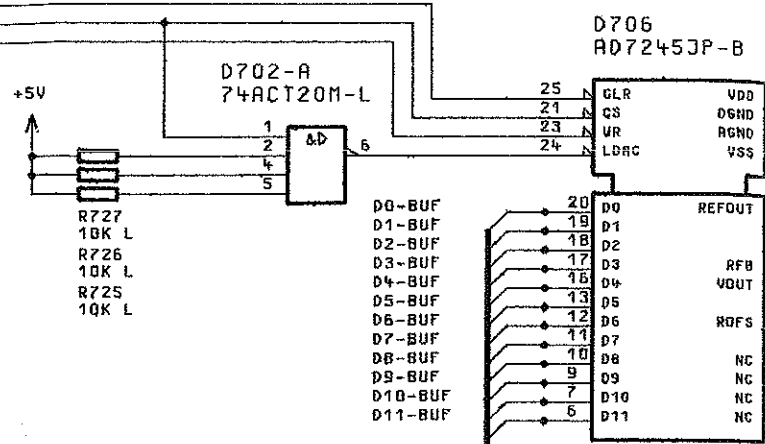
P730



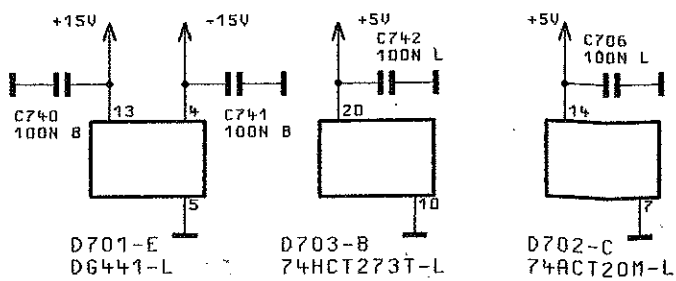
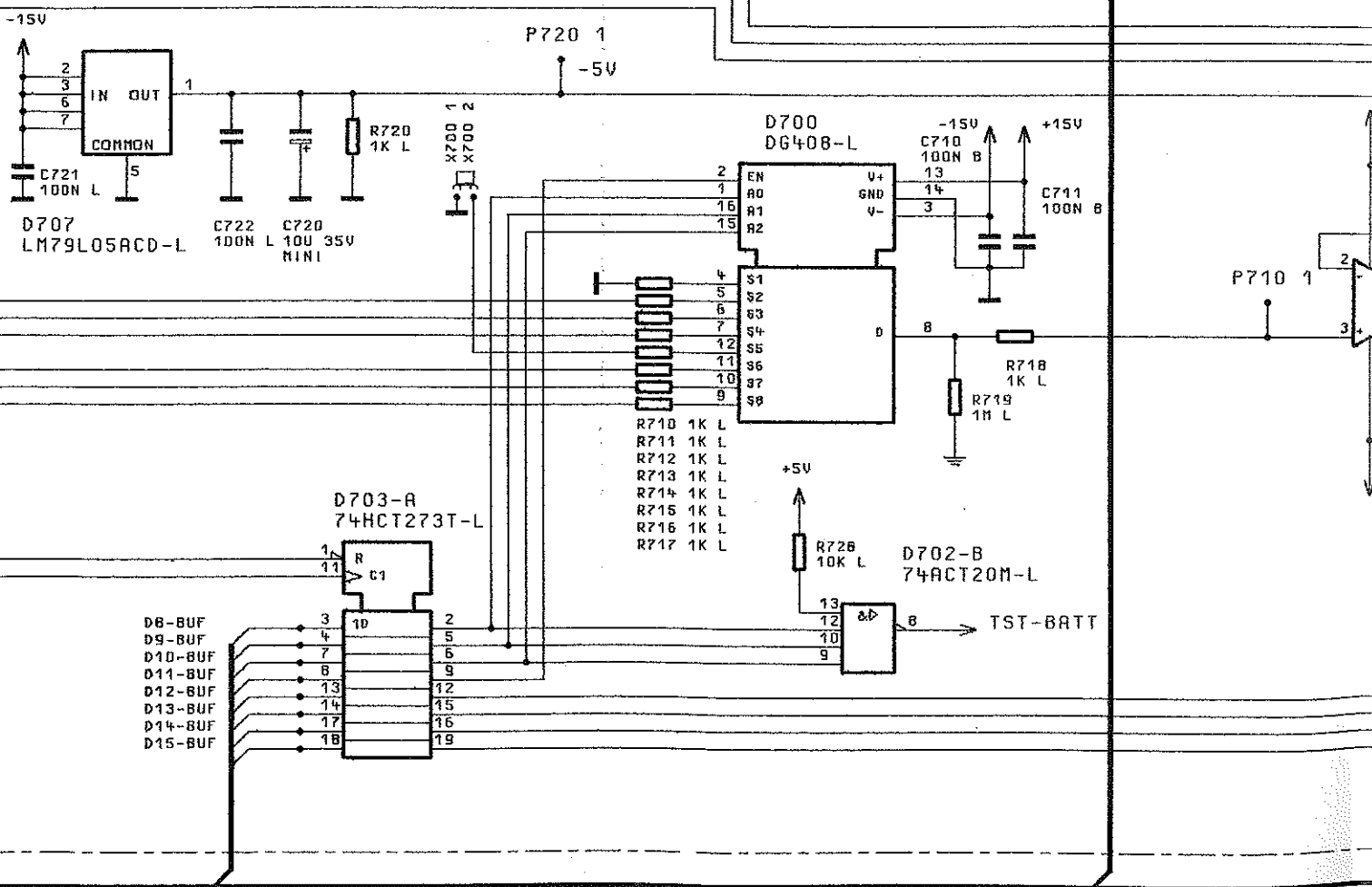
|            |                        |          |      |   |          |     |
|------------|------------------------|----------|------|---|----------|-----|
| 05/        |                        | 19.04.94 | DR   | 16PK  | TAG      | NAM |
|            |                        |          |      | BEARB.  |          | JN  |
|            |                        |          |      | GEPR.   |          |     |
|            |                        |          |      | NORM  |          |     |
|            |                        |          |      | PLOTT   | 03.05.94 |     |
|            |                        |          |      |   |          |     |
|            |                        |          |      |   |          |     |
| REND. IND. | RENDERUNGS- MITTEILUNG | DATUM    | NAME | <br><b>ROHDE &amp; SCHWARZ</b><br>ZU GERÄT SMP |          |     |
|            |                        |          |      |   |          |     |



PUT



DIAGNOSE





### X-OUTPUT

RES-N  
CS-D/A-CONV  
WR-D/A-CONV

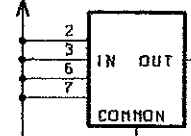
+5V

### SELF DIAGNOSE

CS-REG2  
RD-PER1-1  
CS-REG3

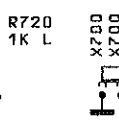
-15V

P720 1  
-5V



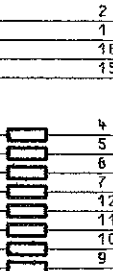
D707  
LM79L05ACD-L

C722 100N L  
C720 100 35V MINI



DIAG-15V  
DIAG-5V  
X-AXIS

VPP  
UREF-D/A  
UBATT-TST

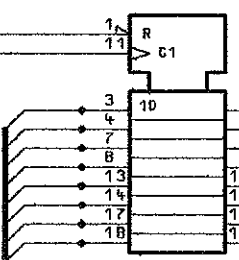


R710 1K L  
R711 1K L  
R712 1K L  
R713 1K L  
R714 1K L  
R715 1K L  
R716 1K L  
R717 1K L

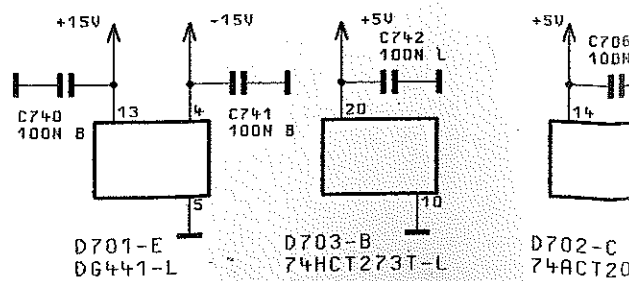
WR-REG2-HIGH

D703-A  
74HCT273T-L

D8-BUF  
D9-BUF  
D10-BUF  
D11-BUF  
D12-BUF  
D13-BUF  
D14-BUF  
D15-BUF



D-BUS-BUF  
A-BUS-PERI



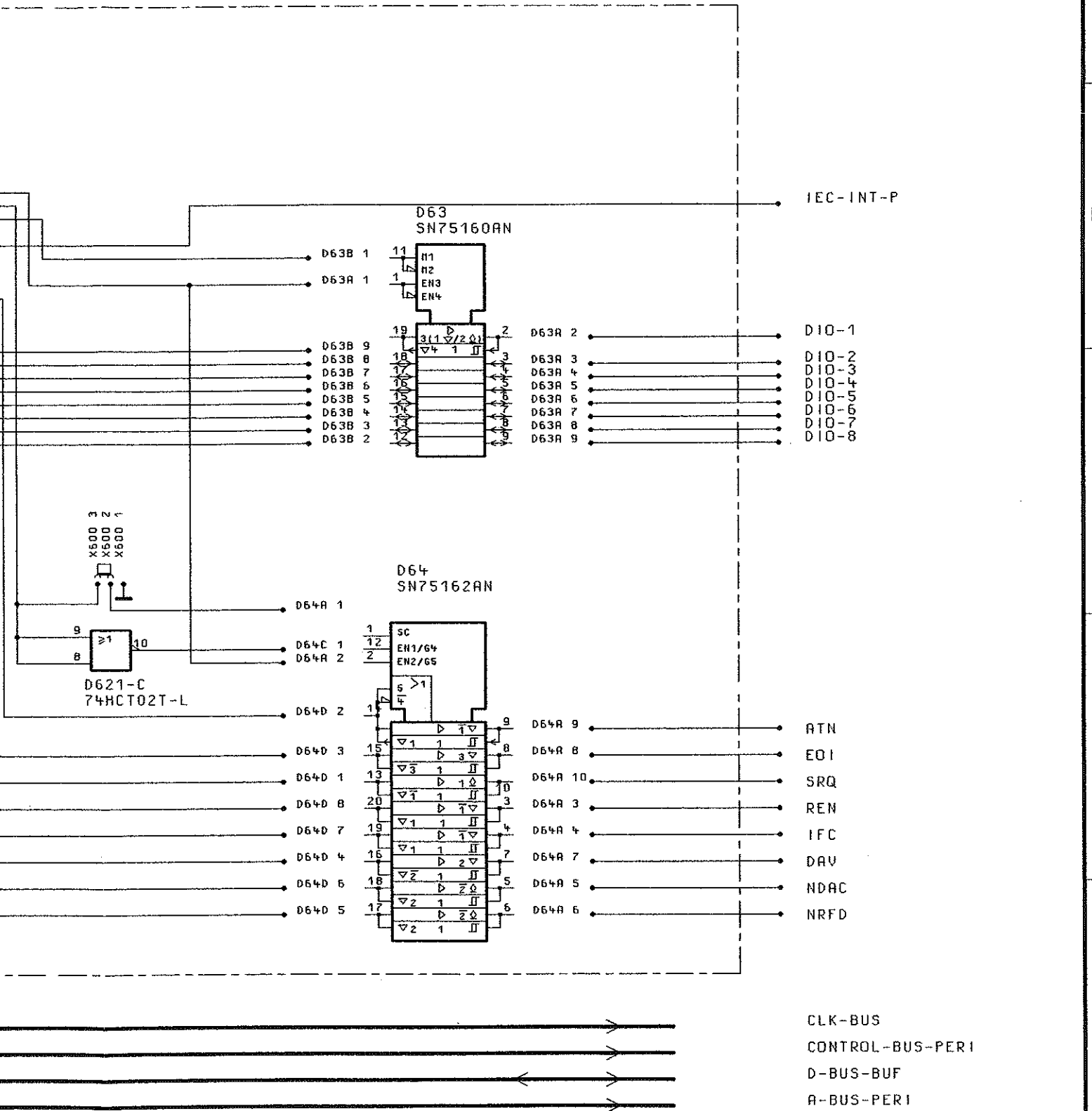
D701-E  
D6441-L

D703-B  
74HCT273T-L

D702-C  
74ACT20

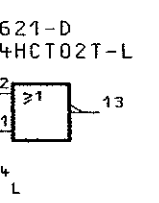
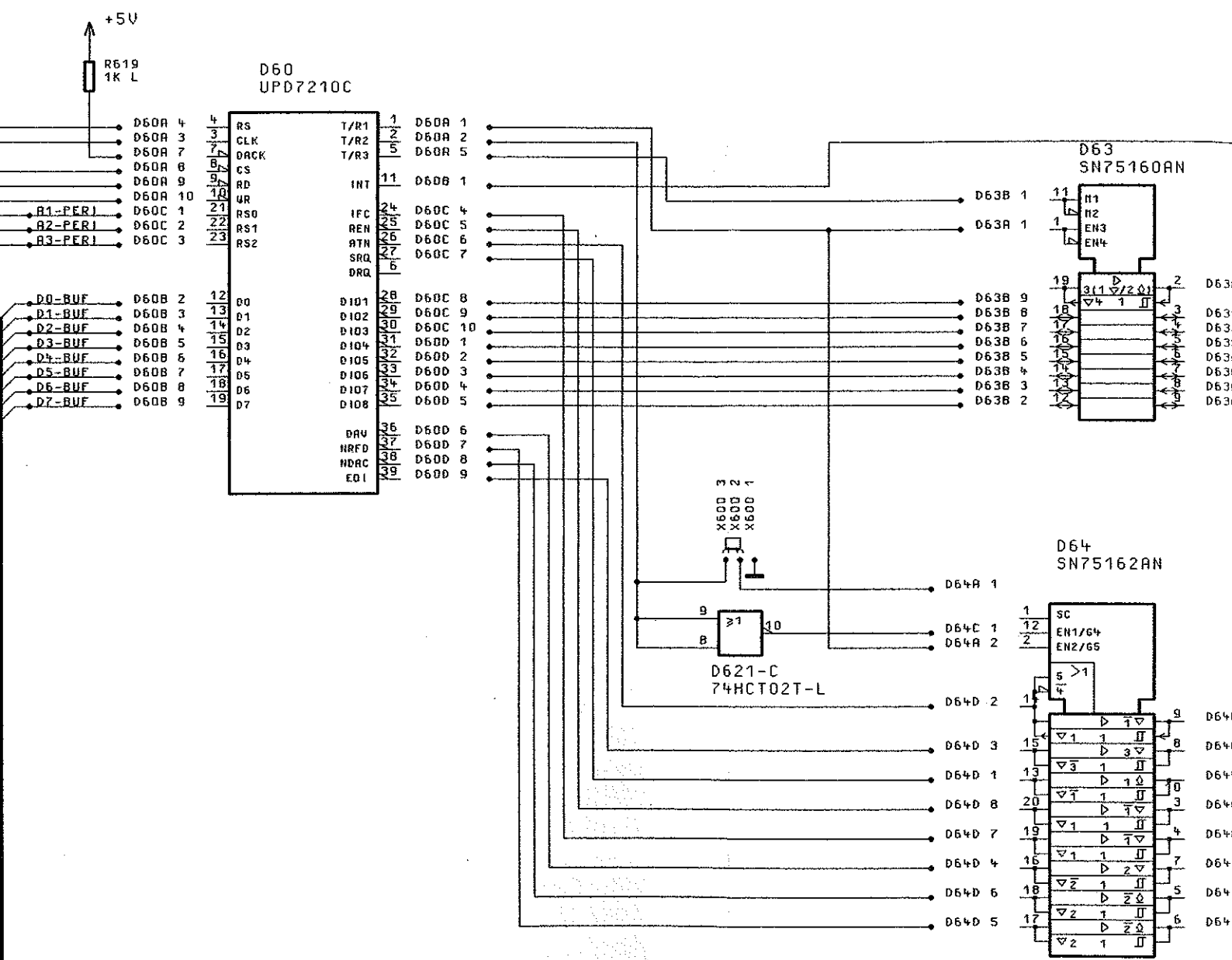
FUER DIESE UNTERLAGE  
BEHALTEN WIR UNS ALLE RECHTE VOR

CHN.-NR.



|               |                           |       |                                |          |             |                      |           |           |
|---------------|---------------------------|-------|--------------------------------|----------|-------------|----------------------|-----------|-----------|
| DB/           | 13.03.95                  | DR    | 1GPK                           | TAG      | NAME        | BENENNUNG            |           |           |
|               |                           |       | BEARB.                         |          | DR          | RECHNER<br>PROCESSOR |           |           |
|               |                           |       | GEPR.                          |          |             |                      |           |           |
|               |                           |       | NDRN                           |          |             |                      |           |           |
|               |                           |       | PLOTT.                         | 13.03.95 |             |                      |           |           |
|               |                           |       | <br><b>ROHDE &amp; SCHWARZ</b> |          | ZEICHN.-NR. |                      | BLATT-NR. |           |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG | DATUM |                                |          | NAME        | 1035.7250.015        |           | 9+        |
|               |                           |       | ZU GERÄT                       | SMP      | REG. I. V.  | 1035.5005            | ERSTE Z.  | 1035.5005 |

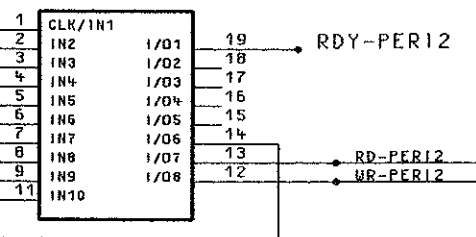
-BUS



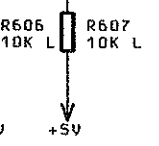
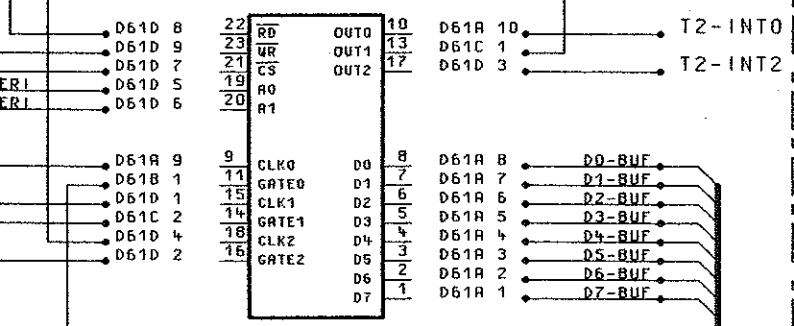
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|-------|-------------|----------|------|-------------------------|----------|
| 08/   |             | 13.03.95 | DR   | 1GPK                    | TAG      |
|       |             |          |      | BEARB.                  |          |
|       |             |          |      | GEPR.                   |          |
|       |             |          |      | NORN                    |          |
|       |             |          |      | PLOTT                   | 13.03.95 |
|       |             |          |      | R/S                     |          |
|       |             |          |      | <b>ROHDE &amp; SCHW</b> |          |
| REND. | BERENDUNGS- | DATUM    | NAME | ZU GERÄT                | SMP      |
|       | MITTEILUNG  |          |      |                         |          |

-B  
T02T-L

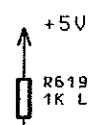
D600-A  
N85C220-80



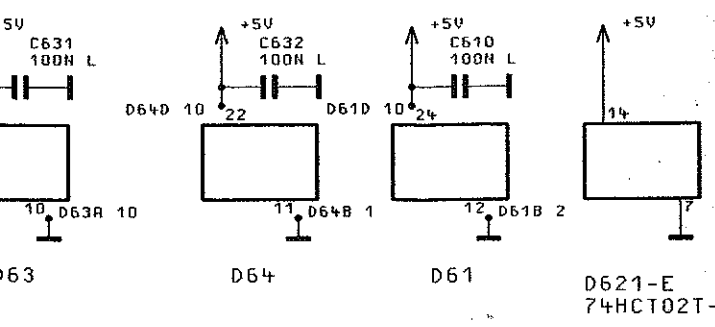
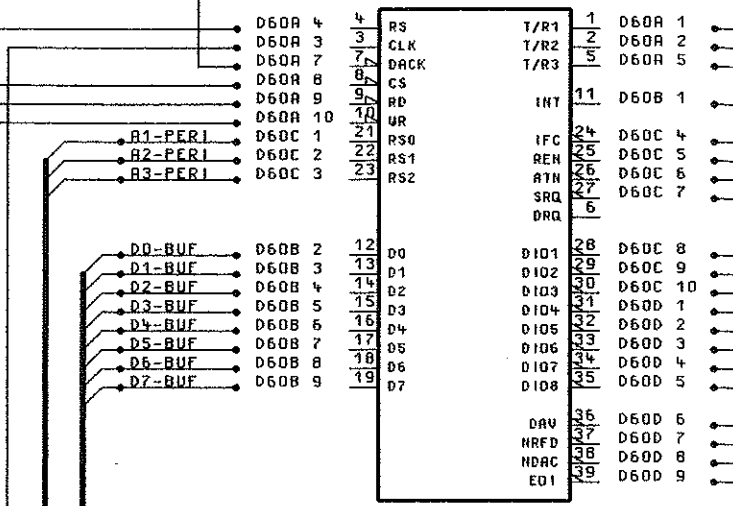
D61  
MSM82C54



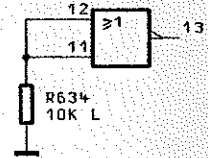
IEC-BUS

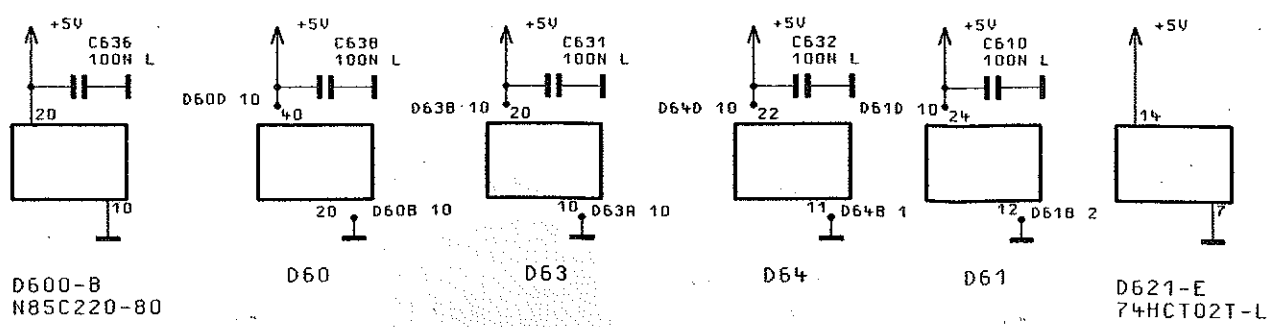
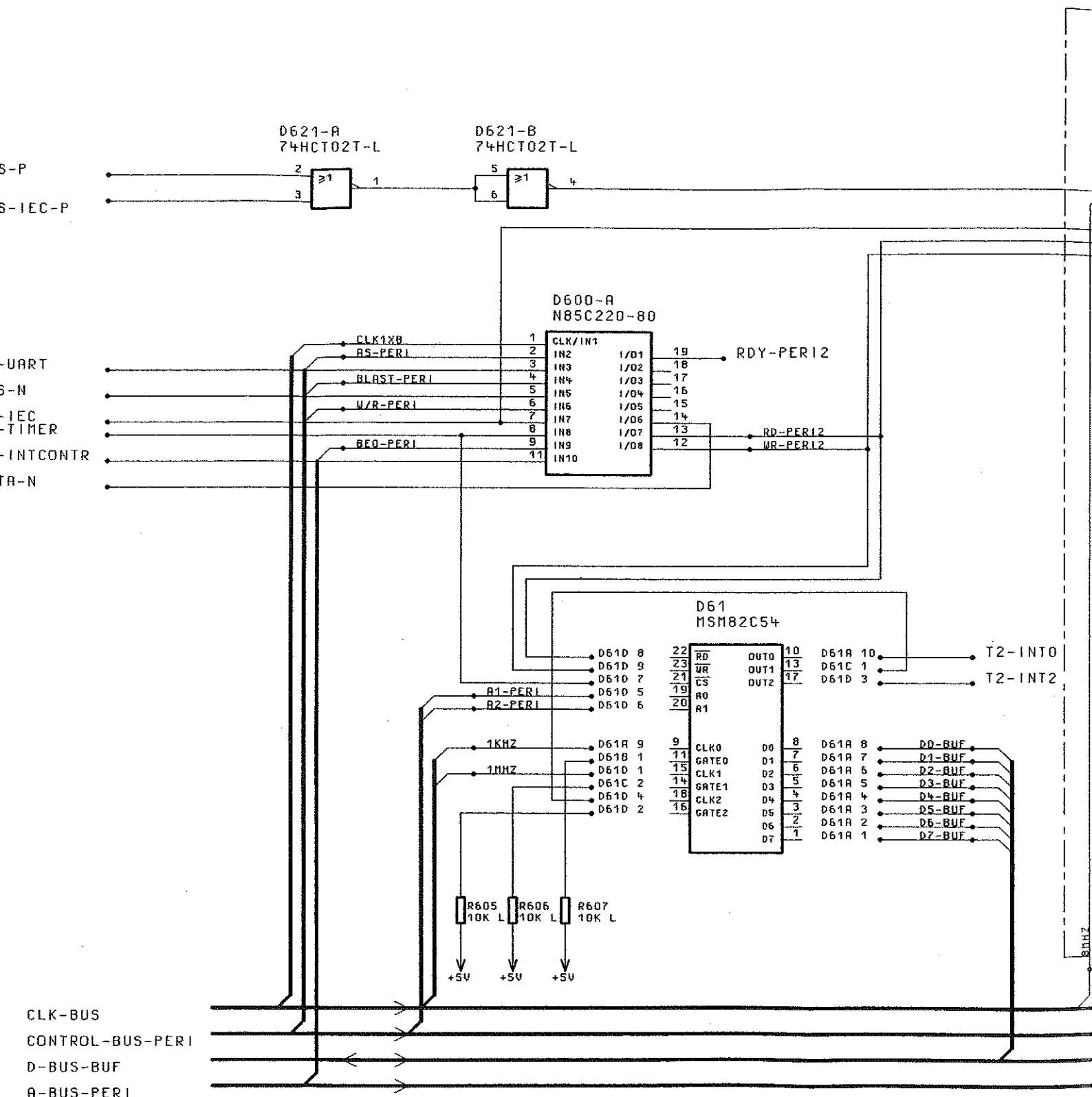


D60  
UPD7210C



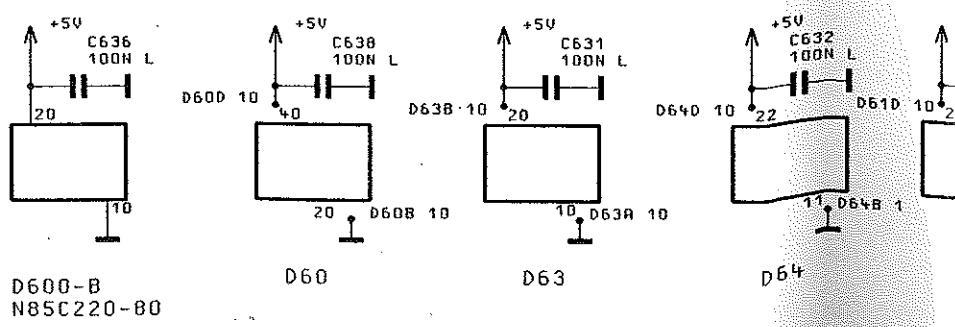
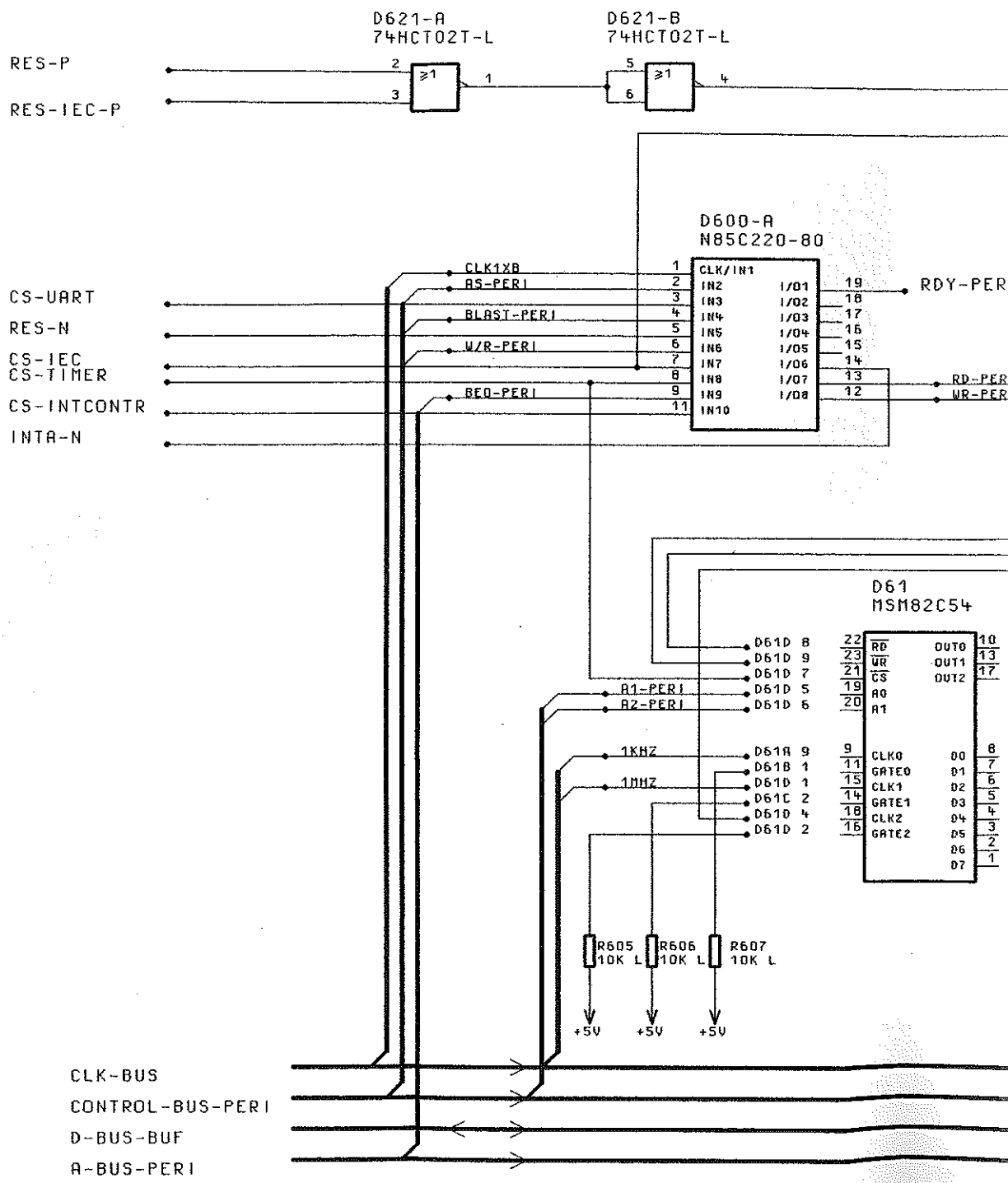
D621-D  
74HCT02T-L

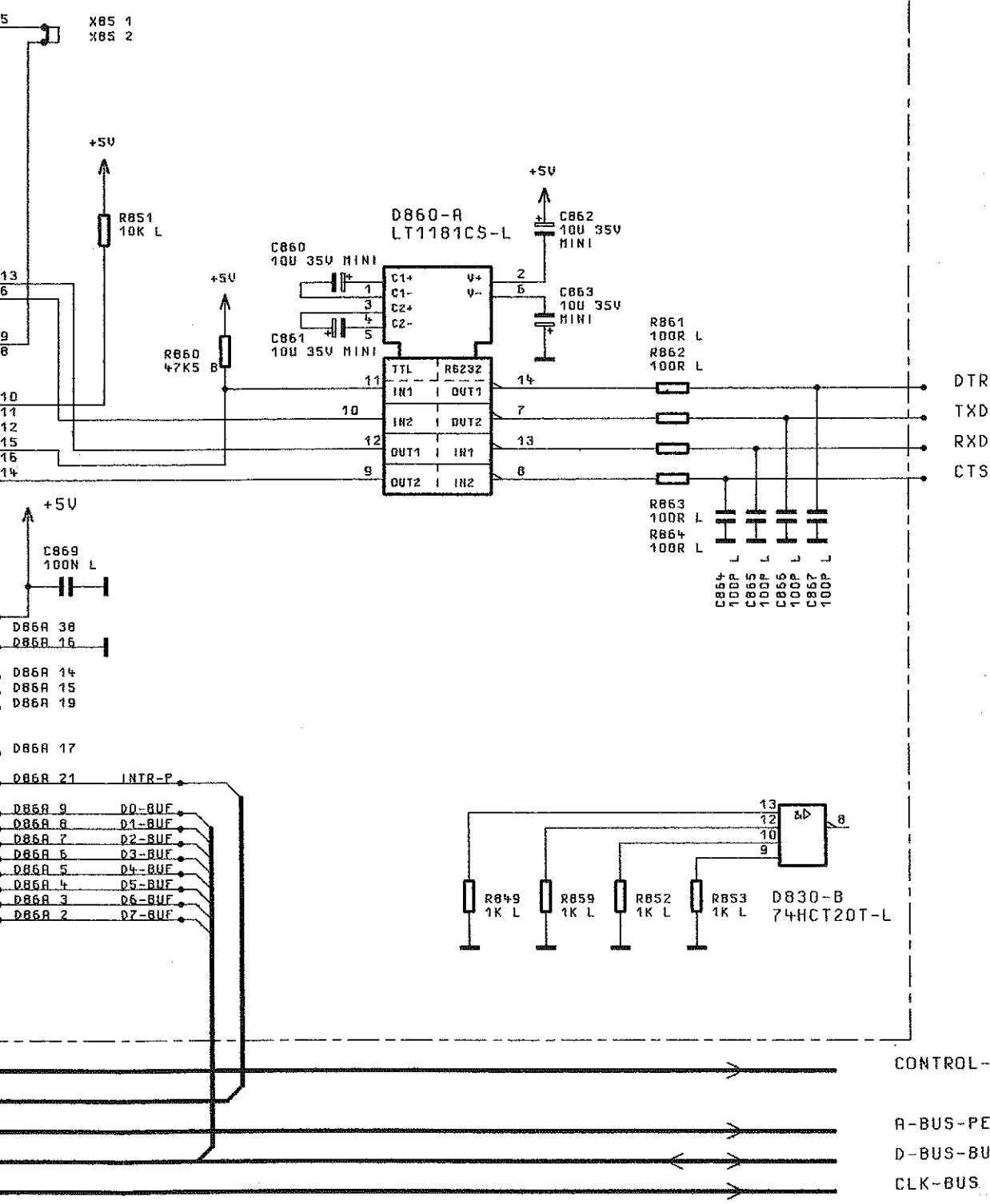




FUER DIESE UNTERLAGE  
BEHALTEN WIR UNS ALLE RECHTE VOR


ZEICHN.-NR.

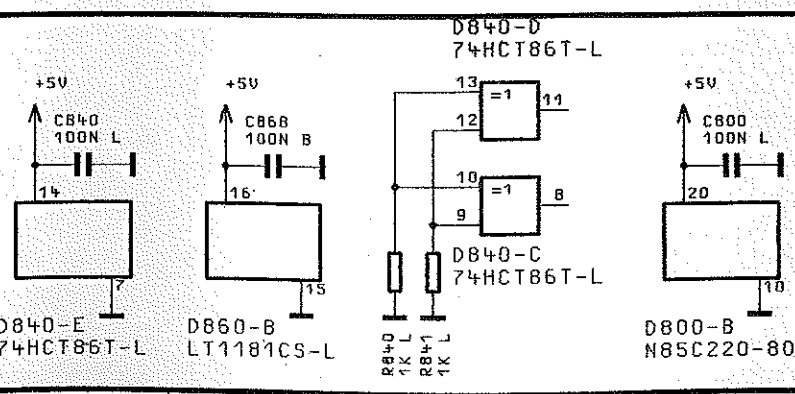
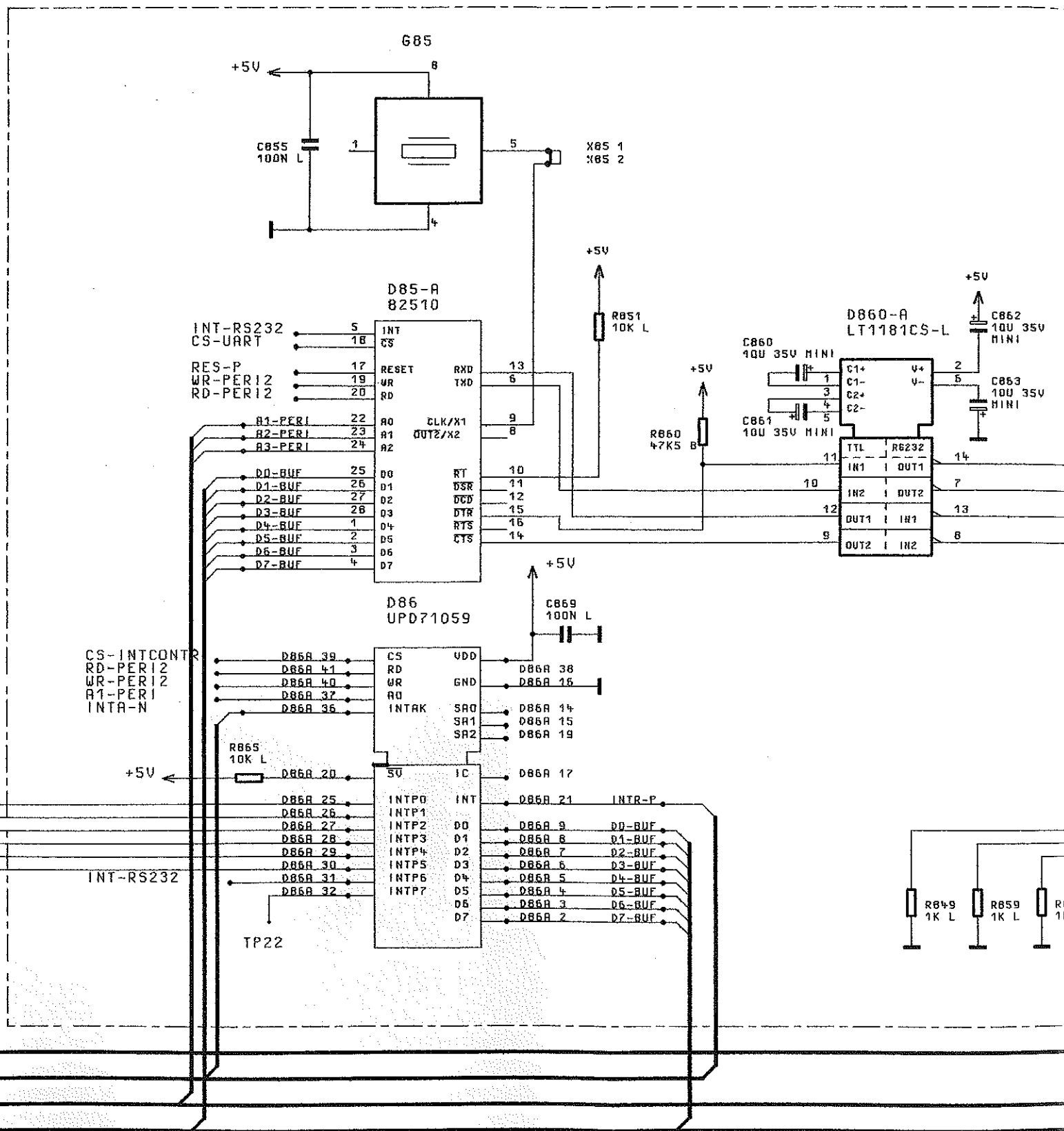




- D86A 38
- D86A 16
- D86A 14
- D86A 15
- D86A 19
- D86A 17
- D86A 21 INTR-P
- D86A 9 D0-BUF
- D86A 8 D1-BUF
- D86A 7 D2-BUF
- D86A 6 D3-BUF
- D86A 5 D4-BUF
- D86A 4 D5-BUF
- D86A 3 D6-BUF
- D86A 2 D7-BUF

CONTROL-BUS-PERI  
 A-BUS-PERI  
 D-BUS-BUF  
 CLK-BUS

|            |                       |       |   |          |               |                      |           |          |           |
|------------|-----------------------|-------|---|----------|---------------|----------------------|-----------|----------|-----------|
| OS/        | 19.04.94              | DR    | 1GPK  | TAG      | NAME          | BENENNUNG            |           |          |           |
|            |                       |       | BEARB.  |          | JN            | RECHNER<br>PROCESSOR |           |          |           |
|            |                       |       | GEPR.   |          |               |                      |           |          |           |
|            |                       |       | NORM  |          |               |                      |           |          |           |
|            |                       |       | PLDT  | 03.05.94 |               |                      |           |          |           |
|            |                       |       | <br><b>ROHDE &amp; SCHWARZ</b> |          | ZEICHN.-NR.   |                      | BLATT-NR. |          |           |
|            |                       |       |   |          | 1035.7250.015 |                      | 10+       |          |           |
| REND. IND. | RENDERUNGS-NITTEILUNG | DATUM | NAME  | ZU GERÄT | SMP           | REG. I. V.           | 1035.5005 | ERSTE Z. | 1035.5005 |

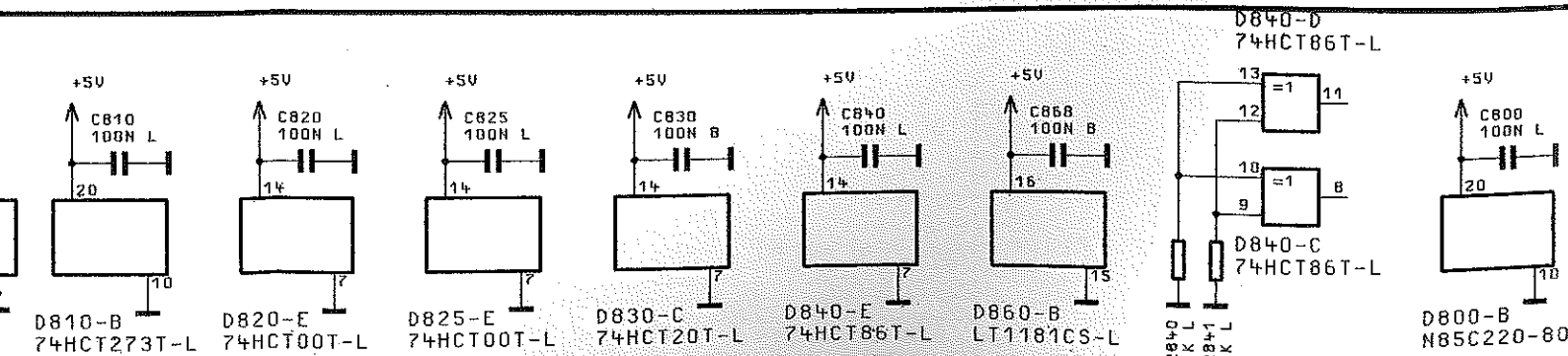
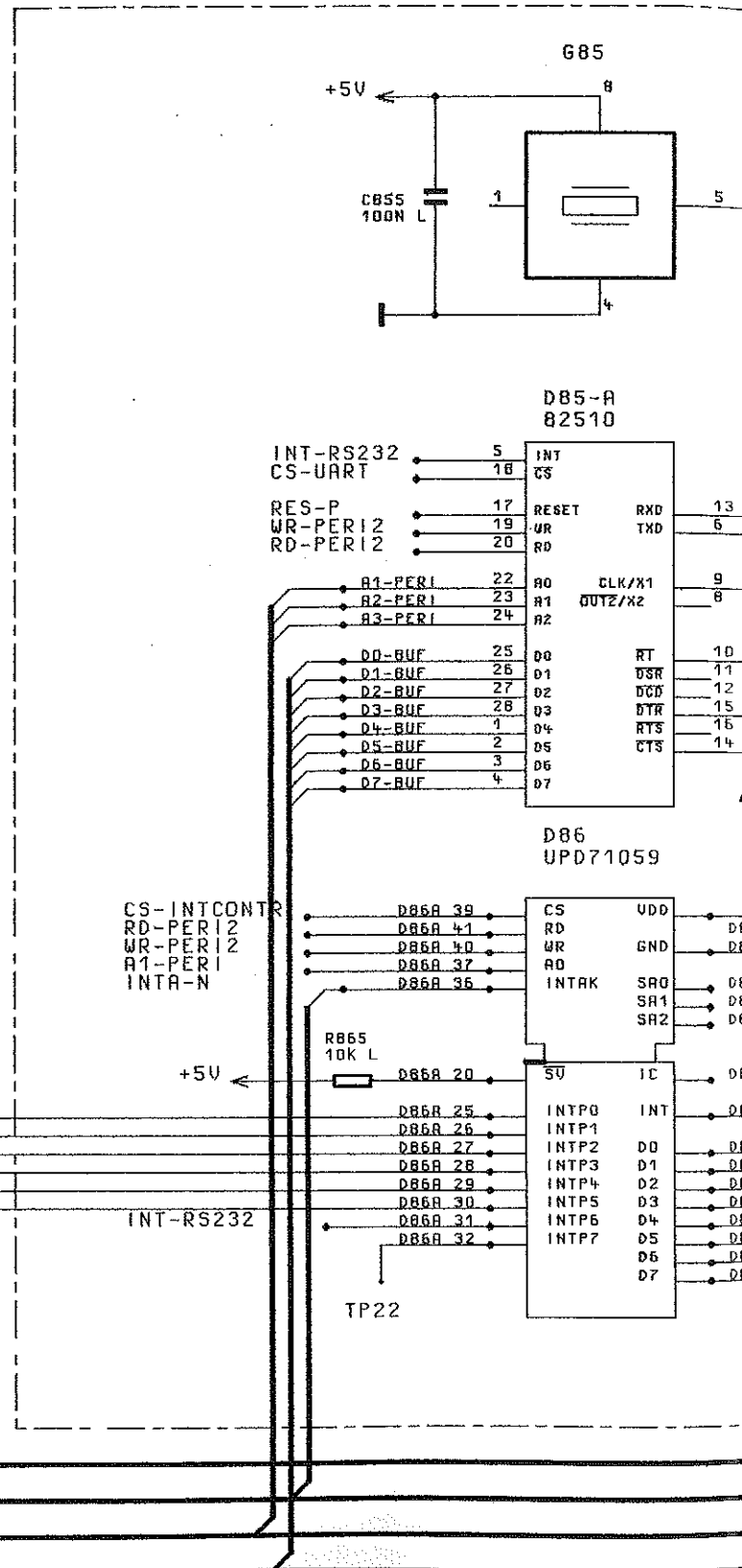
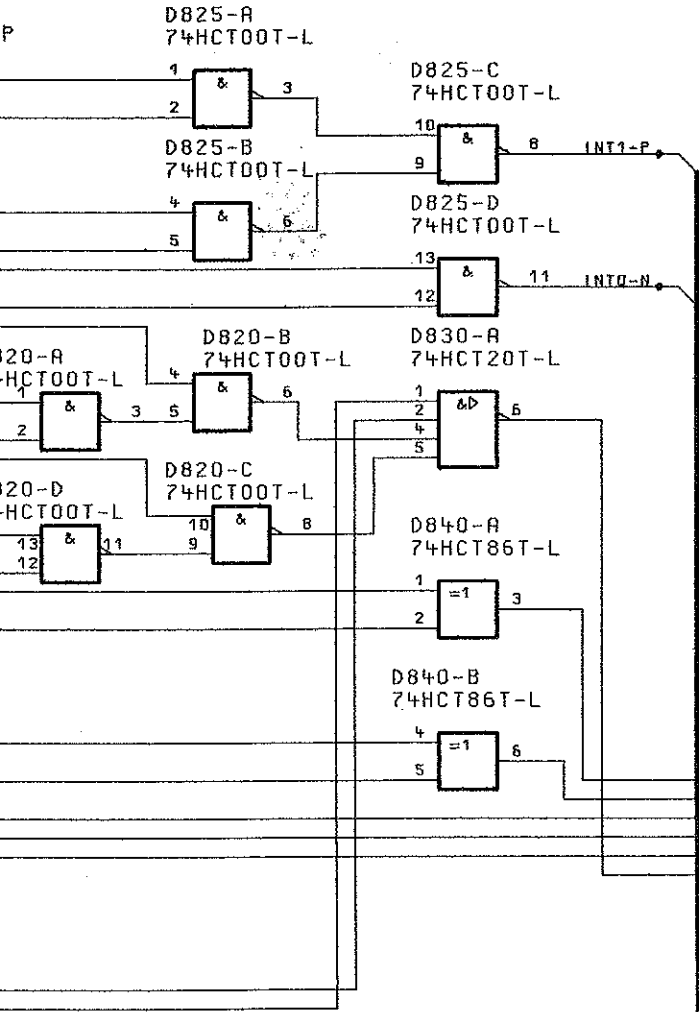


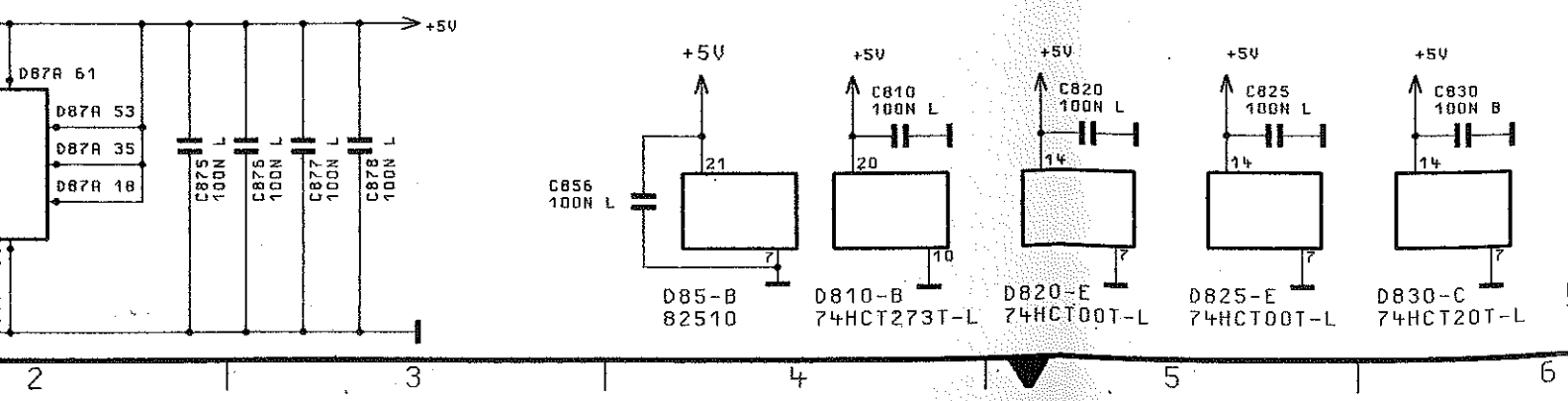
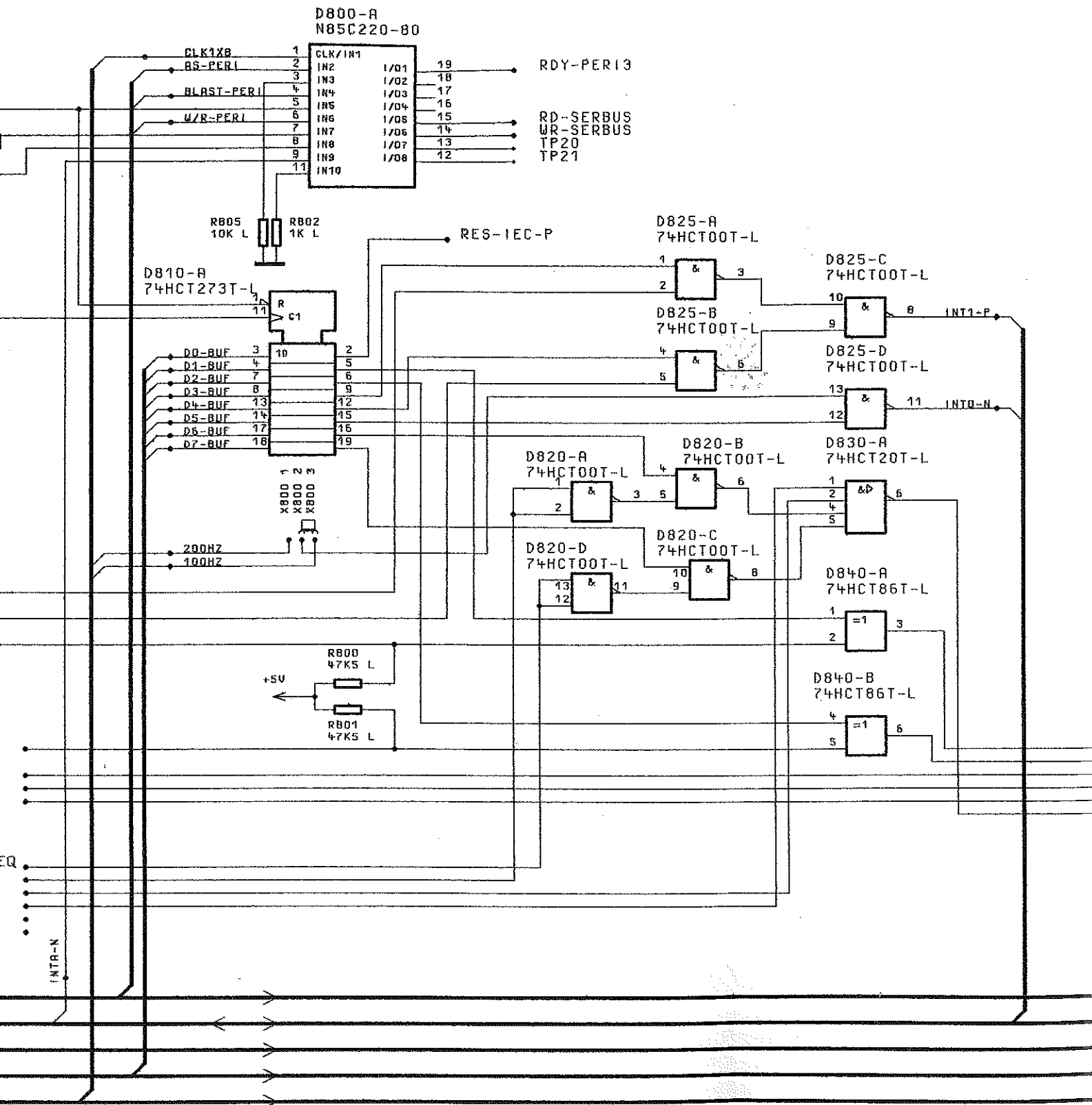
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|------------|-----------------------|-------|----------------------------|----------|-----|
| 05/        | 19.04.94              | DR    | 1GPK                       | TAG      | NAN |
|            |                       |       | BEARB.                     |          | JN  |
|            |                       |       | GEPR.                      |          |     |
|            |                       |       | NORN                       |          |     |
|            |                       |       | PLOTT                      | 03.05.94 |     |
|            |                       |       |                            |          |     |
|            |                       |       | <b>ROHDE &amp; SCHWARZ</b> |          |     |
| REND. IND. | RENDERUNGS-NITTEILUNG | DATUM | NANE                       | ZU GERÄT | SMP |



RDY-PER13

RD-SERBUS  
WR-SERBUS  
TP20  
TP21





BEHALTEN WIR UNS ALLE RECHTE VOR  
FÜR DIESE UNTERLAGE

RES-P

RES-N

CS-SERBUS

CS-TEST2SS

WR-REG4-LOW

KEY-INT-P

KNOB-INT-P

TRIGGER

AUX-TRIG

IEC-INT-P  
T2-INT0  
T2-INT2

SERBUS-ACTREQ  
AC-FAIL  
SERBUS-INT2  
SERBUS-INT1  
KEY-STROKE  
DIR-FF

CONTROL-BUS-CPU

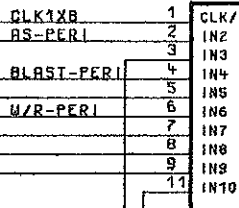
INTERRUPT-BUS

A-BUS-PERI

D-BUS-BUF

CLK-BUS-CPU

D800-A  
N85C220-80



RDY-PER13

RD-SERBUS  
WR-SERBUS  
TP20  
TP21

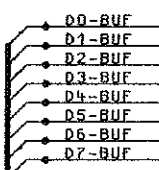


RES-IEC-P

D825-A  
74HCT00T-L

D810-A  
74HCT273T-L

D825-B  
74HCT00T-L

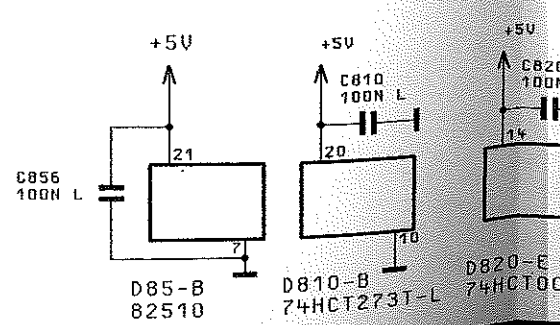
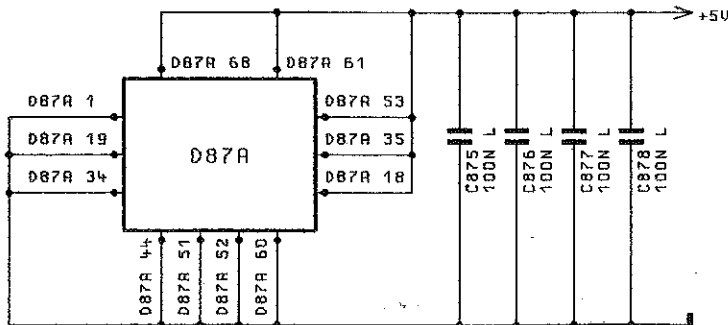
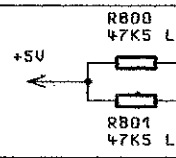


D820-B  
74HCT00T-L

D820-A  
74HCT00T-L

D820-D  
74HCT00T-L

D820-C  
74HCT00T-L



1    2    3    4

LER

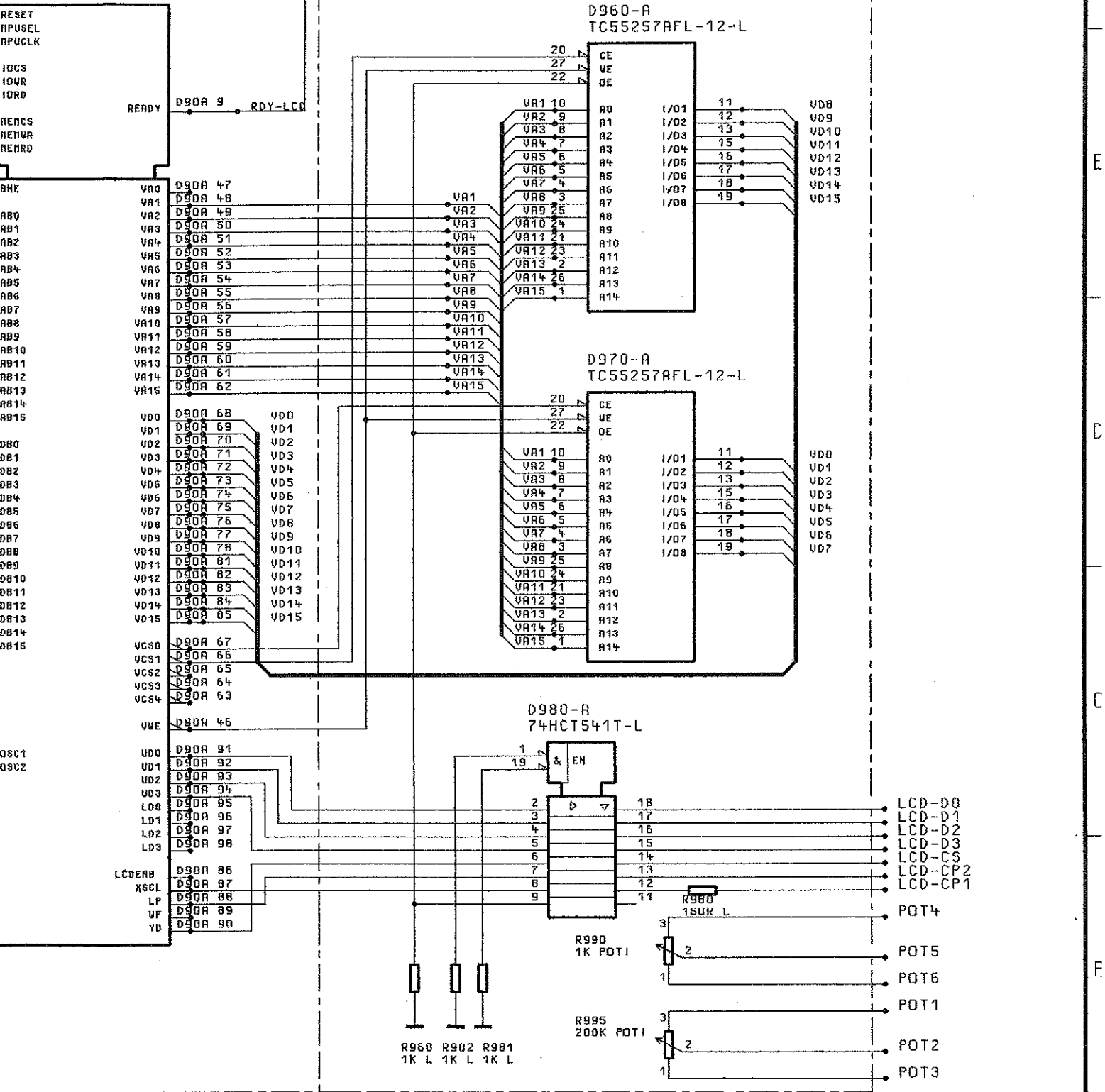
D90  
SED1351F

VIDEO MEMORY

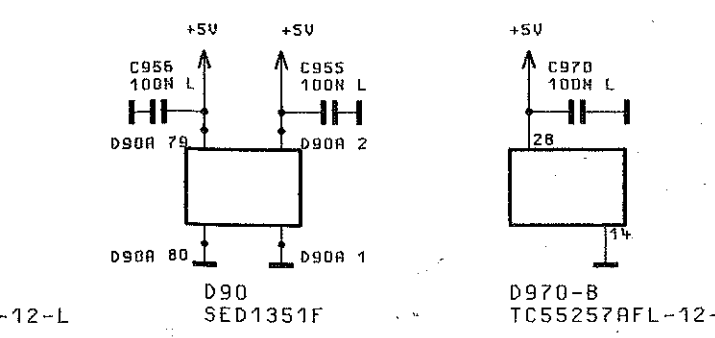
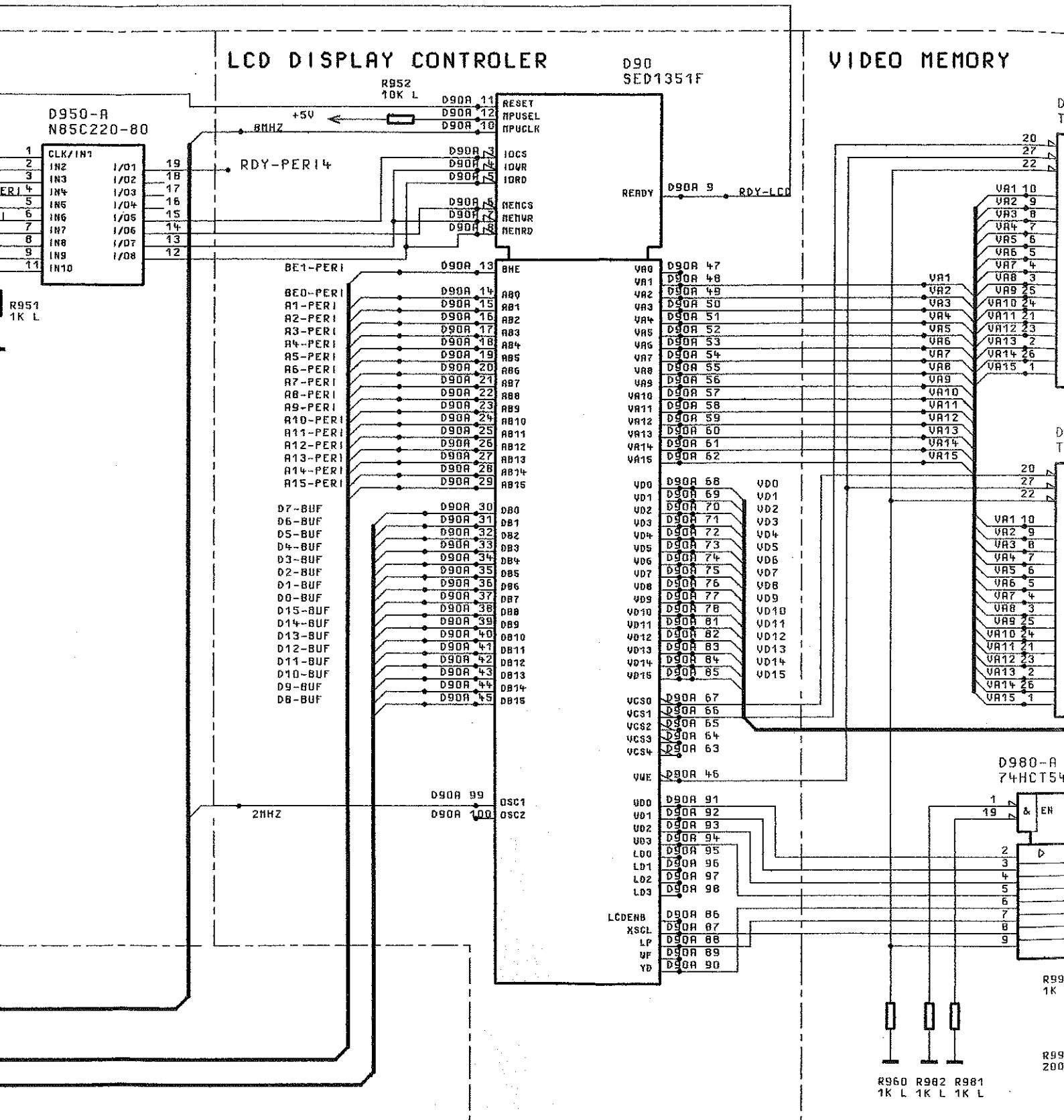
D960-A  
TC55257AFL-12-L

D970-A  
TC55257AFL-12-L

D980-A  
74HCT541T-L

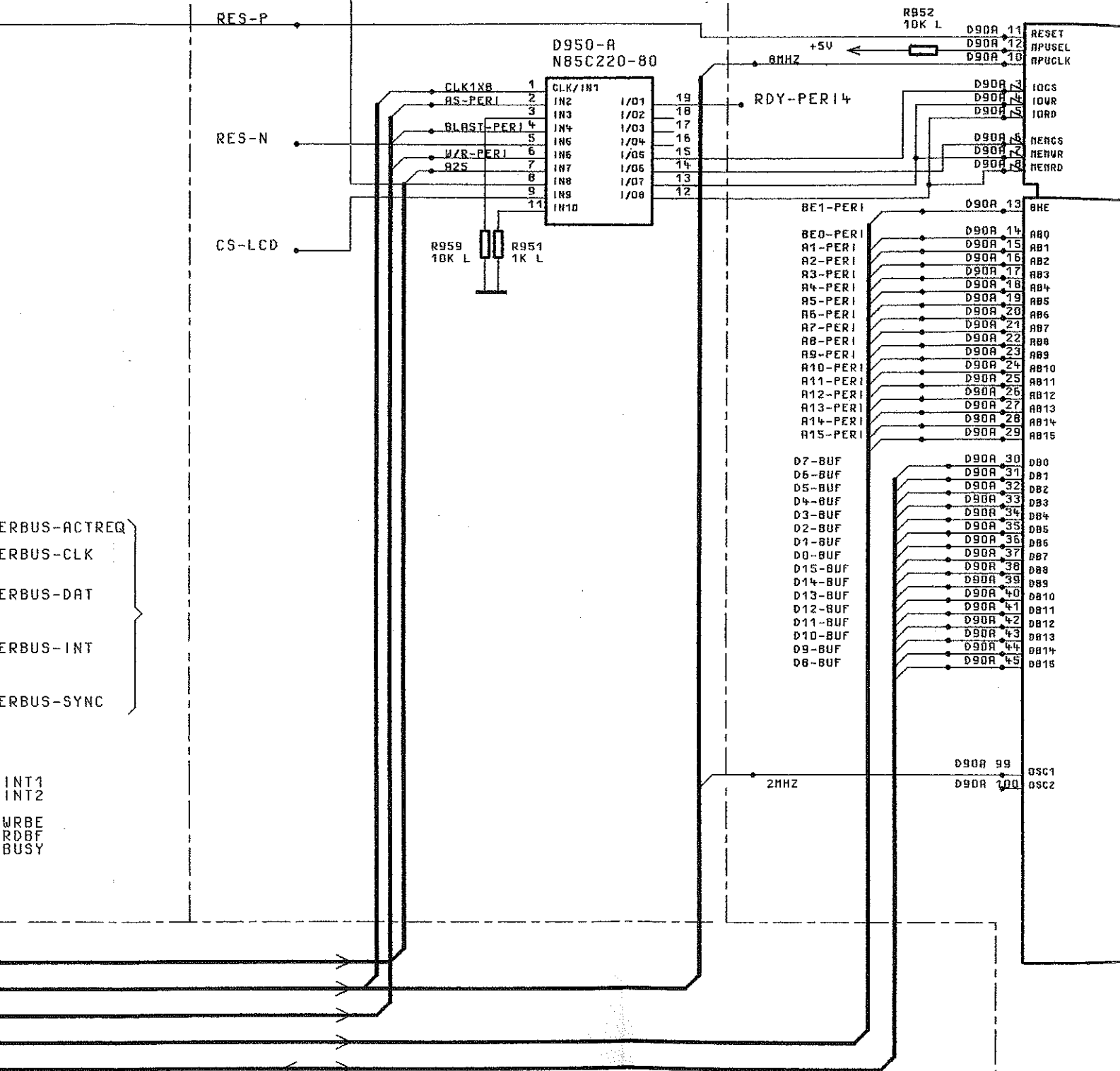


|            |                       |          |      |                            |          |                      |                      |
|------------|-----------------------|----------|------|----------------------------|----------|----------------------|----------------------|
| 05/        |                       | 19.04.94 | DR   | 1GPK                       | TAG      | NAME                 | BENENNUNG            |
|            |                       |          |      | BEARB.                     |          | JN                   | RECHNER<br>PROCESSOR |
|            |                       |          |      | GEPR.                      |          |                      |                      |
|            |                       |          |      | NDRH                       |          |                      |                      |
|            |                       |          |      | PLOTT                      | 03.05.94 |                      |                      |
|            |                       |          |      |                            |          | ZEICHN.-NR.          | BLATT-NR.            |
|            |                       |          |      | <b>ROHDE &amp; SCHWARZ</b> |          | <b>1035.7250.01S</b> | <b>11+</b>           |
| REND. IND. | BEREICHUNGSMITTEILUNG | DATUM    | NAME | ZU GERÄT                   | SMP      | REG. I. V.           | U. BL.               |
|            |                       |          |      |                            |          | 1035.5005            | ERSTE Z.             |
|            |                       |          |      |                            |          | 1035.5005            |                      |



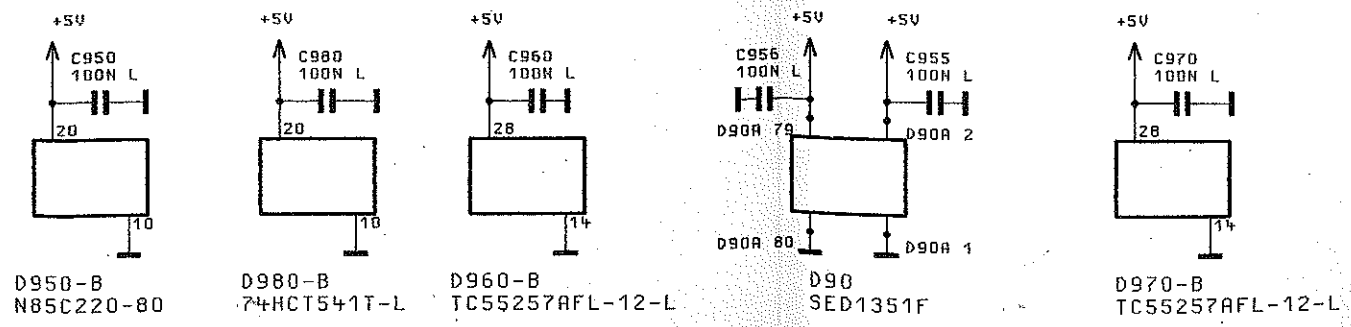
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|------------|-----------------------|----------|------|-----------|----------|------|
| 05/        |                       | 19.04.94 | DR   | 16PK      | TAG      | NAME |
|            |                       |          |      | BEARB.    |          | JN   |
|            |                       |          |      | GEPR.     |          |      |
|            |                       |          |      | NORN      |          |      |
|            |                       |          |      | PLOTT     | 03.05.94 |      |
|            |                       |          |      |           |          |      |
|            |                       |          |      |           |          |      |
|            |                       |          |      |           |          |      |
| REND. IND. | RENDERUNGS-MITTEILUNG | DATUM    | NAME |           |          |      |
|            |                       |          |      | ZU BERRET | SMP      |      |

# LCD DISPLAY CONTROLLER

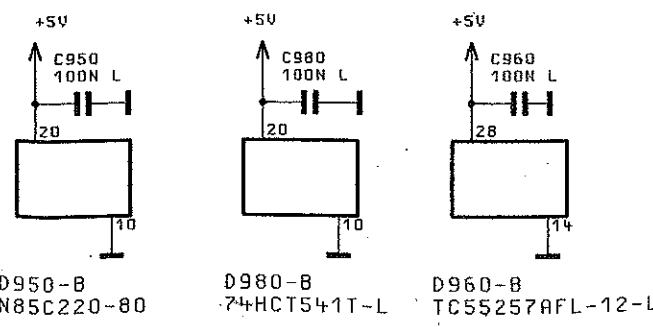
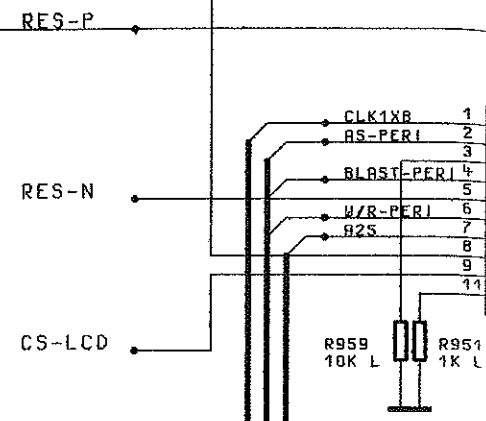
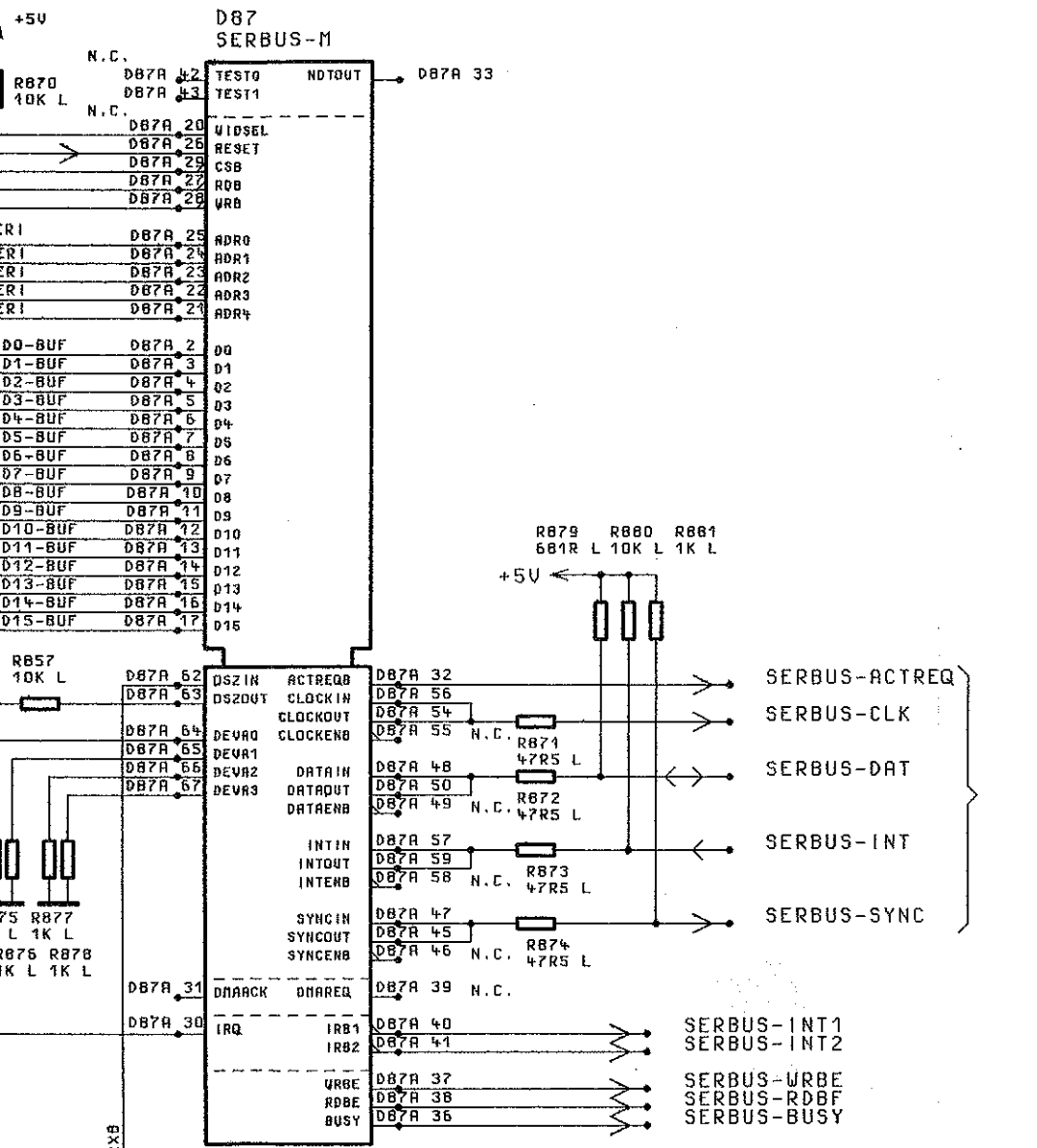


ERBUS-ACTREQ  
 ERBUS-CLK  
 ERBUS-DAT  
 ERBUS-INT  
 ERBUS-SYNC

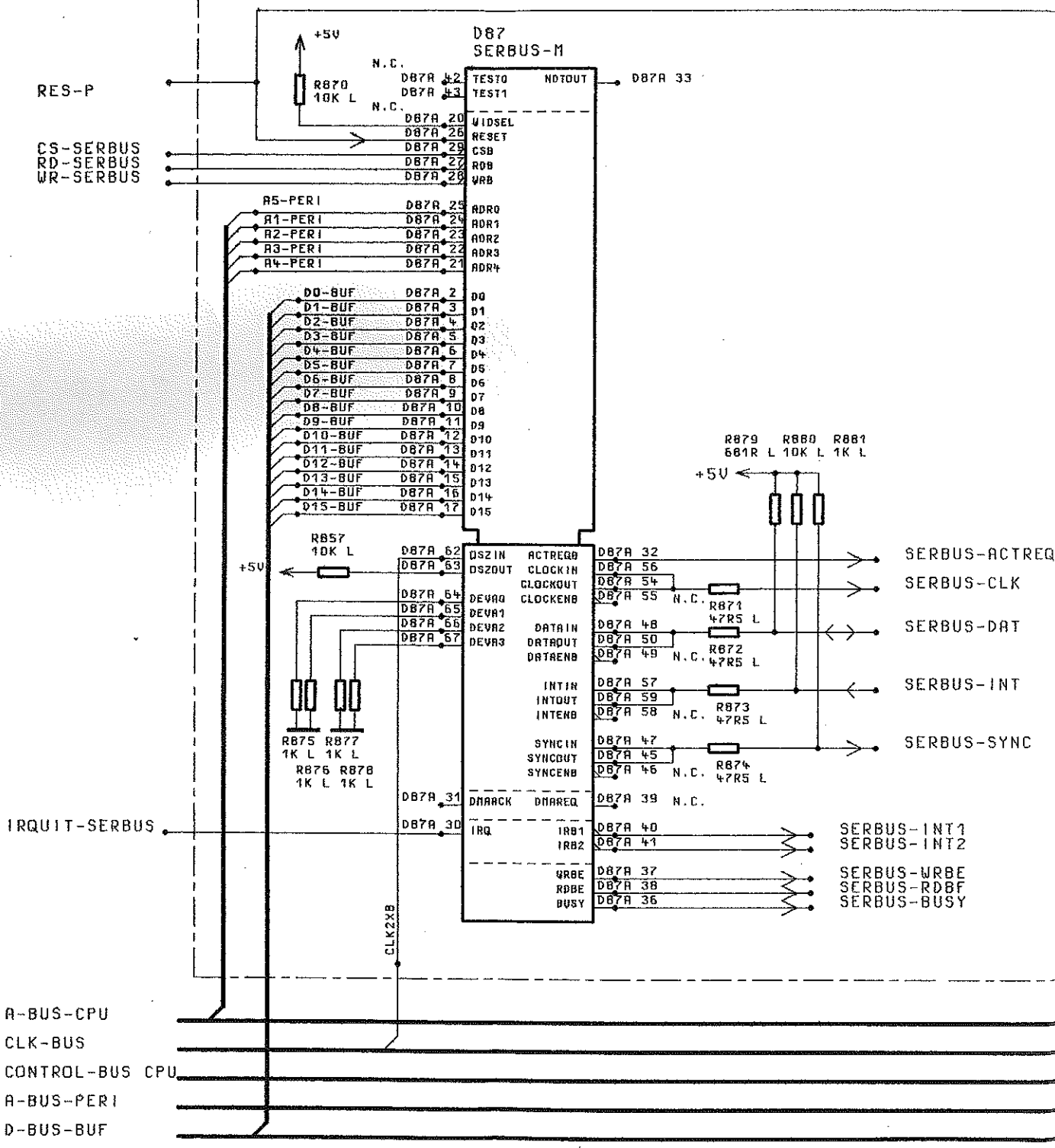
INT1  
 INT2  
 WRBE  
 RDBF  
 BUSY



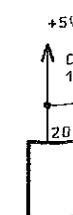
JS-M



# SERBUS-M

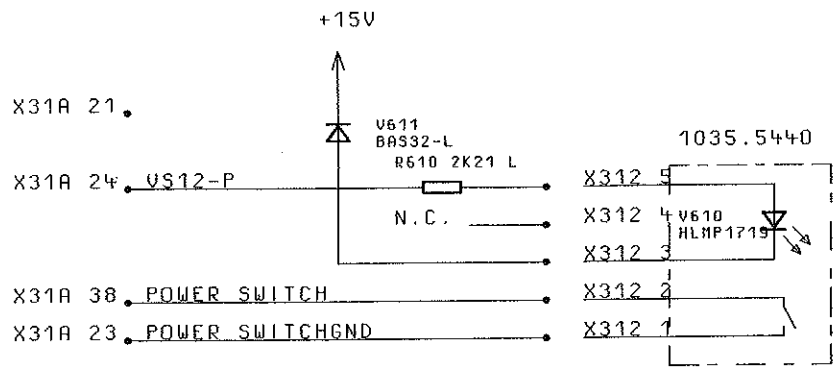


FUER DIESE UNTERLAGE  
BEHALTEN WIR UNS ALLE RECHTE VOR



D950-  
N85C2





X31A 50 N.C.  
 X31A 35 N.C.  
 X31A 49 N.C.  
 X31A 34 N.C.  
 X31A 48 N.C.

- X31A 33 X-AXIS → X-AXIS
- X31A 47 DIAG-5V → DIAG-5V
- X31A 32 DIAG-15V → DIAG-15V
- X31A 46 TRIGGER → TRIGGER
- X31A 31 AUX-TRIG → AUX-TRIG
- X31A 45 SERBUS-CLK → SERBUS-CLK
- X31A 30 SERBUS-DAT → SERBUS-DAT
- X31A 44 SERBUS-INT → SERBUS-INT
- X31A 29 SERBUS-SYNC → SERBUS-SYNC
- X31A 43 SYSRESET → SYSRESET
- X31A 28 AC-FAIL → AC-FAIL
- X31A 42 BLANK ← BLANK
- X31A 27 MARKER ← MARKER
- X31A 41 SWEEP-STOP → SWEEP-STOP
- X31A 26 MODCTRL-IN → MODCTRL-IN
- X31A 40 MODCTRL-OUT ← MODCTRL-OUT
- X31A 25 RESERVE ← RESERVE
- X31A 39 RES-P ← RES-P

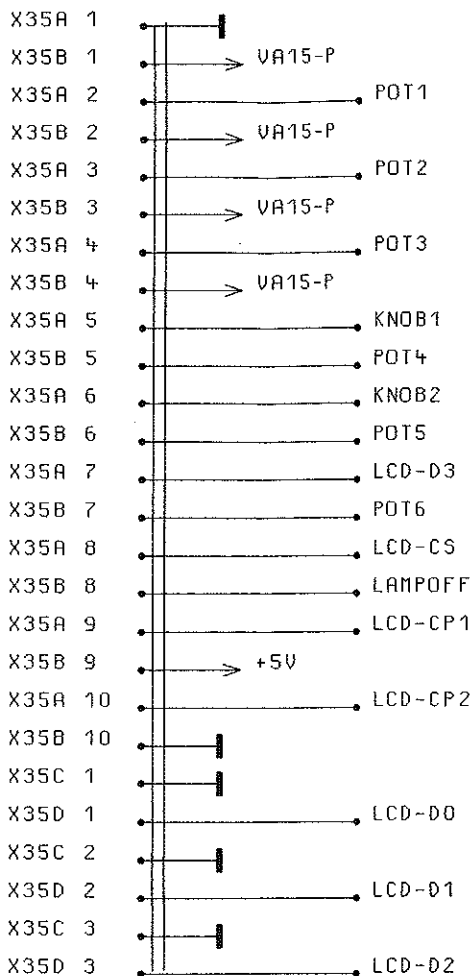
R611  
10R L

BINDENDE ANGABEN UEBER VARIANTEN,  
 TRIMMWERTE, BAUTEILWERTE UND  
 NICHT BESTUECKTE BAUTEILE SIEHE SA.

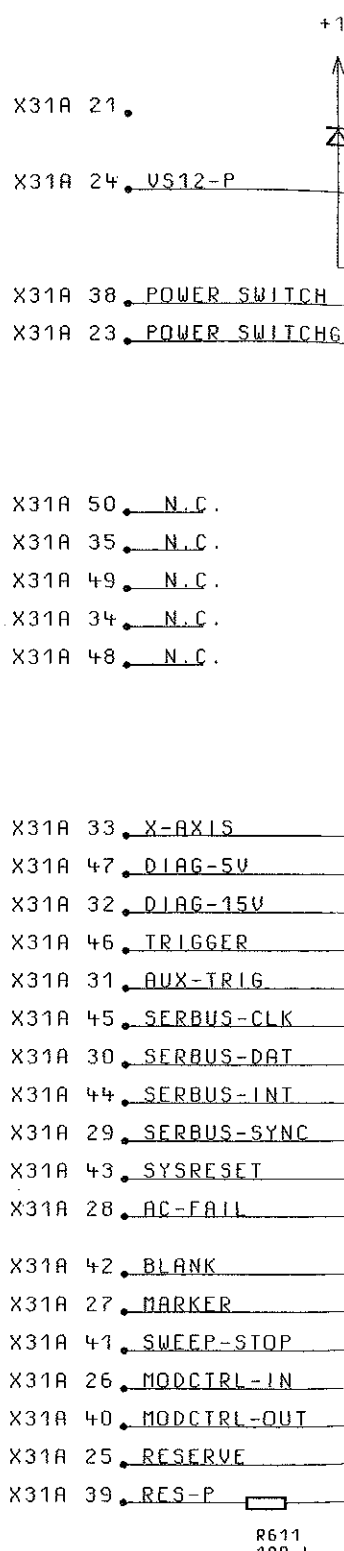
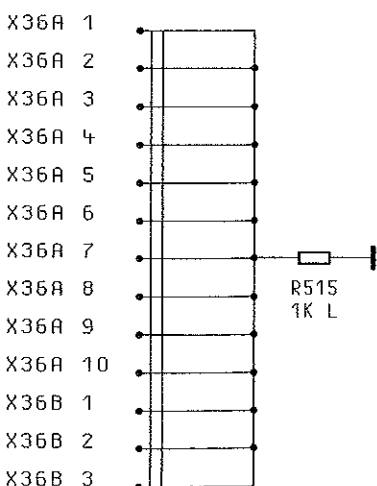
FOR BINDING INFORMATION ON MODELS,  
 TRIMMING AND COMPONENTS VALUES AND  
 NONFITTED COMPONENTS SEE PARTS LIST.

|               |                           |       |                                 |             |          |                             |          |                  |
|---------------|---------------------------|-------|---------------------------------|-------------|----------|-----------------------------|----------|------------------|
| 08/13         | 97-12-08                  | E I   | ME NP                           | TAG         | NAME     | BENENNUNG                   |          |                  |
|               |                           |       | BEARB.                          |             | E I      | <b>RECHNER</b><br>PROCESSOR |          |                  |
|               |                           |       | GEPR.                           |             |          |                             |          |                  |
|               |                           |       | NORM                            |             |          |                             |          |                  |
|               |                           |       | PLOTT                           | 09.12.97    |          |                             |          |                  |
| 08/           | 13.03.95                  | DR    | R/S<br><b>ROHDE&amp;SCHWARZ</b> | ZEICHN.-NR. |          | 1035.7250.01S               |          | BLATT-NR.<br>12+ |
| REND.<br>IND. | AENDERUNGS-<br>MITTEILUNG | DATUM |                                 | NAME        | REG.I.V. | 1035.5005                   | ERSTE Z. | 1035.5005        |
|               | 9                         |       |                                 | 10          |          |                             | 11       | 12               |

# KNOB

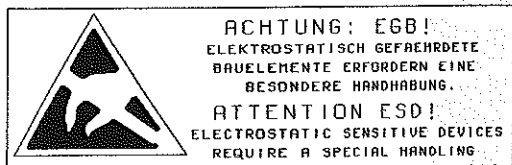


# KEYBOARD



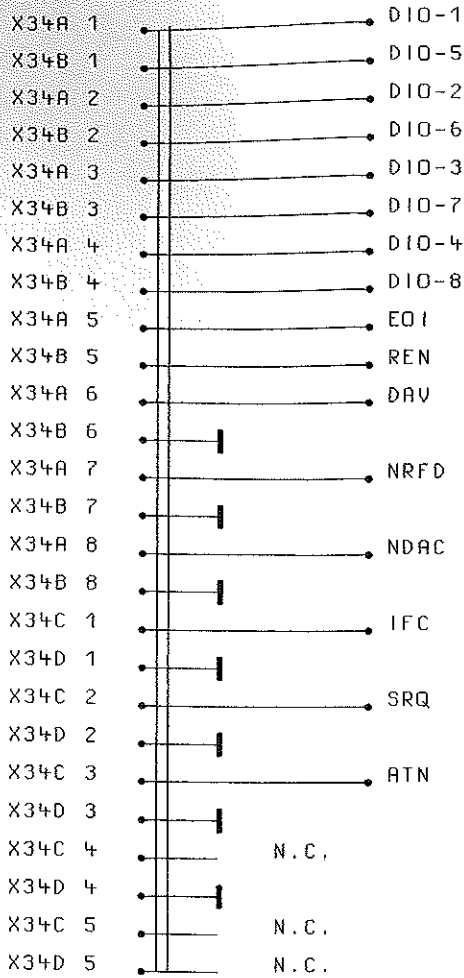
BINDENDE ANGABEN UEBER VARIANTEN, TRIMMWERTE, BAUTEILWERTE UND NICHT BESTUECKTE BAUTEILE SIEHE SA.

FOR B TRIMH NONFI

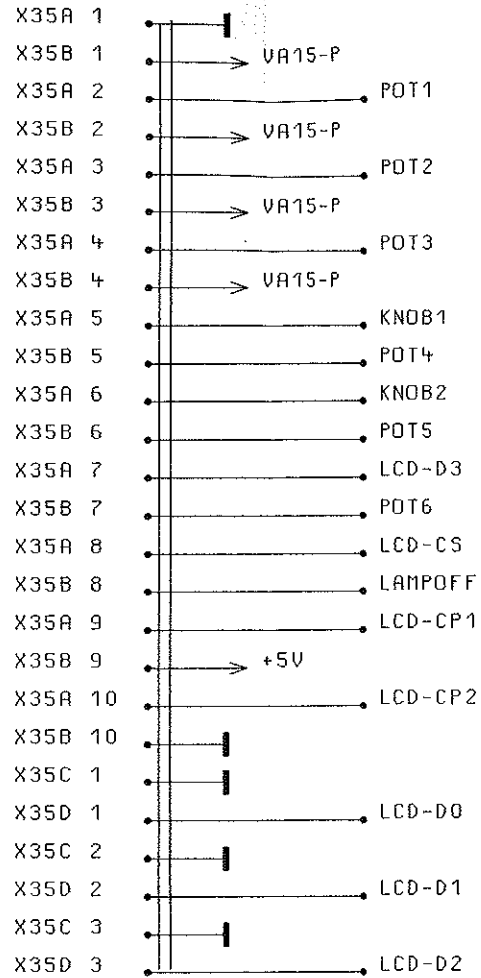


|            |                       |       |                                    |          |
|------------|-----------------------|-------|------------------------------------|----------|
| 08/13      | 97-12-08              | EI    | MENP                               | TAG      |
|            |                       |       | BEARB.                             |          |
|            |                       |       | GEPR.                              |          |
|            |                       |       | NORM                               |          |
|            |                       |       | PLOTT                              | 09.12.97 |
| 08/        | 13.03.95              | DR    | <b>ROHDE&amp;S</b><br>ZU GERÄT SMP |          |
| REND. IND. | RENDERUNGS-MITTEILUNG | DATUM |                                    |          |

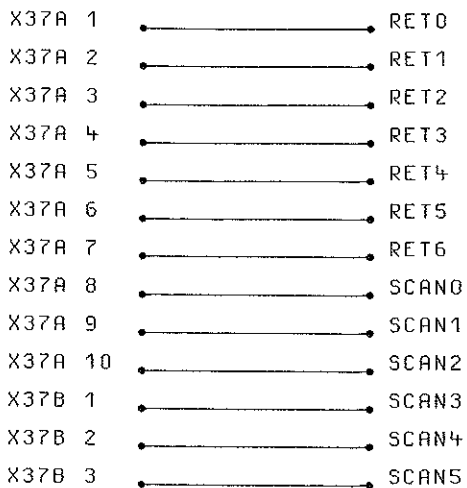
### IEC625



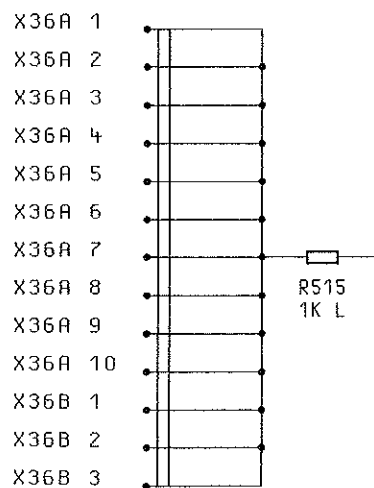
### KNOB



### KEYBOARD

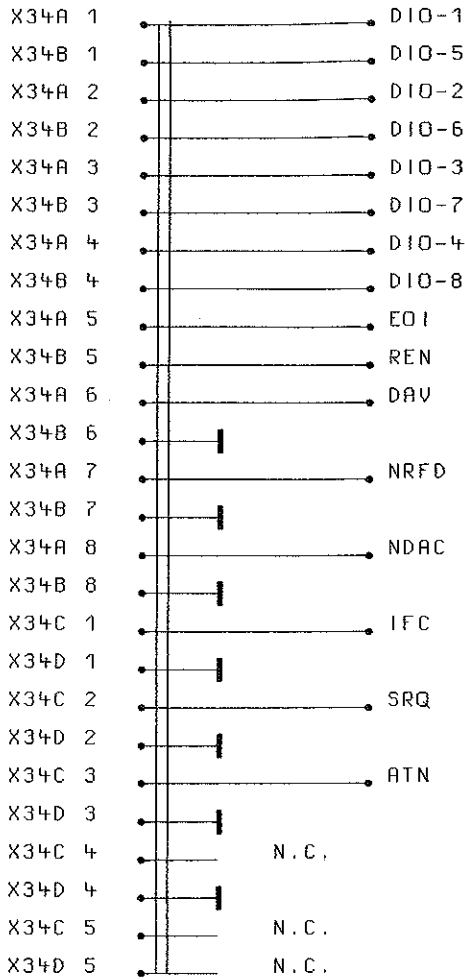


### KEYBOARD

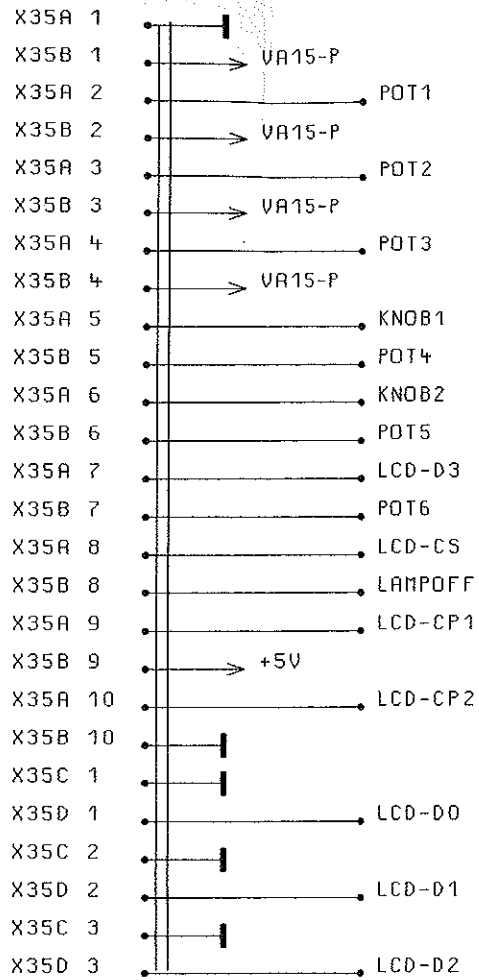


ACHTUNG: ELEKTROSTATISCH GEFÄHRDUNG  
 BAUELEMENTE ERFORDERN  
 BESONDERE HANDHABUNG  
 ATTENTION: ELECTROSTATIC SENSITIVE COMPONENTS  
 REQUIRE A SPECIAL HANDLING PROCEDURE

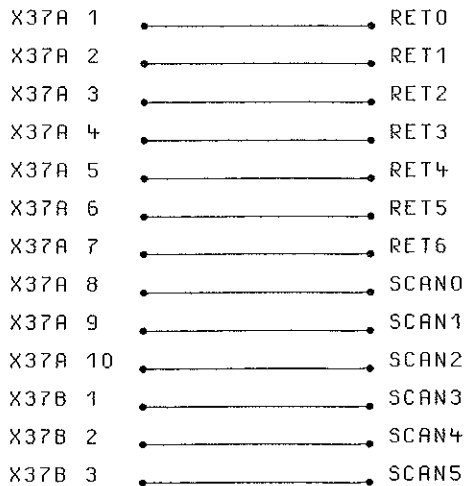
### IEC625



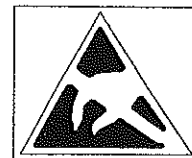
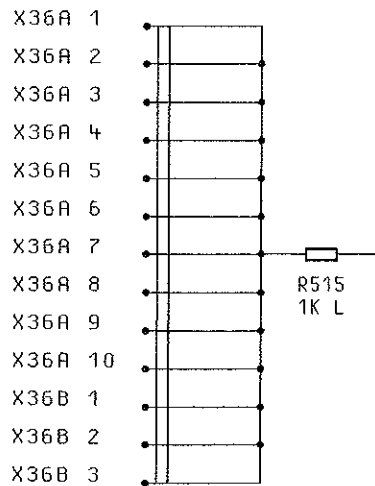
### KNOB



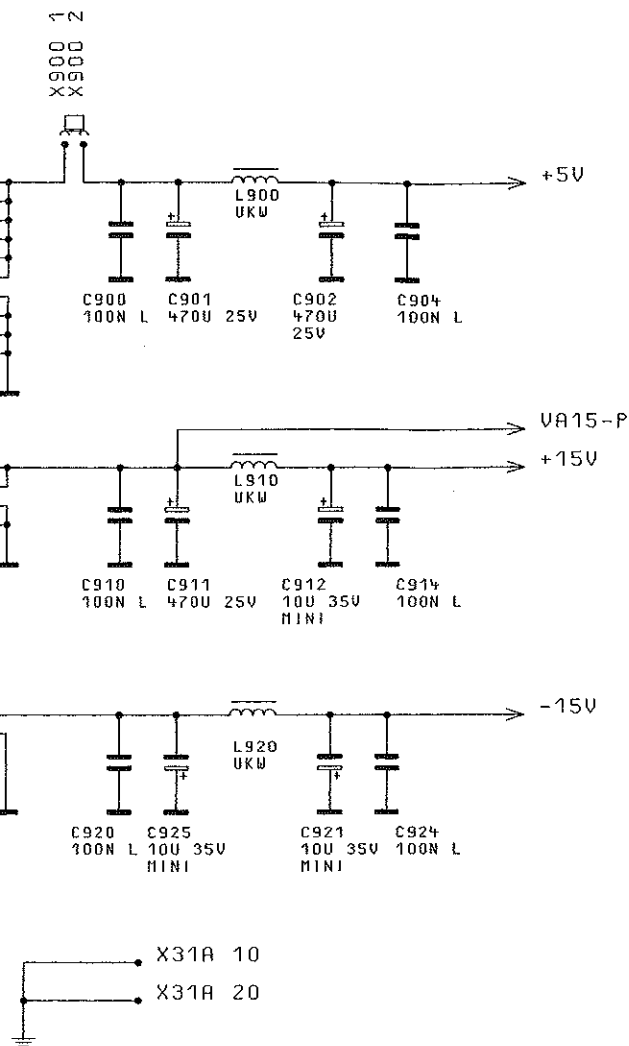
### KEYBOARD



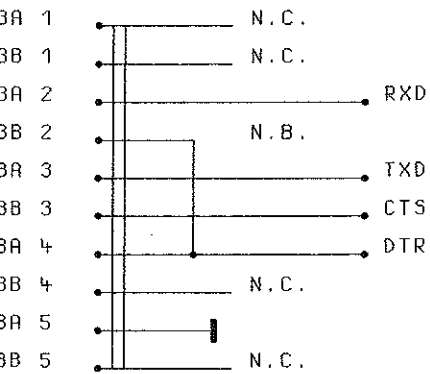
### KEYBOARD



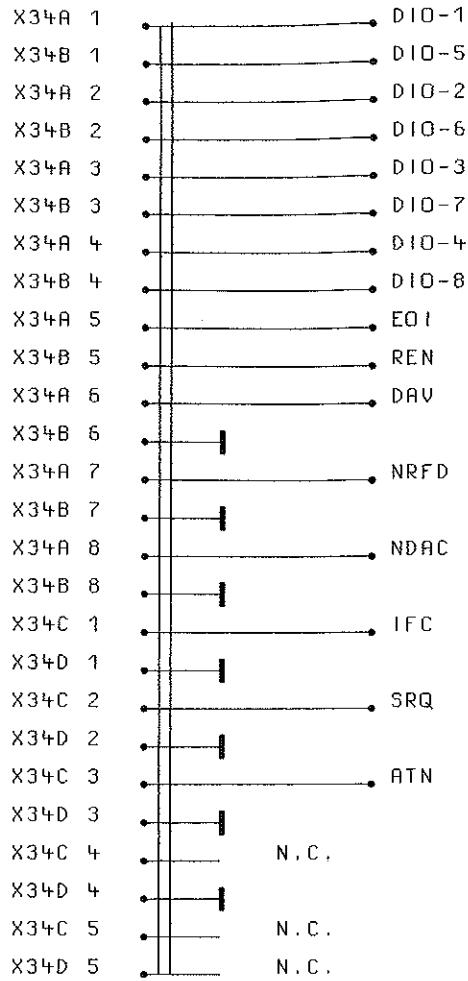
ACHTUNG: EG  
ELEKTROSTATISCH GE  
BAUELEMENTE ERFOR  
BESONDERE HANDH  
ATTENTION ES  
ELECTROSTATIC SENSIT  
REQUIRE A SPECIAL



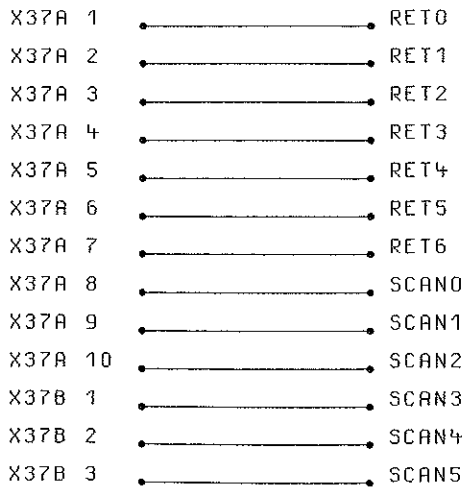
### S232



### IEC625

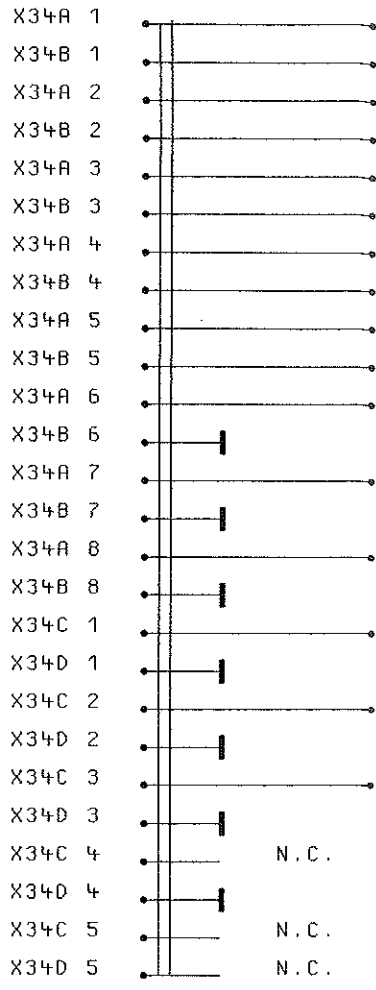


### KEYBOARD

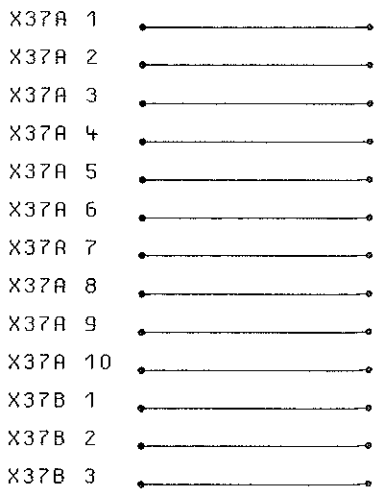


FUER DIESE UNTERLAGE  
BEHALTEN WIR UNS ALLE RECHTE VOR

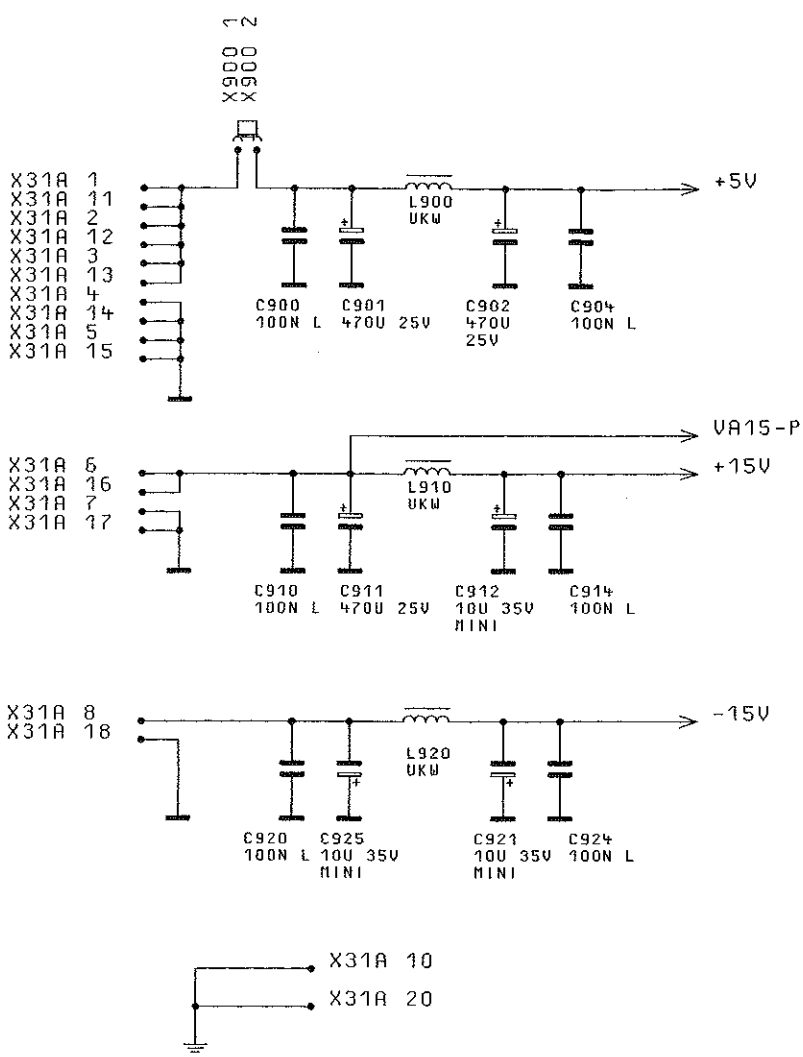
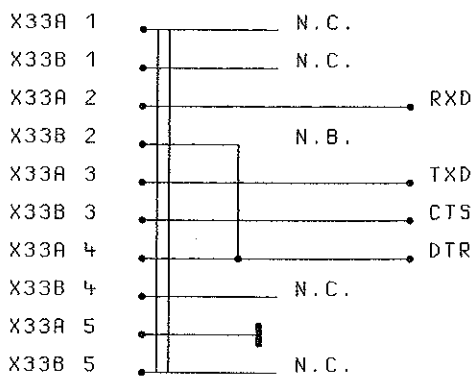
IEC625



KEYBOARD



RS232



ZEICHN.-NR.



| Signal-Name     | Page-No.: Zones   |
|-----------------|---|
| +15V            | 05: 3F<br>08: 3A 6D 7D 7F 8D 9F<br>12: 3D 10F   |
| +5V             | 02: 2B 2C 3D 3E 3F 4B 4E 6A 6E 7D 9D 10D<br>11D 11E<br>03: 5A 6D 6E 7F 8D 12F<br>04: 2F 3B 3E 4D 4E 4F 5F 6C 7B<br>05: 2A 3B 5F<br>06: 3A 4A 5A 6A 7D<br>07: 1A 2A 2E 3A 4A 5A 6A 6C 7D 9E 10C 10F<br>11F<br>08: 4A 5C 5E 9D 10D<br>09: 2A 3A 3B 4A 4B 5A 6E<br>10: 3A 3C 4A 5A 6A 7A 7C 7F 8A 8D 8E 9E<br>10E<br>11: 2D 2E 3D 5A 6A 7A 7E<br>12: 3E 7D |
| -15V            | 08: 3D 4A 5D 7C 8B 9D<br>12: 3D   |
| 100HZ           | 02: 6D<br>10: 3D  |
| 1KHZ            | 02: 6D<br>03: 10F<br>09: 3C   |
| 1MHZ            | 02: 6D<br>09: 3C  |
| 200HZ           | 02: 6D<br>10: 3D  |
| 2MHZ            | 02: 6D<br>11: 7C  |
| 8MHZ            | 02: 6D<br>09: 6B<br>11: 7E  |
| A1              | 02: 9E 10E<br>03: 2C<br>04: 5C 7D 7E 9D 9E<br>05: 6D 6F 8D 8F   |
| A1-PERI         | 03: 3C<br>06: 3D<br>09: 3C 6E<br>10: 6C 7D<br>11: 2E 7E   |
| A10-MEM         | 03: 3E  |
| Druck 03.05.94  | Abt.1GPK   Name JN   Dat.03.05.94   Ae.Mi.   Aei. 05  |
| ROHDE & SCHWARZ | Benennung RECHNER<br>PROCESSOR   13+  |
| Typ. SMP        | Reg in Verz. 1035.5005 V   Sachnummer 1035.7250 S   |

| Signal-Name     | Page-No.:              | Zones   |
|-----------------|------------------------|---|
| A10-MEM         | 04:                    | 5C 7C 7E 9C 9E<br>05: 6C 6E 8C 8E               |
| A10-PERI        | 03:                    | 3E<br>11: 7D                                    |
| A11-MEM         | 03:                    | 3E<br>04: 5C 7C 7E 9C 9E<br>05: 6C 6E 8C 8E     |
| A11-PERI        | 03:                    | 3E<br>11: 7D                                    |
| A12-MEM         | 03:                    | 3E<br>04: 5C 7C 7E 9C 9E<br>05: 6C 6E 8C 8E     |
| A12-PERI        | 03:                    | 3F<br>11: 7D                                    |
| A13-MEM         | 03:                    | 3E<br>04: 5C 7C 7E 9C 9E<br>05: 6C 6E 8C 8E     |
| A13-PERI        | 03:                    | 3F<br>11: 7D                                    |
| A14-MEM         | 03:                    | 3E<br>04: 5C 7C 7E 9C 9E<br>05: 6C 6E 8C 8E     |
| A14-PERI        | 03:                    | 3F<br>11: 7D                                    |
| A15-MEM         | 03:                    | 3E<br>04: 5C 7C 7E 9C 9E<br>05: 6C 6E 8C 8E     |
| A15-PERI        | 03:                    | 3F<br>11: 7D                                    |
| A16             | 02:                    | 9E 10E<br>04: 5C 7C 7D 9C 9D<br>05: 6C 6E 8C 8E |
| A17             | 02:                    | 9E 10E<br>04: 5C 7C 7D 9C 9D<br>05: 6C 6E 8C 8E |
| A18             | 02:                    | 9E 10E<br>04: 2D 4B<br>05: 6C 6E 8C 8E          |
| A19             | 02:                    | 9E 10E  |
| Druck 03.05.94  | Abt.1GPK               | Name JN   Dat.03.05.94   Ae.Mi.   Aei. 05       |
| ROHDE & SCHWARZ | Benennung              | RECHNER<br>PROCESSOR   14+                      |
| Typ. SMP        | Reg in Verz. 1035.5005 | V   Sachnummer 1035.7250   S                    |



| Signal-Name     | Page-No.:              | Zones   |
|-----------------|------------------------|---|
| A19             | 04:                    | 2D<br>05: 4D 6E   |
| A2              | 02:                    | 9E 10E<br>03: 2C<br>04: 5C 7D 7E 9D 9E<br>05: 6D 6F 8D 8F |
| A2-PERI         | 03:                    | 3C<br>06: 3D<br>09: 3C 6E<br>10: 7D<br>11: 2E 7E          |
| A20             | 02:                    | 9E 10E<br>05: 4D  |
| A21             | 02:                    | 9E 10E  |
| A22             | 02:                    | 9E 10E  |
| A23             | 02:                    | 9E 10E  |
| A24             | 02:                    | 9E 10E  |
| A25             | 02:                    | 9E 10E<br>11: 6E  |
| A26             | 02:                    | 9E 10E<br>06: 3E  |
| A27             | 02:                    | 9D 10D<br>03: 7F<br>06: 3E                                |
| A28             | 02:                    | 9D 10D<br>03: 7F<br>06: 3E                                |
| A29             | 02:                    | 9D 10D<br>03: 7F<br>06: 3E                                |
| A3              | 02:                    | 9E 10E<br>03: 2C<br>04: 5C 7D 7E 9D 9E<br>05: 6D 6E 8D 8E |
| A3-PERI         | 03:                    | 3C<br>06: 3D<br>09: 6E<br>10: 7D<br>11: 2E 7E             |
| Druck 03.05.94  | Abt.1GPK               | Name JN   Dat.03.05.94   Ae.Mi.   Aei. 05                 |
| ROHDE & SCHWARZ | Benennung              | RECHNER<br>PROCESSOR   15+                                |
| Typ. SMP        | Reg in Verz. 1035.5005 | V   Sachnummer 1035.7250   S                              |

| Signal-Name | Page-No.: Zones                                 |
|-------------|---|
| A30         | 02: 9D 10D<br>03: 7E<br>06: 3E                  |
| A31         | 02: 9D 10D<br>03: 7E<br>06: 3D 3E               |
| A4-MEM      | 03: 3D<br>04: 5C 7D 7E 9D 9E<br>05: 6D 6E 8D 8E |
| A4-PERI     | 03: 3D<br>11: 2E 7E                             |
| A5-MEM      | 03: 3D<br>04: 5C 7C 7E 9C 9E<br>05: 6D 6E 8D 8E |
| A5-PERI     | 03: 3D<br>11: 2E 7E                             |
| A6-MEM      | 03: 3D<br>04: 5C 7C 7E 9C 9E<br>05: 6D 6E 8D 8E |
| A6-PERI     | 03: 3D<br>11: 7D                                |
| A7-MEM      | 03: 3D<br>04: 5C 7C 7E 9C 9E<br>05: 6D 6E 8D 8E |
| A7-PERI     | 03: 3D<br>11: 7D                                |
| A8-MEM      | 03: 3D<br>04: 5C 7C 7E 9C 9E<br>05: 6D 6E 8D 8E |
| A8-PERI     | 03: 3E<br>11: 7D                                |
| A9-MEM      | 03: 3D<br>04: 5C 7C 7E 9C 9E<br>05: 6D 6E 8D 8E |
| A9-PERI     | 03: 3E<br>11: 7D                                |
| AC-FAIL     | 07: 5E<br>10: 1B<br>12: 11C                     |

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ROHDE & SCHWARZ | Benennung RECHNER  
PROCESSOR | 16+

Typ. SMP | Reg in Verz. 1035.5005 V | Sachnummer 1035.7250 S

| Signal-Name     | Page-No.:              | Zones                                     |
|-----------------|------------------------|---|
| AD1             | 02:                    | 7E 8E<br>03: 5C                           |
| AD10            | 02:                    | 7E 8E<br>03: 2E 5D                        |
| AD11            | 02:                    | 7E 8E<br>03: 2E 5D                        |
| AD12            | 02:                    | 7E 8E<br>03: 2E 2F 5E                     |
| AD13            | 02:                    | 7E 8E<br>03: 2E 2F 5E                     |
| AD14            | 02:                    | 7D 8D<br>03: 2E 2F 5E                     |
| AD15            | 02:                    | 7D 8D<br>03: 2E 2F 5E                     |
| AD2             | 02:                    | 7E 8E<br>03: 5C                           |
| AD3             | 02:                    | 7E 8E<br>03: 5C                           |
| AD4             | 02:                    | 7E 8E<br>03: 2D 5C                        |
| AD5             | 02:                    | 7E 8E<br>03: 2D 5D                        |
| AD6             | 02:                    | 7E 8E<br>03: 2D 5D                        |
| AD7             | 02:                    | 7E 8E<br>03: 2D 5D                        |
| AD8             | 02:                    | 7E 8E<br>03: 2D 2E 5D                     |
| AD9             | 02:                    | 7E 8E<br>03: 2D 2E 5D                     |
| ALE             | 02:                    | 10D 11D<br>03: 2B                         |
| AS              | 02:                    | 10D 11D<br>03: 2B<br>04: 2C<br>05: 3C     |
| AS-PERI         | 03:                    | 3B  |
| Druck 03.05.94  | Abt.1GPK               | Name JN   Dat.03.05.94   Ae.Mi.   Aei. 05 |
| ROHDE & SCHWARZ | Benennung              | RECHNER<br>PROCESSOR   17+                |
| Typ. SMP        | Reg in Verz. 1035.5005 | V   Sachnummer 1035.7250   S              |

| Signal-Name     | Page-No.: Zones                                      |
|-----------------|--|
| AS-PERI         | 06: 3C<br>09: 3D<br>10: 3F<br>11: 6E                 |
| ATN             | 09: 11C<br>12: 5D                                    |
| AUX-TRIG        | 10: 2C<br>12: 11C                                    |
| BEO             | 02: 9D<br>03: 2C<br>04: 2C<br>05: 3C                 |
| BEO-PERI        | 03: 3C<br>06: 3C<br>09: 3D<br>11: 7E                 |
| BE1             | 02: 9D<br>03: 2C<br>04: 2C<br>05: 3C                 |
| BE1-PERI        | 03: 3C<br>06: 3C<br>11: 7E                           |
| BLANK           | 03: 11D<br>12: 11C                                   |
| BLAST           | 02: 10D 11D<br>03: 2B<br>04: 2C<br>05: 3C            |
| BLAST-PERI      | 03: 3B<br>06: 3C<br>09: 3D<br>10: 3E<br>11: 6E       |
| BUSY-A/D        | 07: 5E<br>08: 10C                                    |
| CLK1XA          | 02: 6D<br>04: 2C<br>05: 3C                           |
| CLK1XB          | 02: 6D<br>06: 3C<br>09: 3D                           |
| Druck 03.05.94  | Abt.1GPK   Name JN   Dat.03.05.94   Ae.Mi.   Aei. 05 |
| ROHDE & SCHWARZ | Benennung RECHNER<br>PROCESSOR   18+                 |
| Typ. SMP        | Reg in Verz. 1035.5005 V   Sachnummer 1035.7250 S    |

| Signal-Name     | Page-No. : Zones                                     |
|-----------------|--|
| CLK1XB          | 10: 3F<br>11: 6E                                     |
| CLK2XA          | 02: 6D   |
| CLK2XB          | 02: 6D<br>11: 2B                                     |
| CS-D/A-CONV     | 06: 3C<br>08: 1F                                     |
| CS-EPROM        | 03: 8F<br>04: 1C                                     |
| CS-FLASH        | 03: 8F<br>05: 2C                                     |
| CS-FLASH1       | 05: 5D   |
| CS-FLASH2       | 05: 5D 9D 9F   |
| CS-IEC          | 06: 4E<br>09: 1D                                     |
| CS-INTCONTR     | 06: 4E<br>09: 1D<br>10: 6C                           |
| CS-LCD          | 06: 4E<br>11: 5E                                     |
| CS-RAM          | 03: 8F<br>04: 1C                                     |
| CS-REG          | 06: 3C   |
| CS-REG-VARI     | 03: 10F<br>04: 1C                                    |
| CS-REG1         | 06: 4D<br>07: 5E                                     |
| CS-REG2         | 06: 4D<br>08: 1D                                     |
| CS-REG3         | 06: 5C<br>08: 1D                                     |
| CS-REG4         | 06: 4D   |
| CS-REG5         | 06: 4D   |
| CS-SERBUS       | 06: 4E<br>10: 1E                                     |
| Druck 03.05.94  | Abt.1GPK   Name JN   Dat.03.05.94   Ae.Mi.   Aei. 05 |
| ROHDE & SCHWARZ | Benennung RECHNER<br>PROCESSOR   19+                 |
| Typ. SMP        | Reg in Verz. 1035.5005 V   Sachnummer 1035.7250 S    |

| Signal-Name     | Page-No.:              | Zones        |
|-----------------|------------------------|--------------|
| CS-SERBUS       | 11:                    | 1E           |
| CS-TEST2SS      | 03:                    | 8E           |
|                 | 10:                    | 1E           |
| CS-TIMER        | 06:                    | 4E           |
|                 | 09:                    | 1D           |
| CS-UART         | 06:                    | 4E           |
|                 | 09:                    | 1D           |
|                 | 10:                    | 7E           |
| CTS             | 10:                    | 11D          |
|                 | 12:                    | 3B           |
| DO              | 02:                    | 7E 8E        |
|                 | 03:                    | 5C           |
| DO-BUF          | 03:                    | 7C 9E        |
|                 | 04:                    | 6C 8D 10D    |
|                 | 05:                    | 8D 10D       |
|                 | 06:                    | 9C           |
|                 | 07:                    | 8D           |
|                 | 08:                    | 5E 10C       |
|                 | 09:                    | 5C 6D        |
|                 | 10:                    | 3D 7D 8C     |
|                 | 11:                    | 2E 7D        |
| D1-BUF          | 03:                    | 7C 9E        |
|                 | 04:                    | 6C 8D 10D    |
|                 | 05:                    | 8D 10D       |
|                 | 06:                    | 9D           |
|                 | 07:                    | 8D           |
|                 | 08:                    | 5E 10C       |
|                 | 09:                    | 5C 6D        |
|                 | 10:                    | 3D 7D 8C     |
|                 | 11:                    | 2E 7D        |
| D10-BUF         | 03:                    | 7D 10C       |
|                 | 04:                    | 6C 8E 10E    |
|                 | 05:                    | 8E 10E       |
|                 | 07:                    | 2C 8E        |
|                 | 08:                    | 3B 5E 10C    |
|                 | 11:                    | 2D 7C        |
| D11-BUF         | 03:                    | 7D 10C       |
|                 | 04:                    | 6C 8E 10E    |
|                 | 05:                    | 8E 10E       |
|                 | 07:                    | 2B 8E        |
|                 | 08:                    | 3B 5E 10B    |
|                 | 11:                    | 2D 7C        |
| D12-BUF         | 03:                    | 7E 10C       |
|                 | 04:                    | 6C 8E 10E    |
| Druck 03.05.94  | Abt.1GPK               | Name JN      |
|                 |                        | Dat.03.05.94 |
|                 |                        | Ae.Mi.       |
|                 |                        | Aei. 05      |
| ROHDE & SCHWARZ | Benennung              | RECHNER      |
|                 |                        | PROCESSOR    |
|                 |                        | 20+          |
| Typ. SMP        | Reg in Verz. 1035.5005 | V            |
|                 | Sachnummer 1035.7250   | S            |

| Signal-Name     | Page-No.:              | Zones  |
|-----------------|------------------------|--|
| D12-BUF         | 05:                    | 8E 10E<br>07: 2B 8E<br>08: 3B<br>11: 2D 7C   |
| D13-BUF         | 03:                    | 7E 10C<br>04: 6C 8E 10E<br>05: 8E 10E<br>07: 2B 8E<br>08: 3B<br>11: 2D 7C  |
| D14-BUF         | 03:                    | 7E 10C<br>04: 6C 8E 10E<br>05: 8E 10E<br>07: 2B 8E<br>08: 3B<br>11: 2D 7C  |
| D15-BUF         | 03:                    | 7E 10C<br>04: 6C 8E 10E<br>05: 8E 10E<br>07: 2B 8E<br>08: 3B<br>11: 2D 7D  |
| D2-BUF          | 03:                    | 7C 9E<br>04: 6C 8D 10D<br>05: 8D 10D<br>06: 9D<br>07: 8D<br>08: 5E 10C<br>09: 5C 6D<br>10: 3D 7D 8C<br>11: 2E 7D |
| D3-BUF          | 03:                    | 7C 9E<br>04: 6C 8D 10D<br>05: 8D 10D<br>06: 9D<br>07: 8D<br>08: 5E 10C<br>09: 5C 6D<br>10: 3D 7D 8C<br>11: 2D 7D |
| D4-BUF          | 03:                    | 7C 9D<br>04: 6C 8C 10C<br>05: 8D 10D<br>06: 9D<br>07: 8D<br>08: 5E 10C<br>09: 5C 6D<br>10: 3D 7D 8C              |
| Druck 03.05.94  | Abt.1GPK               | Name JN   Dat.03.05.94   Ae.Mi.   Aei. 05  |
| ROHDE & SCHWARZ | Benennung              | RECHNER<br>PROCESSOR   21+   |
| Typ. SMP        | Reg in Verz. 1035.5005 | V   Sachnummer 1035.7250   S   |

| Signal-Name     | Page-No.:    | Zones                |
|-----------------|--------------|----------------------|
| D4-BUF          | 11:          | 2D 7D                |
| D5-BUF          | 03:          | 7D 9D                |
|                 | 04:          | 6C 8C 10C            |
|                 | 05:          | 8D 10D               |
|                 | 06:          | 9D                   |
|                 | 07:          | 8D                   |
|                 | 08:          | 5E 10C               |
|                 | 09:          | 5C 6D                |
|                 | 10:          | 3D 7D 8C             |
|                 | 11:          | 2D 7D                |
| D6-BUF          | 03:          | 7D 9D                |
|                 | 04:          | 6C 8C 10C            |
|                 | 05:          | 8D 10D               |
|                 | 06:          | 9D                   |
|                 | 07:          | 8D                   |
|                 | 08:          | 5E 10C               |
|                 | 09:          | 5C 6D                |
|                 | 10:          | 3D 7D 8C             |
|                 | 11:          | 2D 7D                |
| D7-BUF          | 03:          | 7D 9D                |
|                 | 04:          | 6C 8C 10C            |
|                 | 05:          | 8D 10D               |
|                 | 06:          | 9D                   |
|                 | 07:          | 8D                   |
|                 | 08:          | 5E 10C               |
|                 | 09:          | 5C 6D                |
|                 | 10:          | 3D 7D 8B             |
|                 | 11:          | 2D 7D                |
| D8-BUF          | 03:          | 7D 10C               |
|                 | 04:          | 6C 8E 10E            |
|                 | 05:          | 8F 10F               |
|                 | 07:          | 2C 8E                |
|                 | 08:          | 3B 5E 10C            |
|                 | 11:          | 2D 7C                |
| D9-BUF          | 03:          | 7D 10C               |
|                 | 04:          | 6C 8E 10E            |
|                 | 05:          | 8F 10F               |
|                 | 07:          | 2C 8E                |
|                 | 08:          | 3B 5E 10C            |
|                 | 11:          | 2D 7C                |
| DAV             | 09:          | 11C                  |
|                 | 12:          | 5E                   |
| DEN             | 02:          | 10D 11D              |
|                 | 03:          | 5D                   |
| DIAG-15V        | 08:          | 1C                   |
| Druck 03.05.94  | Abt.1GPK     | Name JN              |
|                 |              | Dat.03.05.94         |
|                 |              | Ae.Mi.               |
|                 |              | Aei. 05              |
| ROHDE & SCHWARZ | Benennung    | RECHNER              |
|                 |              | PROCESSOR            |
|                 |              | 22+                  |
| Typ. SMP        | Reg in Verz. | 1035.5005            |
|                 | V            | Sachnummer 1035.7250 |
|                 |              | S                    |



| Signal-Name     | Page-No.:              | Zones                                     |
|-----------------|------------------------|---|
| DIAG-15V        | 12:                    | 11D                                       |
| DIAG-5V         | 08:                    | 1C<br>12: 11D                             |
| DIO-1           | 09:                    | 11E<br>12: 5F                             |
| DIO-2           | 09:                    | 11D<br>12: 5F                             |
| DIO-3           | 09:                    | 11D<br>12: 5E                             |
| DIO-4           | 09:                    | 11D<br>12: 5E                             |
| DIO-5           | 09:                    | 11D<br>12: 5F                             |
| DIO-6           | 09:                    | 11D<br>12: 5E                             |
| DIO-7           | 09:                    | 11D<br>12: 5E                             |
| DIO-8           | 09:                    | 11D<br>12: 5E                             |
| DIR-FF          | 03:                    | 7C<br>07: 11E                             |
| DT/R            | 02:                    | 10D 11D<br>03: 5D                         |
| DTR             | 10:                    | 11D<br>12: 3B                             |
| EOI             | 09:                    | 11C<br>12: 5E                             |
| IEC-INT-P       | 09:                    | 11E<br>10: 2C                             |
| IFC             | 09:                    | 11C<br>12: 5D                             |
| INT-RS232       | 10:                    | 6C 7E                                     |
| INT0-N          | 02:                    | 8D<br>10: 5D                              |
| INT1-P          | 02:                    | 8D  |
| Druck 03.05.94  | Abt.1GPK               | Name JN   Dat.03.05.94   Ae.Mi.   Aei. 05 |
| ROHDE & SCHWARZ | Benennung              | RECHNER<br>PROCESSOR   23+                |
| Typ. SMP        | Reg in Verz. 1035.5005 | V   Sachnummer 1035.7250   S              |

| Signal-Name     | Page-No.:              | Zones        |
|-----------------|------------------------|--------------|
| INT1-P          | 10:                    | 5E           |
| INTA-N          | 02:                    | 8D           |
|                 | 09:                    | 1D           |
|                 | 10:                    | 2B 6C        |
| INTR-P          | 02:                    | 8D           |
|                 | 10:                    | 8C           |
| IRQUIT-SERBUS   | 03:                    | 11C          |
|                 | 11:                    | 1C           |
| KEY-INT-P       | 03:                    | 7C           |
|                 | 07:                    | 11C          |
|                 | 10:                    | 1D           |
| KEY-STROKE      | 07:                    | 11C          |
| KNOB-INT-P      | 03:                    | 7C           |
|                 | 07:                    | 11E          |
|                 | 10:                    | 1C           |
| KNOB1           | 07:                    | 8E           |
|                 | 12:                    | 7E           |
| KNOB2           | 07:                    | 8E           |
|                 | 12:                    | 7E           |
| LAMPOFF         | 03:                    | 11C          |
|                 | 12:                    | 7D           |
| LCD-CP1         | 11:                    | 11B          |
|                 | 12:                    | 7D           |
| LCD-CP2         | 11:                    | 11B          |
|                 | 12:                    | 7D           |
| LCD-CS          | 11:                    | 11B          |
|                 | 12:                    | 7D           |
| LCD-D0          | 11:                    | 11C          |
|                 | 12:                    | 7D           |
| LCD-D1          | 11:                    | 11C          |
|                 | 12:                    | 7C           |
| LCD-D2          | 11:                    | 11B          |
|                 | 12:                    | 7C           |
| LCD-D3          | 11:                    | 11B          |
|                 | 12:                    | 7E           |
| MARKER          | 03:                    | 11D          |
| Druck 03.05.94  | Abt.1GPK               | Name JN      |
|                 |                        | Dat.03.05.94 |
|                 |                        | Ae.Mi.       |
|                 |                        | Aei. 05      |
| ROHDE & SCHWARZ | Benennung              | RECHNER      |
|                 |                        | PROCESSOR    |
|                 |                        | 24+          |
| Typ. SMP        | Reg in Verz. 1035.5005 | V            |
|                 | Sachnummer 1035.7250   | S            |

| Signal-Name     | Page-No.:              | Zones                |
|-----------------|------------------------|----------------------|
| MARKER          | 12:                    | 11C                  |
| MODCTRL-IN      | 03:<br>12:             | 7C<br>11B            |
| MODCTRL-OUT     | 03:<br>12:             | 11E<br>11B           |
| NDAC            | 09:<br>12:             | 11B<br>5D            |
| NRFD            | 09:<br>12:             | 11B<br>5E            |
| POT1            | 11:<br>12:             | 11B<br>7F            |
| POT2            | 11:<br>12:             | 11B<br>7E            |
| POT3            | 11:<br>12:             | 11B<br>7E            |
| POT4            | 11:<br>12:             | 11B<br>7E            |
| POT5            | 11:<br>12:             | 11B<br>7E            |
| POT6            | 11:<br>12:             | 11B<br>7D            |
| RD-MEM1         | 03:<br>04:             | 7C<br>5D             |
| RD-PERI1        | 06:<br>07:<br>08:      | 4C<br>5E<br>1D       |
| RD-PERI2        | 09:<br>10:             | 4D<br>6C 7D          |
| RD-SERBUS       | 10:<br>11:             | 4E<br>1E             |
| RDY-LCD         | 11:                    | 9E                   |
| RDY-MEM1        | 02:<br>04:             | 2C<br>3C             |
| RDY-MEM2        | 02:<br>05:             | 2C<br>4C             |
| RDY-PERI1       | 02:                    | 2C                   |
| Druck 03.05.94  | Abt.1GPK               | Name JN              |
|                 |                        | Dat.03.05.94         |
|                 |                        | Ae.Mi.               |
|                 |                        | Aei. 05              |
| ROHDE & SCHWARZ | Benennung              | RECHNER<br>PROCESSOR |
|                 |                        | 25+                  |
| Typ. SMP        | Reg in Verz. 1035.5005 | V                    |
|                 | Sachnummer 1035.7250   | S                    |

| Signal-Name     | Page-No.:              | Zones  |
|-----------------|------------------------|--|
| RDY-PER11       | 06:                    | 4C   |
| RDY-PER12       | 02:                    | 2C<br>09: 4D   |
| RDY-PER13       | 02:                    | 2C<br>10: 4F   |
| RDY-PER14       | 02:                    | 2C<br>11: 7E   |
| READY-N         | 02:                    | 8D   |
| REN             | 09:                    | 11C<br>12: 5E  |
| RES-IEC-P       | 09:                    | 1E<br>10: 4E   |
| RES-N           | 02:                    | 6E<br>04: 1F<br>05: 2C<br>06: 2C<br>07: 2C<br>08: 1F<br>09: 1D<br>10: 1E<br>11: 5E |
| RES-P           | 02:                    | 6F<br>03: 9E<br>09: 1E<br>10: 7E<br>11: 5F<br>12: 11B                              |
| RESERVE         | 03:                    | 11E<br>12: 11B   |
| RESIN2          | 02:                    | 4E<br>04: 6F   |
| RET0            | 07:                    | 2D<br>12: 5C   |
| RET1            | 07:                    | 2D<br>12: 5C   |
| RET2            | 07:                    | 2D<br>12: 5C   |
| RET3            | 07:                    | 2D<br>12: 5C   |
| Druck 03.05.94  | Abt.1GPK               | Name JN  |
|                 |                        | Dat.03.05.94   |
|                 |                        | Ae.Mi.   |
|                 |                        | Aei. 05  |
| ROHDE & SCHWARZ | Benennung              | RECHNER<br>PROCESSOR   |
|                 |                        | 26+  |
| Typ. SMP        | Reg in Verz. 1035.5005 | V  |
|                 | Sachnummer 1035.7250   | S  |

| Signal-Name   | Page-No.: Zones            |
|---------------|----------------------------|
| RET4          | 07: 2D<br>12: 5B           |
| RET5          | 07: 2D<br>12: 5B           |
| RET6          | 07: 2D<br>12: 5B           |
| RXD           | 10: 11D<br>12: 3B          |
| SCAN0         | 07: 4C<br>12: 5B           |
| SCAN1         | 07: 4C<br>12: 5B           |
| SCAN2         | 07: 4C<br>12: 5B           |
| SCAN3         | 07: 4B<br>12: 5B           |
| SCAN4         | 07: 4B<br>12: 5B           |
| SCAN5         | 07: 4B<br>12: 5B           |
| SERBUS-ACTREQ | 07: 5E<br>10: 1B<br>11: 4D |
| SERBUS-BUSY   | 07: 5E<br>11: 4B           |
| SERBUS-CLK    | 11: 4D<br>12: 11C          |
| SERBUS-DAT    | 11: 4C<br>12: 11C          |
| SERBUS-INT    | 11: 4C<br>12: 11C          |
| SERBUS-INT1   | 07: 5E<br>10: 1B<br>11: 4C |
| SERBUS-INT2   | 07: 5E<br>10: 1B<br>11: 4C |

|                 |              |                      |               |                      |         |
|-----------------|--------------|----------------------|---------------|----------------------|---------|
| Druck 03.05.94  | Abt. 1GPK    | Name JN              | Dat. 03.05.94 | Ae.Mi.               | Aei. 05 |
| ROHDE & SCHWARZ | Benennung    | RECHNER<br>PROCESSOR |               |                      | 27+     |
| Typ. SMP        | Reg in Verz. | 1035.5005            | V             | Sachnummer 1035.7250 | S       |

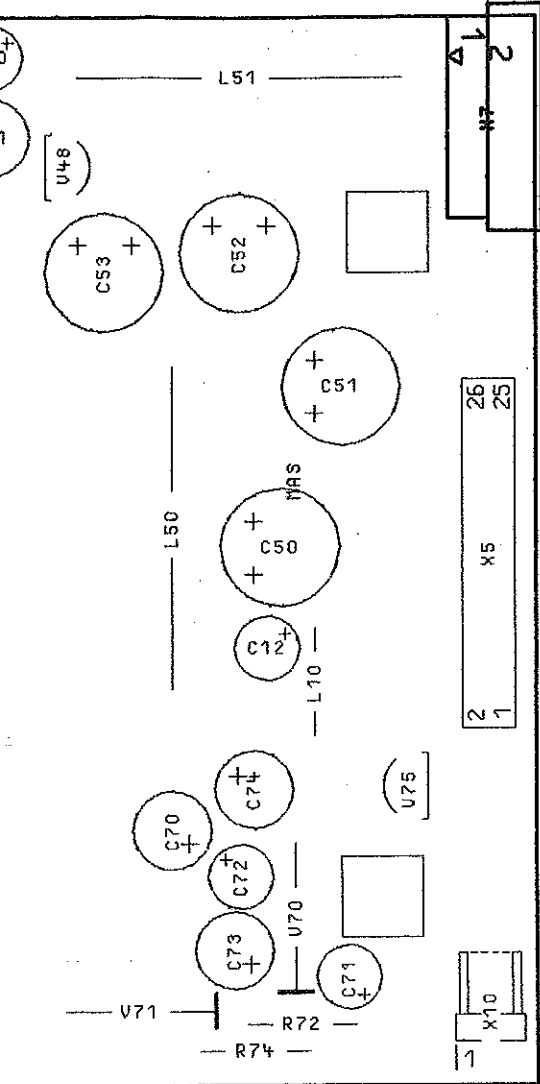
| Signal-Name   | Page-No.:                      | Zones                  |
|---|--------------------------------|------------------------|
| SERBUS-RDBF   | 07: 5E<br>11: 4C               |                        |
| SERBUS-SYNC   | 11: 4C<br>12: 11C              |                        |
| SERBUS-WRBE   | 07: 5E<br>11: 4C               |                        |
| SRQ   | 09: 11C<br>12: 5D              |                        |
| SWEEP-STOP  | 03: 7C<br>12: 11B              |                        |
| SYSRESET  | 02: 2E<br>12: 11C              |                        |
| T2-INT0   | 09: 5C<br>10: 2C               |                        |
| T2-INT2   | 09: 5C<br>10: 2C               |                        |
| TRIGGER   | 10: 1C<br>12: 11C              |                        |
| TST-BATT  | 04: 2D<br>08: 5B               |                        |
| TXD   | 10: 11D<br>12: 3B              |                        |
| UBATT   | 02: 7A<br>04: 2F 6B            |                        |
| UBATT-TST   | 04: 3E<br>08: 1C               |                        |
| UREF-D/A  | 08: 1C 7F                      |                        |
| VA1   | 11: 10D 10E                    |                        |
| VA10  | 11: 10C 10D 10E                |                        |
| VA11  | 11: 10C 10D 10E                |                        |
| VA12  | 11: 10C 10D 10E                |                        |
| VA13  | 11: 10C 10D 10E                |                        |
| VA14  | 11: 10C 10D 10E                |                        |
| Druck 03.05.94   Abt.1GPK   Name JN   Dat.03.05.94   Ae.Mi.   Aei. 05 |                                |                        |
| ROHDE & SCHWARZ   | Benennung RECHNER<br>PROCESSOR | 28+                    |
| Typ. SMP  | Reg in Verz. 1035.5005 V       | Sachnummer 1035.7250 S |

| Signal-Name     | Page-No.:              | Zones                                       |
|-----------------|------------------------|---|
| VA15            | 11:                    | 10C 10D 10E                                 |
| VA15-P          | 12:                    | 3E 7E 7F                                    |
| VA2             | 11:                    | 10D 10E                                     |
| VA3             | 11:                    | 10D 10E                                     |
| VA4             | 11:                    | 10D 10E                                     |
| VA5             | 11:                    | 10D 10E                                     |
| VA6             | 11:                    | 10D 10E                                     |
| VA7             | 11:                    | 10D 10E                                     |
| VA8             | 11:                    | 10D 10E                                     |
| VA9             | 11:                    | 10D 10E                                     |
| VD0             | 11:                    | 9D 11D                                      |
| VD1             | 11:                    | 9D 11D                                      |
| VD10            | 11:                    | 9D 11E                                      |
| VD11            | 11:                    | 9C 11E                                      |
| VD12            | 11:                    | 9C 11E                                      |
| VD13            | 11:                    | 9C 11E                                      |
| VD14            | 11:                    | 9C 11E                                      |
| VD15            | 11:                    | 9C 11E                                      |
| VD2             | 11:                    | 9D 11D                                      |
| VD3             | 11:                    | 9D 11D                                      |
| VD4             | 11:                    | 9D 11D                                      |
| VD5             | 11:                    | 9D 11D                                      |
| VD6             | 11:                    | 9D 11D                                      |
| VD7             | 11:                    | 9D 11D                                      |
| VD8             | 11:                    | 9D 11E                                      |
| VD9             | 11:                    | 9D 11E                                      |
| VPP             | 05:                    | 5E 8C 8E 10C 10E                            |
| Druck 03.05.94  | Abt. 1GPK              | Name JN   Dat. 03.05.94   Ae. Mi.   Aei. 05 |
| ROHDE & SCHWARZ | Benennung              | RECHNER<br>PROCESSOR   29+                  |
| Typ. SMP        | Reg in Verz. 1035.5005 | V   Sachnummer 1035.7250   S                |

| Signal-Name   | Page-No.: Zones                                |
|---------------|--|
| VPP           | 08: 1C   |
| VPP-EIN       | 03: 11E<br>05: 2E                              |
| W/R           | 02: 10D 11D<br>03: 2B<br>04: 2C<br>05: 3C      |
| W/R-PERI      | 03: 3B<br>06: 3C<br>09: 3D<br>10: 3E<br>11: 6E |
| WR-D/A-CONV   | 06: 4C<br>08: 1F                               |
| WR-PERI1-HIGH | 06: 4C   |
| WR-PERI1-LOW  | 06: 4C   |
| WR-PERI2      | 09: 4D<br>10: 6C 7E                            |
| WR-RAM-LOW    | 03: 9E<br>04: 6E                               |
| WR-REG1-HIGH  | 06: 10F<br>07: 2C                              |
| WR-REG2-HIGH  | 06: 10E<br>08: 1B                              |
| WR-REG4-LOW   | 06: 10E<br>10: 1E                              |
| WR-SERBUS     | 10: 4E<br>11: 1E                               |
| X-AXIS        | 08: 1C 9E<br>12: 11D                           |

|                 |              |                      |               |                      |         |
|-----------------|--------------|----------------------|---------------|----------------------|---------|
| Druck 03.05.94  | Abt. 1GPK    | Name JN              | Dat. 03.05.94 | Ae.Mi.               | Aei. 05 |
| ROHDE & SCHWARZ | Benennung    | RECHNER<br>PROCESSOR |               |                      | 30-     |
| Typ. SMP        | Reg in Verz. | 1035.5005            | V             | Sachnummer 1035.7250 | S       |





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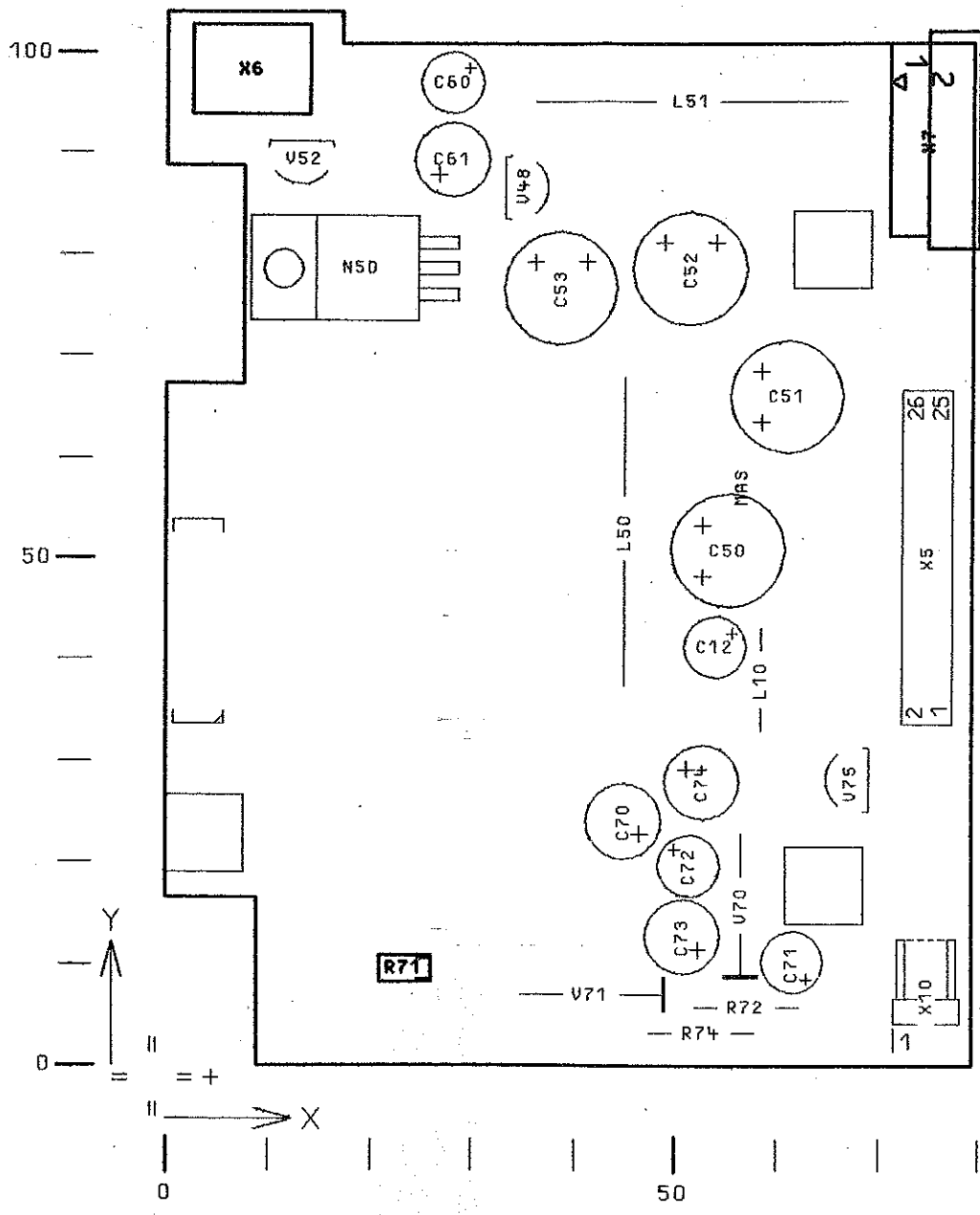
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|---------------|---------------------------|----------|------|--------------------------------|----------|------------|----------------------------|----------|-----------|
| 05/           | 48730 90                  | 07.04.94 | JN   | 1GPK                           | TAG      | NAME       | BENENNUNG                  |          | Z         |
|               |                           |          |      | BEARB.                         |          | JN         | DREHGEBER<br>KNOB ASSEMBLY |          |           |
|               |                           |          |      | GEPR.                          |          | DR         |                            |          |           |
|               |                           |          |      | NORM                           |          |            |                            |          |           |
|               |                           |          |      | PLDTT                          | 07.04.94 |            |                            |          |           |
|               |                           |          |      | <br><b>ROHDE &amp; SCHWARZ</b> |          |            | ZEICHN.-NR.                |          | BLATT-NR. |
|               |                           |          |      |                                |          |            | 1035.5592.01               |          | ED        |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG | DATUM    | NAME | ZU GERÄT                       | SMP      | REG. I. V. | 1035.5005                  | ERSTE Z. | 1035.5440 |

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**ACHTUNG: EGB!**  
 ELEKTROSTATISCH GEFÄHREDETE  
 BAUELEMENTE ERFORDERN EINE  
 BESONDERE HANDHABUNG.  
**ATTENTION ESD!**  
 ELECTROSTATIC SENSITIVE DEVICES  
 REQUIRE A SPECIAL HANDLING

BINDENDE ANGABEN UEBER VARIANTEN,  
 TRIMMWERTE, BAUTEILWERTE UND  
 NICHT BESTUECKTE BAUTEILE SIEHE SA.  
 FOR BINDING INFORMATION ON MODELS,  
 TRIMMING AND COMPONENTS VALUES AND  
 NONFITTED COMPONENTS SEE PARTS LIST.

|               |                           |          |       |  |          |
|---------------|---------------------------|----------|-------|--|----------|
| 06/           | 48730 90                  | 07.04.94 | JN    | 1GPK   | TAG      |
|               |                           |          |       | BEARB.   |          |
|               |                           |          |       | GEPR.  |          |
|               |                           |          |       | NORM   |          |
|               |                           |          |       | PLOTT  | 07.04.94 |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG | DATUM    | NAMEN | <br>ROHDE & SCHWABE<br>ZU GERÄT SMP |          |
|               |                           |          |       |  |          |

DIESE ZEICHNUNG IST EINE VORBEREITUNG FÜR DIE DRUCKREIHE. FÜR DIESE ZEICHNUNG BEHALTEN WIR UNS ALLE RECHTE VOR. WÄNDERUNGEN KÖNNEN NUR DURCH REVISIONEN DES DATENSATZES ERFOLGEN.

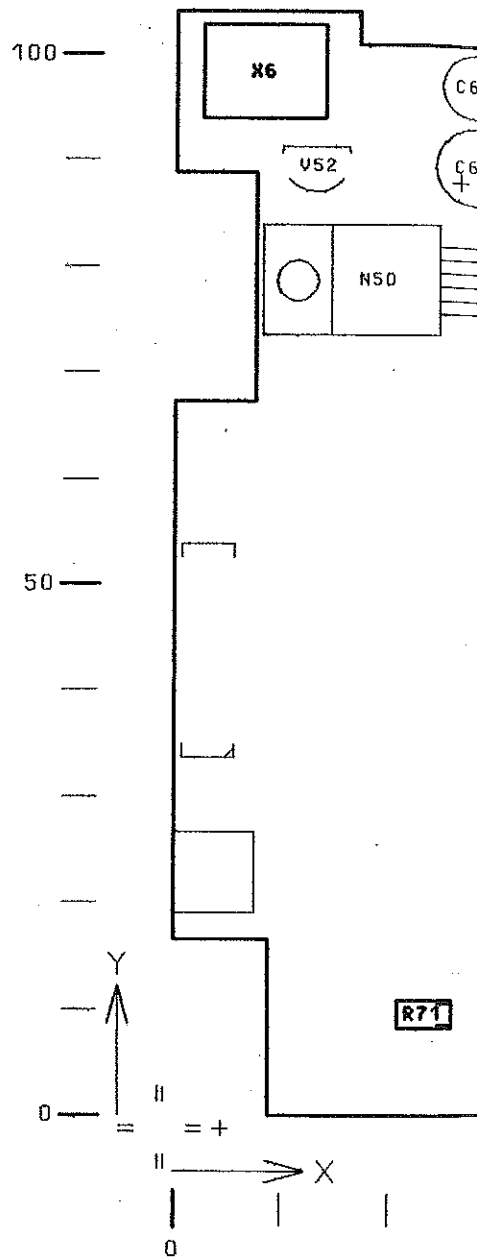
F  
E  
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DARSTELLUNG SEITE B  
VIEW ON SIDE B

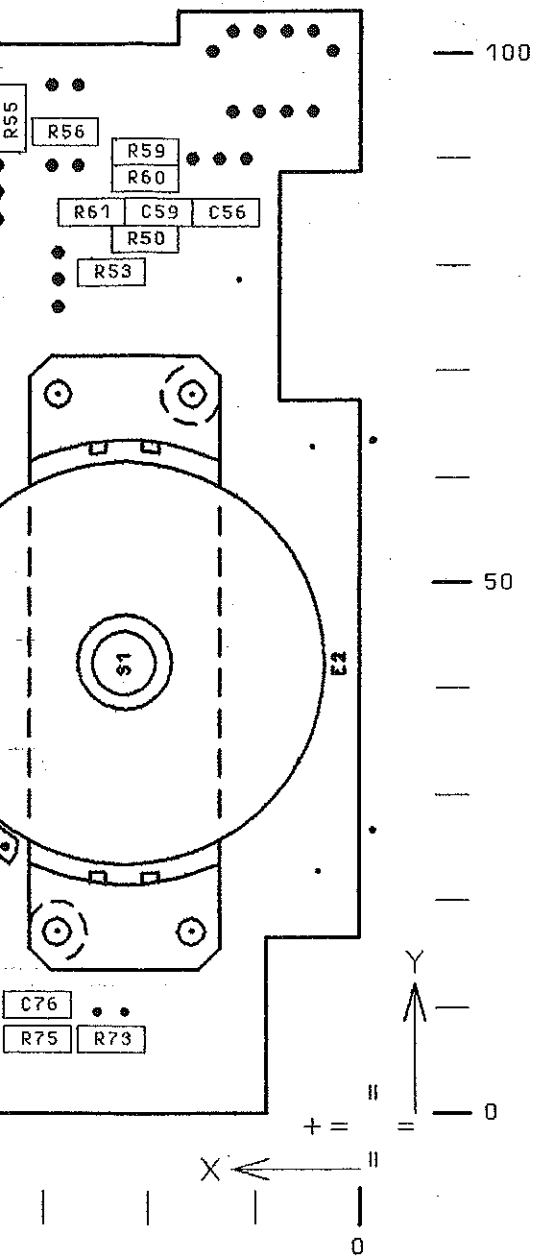


**ACHTUNG: EGB!**  
ELEKTROSTATISCH GEFÄHRDETE  
BAUELEMENTE ERFORDERN EINE  
BESONDERE HANDHABUNG.  
**ATTENTION ESD!**  
ELECTROSTATIC SENSITIVE DEVICES  
REQUIRE A SPECIAL HANDLING

BINDENDE ANGABEN UEBER VARIANTEN,  
TRIMMWERTE, BAUTEILWERTE UND  
NICHT BESTUECKTE BAUTEILE SIEHE S  
  
FOR BINDING INFORMATION ON MODELS  
TRIMMING AND COMPONENTS VALUES AND  
NONFITTED COMPONENTS SEE PARTS LIS



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|               |                           |          |      |                                |          |              |                            |            |           |
|---------------|---------------------------|----------|------|--------------------------------|----------|--------------|----------------------------|------------|-----------|
| 06/           | 48730 90                  | 07.04.94 | JN   | 1GPK                           | TAG      | NAME         | BENENNUNG                  |            | Z         |
|               |                           |          |      | BEARB.                         |          | JN           | DREHGEBER<br>KNOB ASSEMBLY |            |           |
|               |                           |          |      | GEPR.                          |          | DR           |                            |            |           |
|               |                           |          |      | NORM                           |          |              |                            |            |           |
|               |                           |          |      | PLOTT                          | 07.04.94 |              | ZEICHN.-NR.                |            | BLATT-NR. |
|               |                           |          |      | <br><b>ROHDE &amp; SCHWARZ</b> |          | 1035.5592.01 |                            | ED         | 2+        |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG | DATUM    | NAME |                                |          | ZU GERÄT     | SMP                        | REG. I. V. | 1035.5005 |

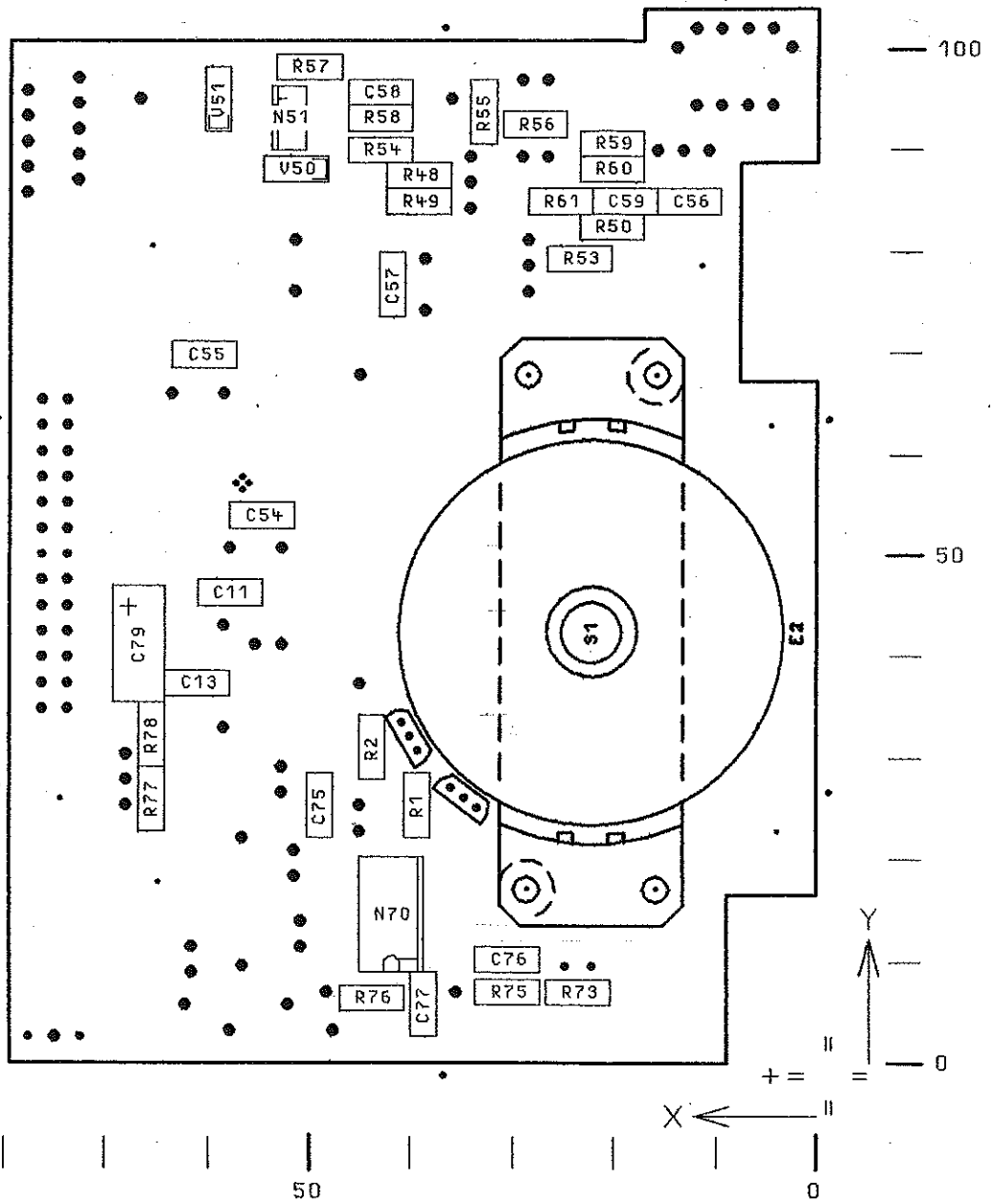
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**ACHTUNG: EGB!**  
ELEKTROSTATISCH GEFÄHRDETE  
BAUELEMENTE ERFORDERN EINE  
BESONDERE HANDHABUNG.  
**ATTENTION ESD!**  
ELECTROSTATIC SENSITIVE DEVICES  
REQUIRE A SPECIAL HANDLING

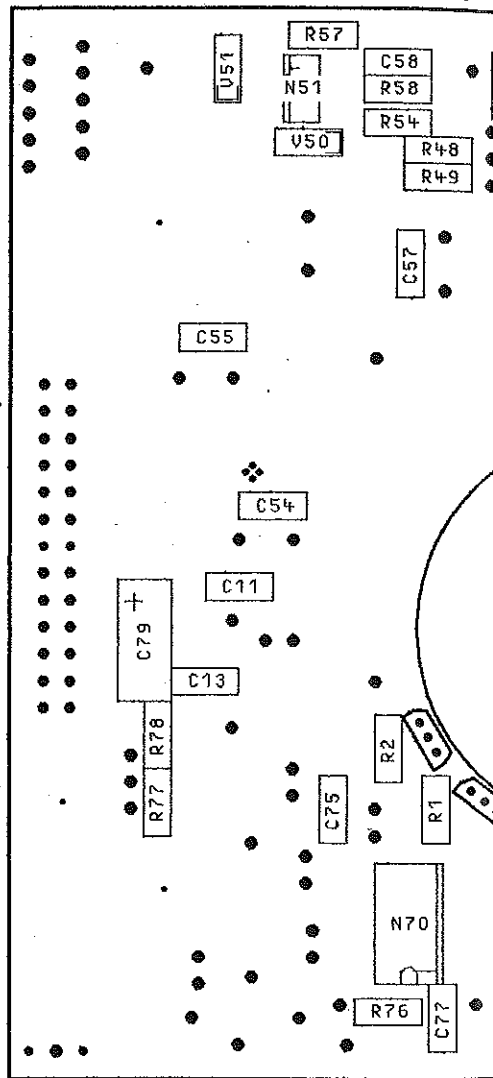
BINDENDE ANGABEN UEBER VARIANTEN,  
TRIMMWERTE, BAUTEILWERTE UND  
NICHT BESTUECKTE BAUTEILE SIEHE SA.

FOR BINDING INFORMATION ON MODELS,  
TRIMMING AND COMPONENTS VALUES AND  
NONFITTED COMPONENTS SEE PARTS LIST.

|               |                           |          |       |   |          |
|---------------|---------------------------|----------|-------|---|----------|
| 06/           | 48730 90                  | 07.04.94 | JN    | 1GPK  | TAG      |
|               |                           |          |       | BEARB.  |          |
|               |                           |          |       | GEPR.   |          |
|               |                           |          |       | NORM  |          |
|               |                           |          |       | PLOTT   | 07.04.94 |
|               |                           |          |       |   |          |
| REND.<br>IND. | RENDERUNGS-<br>MITTEILUNG | DATUM    | NAMEN | <br><b>ROHDE &amp; SCHWARZ</b><br>ZU GERÄT: SMP |          |
|               |                           |          |       |   |          |

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FUER DIESE ZEICHNUNG BEHALTEN WIR UNS ALLE RECHTE VOR  
DIESE ZEICHNUNG IST EIN RECHNERAUSDRUCK, AENDERUNGEN KOENNEN NUR DURCH AENDERUNG DES DATENSATZES ERFOLGEN



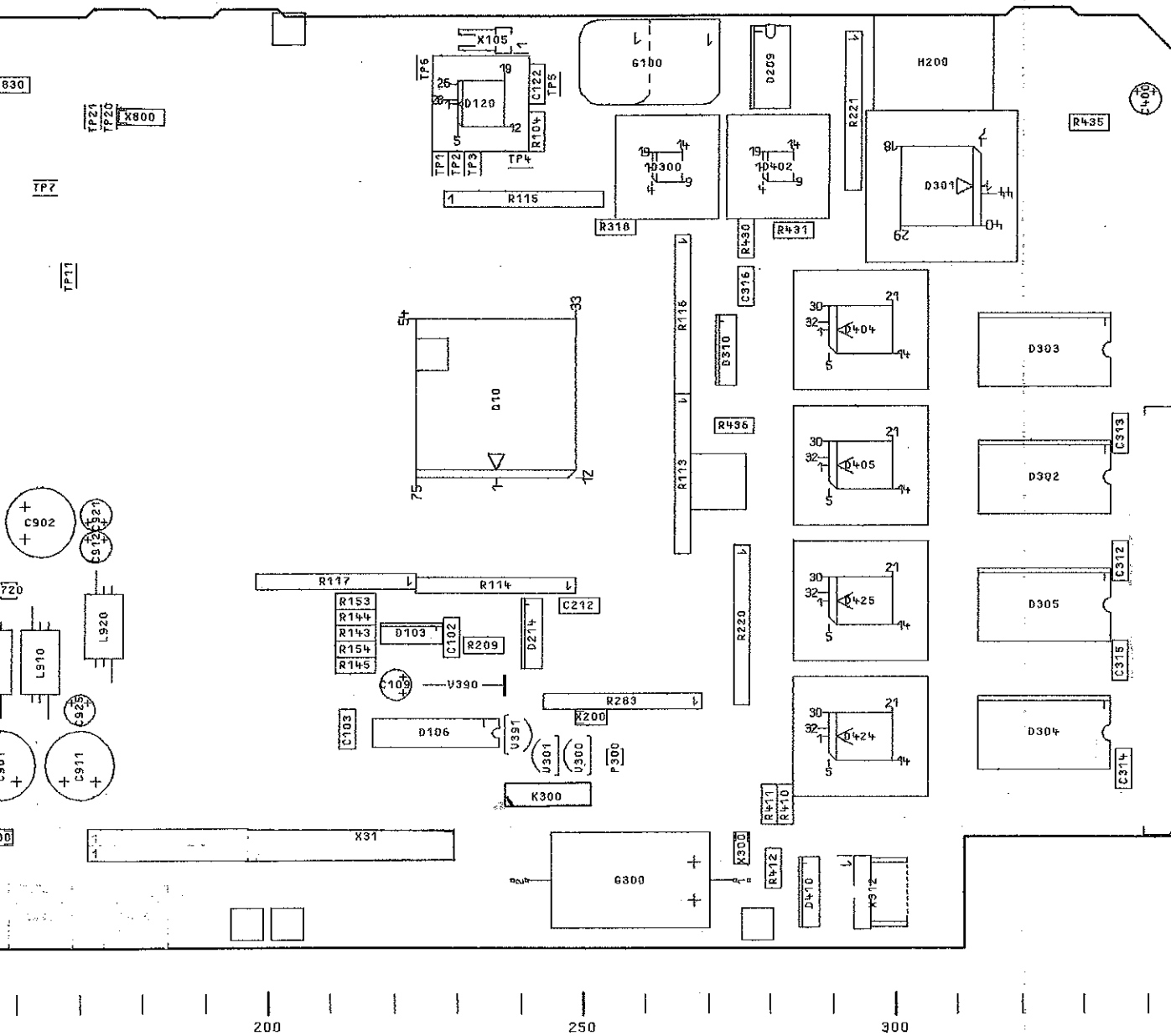
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DARSTELLUNG SEITE A  
VIEW ON SIDE A



ACHTUNG: EGBI  
ELEKTROSTATISCH GEFÄHRDETE  
BAUELEMENTE ERFORDERN EINE  
BESONDERE HANDHABUNG.  
ATTENTION ESD!  
ELECTROSTATIC SENSITIVE DEVICES  
REQUIRE A SPECIAL HANDLING

BINDENDE ANGABEN UEBER VARIANTEN,  
TRIMMWERTE, BAUTEILWERTE UND  
NICHT BESTUECKTE BAUTEILE SIEHE SA  
FOR BINDING INFORMATION ON MODELS,  
TRIMMING AND COMPONENTS VALUES AND  
NONFITTED COMPONENTS SEE PARTS LIST



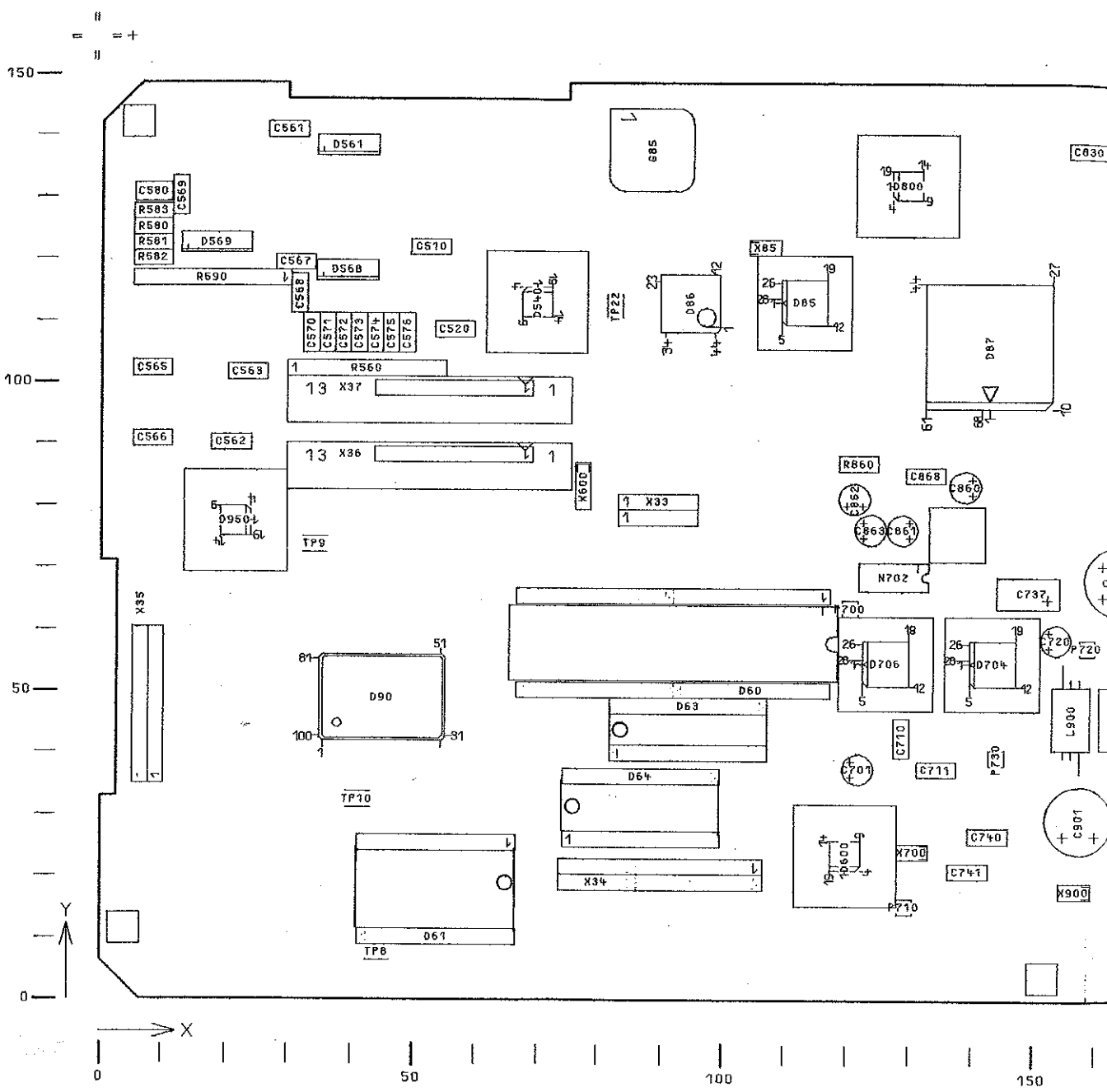
|               |                          |       |     |               |          |               |                      |                    |
|---------------|--------------------------|-------|-----|---------------|----------|---------------|----------------------|--------------------|
| 01/           |                          |       |     | 1GPK          | TAG      | NAM           | BENENNUNG            |                    |
| 02            |                          |       | DR  | BEARR.        |          | JN            | RECHNER<br>PROCESSOR | Z                  |
|               |                          |       |     | GEPR.         |          | JN            |                      |                    |
|               |                          |       |     | NORM          |          |               |                      |                    |
|               |                          |       |     | PLOTT         | 10.03.94 |               |                      |                    |
|               |                          |       |     |               |          |               | ZEICHN.-NR.          | BLATT-NR.          |
|               |                          |       |     |               |          |               | 1035.7250.01         | ED                 |
|               |                          |       |     |               |          |               |                      | 1+                 |
| REND.<br>IND. | ÄNDERUNGS-<br>MITTEILUNG | DATUM | NAM | ROHDE&SCHWARZ |          | ZU GEHÖRT SHP |                      | BL.                |
|               |                          |       |     |               |          | REC. I. V.    | 1035.5005            | ERSTE Z. 1035.5005 |





DIESE ZEICHNUNG IST EIN RECHNERDRUCK, VERÄNDERUNGEN KÖNNEN AUR DURCH RENDERN DES DATENSATZES ENFOLGEN

FÜR DIESE ZEICHNUNG BEFÄHIGT WIR UNS ALLE RECHTE VOR.



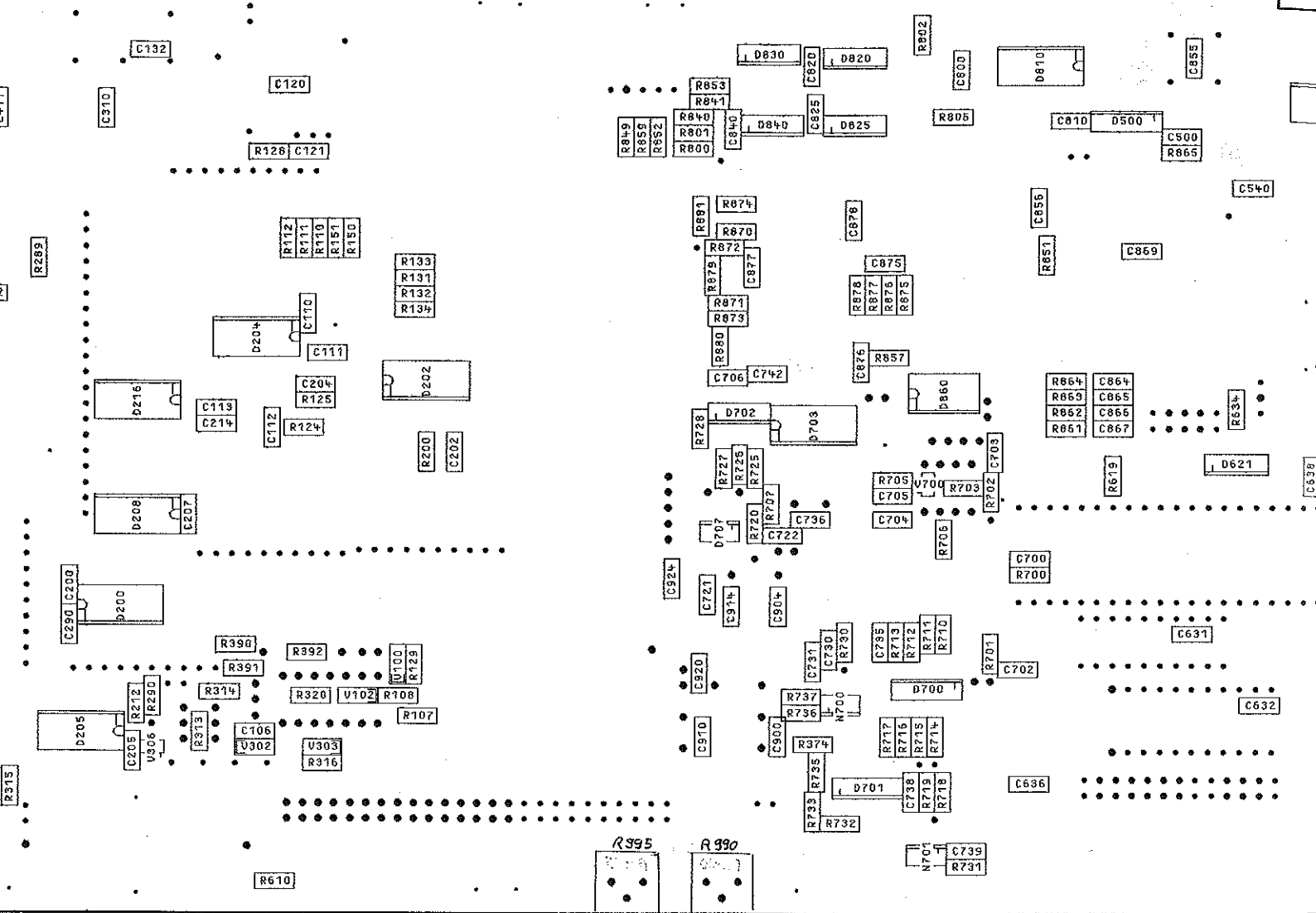
DARSTELLUNG SEITE B  
VIEW ON SIDE B

**ACHTUNG: EGBI**  
ELEKTROSTATISCH GEFÄHRDETE  
BAUELEMENTE ERFORDERN EINE  
BESONDERE HANDHABUNG.  
**ATTENTION ESD!**  
ELECTROSTATIC SENSITIVE DEVICES  
REQUIRE A SPECIAL HANDLING

BINDENDE ANGABEN UEBER VARIANTEN,  
TRIMMWERTE, BAUTEILWERTE UND  
NICHT BESTUECKTE BAUTEILE SIEHE SA

FOR BINDING INFORMATION ON MODELS,  
TRIMMING AND COMPONENTS VALUES AND  
NONFITTED COMPONENTS SEE PARTS LIST.





250

200

150

100

ESB!  
GEFÄHRDETE  
BAUTEILE  
DÜRFEN KEINE  
REPARATUR-  
ARBEITEN  
ERHALTEN.  
ESD!  
STATISCHE  
SCHUTZ-  
MASSNAHMEN  
BEI DER  
HANDLUNG

BINDENDE ANGABEN ÜBER VARIANTEN,  
TRIMMWERTE, BAUTEILWERTE UND  
NICHT BESTÜCKTE BAUTEILE SIEHE SA.

FOR BINDING INFORMATION ON MODELS,  
TRIMMING AND COMPONENTS VALUES AND  
NONFITTED COMPONENTS SEE PARTS LIST.

|       |             |    |
|-------|-------------|----|
| D1/   |             |    |
| 02    |             |    |
|       |             |    |
|       |             |    |
|       |             |    |
|       |             |    |
| REND. | RENDERUNGS- | DR |
| IND.  | NITTEILUNG  |    |

