ROHDE&SCHWARZ

SERVICEUNTERLAGEN

Frontmodul mit Rechner VAR 02

1035.5440

Variantenerklärung des Gesamtmoduls:

1035.5440.02 SMP

1035.5440.03 SME

1035.5440.04 SMT

1035.5440.05 SMIQ

Rechner SME

1035.7308.02
1035.7250.04
1035.7766.06
1035.7908.06

# Inhaltsverzeichnis

## 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
- EEPROM-Speicher (optional)
- IEC-Bus Interface
- SERBUS Interface
- RS232 / V.24 Interface
- ausreichend Timer ( >=4 16-Bit 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 ( ±5V & ±15V )
- X-Ausgang ( 0 ... 10 V)
- Variantenerkennung
- 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 Versorgungsspanung 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 39,2 k$\Omega$ 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-EPROM's als Speicher verwendet. Es sind zwei Bausteine D404 und D405 vom Type 28F020 (256K-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-EPROM's nur als ganzes gelöscht werden können, gibt es noch ein BOOT-EPROM (D301), welches den Urlader enthält. Zudem erlaubt das Vorhandensein des BOOT-EPROM's das Bestücken der FLASH-EPROM's 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 ein Bestandteil des Bausteines SAB82556 (D85). Die Pegelumsetzung von TTL auf RS232 erfolgt im Baustein LT1181 (D860).
Das zweite im SAB82556 enthaltene serielle Interface wird ohne Pegelwandlung auf's Motherboard geführt und steht dort für Testzwecke an einem 10pol. Stecker zur Verfügung.

### 7.1.8 Timer

Der Baustein SAB82556 enthält drei 16-Bit Timer. Da diese Anzahl nicht ausreicht, wurde noch ein Baustein 82C54 (D610) mit eingebaut. Dieser Baustein enthält ebenfalls drei 16-Bit Timer. Um lange Zeiten mit hoher Auflösung realisieren zu können sind zwei dieser Timer kaskadiert (Timer1 und Timer2). Als Eingangstakt stehen am 82C54 1kHz für Timer0 und 1MHz für Timer1/2 zur Verfügung. Am SAB82556 stehen als Taktquellen zur Verfügung:
für Timer0 8MHz, 1kHz und als Sonderfall 14,7456MHz/x,
für Timer1 8MHz, 1kHz und ebenfalls 14,7456MHz/x und
für Timer2 8MHz.

### 7.1.9 Interruptcontroller

Die Funktion des Interruptcontrollers ist ebenfalls im SAB82556 realisiert. Folgende 5 Interruptquellen sind angeschlossen, wobei jeder Eingang als dynamisch oder statisch verwendet werden kann:

| Port-Eing. | Interrupt |
|---|---|
| PA0 | Trigger |
| PA1 | Aux-Trigger |
| PA4 | IEC-INT-P |
| PA5 | T2-INT0 |
| PA6 | T2-INT2 |

Alle statischen Interrupts werden an D830 zu einem zusammengefaßt und auf den verbleibenden Interrupteingang (INTE) gelegt:

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

Alle Interrupts am Port des SAB82556 sind im Baustein 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 im Baustein SAB82556. 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.

### 7.1.13 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 (±5V & ±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: ±15V, ±5V und ±1V.
Die Wandlungszeit (max. 9us) 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 Programmierspannung der FLASH-EPROMs
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 ±15V nicht überschreitet.

### 7.1.17 X-Ausgang

Der X-Ausgang erzeugt beim Sweep ein Ausgangssignal von 0V (Sweepanfang) 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 Variantenerkennung

Zur Variantenerkennung dient der Port D590. Je nach Bestückung der Widerstände R591 bis R598 können die verschiedenen Varianten kodiert werden.

### 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>1MOhm | 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 |
| | Prüfen des ACFAIL-Signales nach 7.4.4 |
| Keine Spannung an X-AXIS | Prüfen des Ausganges X-AXIS mit Diagnose nach 7.4.6 |
| | 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 | -10mV...10mV | Referenzpunkt |
| 3 | 0V...10V | X-AXIS |
| 4 | -15V...15V | Voltmeter |
| 5 | 11.5V...12.5V | Progr.spannung FLASH |
| 6 | 4.9V...5.1V | Referenzspannung X-D/A |
| 7 | 3.0V...3.7V | 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 | VD-5P | Eingang | A2, POWS | 5.10V...5.25V | Versorgungsspannung digital |
| . | | | | max. 3000mA | |
| . | | | | | |
| X31.6 | | | | | |
| X31.11 | VA15-P | Eingang | A2, POWS | 14.7V...15.9V | Versorgungsspannung analog |
| X31.12 | | | | max. 660mA | |
| X31.15 | VA15-N | Eingang | A2, POWS | -15.9V...-14.7V | Versorgungsspannung analog |
| | | | | max. 50mA | |
| X31.27 | VS12-P | Eingang | A2, POWS | 11.6V...12.4V | Standby-spannung |
| X31.7,8,9,10,13,14,16 | | | | | Masse digital |
| X31.19,20 | | | | | Masse analog |
| X31.26 | POWER-SWITCH | Ausgang | A2, POWS | | Schalterkontakt |
| X312.2 | | | | | |
| X31.25 | POWER-SWITCH- | Ausgang | A2, POWS | | Schalterkontakt |
| X312.1 | GND | | | | |
| 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 |
| X31.40 | SERBUS-CLK | Ausgang | | HCMOS-Pegel | Serbus-Clock |
| X31.39 | SERBUS-DAT | bidir. | | HCMOS-Pegel | Serbus-Daten |
| X31.37 | SERBUS-SYNC | Ausgang | | HCMOS-Pegel | Serbus-Synchronisation |
| X31.38 | SERBUS-INT | Eingang | | HCMOS-Pegel | Serbus-Interrupt |
| X31.28 | RES-P | Ausgang | | HCMOS-Pegel | Reset |
| X31.44 | DIAG-5V | Eingang | | -5V...5V | Diagnose |
| X31.43 | DIAG-15V | Eingang | | -15V...15V | Diagnose |
| X31.42 | TRIGGER | Eingang | Rückwand | HCMOS-Pegel | Trigger |
| X31.41 | AUX-TRIG | Eingang | Rückwand | HCMOS-Pegel | Trigger |
| X31.36 | SYSRESET | Eingang | A2, POWS | HCMOS-Pegel | System-Reset |
| X31.35 | ACFAIL | Eingang | A2, POWS | HCMOS-Pegel | Powerfail |
| X31.34 | BLANK | Ausgang | Rückwand | HCMOS-Pegel | Steuersignal |
| X31.33 | MARKER | Ausgang | Rückwand | HCMOS-Pegel | Steuersignal |
| X31.32 | SWEEP-STOP | Eingang | Rückwand | HCMOS-Pegel | Steuersignal |
| X31.30 | MODCTRL-OUT | Ausgang | A5, MGEN X5.2 | HCMOS-Pegel | Steuerung Modulationsgenerator |
| X31.31 | MODCTRL-IN | Eingang | A5, MGEN X5.1 | HCMOS-Pegel | Steuerung Modulationsgenerator |
| X31.45 | X-AXIS | Ausgang | Rückwand | 0...10V | Frequ.prop. Spannung |
| X31.49 | RXD1 | Eingang | Motherboard | HCMOS-Pegel | TEST |
| X31.48 | TXD1 | Ausgang | Motherboard | HCMOS-Pegel | TEST |
| X31.47 | CTS1 | Eingang | Motherboard | HCMOS-Pegel | TEST |
| X31.46 | RTS1 | Ausgang | Motherboard | HCMOS-Pegel | TEST |
| X317.1 | RET0 | Eingang | Drehgeber | HCMOS-Pegel | Tastatur |
| . | | | | | |
| . | | | | | |
| X317.7 | RET6 | | | | |
| X317.8 | SCAN0 | Ausgang | Drehgeber | HCMOS-Pegel | Tastatur |
| . | | | | | |
| . | | | | | |
| X317.13 | SCAN5 | | | | |
| X316.1 | "GND" | | | 1kOhm Pulldown | Tastatur |
| . | | | | | |
| . | | | | | |
| X316.13 | | | | | |
| X313.2 | DSR | Eingang | Rückwand | RS232-Pegel | Serielle Schnittstelle |

| Pin | Name | Ein/Ausgang | Herkunft/Ziel | Wertebereich | Signalbeschreibung |
|---|---|---|---|---|---|
| X313.3 | RXD | Eingang | Rückwand | RS232-Pegel | Serielle Schnittstelle |
| X313.5 | TXD | Ausgang | Rückwand | RS232-Pegel | Serielle Schnittstelle |
| X313.7 | DTR | Ausgang | Rückwand | RS232-Pegel | Serielle Schnittstelle |
| X313.4 | | | | | |
| X313.9 | | | | | Masse digital |
| | | | | | |
| X314.1 | DIO-1 | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.3 | DIO-2 | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.5 | DIO-3 | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.7 | DIO-4 | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.2 | DIO-5 | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.4 | DIO-6 | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.6 | DIO-7 | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.8 | DIO-8 | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.9 | EOI | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.10 | REN | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.11 | DAV | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.13 | NRFD | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.15 | NDAC | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.17 | IFC | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.19 | SRQ | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.21 | ATN | bidir. | Rückwand | TTL O.C. | IEC-Bus |
| X314.12,14,16,18,20,22,24 | | | | | Masse |
| | | | | | |
| X315.2 | VA15- P | Eingang | DREHGEBER | 14.7V...15.9V | Versorgungsspannung analog |
| X315.4 | | | max. 650mA | | |
| X315.6 | | | | | |
| X315.8 | | | | | |
| X315.18 | +5V | Eingang | DREHGEBER | 5.1V...5.3V<br>max.20mA | Versorgungsspannung digital |
| X315.1,20,21,23,25 | | | | | Masse |
| X315.16 | LAMPOFF | Eingang | DREHGEBER | HCMOS-Pegel | Steuerung Beleuchtung |
| X315.3 | POT1 | bidir. | DREHGEBER | | Anschl.1 d. Kontrastreglers |
| X315.5 | POT2 | bidir. | DREHGEBER | | Anschl.2 d. Kontrastreglers |
| X315.7 | POT3 | bidir. | DREHGEBER | | Anschl.3 d. Kontrastreglers |
| X315.10 | POT4 | bidir. | DREHGEBER | | Anschl.1 d. Helligkeitsreglers |
| X315.12 | POT5 | bidir. | DREHGEBER | | Anschl.2 d. Helligkeitsreglers |
| X315.14 | POT6 | bidir. | DREHGEBER | | Anschl.3 d. Helligkeitsreglers |
| X315.9 | KNOB1 | Eingang | DREHGEBER | HCMOS-Pegel | Anschl.1 d. Drehgebers |
| X315.11 | KNOB2 | Eingang | DREHGEBER | HCMOS-Pegel | Anschl.2 d. Drehgebers |
| X315.22 | LCD-D0 | Ausgang | DREHGEBER | HCMOS-Pegel | Daten LCD |
| X315.24 | LCD-D1 | Ausgang | DREHGEBER | HCMOS-Pegel | Daten LCD |
| X315.26 | LCD-D2 | Ausgang | DREHGEBER | HCMOS-Pegel | Daten LCD |
| X315.13 | LCD-D3 | Ausgang | DREHGEBER | HCMOS-Pegel | Daten LCD |
| X315.17 | LCD-CP1 | Ausgang | DREHGEBER | HCMOS-Pegel | Clock1 LCD |
| X315.19 | LCD-CP2 | Ausgang | DREHGEBER | HCMOS-Pegel | Clock2 LCD |
| X315.15 | LCD-CS | Ausgang | DREHGEBER | HCMOS-Pegel | Chip-Select LCD |

## 7.6.2 Schnittstelle Drehgeber

| Pin | Name | Ein/Ausgang | Herkunft/Ziel | Wertebereich | Signalbeschreibung |
|---|---|---|---|---|---|
| X5A.1 | +15V | Eingang | RECHNER | 14.7V...15.9V | Versorgungsspannung analog |
| : | | | max. 600mA | | |
| X5A.4 | | | | | |
| X5A.9 | +5V | Eingang | RECHNER | 5.1V..5.3V | Versorgungsspannung digital |
| | | | | max.20mA | |
| X5A.10 | | | | | Masse |
| X5B.1,11,12,13 | | | | | |
| X6.1 | V-DC/AC | Ausgang | DC/AC-Handler | 6V...10V | Versorgungsspannung Beleuchtung |
| | | | | max. 550mA | |
| X6.4 | GND-DC/AC | | DC/AC-Handler | | |
| X7.5 | VEE-LCD | Ausgang | LCD | -15V...-22V | Kontrastspannung |
| X10.5 | | | max. 20mA | | |
| X7.7 | VDD-LCD | Ausgang | LCD | 5.1V...5.3V | Versorgungsspannung digital |
| X10.7 | | | max. 20mA | | |
| X7.6 | VSS-LCD | | | | Masse |
| X5A.11 | LCD-D0 | Eingang | RECHNER | HCMOS-Pegel | Daten LCD |
| X7.4 | | Ausgang | LCD | | |
| X5A.12 | LCD-D1 | Eingang | RECHNER | HCMOS-Pegel | Daten LCD |
| X7.3 | | Ausgang | LCD | | |
| X5A.13 | LCD-D2 | Eingang | RECHNER | HCMOS-Pegel | Daten LCD |
| X7.2 | | Ausgang | LCD | | |
| X5B.7 | LCD-D3 | Eingang | RECHNER | HCMOS-Pegel | Daten LCD |
| X7.1 | | Ausgang | LCD | | |
| X5B.8 | LCD-CS | Eingang | RECHNER | HCMOS-Pegel | Chip-Select LCD |
| X7.10 | | Ausgang | LCD | | |
| X5B.9 | LCD-CP1 | Eingang | RECHNER | HCMOS-Pegel | Clock1 LCD |
| X7.8 | | Ausgang | LCD | | |
| X5B.10 | LCD-CP2 | Eingang | RECHNER | HCMOS-Pegel | Clock2 LCD |
| X7.9 | | Ausgang | LCD | | |
| X5A.8 | LAMPOFF | Eingang | RECHNER | HCMOS-Pegel | Steuerung Beleuchtung |
| X5B.5 | KNOB1 | Ausgang | RECHNER | O.C. 2,2kOhm | Pullup Anschl.1 d. Drehgebers |
| X5B.6 | KNOB2 | Ausgang | RECHNER | O.C. 2,2kOhm | Pullup Anschl.2 d. Drehgebers |
| X5B.2 | POT1,2,3 | bidir. | RECHNER | | Anschl.1,2,3 d. Kontrastreglers |
| : | | | | | |
| X5B.4 | | | | | |
| X5A.5 | POT4,5,6 | bidir. | RECHNER | | Anschl.1,2,3 d. Helligk.reglers |
| : | | | | | |
| X5A.7 | | | | | |

## 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 02

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

## 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 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
- EEPROM (optional)
- IEEE-bus interface
- SERBUS interface
- RS232 / V.24 interface
- Sufficient timers ( >=4 16-Bit Timer )
- 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 ( ±5V & ±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 kΩ 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 Firmware in FLASH-EPROMs, Update

The use of FLASH-EPROMs allows for making firmware updates without external access. Two components D404 and D405, type 28F020 (256K-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 µPD7210 (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) developped 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 accomodates 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 part of the component SAB82556 (D85). The level is converted from TTL to RS232 in the component LT1181 (D860). The second serial interface contained in the SAB82556 is applied to the motherboard without level conversion and is provided there for test purposes at a 10-pin connector.

### 7.1.8 Timer

The component SAB82556 contains three 16-bit timers. Since three times are not enough, an additional component 82C54 (D610) has been fitted which also contains three 16-bit timers. Two of these timers have been cascaded to enable long times with high resolution.(timer1 und Timer2). 1 kHz are provided at 82C54 as input clock for timer 0 and 1 MHz for timers1/2. The following clock sources are provided at the SAB82556:
8MHz, 1kHz and 14,7456MHz/x in special cases, for timer 0
8MHz, 1kHz and 14,7456MHz/x, too, for timer 1 and
8MHz for timer 2.

### 7.1.9 Interrupt Controller

The function of the interrupt controller has also been realized by the SAB82556. The following 5 interrupt sources are conncted, each input can be used dynamically or statically:

| Port input | Interrupt |
|---|---|
| PA0 | Trigger |
| PA1 | Aux-Trigger |
| PA4 | IEC-INT-P |
| PA5 | T2-INT0 |
| PA6 | T2-INT2 |

All static interrupts are comprised to one interrupt at D830 and applied to the remaining interrupt input (INTE):
1. - SERBUS-INT1
2. - SERBUS-INT2
3. - ACFAIL (powerfail of power supply)
4. - SERBUS-ACT-REQ.

All interrupts at the port of the SAB82556 are maskable. The static interrupts 3. and 4. are maskable at the source and the remaining ones can be masked at 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, subsquent 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 in the component SAB82556. 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 programming voltage of the FLASH-EPROMs
- 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 |
| | 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 |
| | 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 | -10mV to 10mV | Reference point |
| 3 | 0V to 10V | X-AXIS |
| 4 | -15V to 15V | Voltmeter |
| 5 | 11.5V to 12.5V | Progr. voltage FLASH |
| 6 | 4.9V to 5.1V | Reference voltage X-D/A |
| 7 | 3.0V to 3.7V | 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 | VD-5P | Input | A2, POWS | 5.10V to 5.25V | Supply voltage, digital |
| . | | | | max. 3000mA | |
| . | | | | | |
| X31.6 | | | | | |
| X31.11 | VA15-P | Input | A2, POWS | 14.7V to 15.9V | Supply voltage, analog |
| X31.12 | | | | max. 660mA | |
| X31.15 | VA15-N | Input | A2, POWS | -15.9V to -14.7V | Supply voltage, analog |
| | | | | max. 50mA | |
| X31.27 | VS12-P | Input | A2, POWS | 11.6V to 12.4V | Standby-voltage |
| X31.7,8,9,10,13,14,16 | | | | | Ground, digital |
| X31.19,20 | | | | | Ground, analog |
| X31.26 | POWER-SWITCH | Output | A2, POWS | | Switch contact |
| X312.2 | | | | | |
| X31.25 | POWER-SWITCH | Output | A2, POWS | | Switch contact |
| X312.1 | GND | | | | |
| 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 |
| X31.40 | SERBUS-CLK | Output | | HCMOS level | Serbus Clock |
| X31.39 | SERBUS-DAT | bidir. | | HCMOS level | Serbus data |
| X31.37 | SERBUS-SYNC | Output | | HCMOS level | Serbus synchronization |
| X31.38 | SERBUS-INT | Input | | HCMOS level | Serbus interrupt |
| X31.28 | RES-P | Output | | HCMOS level | Reset |
| X31.44 | DIAG-5V | Input | | -5V to 5V | Diagnostics |
| X31.43 | DIAG-15V | Input | | -15V to 15V | Diagnostics |
| X31.42 | TRIGGER | Input | Rear panel | HCMOS level | Trigger |
| X31.41 | AUX-TRIG | Input | Rear panel | HCMOS level | Trigger |
| X31.36 | SYSRESET | Input | A2, POWS | HCMOS level | System reset |
| X31.35 | ACFAIL | Input | A2, POWS | HCMOS level | Power fail |
| X31.34 | BLANK | Output | Rear panel | HCMOS level | Control signal |
| X31.33 | MARKER | Output | Rear panel | HCMOS level | Control signal |
| X31.32 | SWEEP-STOP | Input | Rear panel | HCMOS level | Control signal |
| X31.30 | MODCTRL-OUT | Output | A5, MGEN X5.2 | HCMOS level | Modulation generator control |
| X31.31 | MODCTRL-IN | Input | A5, MGEN X5.1 | HCMOS level | Modulation generator control |
| X31.45 | X-AXIS | Output | Rear panel | 0 to 10V | Frequ.-prop. voltage |
| X31.49 | RXD1 | Input | Motherboard | HCMOS level | TEST |
| X31.48 | TXD1 | Output | Motherboard | HCMOS level | TEST |
| X31.47 | CTS1 | Input | Motherboard | HCMOS level | TEST |
| X31.46 | RTS1 | Output | Motherboard | HCMOS level | TEST |
| X317.1 | RET0 | Input | Shaft encoder | HCMOS level | Keyboard |
| . | | | | | |
| . | | | | | |
| X317.7 | RET6 | | | | |
| X317.8 | SCAN0 | Output | Shaft encoder | HCMOS level | Keyboard |
| . | | | | | |
| . | | | | | |
| X317.13 | SCAN5 | | | | |
| X316.1 | "GND" | | | 1kOhm Pulldown | Keyboard |
| . | | | | | |
| . | | | | | |
| X316.13 | | | | | |
| X313.2 | DSR | Input | Rear panel | RS232 level | Serial interface |

| Pin | Name | Input/Output | Origin/Destin. | Specified range | Signal description |
|---|---|---|---|---|---|
| X313.3 | RXD | Input | Rear panel | RS232 level | Serial interface |
| X313.5 | TXD | Output | Rear panel | RS232 level | Serial interface |
| X313.7 | DTR | Output | Rear panel | RS232 level | Serial interface |
| X313.4 | | | | | |
| X313.9 | | | | | Ground, digital |
| | | | | | |
| X314.1 | DIO-1 | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.3 | DIO-2 | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.5 | DIO-3 | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.7 | DIO-4 | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.2 | DIO-5 | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.4 | DIO-6 | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.6 | DIO-7 | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.8 | DIO-8 | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.9 | EOI | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.10 | REN | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.11 | DAV | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.13 | NRFD | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.15 | NDAC | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.17 | IFC | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.19 | SRQ | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.21 | ATN | bidir. | Rear panel | TTL O.C. | IEEE bus |
| X314.12,14,16,18,20,22,24 | | | | | Ground |
| | | | | | |
| X315.2 | VA15-P | Input | SHAFT ENCODER | 14.7V to 15.9V | Supply voltage, analog |
| X315.4 | | | | max. 650mA | |
| X315.6 | | | | | |
| X315.8 | | | | | |
| X315.18 | +5V | Input | SHAFT ENCODER | 5.1V...5.3V | Supply voltage, digital |
| | | | | max.20mA | |
| X315.1,20,21,23,25 | | | | | Ground |
| X315.16 | LAMPOFF | Input | SHAFT ENCODER | HCMOS level | Illumination control |
| X315.3 | POT1 | bidir. | SHAFT ENCODER | | Conn.1 of contrast control |
| X315.5 | POT2 | bidir. | SHAFT ENCODER | | Conn.2 of contrast control |
| X315.7 | POT3 | bidir. | SHAFT ENCODER | | Conn.3 of contrast control |
| X315.10 | POT4 | bidir. | SHAFT ENCODER | | Conn.1 of brightness control |
| X315.12 | POT5 | bidir. | SHAFT ENCODER | | Conn.2 of brightness control |
| X315.14 | POT6 | bidir. | SHAFT ENCODER | | Conn.3 of brightness control |
| X315.9 | KNOB1 | Input | SHAFT ENCODER | HCMOS level | Conn.1 of the shaft encoder |
| X315.11 | KNOB2 | Input | SHAFT ENCODER | HCMOS level | Conn.2 of the shaft encoder |
| X315.22 | LCD-D0 | Output | SHAFT ENCODER | HCMOS level | Data LCD |
| X315.24 | LCD-D1 | Output | SHAFT ENCODER | HCMOS level | Data LCD |
| X315.26 | LCD-D2 | Output | SHAFT ENCODER | HCMOS level | Data LCD |
| X315.13 | LCD-D3 | Output | SHAFT ENCODER | HCMOS level | Data LCD |
| X315.17 | LCD-CP1 | Output | SHAFT ENCODER | HCMOS level | Clock1 LCD |
| X315.19 | LCD-CP2 | Output | SHAFT ENCODER | HCMOS level | Clock2 LCD |
| X315.15 | LCD-CS | Output | SHAFT ENCODER | HCMOS level | Chip-Select LCD |

## 7.6.2 Shaft encoder Interface

| Pin | Name | Input/Output | Origin/Destin. | Specified range | Signal description |
|---|---|---|---|---|---|
| X5A.1 | +15V | Input | Controller | 14.7V to 15.9V | Supply voltage, analog |
| : | | | | max. 600mA | |
| X5A.4 | | | | | |
| X5A.9 | +5V | Input | CONTROLLER | 5.1V..5.3V | Supply voltage, digital |
| | | | | max.20mA | |
| X5A.10 | | | | | Ground |
| X5B.1,11,12,13 | | | | | |
| X6.1 | V-DC/AC | Output | DC/AC converter | 6V...10V | Supply voltage for illumination |
| | | | | max. 550mA | |
| X6.4 | GND-DC/AC | | | | DC/AC-converter |
| X7.5 | VEE-LCD | Output | LCD | -15V to -22V | Contrast voltage |
| X10.5 | | | | max. 20mA | |
| X7.7 | VDD-LCD | Output | LCD | 5.1V to 5.3V | Supply voltage, digital |
| X10.7 | | | | max. 20mA | |
| X7.6 | VSS-LCD | | | | Ground |
| X5A.11 | LCD-D0 | Input | CONTROLLER | HCMOS level | Data LCD |
| X7.4 | | Output | LCD | | |
| X5A.12 | LCD-D1 | Input | CONTROLLER | HCMOS level | Data LCD |
| X7.3 | | Output | LCD | | |
| X5A.13 | LCD-D2 | Input | CONTROLLER | HCMOS level | Data LCD |
| X7.2 | | Output | LCD | | |
| X5B.7 | LCD-D3 | Input | CONTROLLER | HCMOS level | Data LCD |
| X7.1 | | Output | LCD | | |
| X5B.8 | LCD-CS | Input | CONTROLLER | HCMOS level | Chip-Select LCD |
| X7.10 | | Output | LCD | | |
| X5B.9 | LCD-CP1 | Input | CONTROLLER | HCMOS level | Clock1 LCD |
| X7.8 | | Output | LCD | | |
| X5B.10 | LCD-CP2 | Input | CONTROLLER | HCMOS level | Clock2 LCD |
| X7.9 | | Output | LCD | | |
| X5A.8 | LAMPOFF | Input | CONTROLLER | HCMOS level | Illumination control of |
| X5B.5 | KNOB1 | Output | CONTROLLER | O.C. 2,2kOhm | Connect.1 of the shaft encoder |
| X5B.6 | KNOB2 | Output | CONTROLLER | O.C. 2,2kOhm | Connect.2 of the shaft encoder |
| X5B.2 | POT1,2,3 | bidir. | CONTROLLER | | Conn.1,2,3 of contrast contr. |
| : | | | | | |
| X5B.4 | | | | | |
| X5A.5 | POT4,5,6 | bidir. | CONTROLLER | | Conn.1,2,3 of brightnes control |
| : | | | | | |
| X5A.7 | | | | | |

## 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

# Schaltteillisten
# numerisch geordnet
# Part lists
# in numerical order
# Listes des pièces détachées
# par numéros de référence

(R 29500 Bl. 3)
095.1000 Bl. 3

| Kennz. Comp. No. | Benennung Designation | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in 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 SCHALTFOLIE F.34TASTEN<br>KEY PAD | 1036.4354.00 | HOF_KRIPPN | 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 | SUMITUMO | SMCD-10X170-ADX10-P1 | 1035.5634.00 |
| X2 | SB NETZSCHALTER 2XU O.KN.<br>POWER SWITCH | SB 0007.5143.00 | ITT-SEL | NE18 2U E E | 1035.5486.00 |



| MENP1 502 3PU-D | Äl | Datum Date | Schaltteilliste für Parts list for | Sachnummer Stock No. | Blatt-Nr. Page |
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| ROHDE&SCHWARZ | 19 | 04.02.98 | ZE FRONTMODUL | **1035.5440.01 SA** | 1- |

| 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 ..53 | CE 470UF+-20%25V12,5X12,5 ELECTROLYTIC CAPACITOR | 0803.0715.00 | NAT_PANASO | ECA-1EM471 | |
| C54 ..58 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |
| 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 | |

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

| 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 ..113 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |
| 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 | GRM42-6C0G 100 C50PT | |
| C216 | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00 | MURATA | GRM42-6C0G 100 C50PT | |
| C290 | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00 | MURATA | GRM42-6C0G 100 C50PT | |
| C310 ..316 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |
| C400 | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR | 0803.0667.00 | NAT_PANASO | ECE-A1VKS-100 | |
| C411 ..416 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |
| 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 1NF+-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 | GRM42-6C0G 100 C50PT | |
| C551 | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00 | MURATA | GRM42-6C0G 100 C50PT | |
| C552 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |
| C560 ..563 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |
| C565 ..569 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |
| C570 ..576 | CC 10PF+-0,25 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00 | MURATA | GRM42-6C0G 100 C50PT | |
| C577 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |

| 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 50VNPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8480.00 | MURATA | GRM42-6COG 100 C50PT | |
| 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 ..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 | |
| C850 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |
| C851 | 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 | |
| C860 ..863 | CE 10UF+-20%35V RD5,5XH6 ELECTROLYTIC CAPACITOR | 0803.0667.00 | NAT_PANASO | ECE-A1VKS-100 | |
| C864 ..867 | CC 100PF+-1%50V NPO 1206 CERAMIC CHIP CAPACITOR | CC 0099.8415.00 | MURATA | GRM42-6COG 101F 50PT | |
| C868 | CC 100NF+-10%50V X7R 1206 CERAMIC CHIP CAPACITOR | CC 0007.5237.00 | PHILIPS_CO | 2238 581 55649 | |
| C875 ..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 | |

| 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 | |
| D85 | BC SAB82556-N UNIVERSAL INTERFACE | 0008.7733.00 | SIEMENS | SAB82556-N | |
| D87 | BG L5A8949 SERBUS-M ASIC IC GATEARRAY | 1050.0652.00 | LSI_LOGIC | R&S-SACHNR. | |
| D90 | BC SED1351F0A LCD-CTRL LCD CONTROLLER | 0008.7727.00 | SEIKO_EPSO | SED1351F0A | |
| 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) | |
| D216 | BL 74ACT573SC 8XTRLATCH3S IC OCTAL TRANSP.LATCH 3ST | BL 0008.0751.00 | HARRIS | CD74ACT573M | |
| D300 | HS 1035.7308-SOFTW.(D300) | 1035.7550.00 | | | 1035.7543.01 |
| D301 | HS 1035.7308-SOFTW.(D301) | 1035.7508.00 | | | |
| D302 ..305 | HS SOFTWARE (D490)1.1 | 1046.3838.00 | | | |
| D310 | BL 74ACT139SC 2X 1A4DEMUX IC DUAL 1-OF-4 DEMUX | BL 2000.2412.00 | HARRIS | CD74ACT139M | |
| D400 | BO LP2951CMLOWDROP +VREGL IC VOLTAGE REGULATOR | 1020.0890.00 | NSC | LP2951CM | |

| Kennz. Comp. No. | Benennung Designation | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|---|---|---|---|---|---|
| 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 | |
| D406 | :: 1KGB/DR/28C256 32KX8 | 1036.4448.00 | | | |
| D407 | :: 1KGB/DR/28C256 32KX8<br>NICHT BESTUECKT | 1036.4448.00 | | | |
| D408 | BL 74AC02SC 4X2IN NORG<br>QUAD NOR GATE | BL 0820.3490.00 | NSC | 74AC02(SC) | |
| D500 | BL 74ACT138SC 3TO8 DECOD<br>3-TO-8 DECODER/DEMUX | BL 2007.5017.00 | HARRIS | CD74ACT138(M) | |
| D510 | BL 74ACT138SC 3TO8 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 | | | |
| D550 | BL PC74HCT273T 8XD-FF<br>OCTAL D-TYPE FLIPFLOP | BL 0007.6610.00 | PHILIPS_SE | (PC)74HCT273(D/T) | 1035.7543.01 |
| 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) | |
| 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) | |
| 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) | |
| 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) | |
| D600 | HS 1035.7308-SOFTW.(D600)<br>NUR VAR/ONLY MOD: 02 | 1035.7589.00 | | | 1035.7543.01 |
| D600 | HS SOFTWARE D600<br>NUR VAR/ONLY MOD: 03 | 1035.7614.00 | | | 1035.7543.01 |
| D600 | BC N85C220-80 EPLD(GAL)<br>IC PROGR LOGIC ARRAY | 0008.7740.00 | ALTERA | EP220LC-10A | 1035.7614.00 |
| D602 | BC UPD7210C GPIB IF CONTR<br>GPIB INTERFACE CONTROLLER | BC 0620.3130.00 | NEC | (UP)D7210C | |
| D603 | BJ SN75160AN 8XBUS TRANSC<br>BUS TRANSCEIVER | BJ 0345.6517.00 | TEXAS | SN75160BN | |
| D604 | BJ SN75162N 8XBUS TRANSC<br>BUS TRANSCEIVER | BJ 0359.3567.00 | TEXAS | SN75162BN | |
| D610 | BC D71054C INTERV.TIMER<br>PROGR.INTERVAL TIMER | BC 0006.9622.00 | NEC | D71054C | |
| 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 | |
| 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 | |
| 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 | | | |
| D810 | BL PC74HCT273T 8XD-FF<br>OCTAL D-TYPE FLIPFLOP | BL 0007.6610.00 | PHILIPS_SE | (PC)74HCT273(D/T) | 1035.7543.01 |
| D820 | BL PC74HCT00T 4X2IN.NAND<br>NAND GATE | BL 0007.6156.00 | PHILIPS_SE | (PC)74HCT00D(T) | |





095.0026.0693

| Kennz. Comp. No. | Benennung Designation | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|---|---|---|---|---|---|
| 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 | LT1181ACSW | |
| D950 | HS 1035.7308-SOFTW.(D950) | 1035.7608.00 | | | 1035.7543.01 |
| 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) | |
| 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 | |
| G800 | EO 14,7456MHZ-QU.OSZ. 5V CLOCK-OSCILLATOR | 4007.1995.00 | TELEQUARZ | MCO 1500 B | |
| 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 | |
| 01 | VL STECKLOETOESE 7,5X1,1 PLUG-IN SOLDERING LUG | VL 0078.2747.00 | - | R&S-ZCHNG.078.2747 | |
| 02 | 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 7X47 KOHM+-2%SIL 8 H5 RESISTOR NETWORK | RN 0341.8296.00 | BI_TECHNOL | L 08 1 S 473-M* | |
| R114 | RN 9X47 KOHM+-2% SIL10 H5 RESISTOR NETWORK | RN 0341.9286.00 | BOURNS | 4610X-T09-473 | |
| R115 | RN 7X47 KOHM+-2%SIL 8 H5 RESISTOR NETWORK | RN 0341.8296.00 | BI_TECHNOL | L 08 1 S 473-M* | |

| Kennz. Comp. No. | Benennung Designation | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|---|---|---|---|---|---|
| R116 | RN 9X47 KOHM+-2% SIL10 H5 RESISTOR NETWORK | RN 0341.9286.00 | BOURNS | 4610X-T09-473 | |
| R117 | RN 7X47 KOHM+-2%SIL 8 H5 RESISTOR NETWORK | RN 0341.8296.00 | BI_TECHNOL | L 08 1 S 473-M* | |
| R124 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R125 | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5950.00 | ROEDERSTEI | D25 | |
| R128 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R129 | RG 22,1KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5872.00 | ROEDERSTEI | D25 | |
| R131 ..134 | RG 4,75KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5820.00 | ROEDERSTEI | D25 | |
| R143 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R144 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R145 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R150 | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5950.00 | ROEDERSTEI | D25 | |
| R151 | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5950.00 | ROEDERSTEI | D25 | |
| R153 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R154 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R200 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R209 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R212 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R213 | RG 100 OHM+-1%TK100 1206 CHIP RESISTOR | RG 0006.8884.00 | PHILIPS_CO | RC02 | |
| R214 | RG 100 OHM+-1%TK100 1206 CHIP RESISTOR | RG 0006.8884.00 | PHILIPS_CO | RC02 | |
| R220 | RN 9X47 KOHM+-2% SIL10 H5 RESISTOR NETWORK | RN 0341.9286.00 | BOURNS | 4610X-T09-473 | |
| R221 | RN 9X47 KOHM+-2% SIL10 H5 RESISTOR NETWORK | RN 0341.9286.00 | BOURNS | 4610X-T09-473 | |
| R280 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R281 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R282 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R283 | RN 9X47 KOHM+-2% SIL10 H5 RESISTOR NETWORK | RN 0341.9286.00 | BOURNS | 4610X-T09-473 | |
| R285 | RG 5,11KOHM+-1%TK100 1206 CHIP RESISTOR | RG 0007.0729.00 | ROEDERSTEI | D25 | |
| R286 | RG 5,11KOHM+-1%TK100 1206 CHIP RESISTOR | RG 0007.0729.00 | ROEDERSTEI | D25 | |
| R287 | RG 51,1 OHM+-1%TK100 1206 CHIP RESISTOR | RG 0006.8810.00 | ROEDERSTEI | D25 | |
| R289 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R290 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R310 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R313 | RG 475 OHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5695.00 | ROEDERSTEI | D25 | |
| R314 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R315 | RG 221 OHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5614.00 | ROEDERSTEI | D25 | |
| R316 | RL 0,60W 39,2KOHM+-1%TK50 RESISTOR | RL 0083.1745.00 | RESISTA | MK2 | |
| R318 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R320 | RG 100,0KOH+-1%TK100 1206 CHIP RESISTOR | RG 0007.1948.00 | ROEDERSTEI | D25 | |
| R323 | RG 0-OHM WIDERSTAND-CHIP RESISTOR CHIP 0-OHM | RG 0007.5108.00 | DRALORIC | CR 1206 | |
| R324 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |

| Kennz. Comp. No. | Benennung Designation | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|---|---|---|---|---|---|
| R374 | RL 0,35W 1 KOHM+-0,1%TK25 RESISTOR | 0083.9146.00 | DRALORIC | SMA0207 | |
| R380 ..384 | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5950.00 | ROEDERSTEI | D25 | |
| R390 | RG 2,21KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5743.00 | ROEDERSTEI | D25 | |
| R391 | RG 27,4KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5895.00 | ROEDERSTEI | D25 | |
| R392 | RG 100,0KOH+-1%TK100 1206 CHIP RESISTOR | RG 0007.1948.00 | ROEDERSTEI | D25 | |
| R402 ..405 | RG 0-OHM WIDERSTAND-CHIP RESISTOR CHIP 0-OHM | RG 0007.5108.00 | DRALORIC | CR 1206 | |
| R408 ..411 | RG 0-OHM WIDERSTAND-CHIP RESISTOR CHIP 0-OHM | RG 0007.5108.00 | DRALORIC | CR 1206 | |
| R415 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R418 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R419 | RG 5,62KOHM+-1%TK100 1206 CHIP RESISTOR | RG 0007.0735.00 | ROEDERSTEI | D25 | |
| R420 | RL 0,35W88,7KOHM+-0,1%T25 RESISTOR | RL 0084.4883.00 | ROEDERSTEI | MK2 | |
| R422 | RL 0,35W10,2KOHM+-0,1%T25 RESISTOR | RL 0084.3087.00 | DRALORIC | SMA0207 | |
| R425 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R430 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R436 | RG 0-OHM WIDERSTAND-CHIP RESISTOR CHIP 0-OHM | RG 0007.5108.00 | DRALORIC | CR 1206 | |
| R510 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R515 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R540 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R550 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R551 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R552 | RG 100 OHM+-1%TK100 1206 CHIP RESISTOR | RG 0006.8884.00 | PHILIPS_CO | RC02 | |
| R553 | RG 100 OHM+-1%TK100 1206 CHIP RESISTOR | RG 0006.8884.00 | PHILIPS_CO | RC02 | |
| R558 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R559 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R560 | RN 9X 10KOHM+-SIL10 H5 RESISTOR NETWORK | RN 0343.4523.00 | BI_TECHNOL | L 10 1 S 103 M* | |
| R561 ..567 | RG 100 OHM+-1%TK100 1206 CHIP RESISTOR | RG 0006.8884.00 | PHILIPS_CO | RC02 | |
| R568 ..571 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R573 ..576 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R580 | RG 100,0KOH+-1%TK100 1206 CHIP RESISTOR | RG 0007.1948.00 | ROEDERSTEI | D25 | |
| R581 ..585 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R590 | RN 9X47 KOHM+-2% SIL10 H5 RESISTOR NETWORK | RN 0341.9286.00 | BOURNS | 4610X-T09-473 | |
| R591 ..593 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R595 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R596 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R600 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R601 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R605 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R606 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R607 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |

| Kennz. Comp. No. | Benennung Designation | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|---|---|---|---|---|---|
| R610 | RG 2,21KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5743.00 | ROEDERSTEI | D25 | |
| R611 | RG 10,0 OHM+-1%TK100 1206 CHIP -RESISTOR | RG 0006.8649.00 | PHILIPS_CO | RC02 | |
| R619 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R634 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R700 | RG 0-OHM WIDERSTAND-CHIP RESISTOR CHIP 0-OHM | RG 0007.5108.00 | DRALORIC | CR 1206 | |
| R701 | RG 10,0 OHM+-1%TK100 1206 CHIP -RESISTOR | RG 0006.8649.00 | PHILIPS_CO | RC02 | |
| R702 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R703 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R705 | RG 0-OHM WIDERSTAND-CHIP RESISTOR CHIP 0-OHM | RG 0007.5108.00 | DRALORIC | CR 1206 | |
| R706 | RG 0-OHM WIDERSTAND-CHIP RESISTOR CHIP 0-OHM | RG 0007.5108.00 | DRALORIC | CR 1206 | |
| R707 | RG 182 OHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5595.00 | ROEDERSTEI | D25 | |
| R710 ..718 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R719 | RG 1,0MOHM+-1%TK100 1206 CHIP RESISTOR | RG 0815.7532.00 | PHILIPS_CO | RC 02 | |
| R720 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R725 ..728 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R730 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R731 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R732 | RL 0,35W12,0KOHM+-0,1%T25 RESISTOR | RL 0084.3212.00 | DRALORIC | SMA0207 | |
| R733 | RL 0,35W2KOHM+-0,1%TK25 RESISTOR | RL 0083.9723.00 | DRALORIC | SMA0207 | |
| R735 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R736 | RL 0,35W10,0KOHM+-0,1%T25 RESISTOR | RL 0084.3064.00 | DRALORIC | SMA0207 | |
| R737 | RL 0,35W20,0KOHM+-0,1%T25 RESISTOR | RL 0084.3641.00 | DRALORIC | SMA0207 | |
| R800 | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5950.00 | ROEDERSTEI | D25 | |
| R801 | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5950.00 | ROEDERSTEI | D25 | |
| R802 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R805 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R840 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R841 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R849 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R850 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R851 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R852 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R853 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R856 | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5950.00 | ROEDERSTEI | D25 | |
| R857 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R858 | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5950.00 | ROEDERSTEI | D25 | |
| R859 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R860 | RG 47,5KOHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5950.00 | ROEDERSTEI | D25 | |
| R861 ..864 | RG 100 OHM+-1%TK100 1206 CHIP RESISTOR | RG 0006.8884.00 | PHILIPS_CO | RC02 | |

| Kennz. Comp. No. | Benennung Designation | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|---|---|---|---|---|---|
| R870 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R871 ..874 | RG 47,5 OHM+-1%TK100 1206 RESISTOR CHIP | RG 0007.5566.00 | ROEDERSTEI | D25 | |
| R875 ..878 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R879 | RG 681 OHM+-1%TK100 1206 CHIP RESISTOR | RG 0006.9080.00 | ROEDERSTEI | D25 | |
| R880 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R881 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R951 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R952 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R959 | RG 10,0KOHM+-1%TK100 1206 RG CHIP RESISTOR | RG 0007.0793.00 | PHILIPS_CO | RC02 | |
| R960 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R981 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R982 | RG 1,0 KO +-1%TK100 1206 CHIP RESISTOR | RG 0006.7271.00 | PHILIPS_CO | RC02 | |
| R983 | RL 0,60W 150 OHM+-1%TK50 RESISTOR | RL 0082.9942.00 | RESISTA | MK2 | |
| R990 | RS 0,5W 1K+-10% Q10XH5 CERMET TRIMMING POTENTIOM | 2027.1446.00 | DIPLOMATIC | P67 1K 10% | |
| R995 | RS 0,5W 200K+-10% Q10XH5 POTENTIOMETER | 1036.4377.00 | DIPLOMATIC | P67 200K 10% | |
| V100 | AD BAS32 75V UDI DIODE | AD 0006.7288.00 | PHILIPS | BAS32 (L) | |
| V102 | AD BAS32 75V UDI DIODE | AD 0006.7288.00 | PHILIPS | BAS32 (L) | |
| V287 | AK BC860B P 45V 200MA TRANSISTOR | AK 0007.7975.00 | MOTOROLA | BC860B | |
| V300 | AK BC337-40 N 45V 800MA TRANSISTOR | AK 0815.7684.00 | PHILIPS | BC337-40 GEGURTET | |
| V301 | AK BC327-40 P 45V 800MA TRANSISTOR | AK 0815.7678.00 | PHILIPS_SE | BC327-40GEGURTET | |
| V302 | AD BAS32 75V UDI DIODE | AD 0006.7288.00 | PHILIPS | BAS32 (L) | |
| V303 | AD BAS32 75V UDI DIODE | AD 0006.7288.00 | PHILIPS | BAS32 (L) | |
| V306 | AE HSMS2800 SCHOTTKY DIODE | AE 0836.8421.00 | HEWLETT_PA | HSMS-2800(#L31) | |
| V390 | AE 1N4684 3V3 0.3W ZDI ZENER DIODE | 0641.7234.00 | MOTOROLA | 1N4684 | |
| V391 | AK BC327-40 P 45V 800MA TRANSISTOR | AK 0815.7678.00 | PHILIPS_SE | BC327-40GEGURTET | |
| V400 | AD BAS32 75V UDI DIODE | AD 0006.7288.00 | PHILIPS | BAS32 (L) | |
| V405 | AK BC850B N 45V 200MA TRANSISTOR | AK 0007.7969.00 | VALVO | BC850B | |
| V550 ..555 | AE HSMS2800 SCHOTTKY DIODE | AE 0836.8421.00 | HEWLETT_PA | HSMS-2800(#L31) | |
| V611 | AD BAS32 75V UDI DIODE | AD 0006.7288.00 | PHILIPS | BAS32 (L) | |
| V700 | AD BAV99 70V DUO UDI DIODE | AD 0911.0092.00 | VALVO | BAV99 | |
| X31 | DY BUCHSENLEISTE W31 | 1035.7320.00 | | | |
| X86 | FP STIFTLEISTE 36P.R2,54 PIN CONNECTOR 2-POLIG/2 PINS | FP 0242.3600.00 | BINDER | 742-11-0179-00-36 | |
| X105 | FP STIFTL.WIN 36P.R2,54 ANGLE PIN CONNECTOR 2-POLIG/2 PINS | FP 0243.3578.00 | BINDER | 742-5-11-0187-00-36 | |
| X200 | FP STIFTLEISTE 36P.R2,54 PIN CONNECTOR 2-POLIG/2 PINS | FP 0242.3600.00 | BINDER | 742-11-0179-00-36 | |
| X300 | FP STIFTLEISTE 36P.R2,54 PIN CONNECTOR 2-POLIG/2 PINS | FP 0242.3600.00 | BINDER | 742-11-0179-00-36 | |
| X312 | FP STIFTL.WIN 36P.R2,54 ANGLE PIN CONNECTOR | FP 0243.3578.00 | BINDER | 742-5-11-0187-00-36 | |

| Kennz. Comp. No. | Benennung Designation | Sachnummer Stock No. | Hersteller Manufacturer | Bezeichnung Designation | enthalten in contained in |
|---|---|---|---|---|---|
| | 5-POLIG/5 PINS | | | | |
| X313 | FP STECKERLEISTE 10P.GER<br>CONNECTOR 10P | 0846.4593.00 | SIEMENS | V23535-A2200-A102 | |
| X314 | FP STECKERLEISTE 26P.GER<br>CONNECTOR 26P. | FP 0820.8610.00 | SIEMENS | V23535-A2200-A262 | |
| X315 | DY BUCHSENLEISTE W35 | 1035.7337.00 | | | |
| X316 | FP LEITERPLATTENVERB.13P<br>CONNECTOR | 0840.6436.00 | DUPONT CON | 68100-013 | |
| X317 | FP LEITERPLATTENVERB.13P<br>CONNECTOR | 0840.6436.00 | DUPONT CON | 68100-013 | |
| X600 | FP STIFTLEISTE 36P.R2,54<br>PIN CONNECTOR<br>3-POLIG/3 PINS | FP 0242.3600.00 | BINDER | 742-11-0179-00-36 | |
| X700 | FP STIFTLEISTE 36P.R2,54<br>PIN CONNECTOR<br>2-POLIG/2 PINS | FP 0242.3600.00 | BINDER | 742-11-0179-00-36 | |
| X800 | FP STIFTLEISTE 36P.R2,54<br>PIN CONNECTOR<br>3-POLIG/3 PINS | FP 0242.3600.00 | BINDER | 742-11-0179-00-36 | |
| X900 | FP STIFTLEISTE 36P.R2,54<br>PIN CONNECTOR<br>2-POLIG/2 PINS | FP 0242.3600.00 | BINDER | 742-11-0179-00-36 | |

ROHDE&SCHWARZ

# XY-Liste

# XY List

**Erklärung der Spaltenbezeichnungen:**

Part: Bauelement-Kennzeichen.

Side: Leiterplatten-Seite, auf der sich das Bauelement befindet.

X/Y: 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.

X/Y: 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 | | | | | | |

## Nicht-Service-Relevante Bauteile / Non-Service-Relevant Components

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

| Part | Side | X | Y | Sqr | Pg |
|---|---|---|---|---|---|
| C500 | A | 92 | 125 | | |
| C510 | B | 54 | 122 | | |
| C520 | B | 58 | 109 | | |
| C540 | A | 77 | 117 | | |
| C550 | A | 9 | 81 | | |
| C551 | A | 6 | 81 | | |
| C552 | A | 65 | 82 | | |
| C560 | A | 30 | 127 | | |
| C561 | B | 32 | 141 | | |
| C562 | B | 19 | 90 | | |
| C563 | B | 25 | 102 | | |
| C565 | B | 10 | 102 | | |
| C566 | B | 10 | 91 | | |
| C567 | B | 33 | 119 | | |
| C568 | B | 32 | 116 | | |
| C569 | B | 13 | 128 | | |
| C570 | B | 34 | 106 | | |
| C571 | B | 36 | 106 | | |
| C572 | B | 39 | 106 | | |
| C573 | B | 41 | 106 | | |
| C574 | B | 44 | 110 | | |
| C575 | B | 46 | 110 | | |
| C576 | B | 49 | 110 | | |
| C577 | A | 58 | 128 | | |
| C580 | B | 10 | 131 | | |
| C590 | A | 25 | 137 | | |
| C610 | A | 65 | 13 | | |
| C631 | A | 119 | 36 | | |
| C632 | A | 64 | 39 | | |
| C636 | A | 116 | 21 | | |
| C638 | A | 69 | 69 | | |
| C700 | A | 116 | 57 | | |
| C701 | B | 114 | 46 | | |
| C702 | A | 114 | 44 | | |
| C703 | A | 120 | 73 | | |
| C704 | A | 135 | 64 | | |
| C705 | A | 135 | 67 | | |
| C706 | A | 165 | 86 | | |
| C710 | B | 129 | 41 | | |
| C711 | B | 133 | 37 | | |
| C720 | B | 152 | 58 | | |
| C721 | A | 166 | 53 | | |
| C722 | A | 156 | 61 | | |
| C730 | A | 147 | 41 | | |
| C731 | A | 149 | 39 | | |
| C735 | A | 138 | 46 | | |
| C736 | A | 148 | 64 | | |
| C738 | A | 133 | 18 | | |
| C739 | A | 127 | 10 | | |
| C740 | B | 141 | 27 | | |
| C741 | B | 141 | 21 | | |
| C742 | A | 155 | 87 | | |
| C800 | A | 126 | 134 | | |
| C810 | A | 106 | 128 | | |
| C820 | A | 150 | 138 | | |
| C825 | A | 149 | 131 | | |
| C830 | B | 161 | 138 | | |
| C840 | A | 163 | 128 | | |
| C850 | A | 97 | 107 | | |
| C851 | A | 103 | 91 | | |
| C855 | A | 85 | 138 | | |
| C860 | B | 140 | 83 | | |
| C861 | B | 130 | 76 | | |
| C862 | B | 121 | 80 | | |
| C863 | B | 123 | 76 | | |
| C864 | A | 103 | 86 | | |
| C865 | A | 103 | 83 | | |
| C866 | A | 103 | 81 | | |
| C867 | A | 103 | 78 | | |
| C868 | B | 134 | 85 | | |
| C875 | A | 136 | 105 | | |
| C876 | A | 142 | 91 | | |
| C877 | A | 159 | 106 | | |
| C878 | A | 143 | 114 | | |
| C900 | A | 155 | 27 | | |
| C901 | B | 157 | 27 | | |
| C902 | B | 161 | 68 | | |
| C904 | A | 155 | 51 | | |
| C910 | A | 167 | 27 | | |
| C911 | B | 170 | 27 | | |
| C912 | B | 173 | 65 | | |
| C914 | A | 163 | 51 | | |
| C920 | A | 168 | 37 | | |
| C921 | B | 173 | 68 | | |
| C924 | A | 172 | 56 | | |
| C925 | B | 170 | 39 | | |
| C950 | A | 22 | 74 | | |
| C955 | A | 34 | 38 | | |
| C956 | A | 36 | 64 | | |
| C960 | A | 30 | 38 | | |
| C970 | A | 32 | 14 | | |
| C980 | A | 13 | 43 | | |
| D85 | B | 106 | 94 | | |
| D87 | B | 143 | 94 | | |
| D90 | B | 36 | 40 | | |
| D500 | A | 95 | 131 | | |
| D510 | A | 57 | 118 | | |
| D520 | A | 60 | 106 | | |
| D540 | B | 70 | 117 | | |
| D550 | A | 65 | 68 | | |
| D560 | A | 33 | 136 | | |
| D561 | B | 36 | 135 | | |
| D562 | A | 20 | 93 | | |
| D563 | A | 27 | 98 | | |
| D565 | A | 11 | 98 | | |
| D566 | A | 11 | 86 | | |
| D567 | A | 36 | 121 | | |
| D568 | B | 36 | 115 | | |
| D569 | B | 14 | 119 | | |
| D570 | A | 60 | 136 | | |
| D590 | A | 25 | 124 | | |
| D600 | B | 120 | 19 | | |
| D602 | B | 68 | 50 | | |
| D603 | B | 119 | 41 | | |
| D604 | B | 64 | 32 | | |
| D610 | B | 65 | 25 | | |
| D621 | A | 86 | 55 | | |
| D700 | A | 126 | 39 | | |
| D701 | A | 145 | 17 | | |
| D702 | A | 165 | 77 | | |
| D703 | A | 155 | 74 | | |
| D704 | B | 138 | 55 | | |
| D706 | B | 121 | 55 | | |
| D707 | A | 163 | 65 | | |
| D800 | B | 125 | 132 | | |
| D810 | A | 107 | 142 | | |
| D820 | A | 147 | 135 | | |
| D825 | A | 147 | 124 | | |
| D830 | A | 161 | 135 | | |
| D840 | A | 160 | 124 | | |
| D860 | A | 133 | 79 | | |
| D950 | B | 26 | 77 | | |
| D960 | A | 30 | 23 | | |
| D970 | A | 29 | 6 | | |
| D980 | A | 14 | 57 | | |
| G800 | B | 81 | 135 | | |
| L900 | B | 155 | 55 | | |
| L910 | B | 163 | 55 | | |
| L920 | B | 173 | 60 | | |
| N700 | A | 147 | 30 | | |
| N701 | A | 130 | 13 | | |
| N702 | B | 131 | 72 | | |
| 01 | B | 194 | 126 | | |
| 02 | B | 194 | 136 | | |
| 03 | B | 194 | 44 | | |
| 04 | A | 194 | 39 | | |
| 05 | B | 194 | 57 | | |
| 06 | A | 194 | 55 | | |
| 07 | A | 194 | 57 | | |
| 08 | B | 194 | 60 | | |
| 09 | B | 194 | 100 | | |
| 10 | A | 194 | 98 | | |
| 11 | B | 194 | 98 | | |
| 12 | A | 194 | 95 | | |
| 13 | B | 194 | 110 | | |
| 14 | A | 194 | 110 | | |
| 15 | A | 194 | 108 | | |
| 16 | B | 194 | 108 | | |
| 17 | A | 194 | 105 | | |
| 18 | A | 194 | 103 | | |
| 19 | B | 194 | 103 | | |
| 20 | A | 194 | 100 | | |
| 21 | B | 194 | 105 | | |
| 22 | B | 194 | 113 | | |
| 23 | A | 194 | 113 | | |

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| Part | Side | X | Y | Sqr | Pg |
|---|---|---|---|---|---|
| 24 | B | 194 | 116 | | |
| 25 | A | 194 | 116 | | |
| 26 | B | 194 | 118 | | |
| 27 | A | 194 | 118 | | |
| 28 | A | 194 | 121 | | |
| 29 | A | 194 | 60 | | |
| 30 | B | 194 | 62 | | |
| 31 | A | 194 | 62 | | |
| 32 | B | 194 | 65 | | |
| 33 | A | 194 | 65 | | |
| 34 | B | 194 | 67 | | |
| 35 | A | 194 | 67 | | |
| 37 | A | 194 | 75 | | |
| 38 | B | 194 | 75 | | |
| 39 | A | 194 | 77 | | |
| 40 | B | 194 | 77 | | |
| 41 | A | 194 | 80 | | |
| 42 | B | 194 | 80 | | |
| 43 | A | 194 | 83 | | |
| 44 | B | 194 | 83 | | |
| 45 | A | 194 | 70 | | |
| 46 | B | 194 | 70 | | |
| 47 | A | 194 | 72 | | |
| 48 | B | 194 | 72 | | |
| 49 | B | 194 | 85 | | |
| 50 | A | 194 | 90 | | |
| 51 | A | 194 | 93 | | |
| 52 | B | 194 | 90 | | |
| 53 | B | 194 | 93 | | |
| 54 | B | 194 | 88 | | |
| 55 | A | 194 | 88 | | |
| 56 | A | 194 | 85 | | |
| 57 | B | 194 | 27 | | |
| 58 | B | 194 | 133 | | |
| 59 | A | 194 | 27 | | |
| 60 | B | 194 | 39 | | |
| 61 | A | 194 | 24 | | |
| 62 | A | 194 | 32 | | |
| 63 | A | 194 | 131 | | |
| 64 | B | 194 | 128 | | |
| 65 | B | 194 | 24 | | |
| 66 | B | 194 | 123 | | |
| 67 | A | 194 | 133 | | |
| 68 | A | 194 | 123 | | |
| 69 | A | 194 | 126 | | |
| 70 | A | 194 | 128 | | |
| 71 | B | 194 | 131 | | |
| 72 | A | 194 | 42 | | |
| 73 | A | 194 | 44 | | |
| 74 | B | 194 | 47 | | |
| 75 | A | 194 | 47 | | |
| 76 | B | 194 | 50 | | |
| 77 | A | 194 | 50 | | |
| 78 | B | 194 | 55 | | |
| 79 | A | 194 | 52 | | |
| 80 | B | 194 | 52 | | |
| 81 | B | 194 | 42 | | |
| 88 | B | 194 | 29 | | |
| 89 | A | 194 | 37 | | |
| 90 | B | 194 | 37 | | |
| 91 | A | 194 | 34 | | |
| 92 | B | 194 | 34 | | |
| 93 | B | 194 | 95 | | |
| 94 | A | 194 | 29 | | |
| P700 | B | 121 | 64 | | |
| P710 | B | 130 | 15 | | |
| P720 | B | 159 | 57 | | |
| P730 | B | 144 | 39 | | |
| R374 | B | 147 | 27 | | |
| R510 | A | 50 | 115 | | |
| R515 | A | 34 | 89 | | |
| R516 | A | 91 | 84 | | |
| R520 | B | 53 | 119 | | |
| R521 | B | 50 | 119 | | |
| R540 | A | 65 | 111 | | |
| R550 | A | 3 | 77 | | |
| R551 | A | 10 | 74 | | |
| R552 | A | 8 | 74 | | |
| R553 | A | 5 | 74 | | |
| R558 | A | 17 | 91 | | |
| R559 | A | 30 | 124 | | |
| R560 | B | 31 | 102 | | |
| R561 | A | 34 | 106 | | |
| R562 | A | 36 | 106 | | |
| R563 | A | 39 | 106 | | |
| R564 | A | 41 | 106 | | |
| R565 | A | 44 | 106 | | |
| R566 | A | 46 | 106 | | |
| R567 | A | 49 | 106 | | |
| R568 | A | 17 | 104 | | |
| R569 | A | 31 | 108 | | |
| R570 | A | 68 | 142 | | |
| R571 | A | 71 | 142 | | |
| R573 | A | 14 | 91 | | |
| R574 | A | 57 | 139 | | |
| R575 | A | 14 | 104 | | |
| R576 | A | 3 | 95 | | |
| R580 | B | 6 | 125 | | |
| R581 | B | 6 | 123 | | |
| R582 | B | 6 | 120 | | |
| R583 | B | 10 | 128 | | |
| R584 | A | 17 | 107 | | |
| R585 | A | 28 | 107 | | |
| R590 | B | 29 | 117 | | |
| R591 | A | 27 | 114 | | |
| R592 | A | 24 | 114 | | |
| R593 | A | 22 | 114 | | |
| R594 | A | 19 | 114 | | |
| R595 | A | 17 | 114 | | |
| R596 | A | 14 | 114 | | |
| R597 | A | 11 | 114 | | |
| R598 | A | 9 | 114 | | |
| R600 | A | 112 | 27 | | |
| R601 | A | 121 | 19 | | |
| R605 | A | 45 | 16 | | |
| R606 | A | 40 | 16 | | |
| R607 | A | 40 | 19 | | |
| R619 | A | 93 | 57 | | |
| R634 | A | 76 | 59 | | |
| R700 | A | 113 | 55 | | |
| R701 | A | 118 | 44 | | |
| R702 | A | 121 | 70 | | |
| R703 | A | 123 | 69 | | |
| R705 | A | 138 | 70 | | |
| R706 | A | 128 | 62 | | |
| R707 | A | 156 | 64 | | |
| R710 | A | 128 | 47 | | |
| R711 | A | 131 | 47 | | |
| R712 | A | 133 | 46 | | |
| R713 | A | 136 | 46 | | |
| R714 | A | 130 | 27 | | |
| R715 | A | 132 | 27 | | |
| R716 | A | 135 | 27 | | |
| R717 | A | 137 | 27 | | |
| R718 | A | 128 | 21 | | |
| R719 | A | 131 | 21 | | |
| R720 | A | 159 | 61 | | |
| R725 | A | 159 | 74 | | |
| R726 | A | 161 | 74 | | |
| R727 | A | 164 | 74 | | |
| R728 | A | 168 | 76 | | |
| R730 | A | 144 | 42 | | |
| R731 | A | 123 | 8 | | |
| R732 | B | 136 | 15 | | |
| R733 | B | 150 | 17 | | |
| R735 | A | 149 | 21 | | |
| R736 | B | 140 | 33 | | |
| R737 | B | 140 | 36 | | |
| R800 | A | 171 | 123 | | |
| R801 | A | 171 | 126 | | |
| R802 | A | 132 | 143 | | |
| R805 | A | 125 | 128 | | |
| R840 | A | 167 | 128 | | |
| R841 | A | 165 | 131 | | |
| R849 | A | 180 | 127 | | |
| R850 | A | 105 | 105 | | |
| R851 | A | 108 | 105 | | |
| R852 | A | 175 | 127 | | |
| R853 | A | 165 | 133 | | |
| R856 | A | 101 | 114 | | |
| R857 | A | 105 | 114 | | |
| R858 | A | 108 | 114 | | |
| R859 | A | 177 | 127 | | |
| R860 | B | 120 | 87 | | |
| R861 | A | 110 | 78 | | |

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| Part | Side | X | Y | Sqr | Pg |
|---|---|---|---|---|---|
| R862 | A | 110 | 81 | | |
| R863 | A | 110 | 83 | | |
| R864 | A | 110 | 86 | | |
| R870 | A | 164 | 110 | | |
| R871 | A | 161 | 98 | | |
| R872 | A | 162 | 107 | | |
| R873 | A | 161 | 96 | | |
| R874 | A | 160 | 114 | | |
| R875 | A | 135 | 101 | | |
| R876 | A | 137 | 101 | | |
| R877 | A | 140 | 101 | | |
| R878 | A | 142 | 101 | | |
| R879 | A | 166 | 105 | | |
| R880 | A | 164 | 93 | | |
| R881 | A | 168 | 114 | | |

| Part | Side | X | Y | Sqr | Pg |
|---|---|---|---|---|---|
| R951 | A | 13 | 77 | | |
| R952 | A | 53 | 36 | | |
| R959 | A | 29 | 75 | | |
| R960 | A | 33 | 8 | | |
| R981 | A | 17 | 43 | | |
| R982 | A | 18 | 62 | | |
| R990 | B | 161 | 5 | | |
| R995 | B | 177 | 5 | | |
| V550 | A | 57 | 95 | | |
| V551 | A | 54 | 95 | | |
| V552 | A | 50 | 95 | | |
| V553 | A | 46 | 95 | | |
| V554 | A | 42 | 95 | | |
| V555 | A | 38 | 95 | | |
| V700 | A | 132 | 68 | | |

| Part | Side | X | Y | Sqr | Pg |
|---|---|---|---|---|---|
| X31A | B | 173 | 15 | | |
| X85 | B | 104 | 141 | | |
| X86 | B | 105 | 137 | | |
| X313 | B | 84 | 78 | | |
| X314 | B | 105 | 22 | | |
| X315 | B | 9 | 36 | | |
| X316 | B | 68 | 88 | | |
| X317 | B | 68 | 99 | | |
| X600 | B | 60 | 32 | | |
| X700 | B | 132 | 24 | | |
| X800 | B | 177 | 133 | | |
| X900 | B | 162 | 18 | | |
| X901 | B | 158 | 17 | | |

| Part | Side | X | Y | Sqr | Pg |
|---|---|---|---|---|---|
| C102 | B | -91 | 43 | 6A | 2 |
| C103 | B | $$$ | 21 | 7A | 2 |
| C106 | A | -87 | 23 | 7A | 2 |
| C109 | B | -98 | 37 | 3E | 2 |
| C110 | A | -90 | 93 | 4A | 2 |
| C111 | A | -94 | 85 | 4A | 2 |
| C112 | A | -84 | 71 | 4A | 2 |
| C113 | A | -73 | 76 | 4A | 2 |
| C120 | A | $$$ | 133 | 1A | 2 |
| C121 | B | $$$ | 122 | 2A | 2 |
| C122 | B | -96 | 133 | 2A | 2 |
| C132 | A | -78 | 135 | 4D | 2 |
| C200 | A | -51 | 49 | 1A | 3 |
| C201 | A | 17 | 32 | 2A | 3 |
| C202 | A | $$$ | 71 | 2A | 3 |
| C204 | A | -89 | 80 | 3A | 3 |
| C205 | A | -62 | 19 | 3A | 3 |
| C207 | A | -70 | 57 | 4A | 3 |
| C208 | A | -37 | 139 | 5A | 3 |
| C212 | B | -72 | 50 | 6A | 3 |
| C213 | A | -10 | 25 | 7A | 3 |
| C214 | A | -73 | 74 | 7A | 3 |
| C215 | A | -12 | 16 | 11D | 3 |
| C216 | A | -2 | 17 | 11D | 3 |
| C290 | A | -51 | 39 | 8C | 3 |
| C310 | A | -57 | 123 | 1A | 4 |
| C311 | A | -1 | 115 | 2A | 4 |
| C312 | B | 16 | 58 | 2A | 4 |
| C313 | B | 16 | 79 | 3A | 4 |
| C314 | B | 17 | 22 | 4A | 4 |
| C315 | B | 16 | 39 | 4A | 4 |
| C316 | B | -44 | 99 | 6A | 4 |
| C400 | B | 20 | 131 | 4E | 5 |
| C411 | A | -40 | 123 | 2A | 5 |
| C412 | A | -36 | 95 | 3A | 5 |
| C413 | A | -36 | 49 | 3A | 5 |
| C414 | A | -36 | 72 | 4A | 5 |
| C415 | A | -36 | 26 | 4A | 5 |
| C416 | A | 21 | 109 | 5A | 5 |
| C420 | A | 17 | 124 | 2E | 5 |
| C421 | A | 13 | 114 | 4E | 5 |
| C422 | A | 13 | 131 | 4E | 5 |
| D10A | B | -84 | 68 | 3B | 2 |
| D103-A | B | -93 | 48 | 3C | 2 |
| D103-B | | | | 6A | 2 |
| D106-A | B | -86 | 33 | 5E | 4 |
| D106-B | | | | 6E | 4 |
| D106-C | | | | 3E | 2 |
| D106-D | | | | 4E | 2 |
| D106-E | | | | 7A | 2 |
| D120-A | B | $$$ | 131 | 5E | 2 |
| D120-B | | | | 2A | 2 |
| D200-A | A | -54 | 39 | 9C | 3 |
| D200-B | | | | 1A | 3 |
| D201-A | A | 15 | 25 | 10E | 3 |
| D201-B | | | | 2A | 3 |
| D202-A | A | $$$ | 75 | 3C | 3 |
| D202-B | | | | 3C | 3 |
| D202-C | | | | 2A | 3 |
| D204-A | A | -87 | 93 | 3F | 3 |
| D204-B | | | | 3A | 3 |
| D205-A | A | -59 | 29 | 3D | 3 |
| D205-B | | | | 3A | 3 |
| D208-A | A | -68 | 64 | 5E | 3 |
| D208-B | | | | 4A | 3 |
| D209-A | B | -45 | 141 | 5D | 3 |
| D209-B | | | | 5A | 3 |
| D213-A | A | -7 | 31 | 10D | 3 |
| D213-B | | | | 8A | 3 |
| D214-A | B | -81 | 50 | 8F | 3 |
| D214-B | | | | 6A | 3 |
| D216-A | A | -68 | 83 | 3E | 3 |
| D216-B | | | | 7A | 3 |
| D300-A | B | -61 | 119 | 3C | 4 |
| D300-B | | | | 1A | 4 |
| D301-A | B | -4 | 116 | 5D | 4 |
| D301-B | | | | 2A | 4 |
| D302-A | B | 13 | 77 | 7E | 4 |
| D302-B | | | | 2A | 4 |
| D303-A | B | 13 | 97 | 9E | 4 |
| D303-B | | | | 3A | 4 |
| D304-A | B | 13 | 36 | 7D | 4 |
| D304-B | | | | 4A | 4 |
| D305-A | B | 13 | 57 | 9D | 4 |
| D305-B | | | | 5A | 4 |
| D310-A | B | -50 | 95 | 3D | 4 |
| D310-B | | | | 11F | 3 |
| D310-C | | | | 6A | 4 |
| D400 | A | 14 | 117 | 3E | 5 |
| D402-A | B | -43 | 119 | 4C | 5 |
| D402-B | | | | 2A | 5 |
| D404-A | B | -32 | 93 | 8D | 5 |
| D404-B | | | | 3A | 5 |
| D405-A | B | -32 | 48 | 8F | 5 |
| D405-B | | | | 3A | 5 |
| D406-A | B | -32 | 70 | 10D | 5 |
| D406-B | | | | 4A | 5 |
| D407-A | B | -32 | 25 | 10F | 5 |
| D407-B | | | | 4A | 5 |
| D408-A | A | 18 | 103 | 6A | 5 |
| D408-B | | | | 2D | 5 |
| D408-C | | | | 3D | 5 |
| D408-D | | | | 3D | 5 |
| D408-E | | | | 5A | 5 |
| G100 | B | -68 | 138 | 4D | 2 |
| G300 | B | -47 | 7 | 3E | 4 |
| H200 | B | -11 | 136 | 12E | 3 |
| K300-A | B | -29 | 7 | 3E | 4 |
| K300-B | | | | 3E | 4 |
| 1 | B | -49 | 7 | 3E | 4 |
| 01 | B | $$$ | 121 | | |
| 2 | B | -81 | 7 | 3E | 4 |
| 02 | B | $$$ | 131 | | |
| 03 | B | $$$ | 39 | | |
| 04 | A | $$$ | 34 | | |
| 05 | B | $$$ | 52 | | |
| 06 | A | $$$ | 50 | | |
| 07 | A | $$$ | 52 | | |
| 08 | B | $$$ | 55 | | |
| 09 | B | $$$ | 95 | | |
| 10 | A | $$$ | 93 | | |
| 11 | B | $$$ | 93 | | |
| 12 | A | $$$ | 90 | | |
| 13 | B | $$$ | 105 | | |
| 14 | A | $$$ | 105 | | |
| 15 | A | $$$ | 103 | | |
| 16 | B | $$$ | 103 | | |
| 17 | A | $$$ | 100 | | |
| 18 | A | $$$ | 98 | | |
| 19 | B | $$$ | 98 | | |
| 20 | A | $$$ | 95 | | |
| 21 | B | $$$ | 100 | | |
| 22 | B | $$$ | 108 | | |
| 23 | A | $$$ | 108 | | |
| 24 | B | $$$ | 110 | | |
| 25 | A | $$$ | 110 | | |
| 26 | B | $$$ | 113 | | |
| 27 | A | $$$ | 113 | | |
| 28 | A | $$$ | 116 | | |
| 29 | A | $$$ | 55 | | |
| 30 | B | $$$ | 57 | | |
| 31 | A | $$$ | 57 | | |
| 32 | B | $$$ | 60 | | |
| 33 | A | $$$ | 60 | | |
| 34 | B | $$$ | 62 | | |
| 35 | A | $$$ | 62 | | |
| 37 | A | $$$ | 70 | | |
| 38 | B | $$$ | 70 | | |
| 39 | A | $$$ | 72 | | |
| 40 | B | $$$ | 72 | | |
| 41 | A | $$$ | 75 | | |
| 42 | B | $$$ | 75 | | |
| 43 | A | $$$ | 77 | | |
| 44 | B | $$$ | 77 | | |
| 45 | A | $$$ | 65 | | |
| 46 | B | $$$ | 65 | | |
| 47 | A | $$$ | 67 | | |
| 48 | B | $$$ | 67 | | |
| 49 | B | $$$ | 80 | | |
| 50 | A | $$$ | 85 | | |
| 51 | A | $$$ | 88 | | |
| 52 | B | $$$ | 85 | | |
| 53 | B | $$$ | 88 | | |
| 54 | B | $$$ | 83 | | |
| 55 | A | $$$ | 83 | | |

| ROHDE & SCHWARZ | ÄI | Datum / Date | XY-Liste für / XY-list for | Sach-Nummer / Stock-Nr | Blatt / Page |
|---|---|---|---|---|---|
| | 04 | 25.09.92 | RECHNER PROCESSOR | 1035.7308.01 XY | 4+ |

| Part | Side | X | Y | Sqr | Pg |
|---|---|---|---|---|---|
| 56 | A | $$$ | 80 | | |
| 57 | B | $$$ | 22 | | |
| 58 | B | $$$ | 128 | | |
| 59 | A | $$$ | 22 | | |
| 60 | B | $$$ | 34 | | |
| 61 | A | $$$ | 19 | | |
| 62 | A | $$$ | 27 | | |
| 63 | A | $$$ | 126 | | |
| 64 | B | $$$ | 123 | | |
| 65 | B | $$$ | 19 | | |
| 66 | B | $$$ | 118 | | |
| 67 | A | $$$ | 128 | | |
| 68 | A | $$$ | 118 | | |
| 69 | A | $$$ | 121 | | |
| 70 | A | $$$ | 123 | | |
| 71 | B | $$$ | 126 | | |
| 72 | A | $$$ | 37 | 8D | 6 |
| 73 | A | $$$ | 39 | 8D | 6 |
| 74 | B | $$$ | 42 | 8D | 6 |
| 75 | A | $$$ | 42 | 8C | 6 |
| 76 | B | $$$ | 44 | 8C | 6 |
| 77 | A | $$$ | 44 | 8C | 6 |
| 78 | B | $$$ | 50 | 8C | 6 |
| 79 | A | $$$ | 47 | 8C | 6 |
| 80 | B | $$$ | 47 | 8C | 6 |
| 81 | B | $$$ | 37 | 8C | 6 |
| 88 | B | $$$ | 24 | | |
| 89 | A | $$$ | 32 | 8E | 6 |
| 90 | B | $$$ | 32 | 8D | 6 |
| 91 | A | $$$ | 29 | 8D | 6 |
| 92 | B | $$$ | 29 | 8D | 6 |
| 93 | B | $$$ | 90 | | |
| 94 | A | $$$ | 24 | | |
| P300 | B | -62 | 22 | 2F | 4 |
| R104 | B | -92 | 130 | 5E | 2 |
| R107 | A | $$$ | 27 | 3F | 2 |
| R108 | A | $$$ | 30 | 3E | 2 |
| R110 | A | -91 | 102 | 10E | 2 |
| R111 | A | -89 | 102 | 10E | 2 |
| R112 | A | -86 | 102 | 10E | 2 |
| R113-A | B | -54 | 82 | 10E | 2 |
| R113-B | | | | 10E | 2 |
| R113-C | | | | 10E | 2 |
| R113-D | | | | 10E | 2 |
| R113-E | | | | 10E | 2 |
| R113-F | | | | 10E | 2 |
| R113-G | | | | 10E | 2 |
| R114-A | B | -72 | 53 | 10E | 2 |
| R114-B | | | | 10E | 2 |
| R114-C | | | | 10E | 2 |
| R114-D | | | | 10E | 2 |
| R114-E | | | | 10D | 2 |
| R114-F | | | | 10D | 2 |
| R114-G | | | | 10D | 2 |
| R114-H | | | | 10D | 2 |
| R114-I | | | | 10D | 2 |
| R115-A | B | -86 | 114 | 7E | 2 |
| R115-B | | | | 7E | 2 |
| R115-C | | | | 7E | 2 |
| R115-D | | | | 7E | 2 |
| R115-E | | | | 7E | 2 |
| R115-F | | | | 7E | 2 |
| R115-G | | | | 7E | 2 |
| R116-A | B | -54 | 107 | 7E | 2 |
| R116-B | | | | 7E | 2 |
| R116-C | | | | 7E | 2 |
| R116-D | | | | 7E | 2 |
| R116-E | | | | 7E | 2 |
| R116-F | | | | 7E | 2 |
| R116-G | | | | 7E | 2 |
| R116-H | | | | 7D | 2 |
| R116-I | | | | 7D | 2 |
| R117-A | B | -98 | 53 | 11D | 2 |
| R117-B | | | | 11D | 2 |
| R117-C | | | | 11D | 2 |
| R117-D | | | | 11D | 2 |
| R117-E | | | | 11D | 2 |
| R117-F | | | | 11D | 2 |
| R117-G | | | | 11D | 2 |
| R124 | A | -91 | 73 | 9D | 2 |
| R125 | A | -93 | 77 | 8D | 2 |
| R128 | B | $$$ | 118 | 5E | 2 |
| R129 | A | $$$ | 33 | 3E | 2 |
| R131 | A | $$$ | 97 | 7D | 2 |
| R132 | A | $$$ | 95 | 7D | 2 |
| R133 | A | $$$ | 100 | 7D | 2 |
| R134 | A | $$$ | 92 | 7D | 2 |
| R143 | B | $$$ | 45 | 3C | 2 |
| R144 | B | $$$ | 48 | 3C | 2 |
| R145 | B | $$$ | 40 | 3C | 2 |
| R150 | A | -97 | 102 | 10D | 2 |
| R151 | A | -94 | 102 | 10D | 2 |
| R153 | B | $$$ | 50 | 2C | 2 |
| R154 | B | $$$ | 43 | 2C | 2 |
| R200 | A | $$$ | 71 | 2B | 3 |
| R209 | B | -88 | 43 | 7F | 3 |
| R212 | A | -62 | 30 | 1D | 3 |
| R213 | A | -12 | 18 | 11D | 3 |
| R214 | A | 2 | 18 | 11D | 3 |
| R220-A | B | -44 | 58 | 6E | 3 |
| R220-B | | | | 6E | 3 |
| R220-C | | | | 6E | 3 |
| R220-D | | | | 6E | 3 |
| R220-E | | | | 6E | 3 |
| R220-F | | | | 6E | 3 |
| R220-G | | | | 6E | 3 |
| R220-H | | | | 6E | 3 |
| R220-I | | | | 6E | 3 |
| R221-A | B | -27 | 140 | 6D | 3 |
| R221-B | | | | 6D | 3 |
| R221-C | | | | 6D | 3 |
| R221-D | | | | 6D | 3 |
| R221-E | | | | 6D | 3 |
| R221-F | | | | 6D | 3 |
| R221-G | | | | 6D | 3 |
| R221-H | | | | 6D | 3 |
| R221-I | | | | 6D | 3 |
| R280 | A | 20 | 20 | 9E | 3 |
| R281 | A | 20 | 22 | 9E | 3 |
| R282 | A | 20 | 17 | 9E | 3 |
| R283-A | B | -52 | 34 | 8D | 3 |
| R283-B | | | | 8D | 3 |
| R283-C | | | | 8D | 3 |
| R283-D | | | | 8D | 3 |
| R283-E | | | | 8D | 3 |
| R283-F | | | | 8D | 3 |
| R283-G | | | | 9D | 3 |
| R283-H | | | | 9D | 3 |
| R283-I | | | | 9D | 3 |
| R285 | A | -12 | 138 | 11E | 3 |
| R286 | A | -9 | 129 | 11F | 3 |
| R287 | A | -9 | 131 | 12F | 3 |
| R289 | A | -46 | 99 | 11E | 3 |
| R290 | A | -70 | 29 | 8C | 3 |
| R310 | A | -13 | 119 | 4D | 4 |
| R313 | A | -69 | 19 | 2E | 4 |
| R314 | A | -76 | 25 | 1E | 4 |
| R315 | A | -43 | 9 | 3E | 4 |
| R316 | B | -29 | 11 | 3E | 4 |
| R318 | B | -63 | 110 | 3C | 4 |
| R320 | A | -88 | 30 | 5E | 4 |
| R322 | A | -9 | 115 | 4C | 4 |
| R323 | A | -9 | 111 | 5C | 4 |
| R324 | A | -13 | 122 | 6C | 4 |
| R380 | A | 19 | 70 | 4E | 4 |
| R381 | A | 19 | 49 | 5E | 4 |
| R382 | A | 19 | 65 | 5E | 4 |
| R383 | A | 19 | 46 | 5E | 4 |
| R384 | A | 19 | 68 | 5E | 4 |
| R390 | A | -76 | 37 | 4F | 4 |
| R391 | A | -78 | 33 | 4F | 4 |
| R392 | A | -88 | 37 | 5E | 4 |
| R402 | A | -40 | 29 | 10E | 5 |
| R403 | A | -40 | 23 | 10E | 5 |
| R404 | A | -37 | 59 | 10C | 5 |
| R405 | A | -34 | 59 | 10C | 5 |
| R408 | A | -26 | 31 | 10E | 5 |
| R409 | A | -28 | 25 | 10E | 5 |
| R410 | A | -30 | 79 | 10C | 5 |
| R411 | A | -25 | 66 | 10C | 5 |
| R415 | A | 21 | 118 | 4F | 5 |
| R418 | A | 15 | 95 | 2E | 5 |
| R419 | A | 8 | 123 | 2E | 5 |
| R420 | B | 16 | 131 | 4E | 5 |
| R422 | B | 6 | 129 | 4E | 5 |

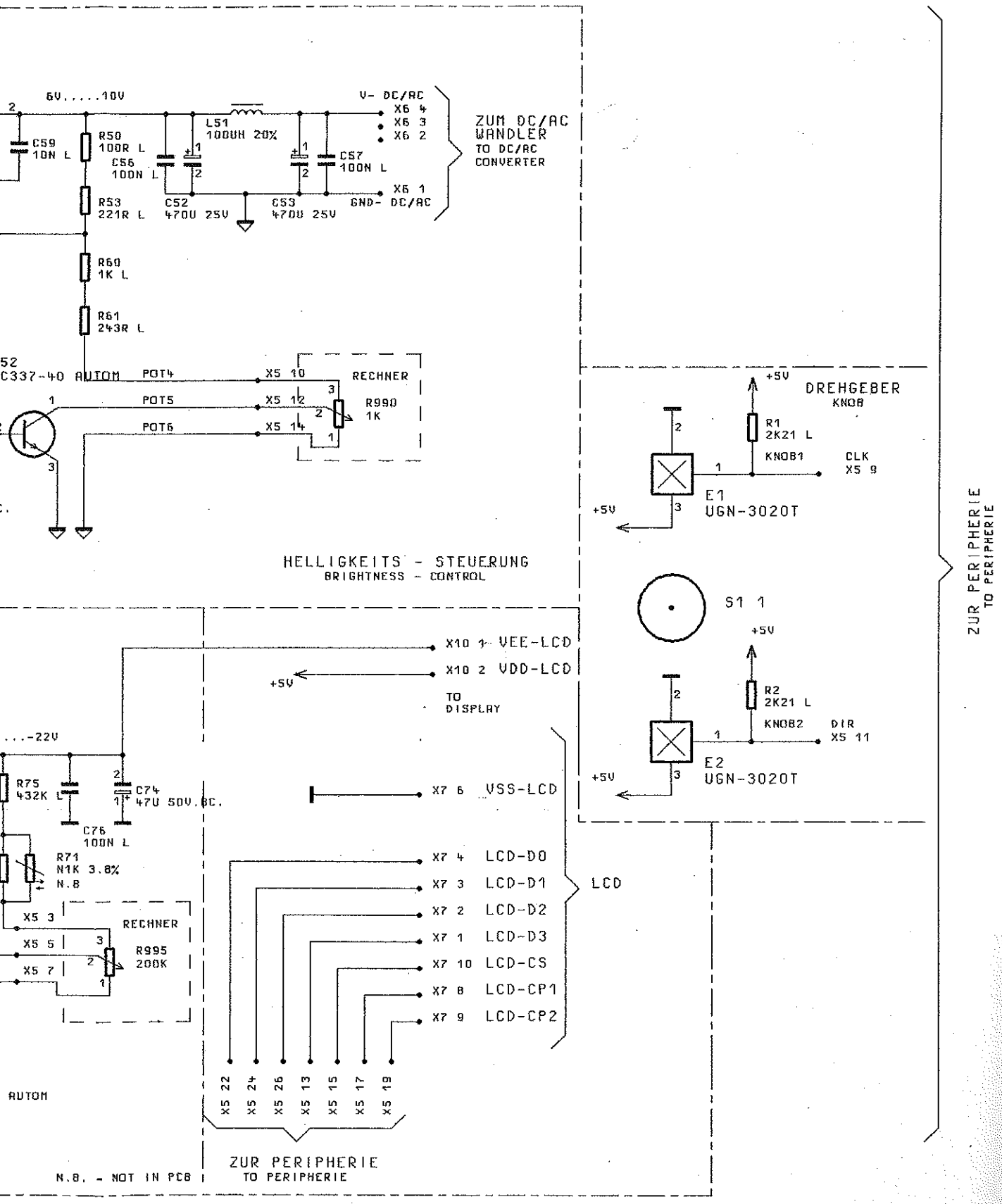
| ROHDE & SCHWARZ | ÄI | Datum / Date | XY-Liste für / XY-list for | Sach-Nummer / Stock-Nr | Blatt / Page |
|---|---|---|---|---|---|
| | 04 | 25.09.92 | RECHNER PROCESSOR | 1035.7308.01 XY | 5+ |

| Part | Side | X | Y | Sqr | Pg | Part | Side | X | Y | Sqr | Pg | Part | Side | X | Y | Sqr | Pg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R425 | A | 15 | 99 | 5A | 5 | V287 | A | -4 | 135 | 11E | 3 | V400 | A | 21 | 126 | 4E | 5 |
| R430 | B | -44 | 110 | 4B | 5 | V300 | B | -72 | 22 | 2E | 4 | V405 | A | 16 | 114 | 2E | 5 |
| R435 | B | 9 | 126 | 5E | 5 | V301 | B | -64 | 22 | 2E | 4 | V611 | A | -18 | 11 | 6F | 6 |
| R436 | B | -44 | 78 | 5E | 5 | V302 | A | -65 | 25 | 2F | 4 | X31B | B | $$$ | 8 | 2E | 6 |
| R610 | A | -30 | 1 | 7E | 6 | V303 | A | -36 | 10 | 3D | 4 | X105 | B | -77 | 123 | 5D | 2 |
| R611 | A | -12 | 21 | 3B | 6 | V306 | A | -42 | 16 | 2E | 4 | X200 | B | -70 | 32 | 8C | 3 |
| V100 | A | $$$ | 33 | 3E | 2 | V390 | B | -83 | 37 | 4E | 4 | X300 | B | -49 | 14 | 3E | 4 |
| V102 | A | $$$ | 30 | 3E | 2 | V391 | B | -81 | 30 | 5F | 4 | X312 | B | -25 | 11 | 7E | 6 |

ROHDE&SCHWARZ

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

(R 29500 Bl 4)
095.1000 Bl. 4




| 04/ | 48730 90 | 07.04.94 | JN |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| / | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG. | DATUM | NAME |

| 1GPK | TAG | NAME |
|---|---|---|
| BEARB. | | JN |
| GEPR. | | DR |
| NORM | | |
| PLOTT | 07.04.94 | |

ROHDE&SCHWARZ

ZU GERAET SMP

BENENNUNG

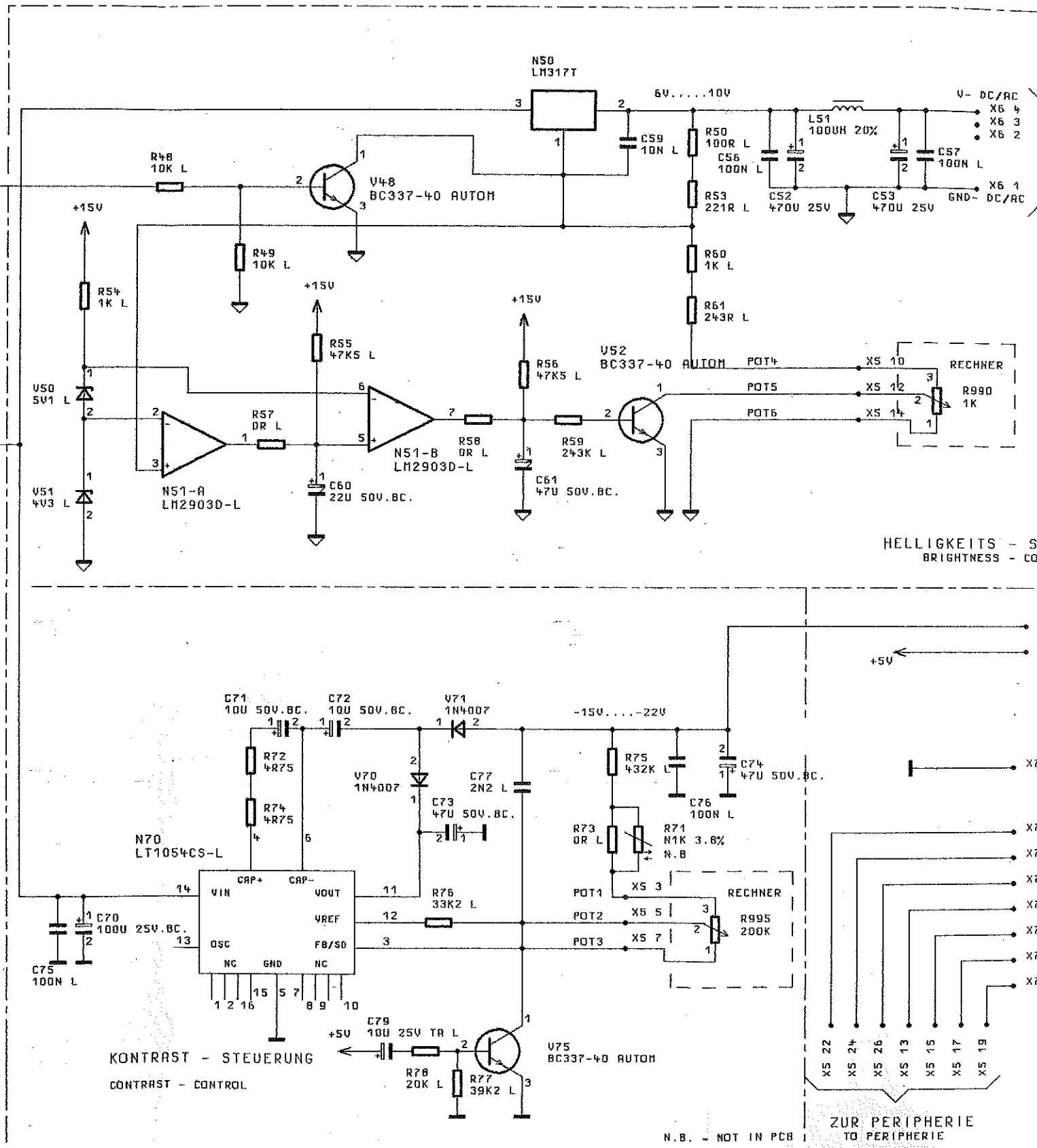
# DREHGEBER
KNOB ASSEMBLY

ZEICHN.-NR. 1035.5592.01S

BLATT-NR. 1

V. BL.

REG.I.V. 1035.5005 ERSTE Z. 1035.5440

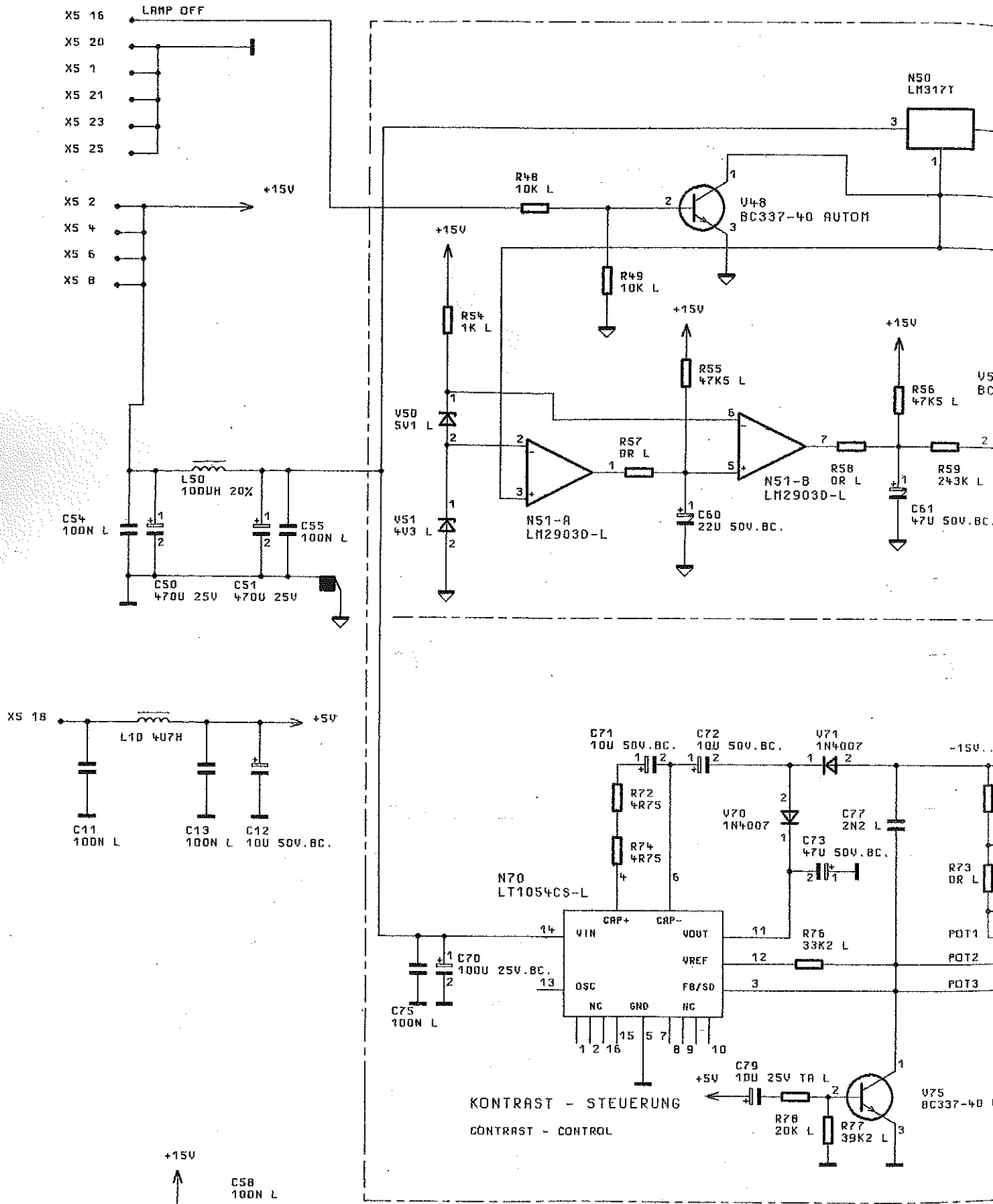



# STROMLAUF GILT FUER VAR.02

CIRCUIT DIAGRAM IS VALID FOR MOD.02

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

| | | | | | |
|---|---|---|---|---|---|
| 04/ | 48730 90 | 07.04.94 | JN | 1GPK | |
| | | | | BEARB. | |
| | | | | GEPR. | |
| | | | | NORM | |
| | | | | PLOTT | 0 |
| / | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG. | DATUM | NAME | ROHD | |
| | | | | ZU GERRET | |

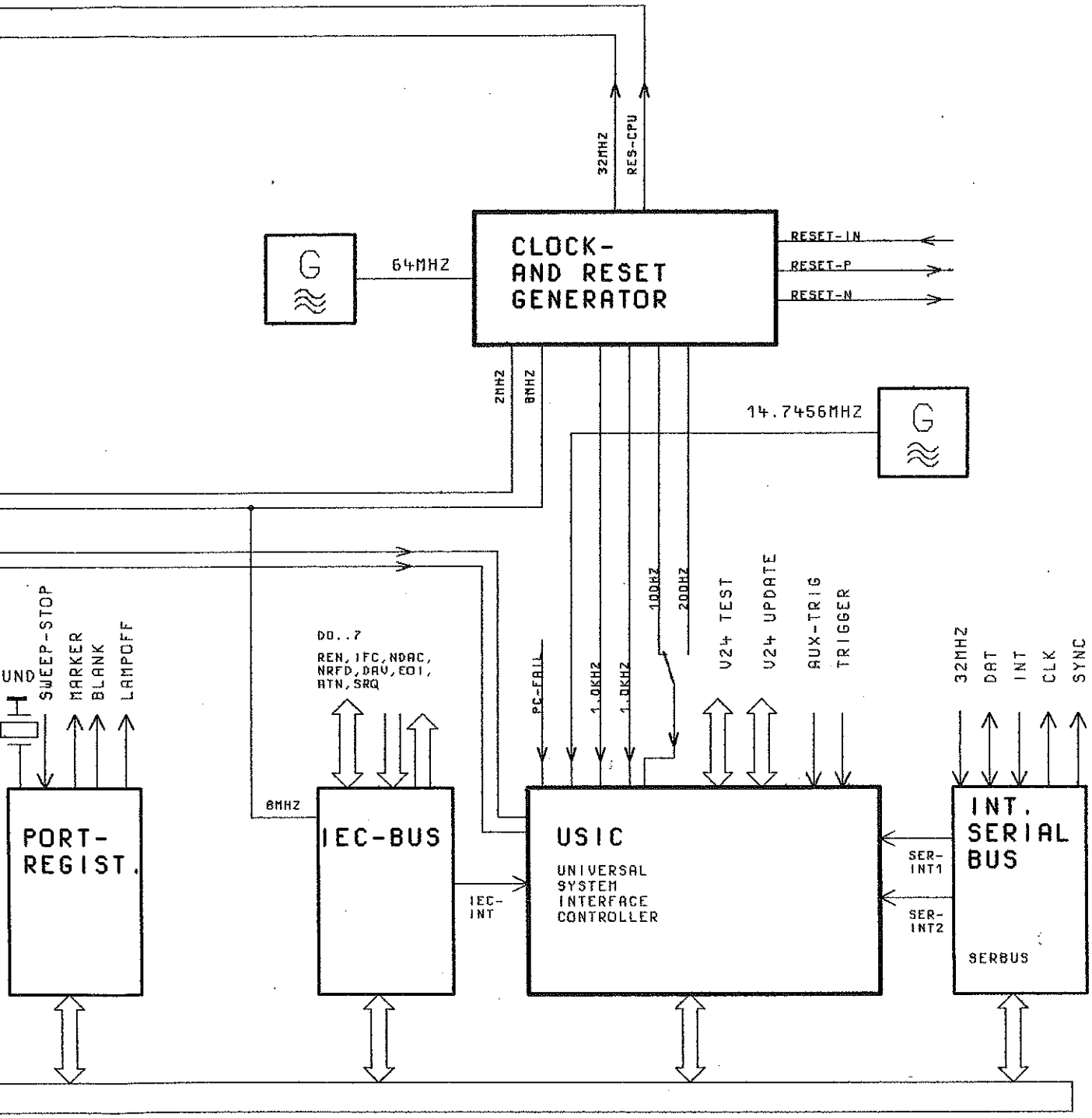



# STROMLAUF GILT FUER VAR.02

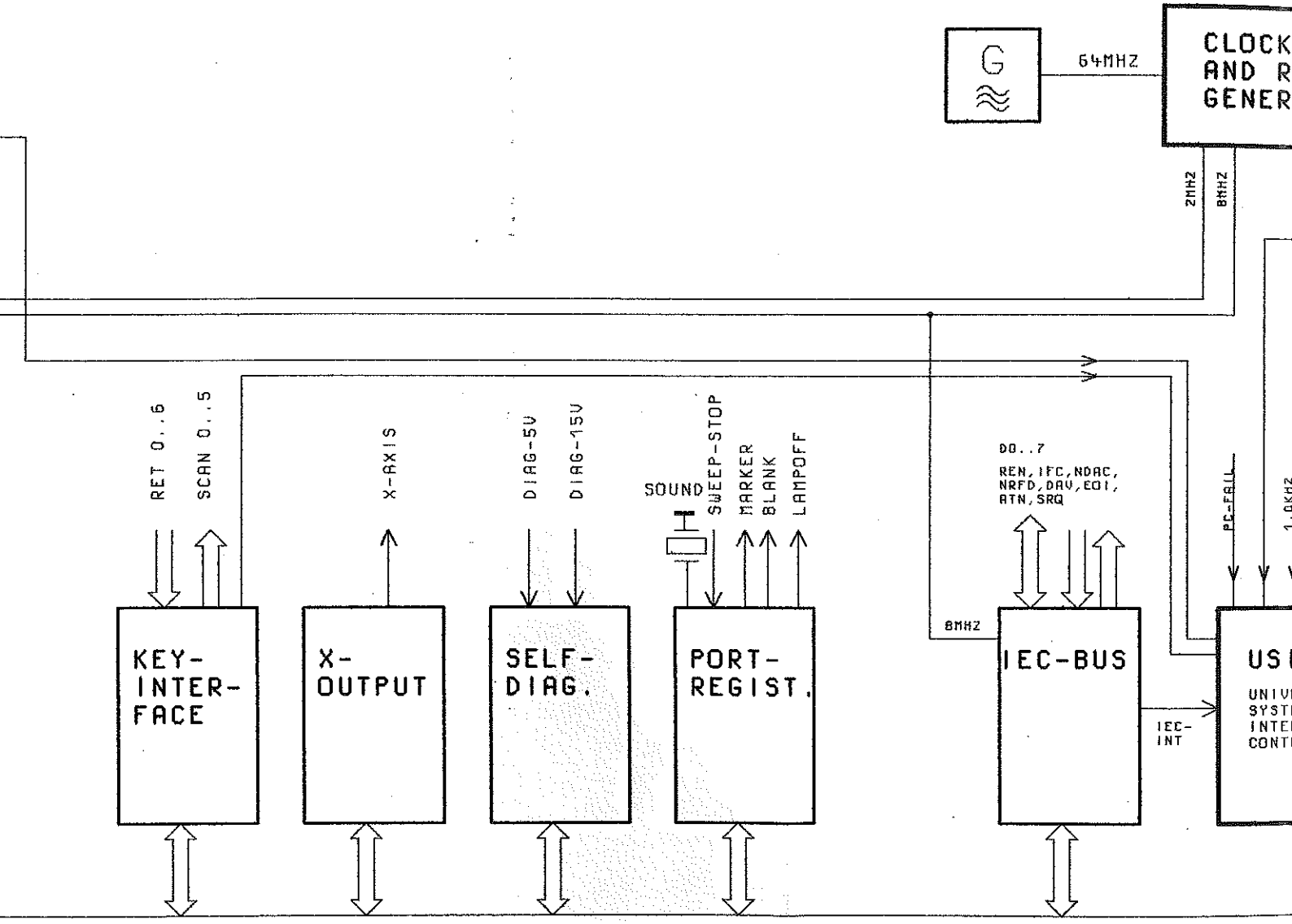
CIRCUIT DIAGRAM IS VALID FOR MOD.02

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

ZEICHN.-NR.




| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 16PK | TAG | NAME | BENENNUNG | |
| | | | | BEARB. | | DR | RECHNER | |
| | | | | GEPR. | | | PROCESSOR | |
| | | | | NORM | | | | |
| | | | | PLOTT | 03.05.94 | | | |
| / | | | | | | | ZEICHN.-NR. | BLATT-NR. |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | 1035.7308.01S | 1+ |
| | | | | ZU GERAET | SMP | | REG.I.V. 1035.5005 | ERSTE Z. 1035.5440 |

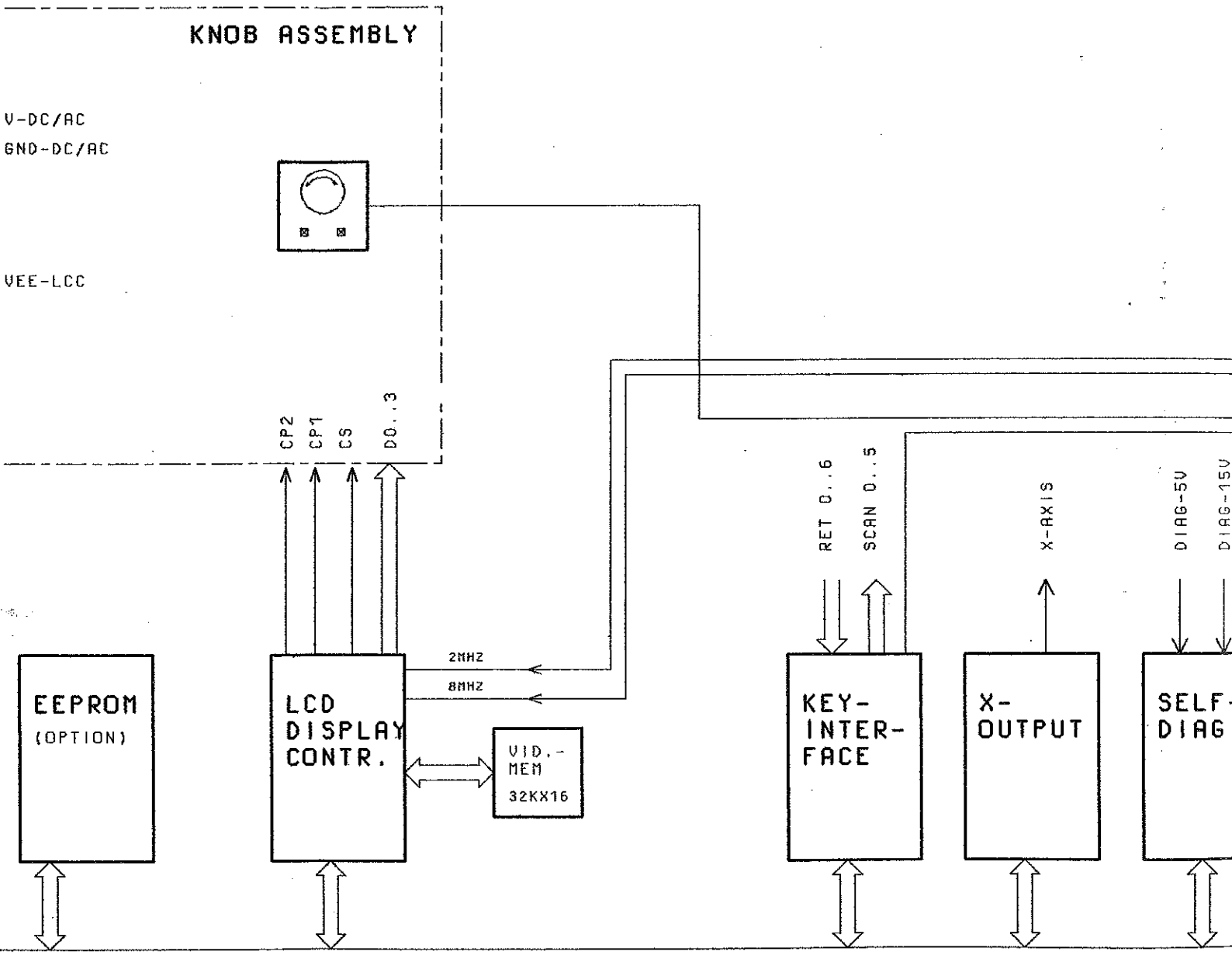



T FUER VAR.02

VALID FOR MOD.02

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

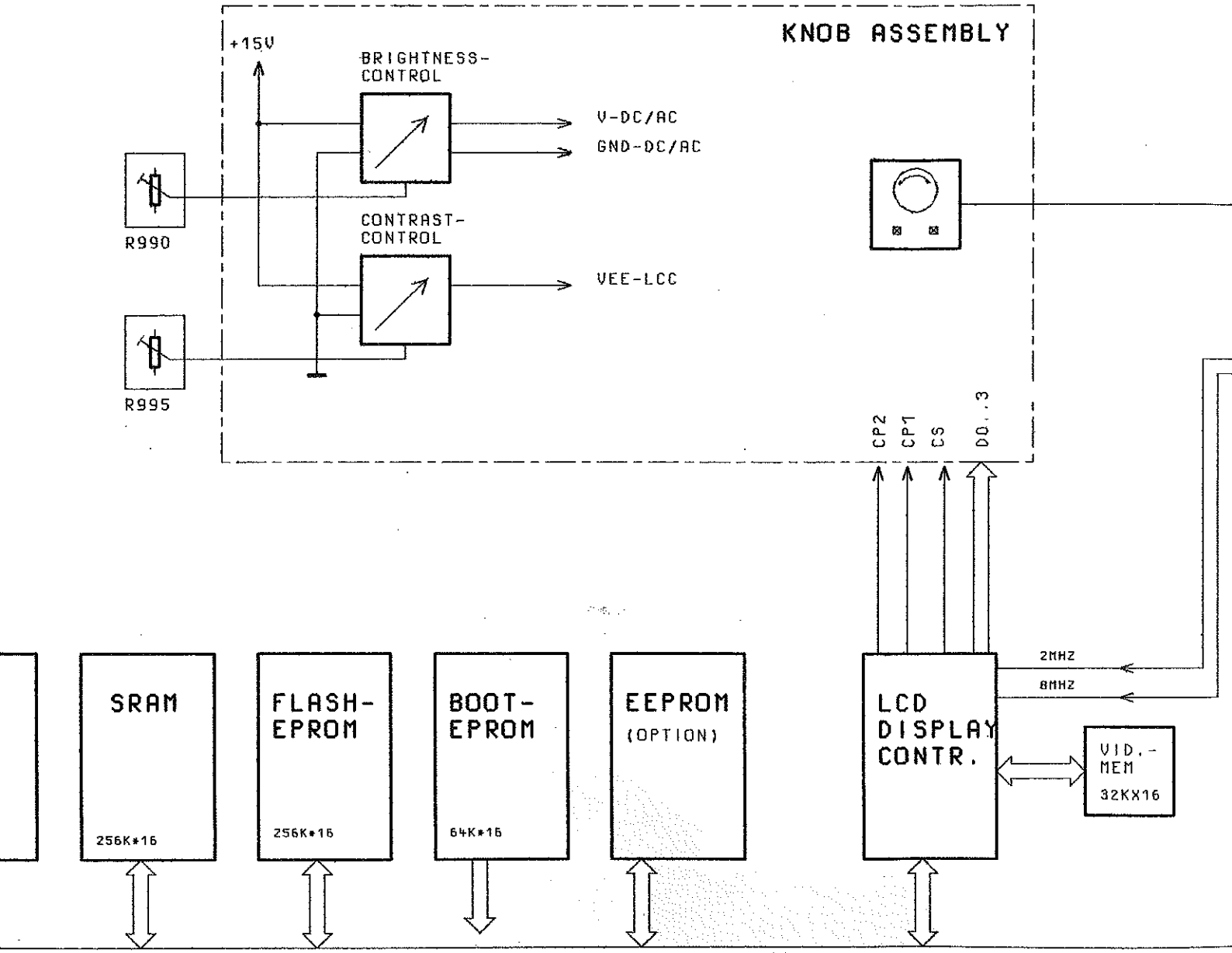
| | | | | | |
|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 16PK | TAG |
| | | | | BEARB. | |
| | | | | GEPR. | |
| | | | | NORM | |
| | | | | PLOTT | 03.05.94 |
| / | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHW | |
| | | | | ZU GERAET | SMP |




## STROMLAUF GILT FUER VAR.02

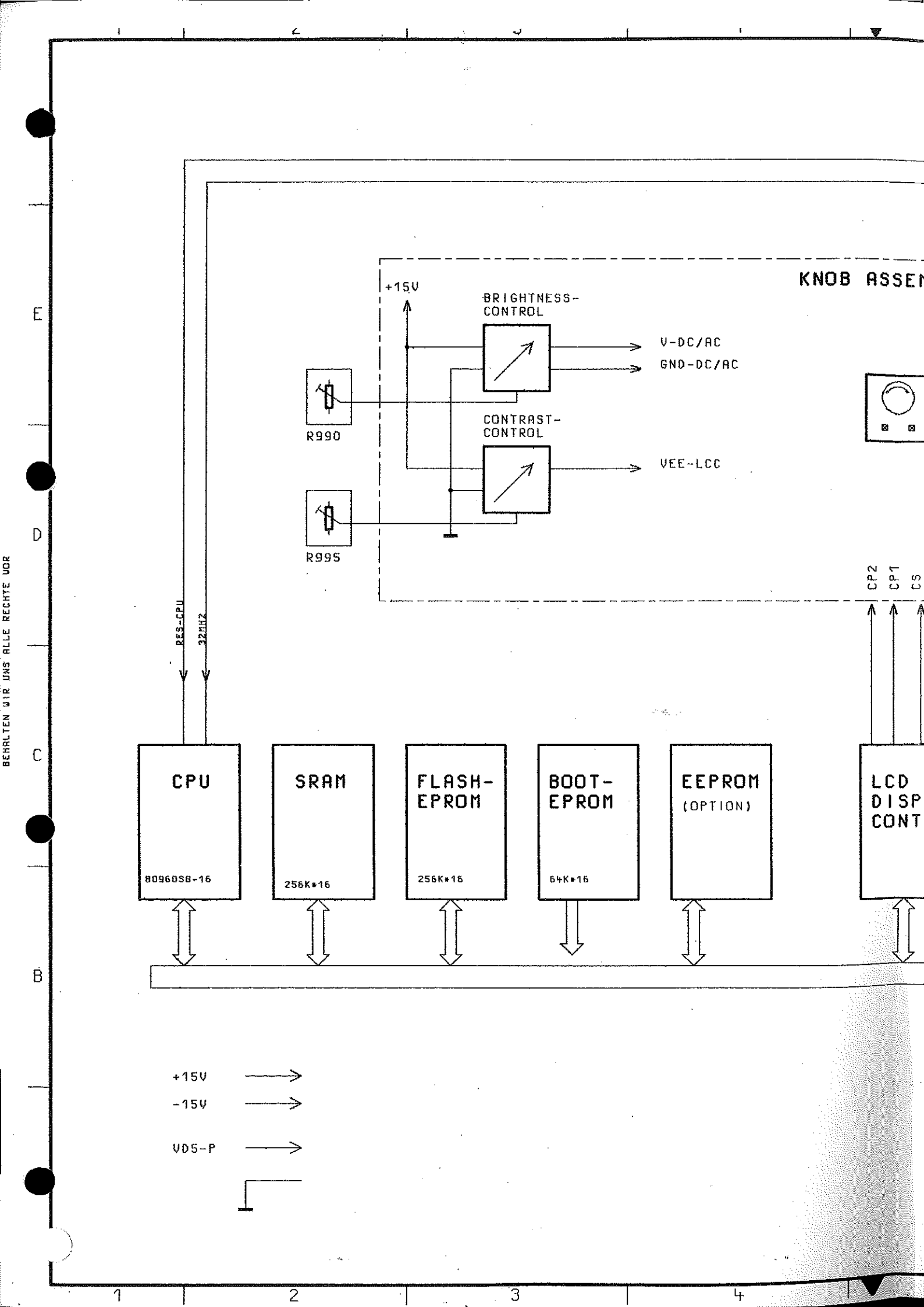
CIRCUIT DIAGRAM IS VALID FOR MOD.02

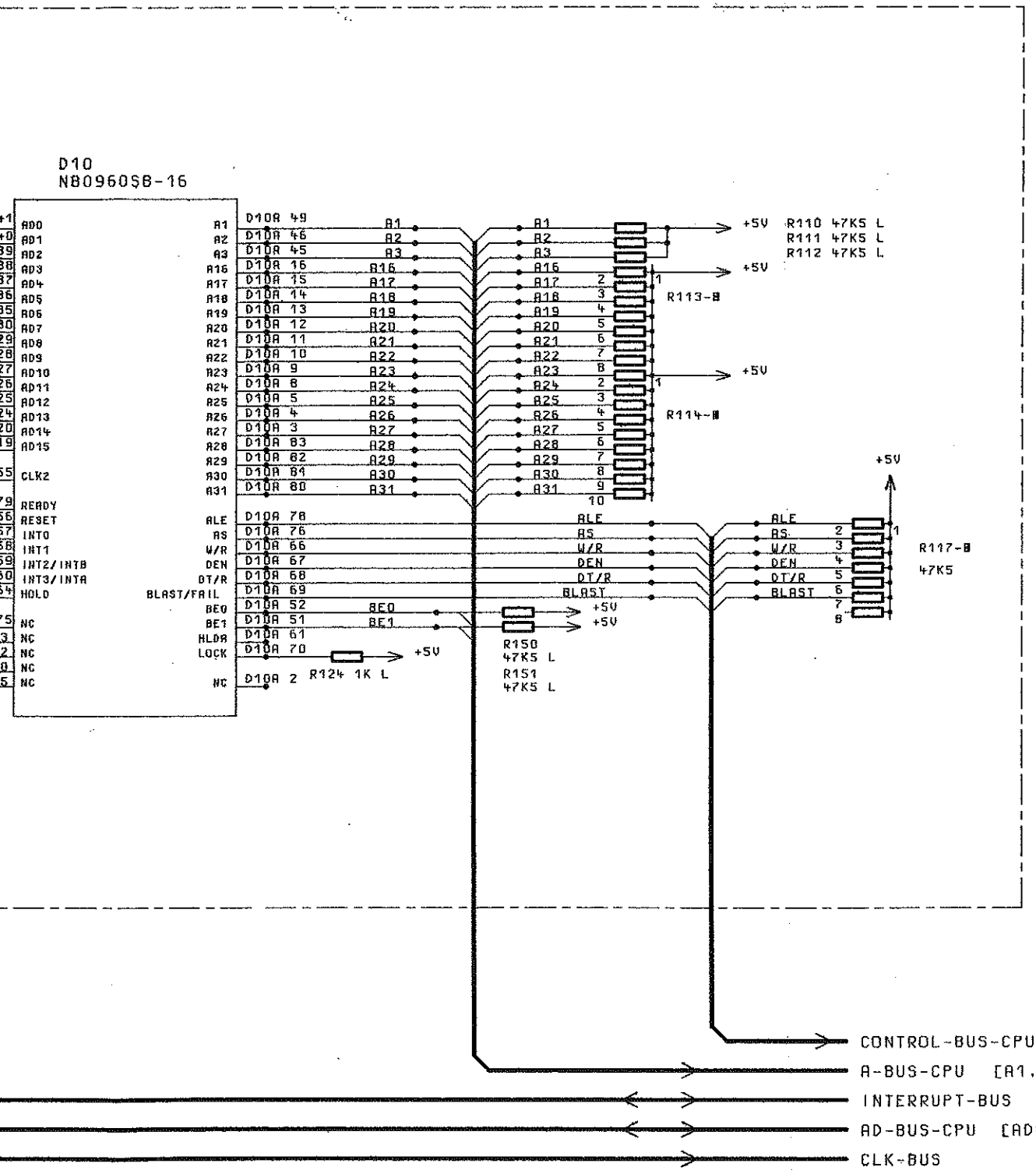
ACHTUNG: E
ELEKTROSTATISCH GE
BAUELEMENTE ERFOR
BESONDERE HAND
ATTENTION E
ELECTROSTATIC SENSI
REQUIRE A SPECIAL




STROMLAUF G

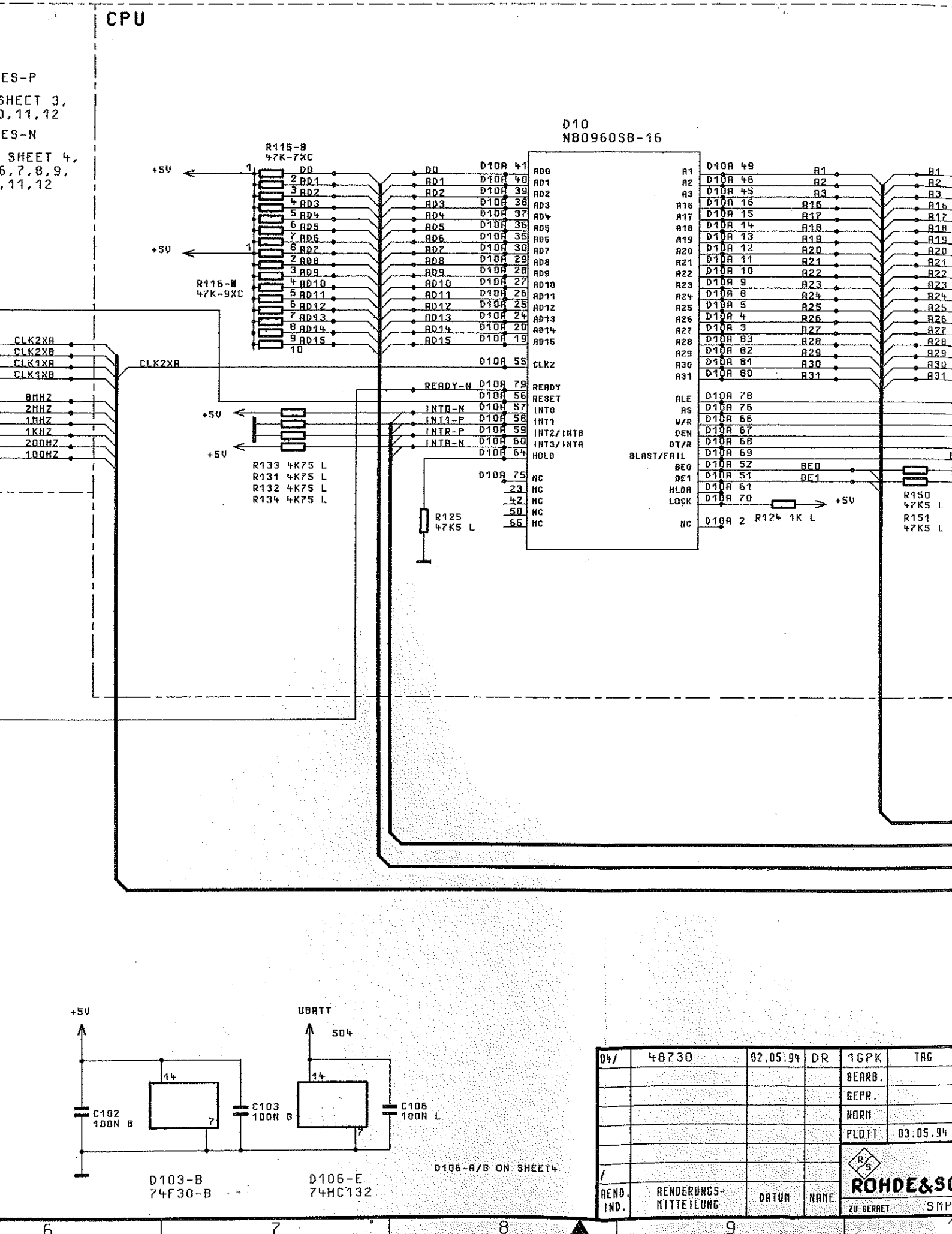
CIRCUIT DIAGRAM






| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | | | | ZEICHN.-NR. 1035.7308.01S |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | BLATT-NR. 2+ |
| | | | | ZU GERAET SMP | | | REG.I.V. 1035.5005 ERSTE Z. 1035.5440 |

SHEET4

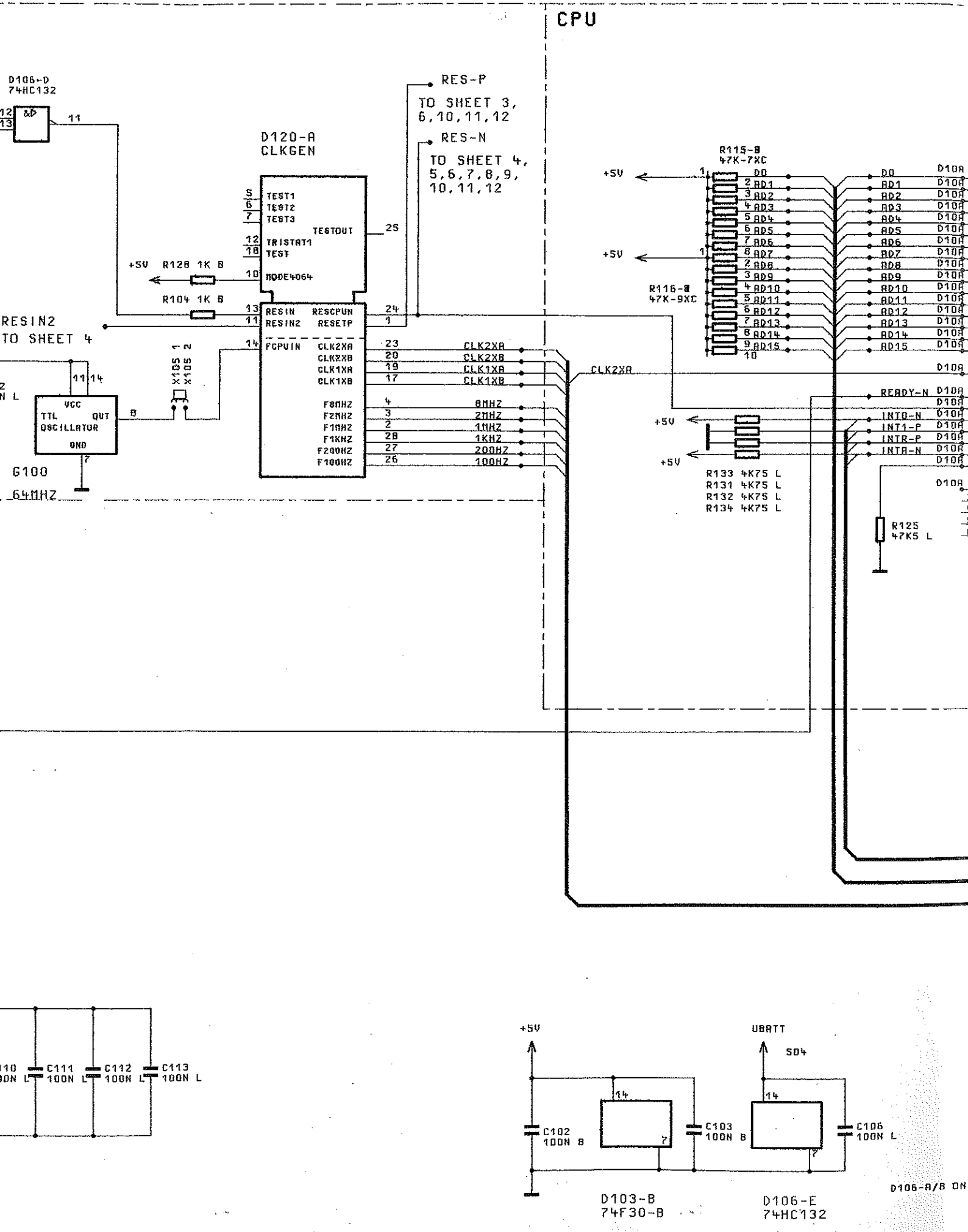




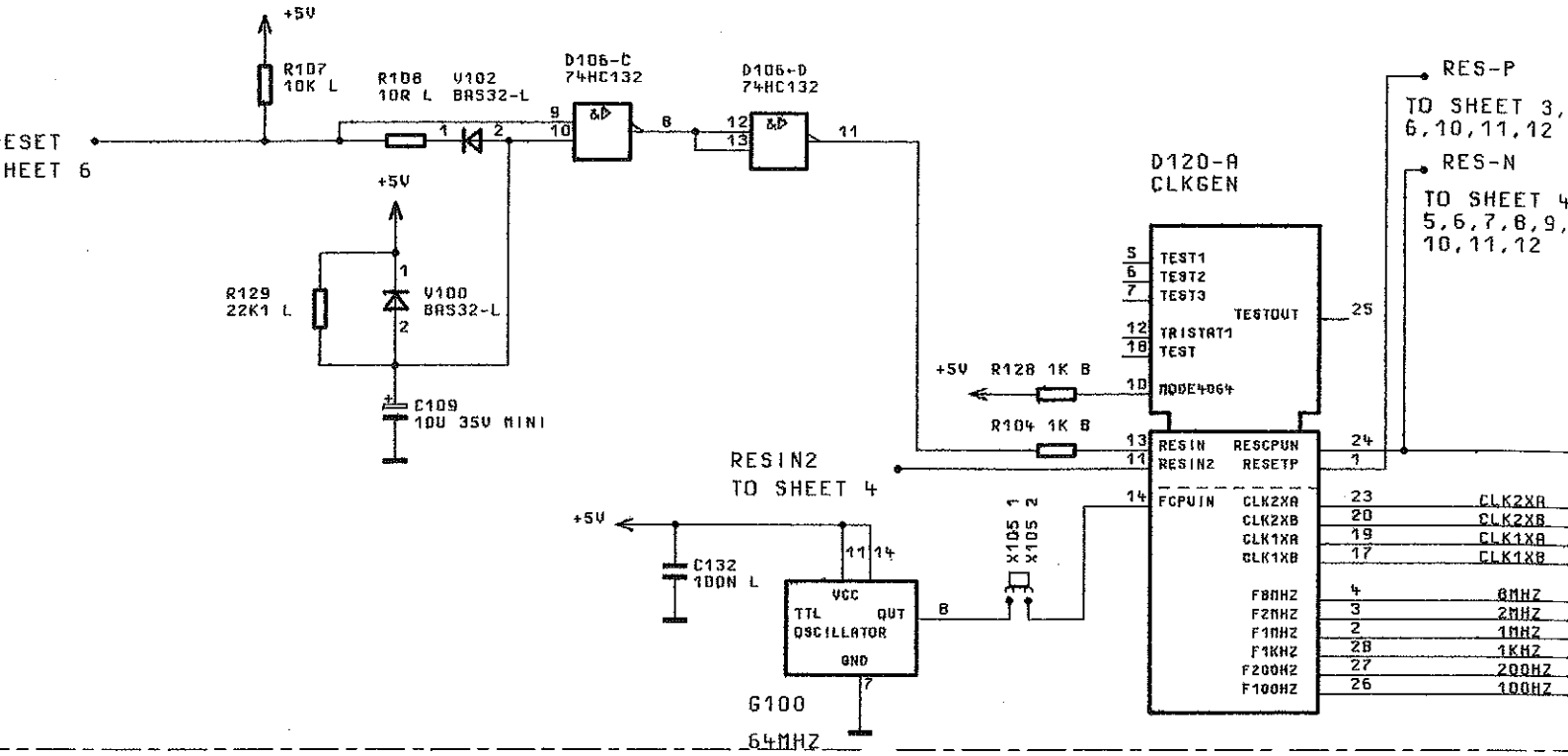


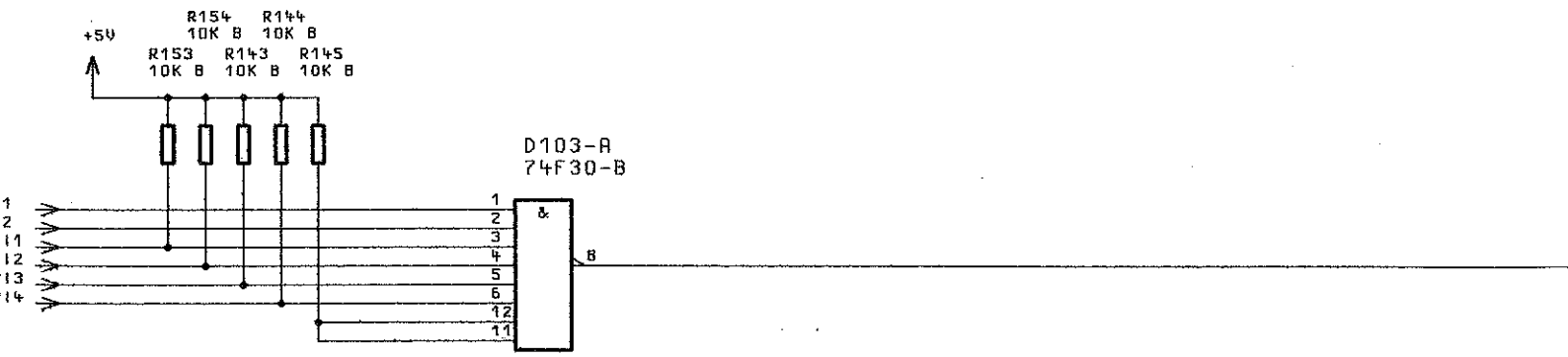
| | | | | | |
|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG |
| | | | | BEARB. | |
| | | | | GEPR. | |
| | | | | NORM | |
| | | | | PLOTT | 03.05.94 |
| / | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ZU GERAET | SMP |

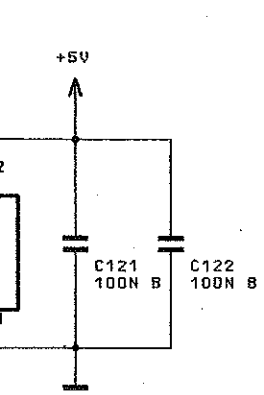
ROHDE&SC

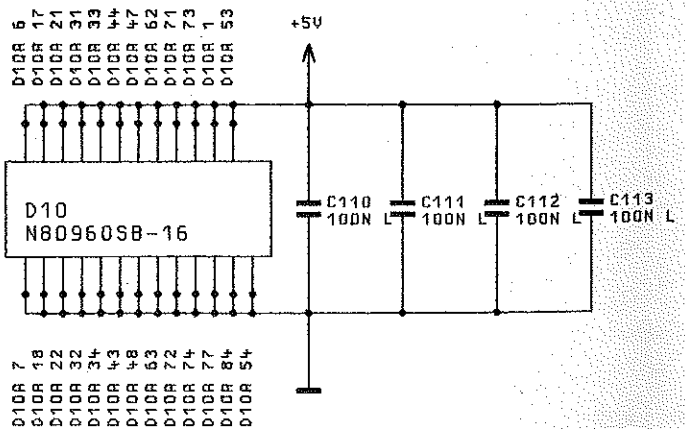

CPU
D106-D
74HC132
RES-P
TO SHEET 3,
6,10,11,12
RES-N
TO SHEET 4,
5,6,7,8,9,
10,11,12
D120-A
CLKGEN
R115-B
47K-7XC
R116-B
47K-9XC
+5V
R128 1K B
R104 1K B
RESIN2
TO SHEET 4
TEST1
TEST2
TEST3
TESTOUT
TRISTAT1
TEST
MODE4064
RESIN
RESCPUN
RESIN2
RESETP
FCPUIN
CLK2XA
CLK2XB
CLK1XA
CLK1XB
F8MHZ
F2MHZ
F1MHZ
F1KHZ
F200HZ
F100HZ
8MHZ
2MHZ
1MHZ
1KHZ
200HZ
100HZ
X10S 1
X10S 2
VCC
TTL OSCILLATOR
OUT
GND
G100
64MHZ
R133 4K75 L
R131 4K75 L
R132 4K75 L
R134 4K75 L
R125
47K5 L
READY-N
INTO-N
INT1-P
INTR-P
INTA-N
D10A
C110
100N L
C111
100N L
C112
100N L
C113
100N L
C102
100N B
C103
100N B
C106
100N L
UBATT
SO4
D103-B
74F30-B
D106-E
74HC132
D106-A/B ON

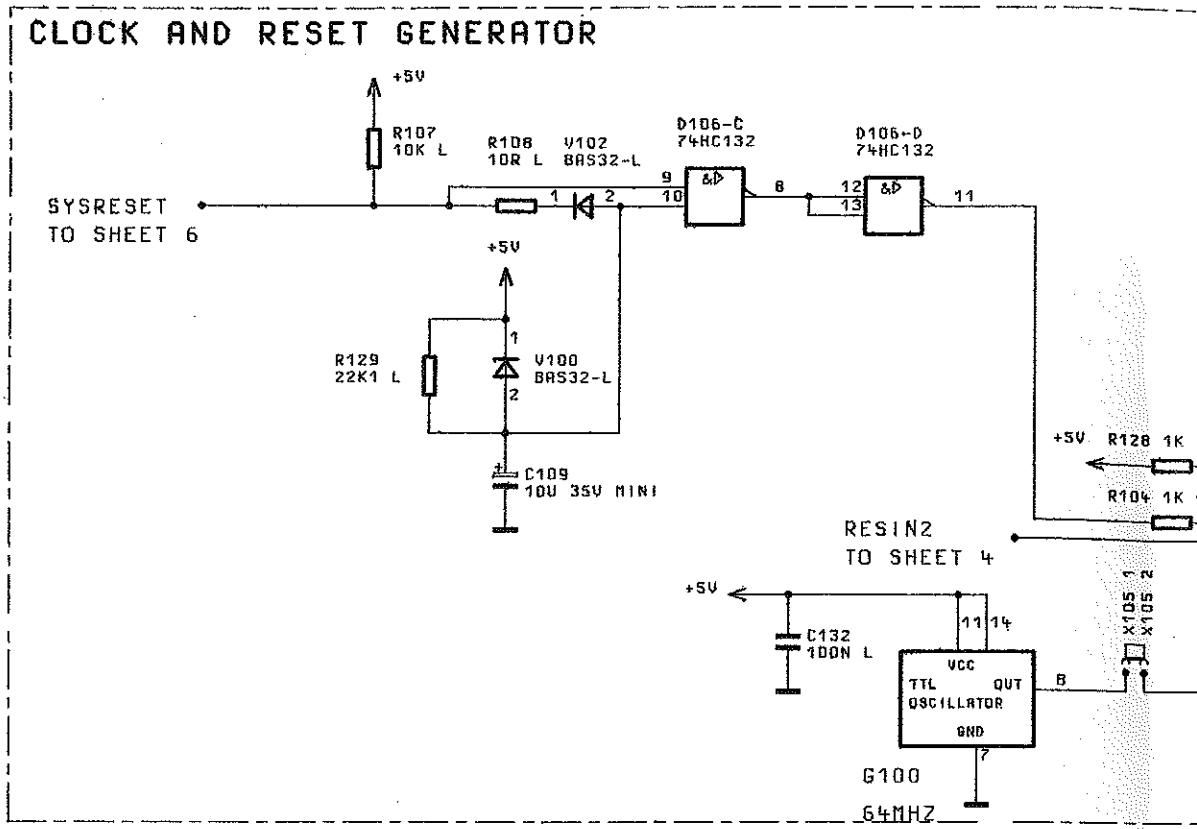
# CK AND RESET GENERATOR

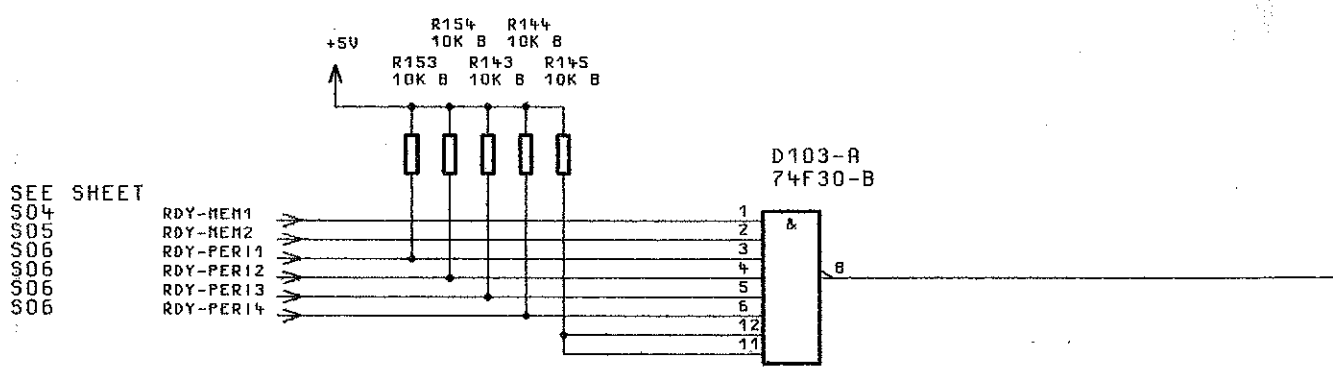


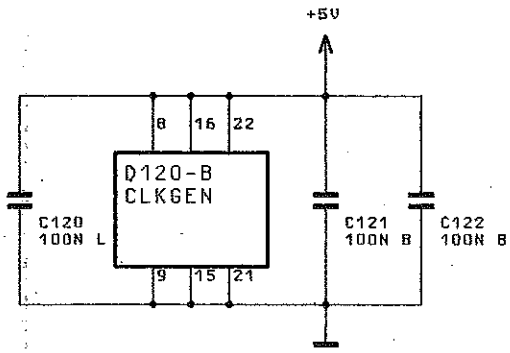



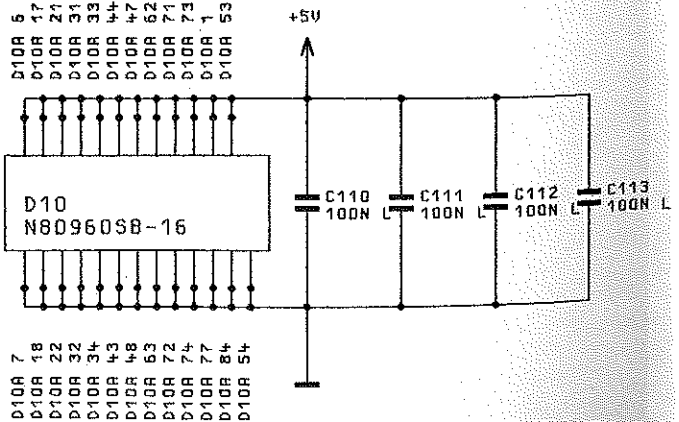





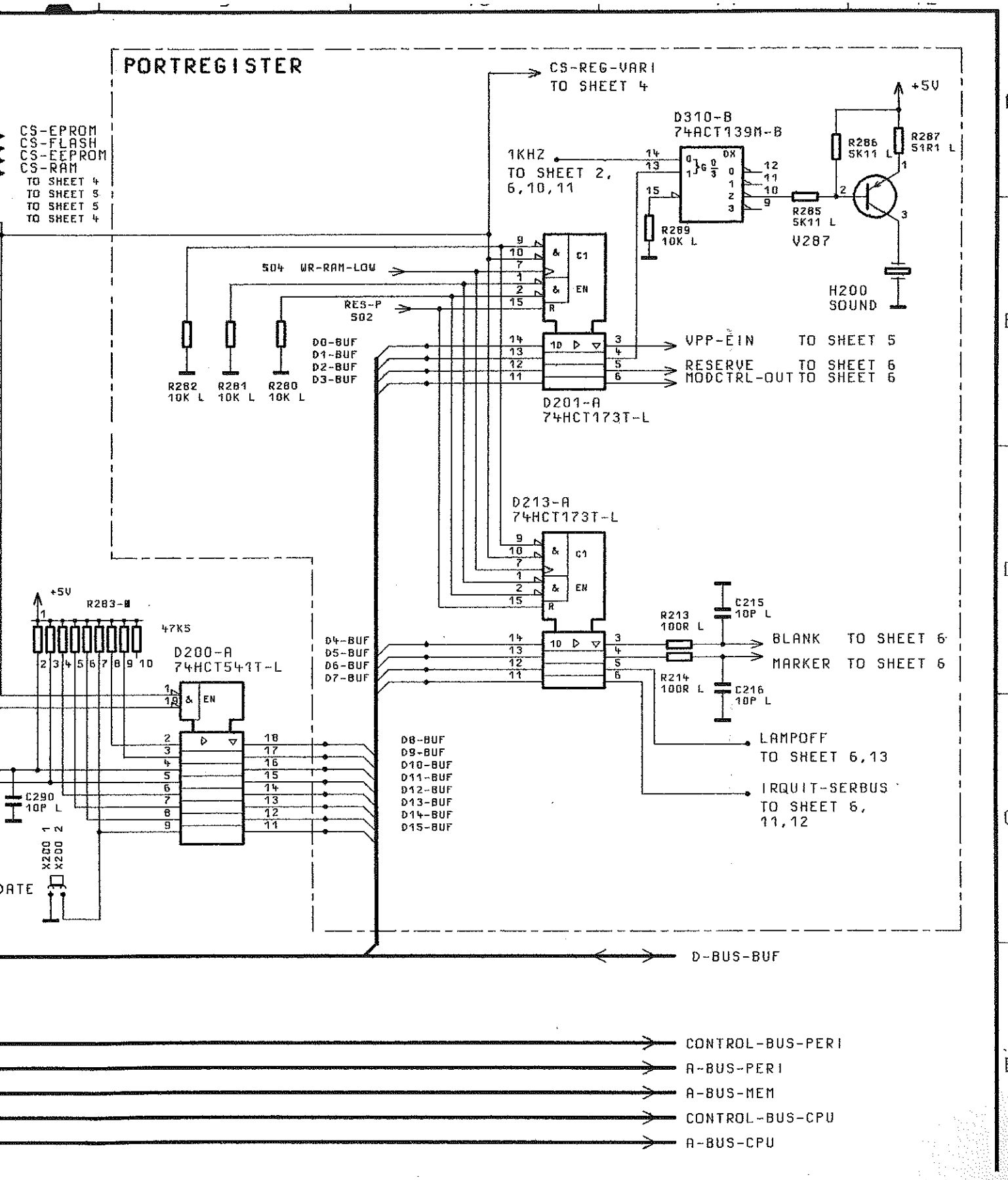





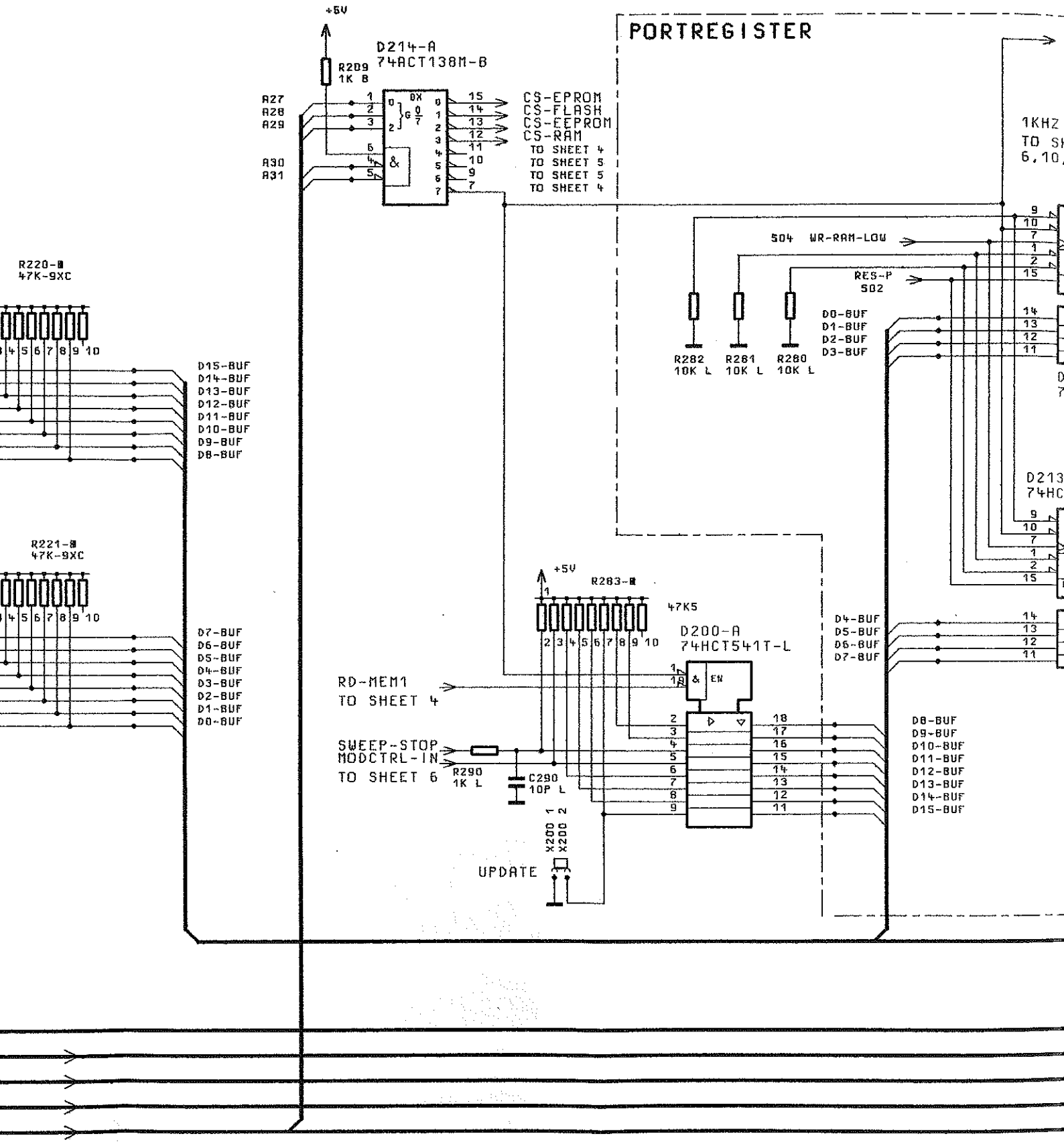

ZEICHN.-NR.




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

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | | | | ZEICHN.-NR. 1035.7308.01S |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | | | | BLATT-NR. 3+ |

ROHDE&SCHWARZ — ZU GERAET SMP — REG.I.V. 1035.5005 — ERSTE Z. 1035.5440




C212
100N B

C214
100N L

C213
100N L

D214-B
74ACT138M-B

D216-B
74ACT573M-L

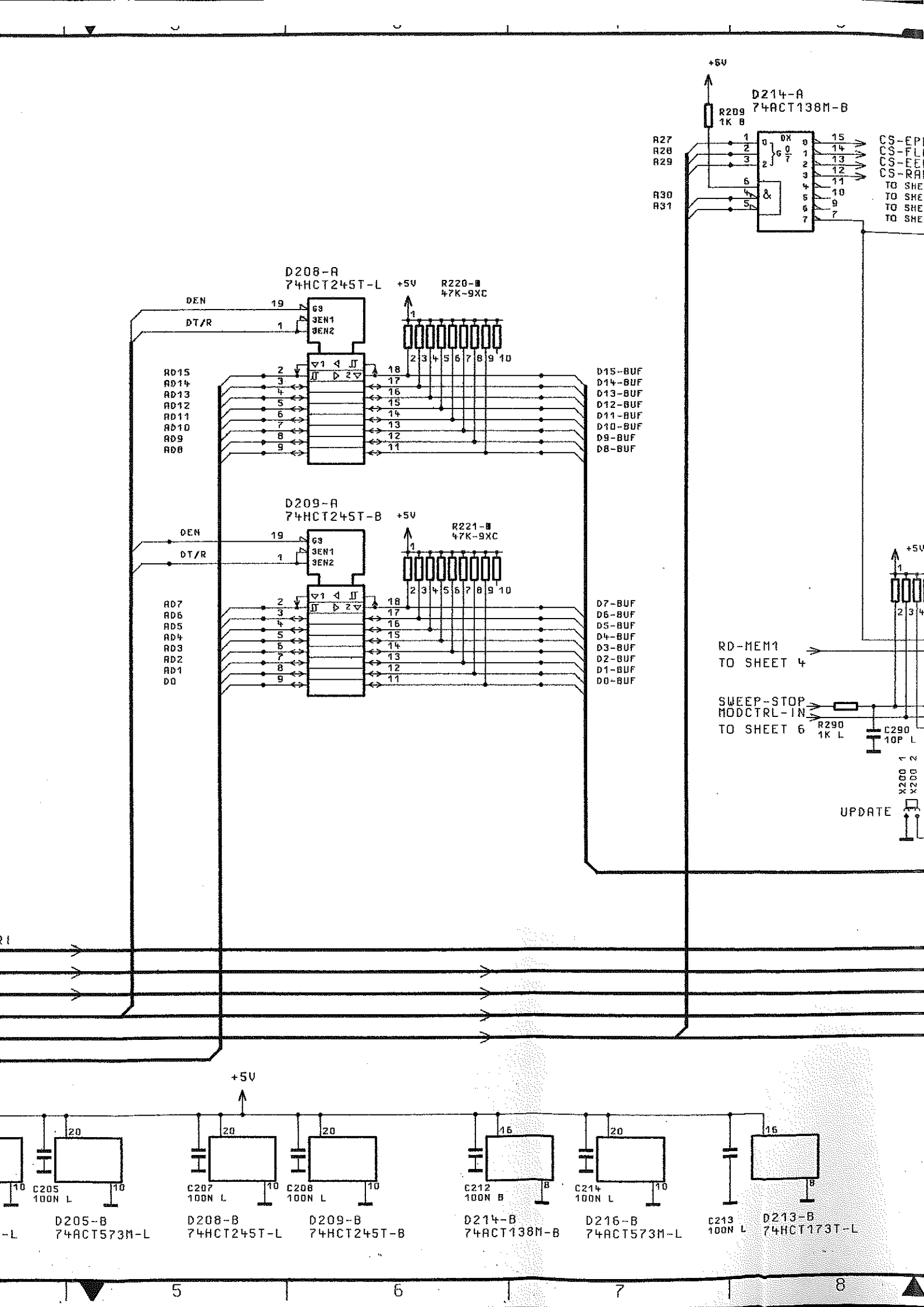
D213-B
74HCT173T-L

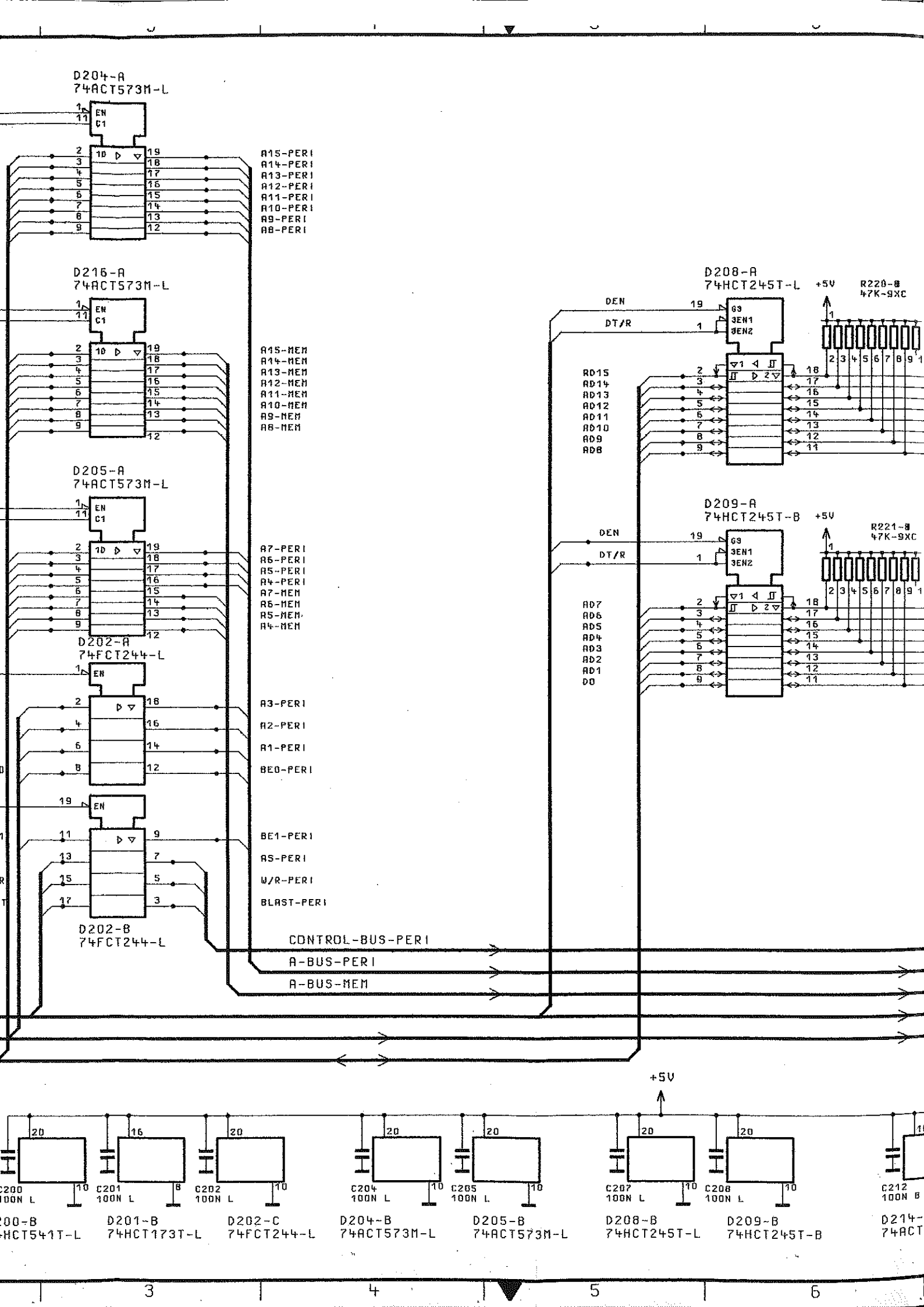
# STROMLAUF GILT FUER VAR.02 CIRCUIT

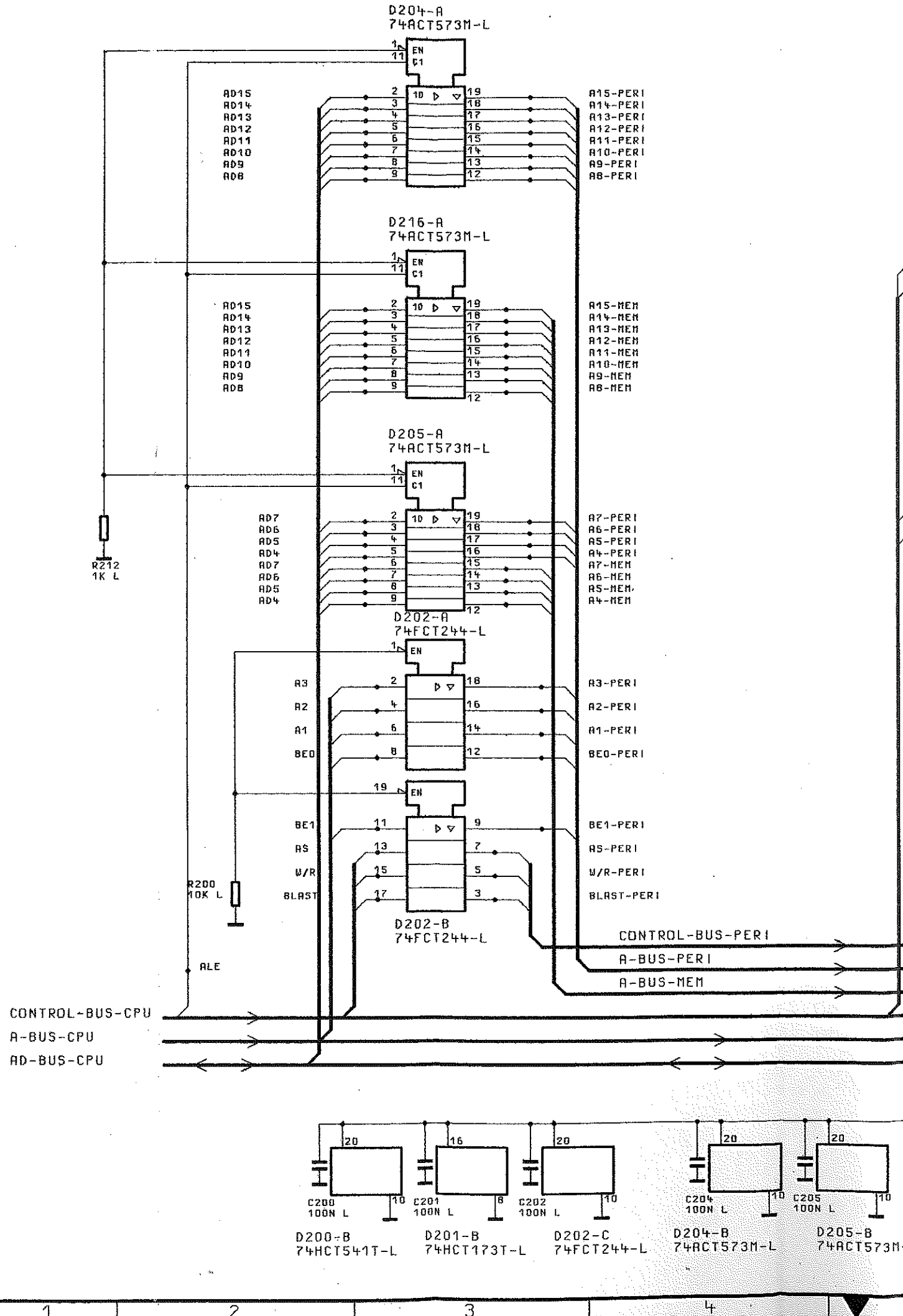
| | | | | | | |
|---|---|---|---|---|---|---|
| B4/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME |
| | | | | BEARB. | | DR |
| | | | | GEPR. | | |
| | | | | NORM | | |
| | | | | PLOTT | 03.05.94 | |
| | | | | / | | |
| REND. IND. | AENDERUNGS-MITTEILUNG | | DATUM | NAME | | |

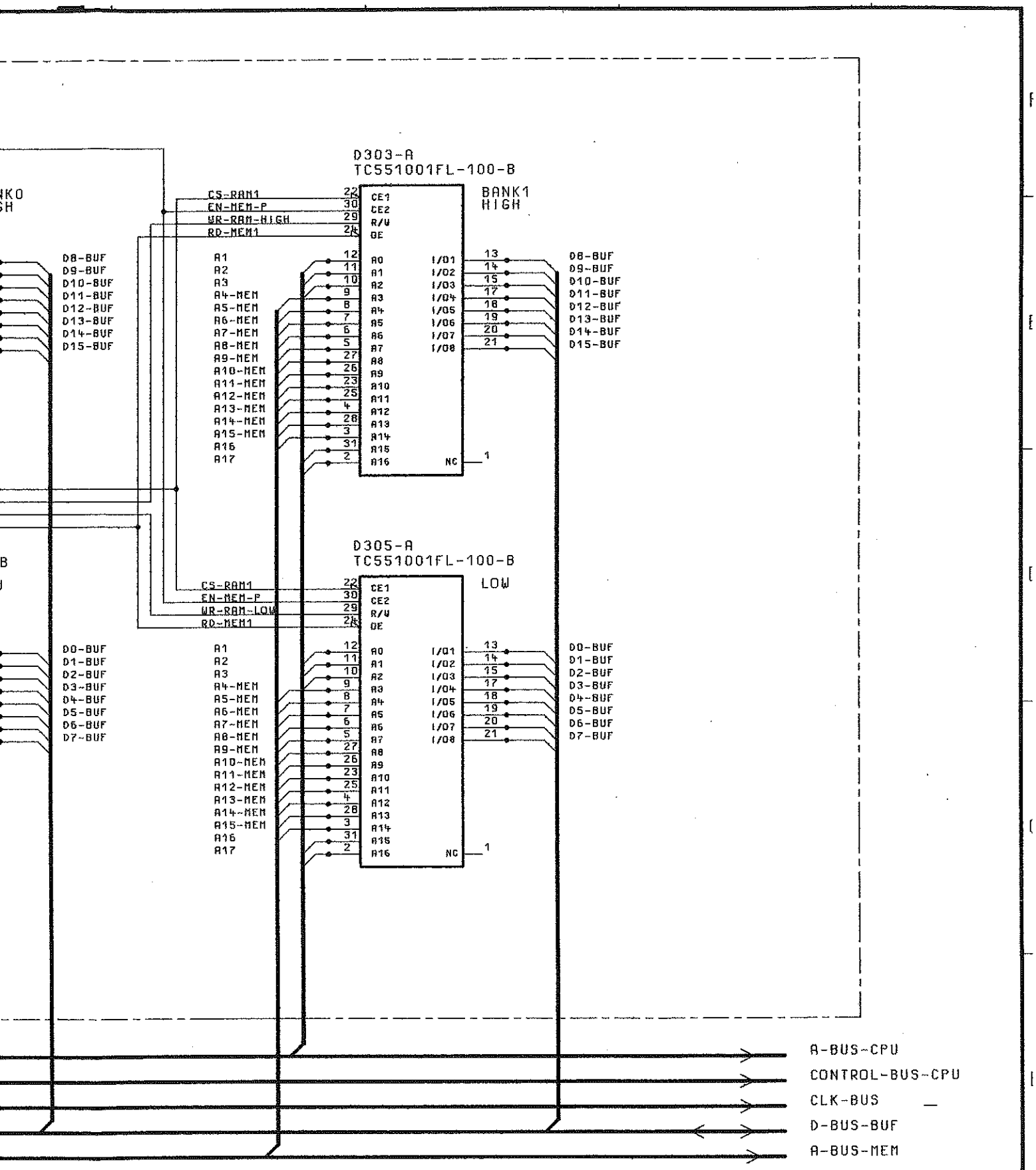
ROHDE&SCHWARZ

ZU GERAET SMP

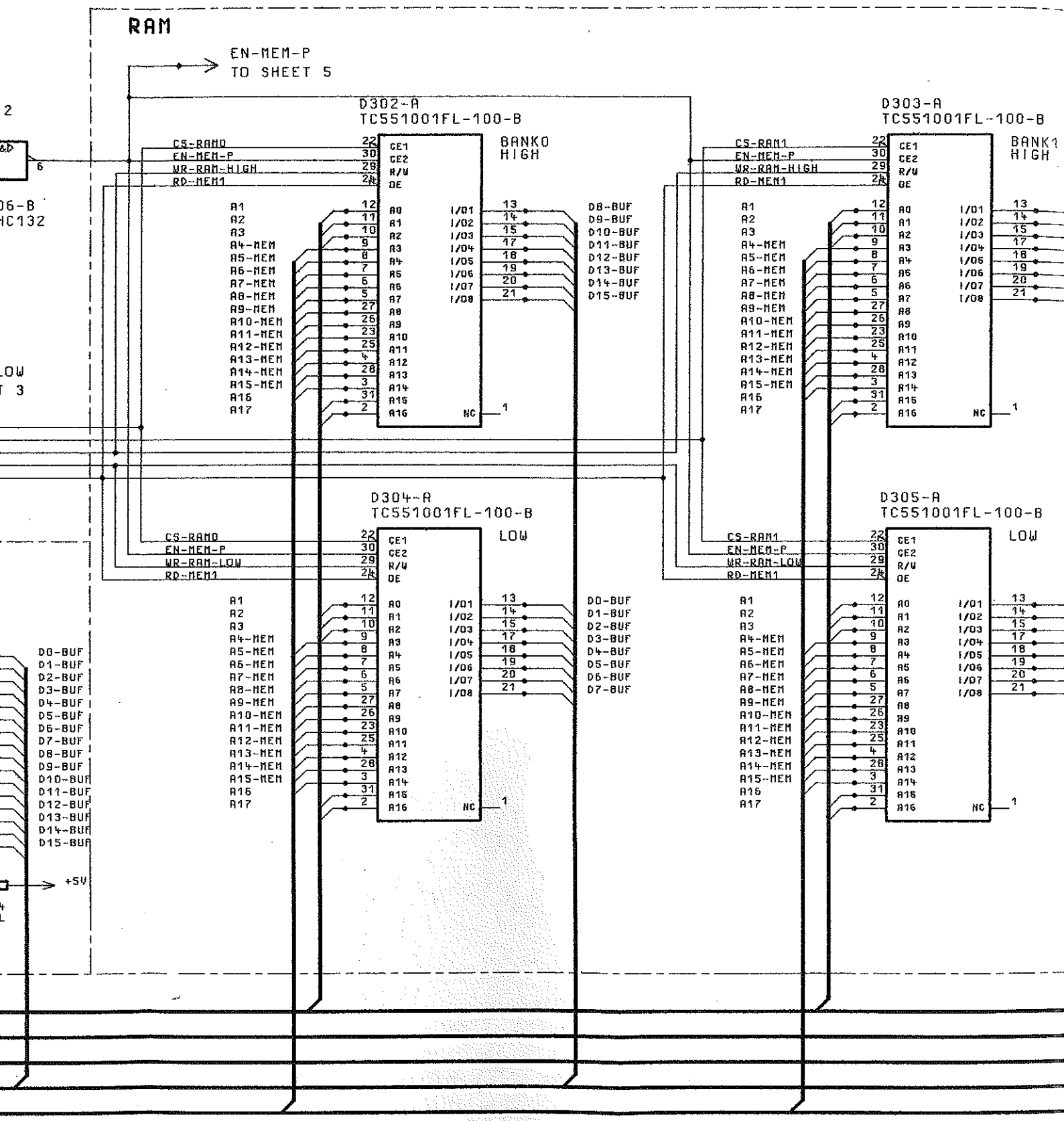

+5V
D214-A
74ACT138M-B
R209
1K B
A27
A28
A29
A30
A31
CS-EP
CS-FL
CS-EE
CS-RA
TO SHE
TO SHE
TO SHE
TO SHE
D208-A
74HCT245T-L
+5V
R220-B
47K-9XC
DEN
DT/R
AD15
AD14
AD13
AD12
AD11
AD10
AD9
AD8
D15-BUF
D14-BUF
D13-BUF
D12-BUF
D11-BUF
D10-BUF
D9-BUF
D8-BUF
D209-A
74HCT245T-B
+5V
R221-B
47K-9XC
DEN
DT/R
AD7
AD6
AD5
AD4
AD3
AD2
AD1
D0
D7-BUF
D6-BUF
D5-BUF
D4-BUF
D3-BUF
D2-BUF
D1-BUF
D0-BUF
+5V
RD-MEM1
TO SHEET 4
SWEEP-STOP
MODCTRL-IN
TO SHEET 6
R290
1K L
C290
10P L
X200
X200
UPDATE
+5V
C205
100N L
D205-B
74ACT573M-L
C207
100N L
D208-B
74HCT245T-L
C208
100N L
D209-B
74HCT245T-B
C212
100N B
D214-B
74ACT138M-B
C214
100N L
D216-B
74ACT573M-L
C213
100N L
D213-B
74HCT173T-L


D204-A
74ACT573M-L
A15-PERI
A14-PERI
A13-PERI
A12-PERI
A11-PERI
A10-PERI
A9-PERI
A8-PERI
D216-A
74ACT573M-L
A15-MEM
A14-MEM
A13-MEM
A12-MEM
A11-MEM
A10-MEM
A9-MEM
A8-MEM
D205-A
74ACT573M-L
A7-PERI
A6-PERI
A5-PERI
A4-PERI
A7-MEM
A6-MEM
A5-MEM
A4-MEM
D202-A
74FCT244-L
A3-PERI
A2-PERI
A1-PERI
BE0-PERI
BE1-PERI
AS-PERI
W/R-PERI
BLAST-PERI
D202-B
74FCT244-L
D208-A
74HCT245T-L
+5V
R220-8
47K-9XC
DEN
DT/R
AD15
AD14
AD13
AD12
AD11
AD10
AD9
AD8
D209-A
74HCT245T-B
+5V
R221-8
47K-9XC
DEN
DT/R
AD7
AD6
AD5
AD4
AD3
AD2
AD1
D0
CONTROL-BUS-PERI
A-BUS-PERI
A-BUS-MEM
+5V
C200
100N L
C201
100N L
C202
100N L
C204
100N L
C205
100N L
C207
100N L
C208
100N L
C212
100N B
D200-B
HCT541T-L
D201-B
74HCT173T-L
D202-C
74FCT244-L
D204-B
74ACT573M-L
D205-B
74ACT573M-L
D208-B
74HCT245T-L
D209-B
74HCT245T-B
D214-
74ACT
3
4
5
6

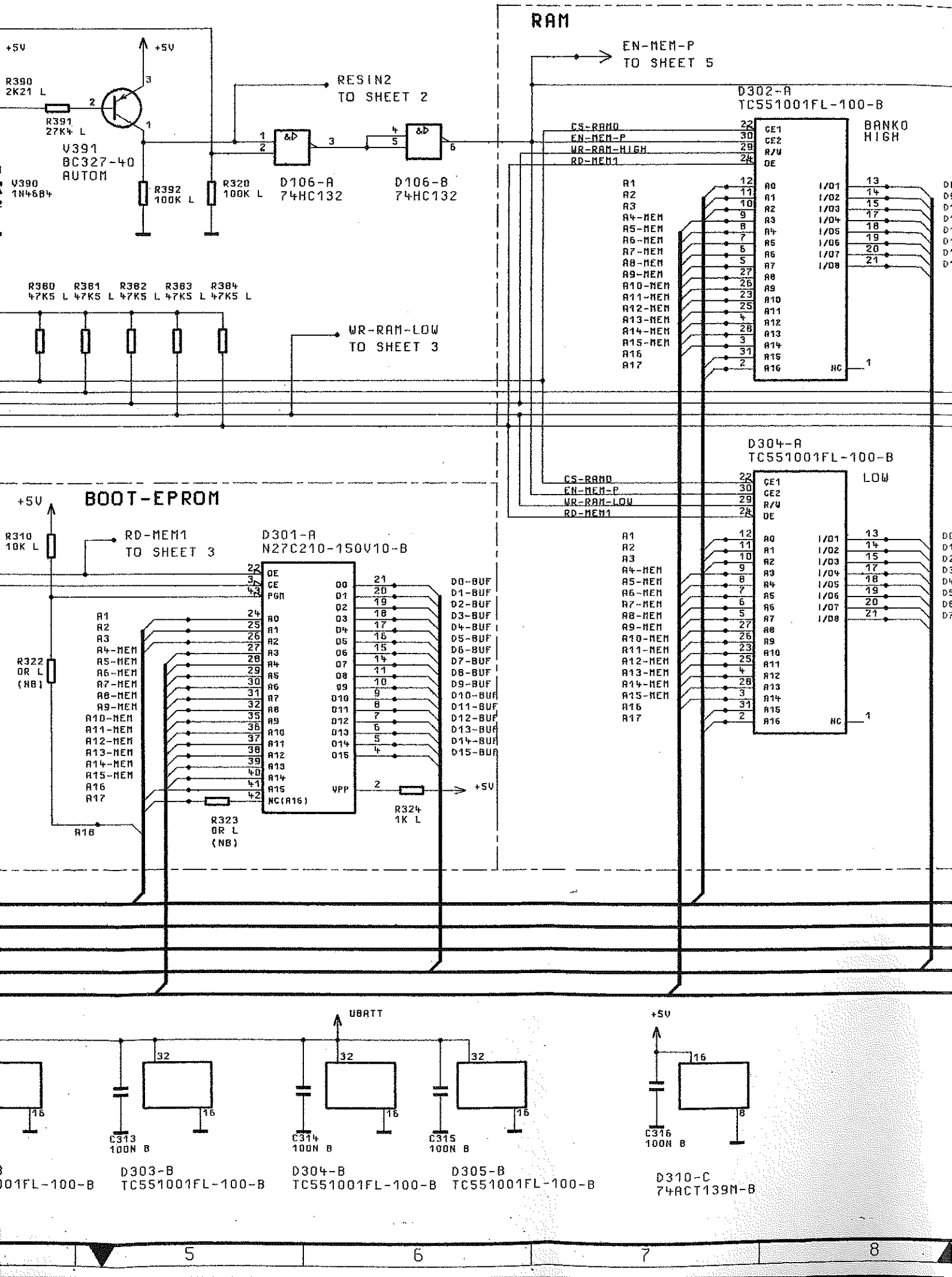


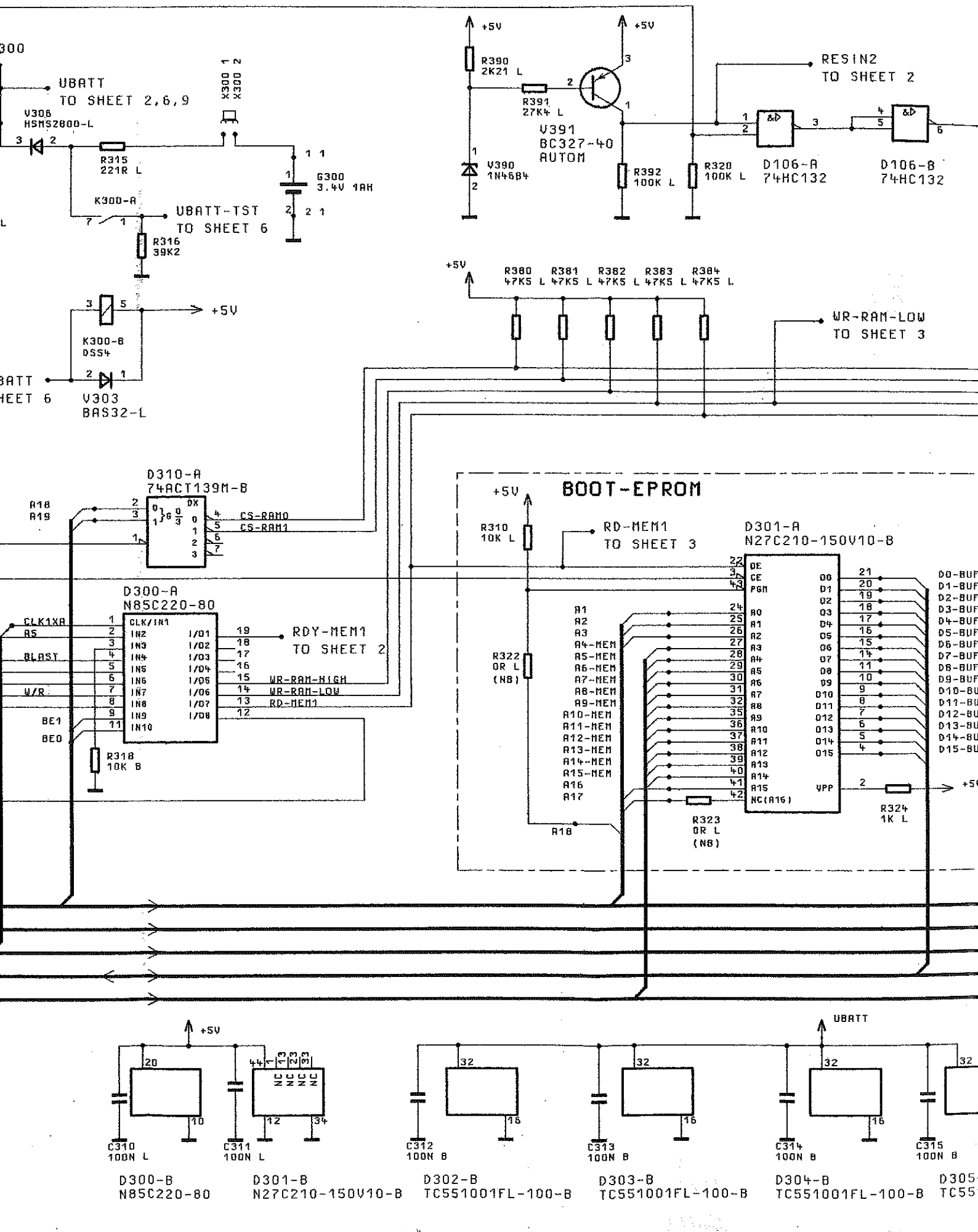



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| D4/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | | | | ZEICHN.-NR. 1035.7308.01S |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | BLATT-NR. 4+ |
| | | | | ZU GERAET SMP | | | REG.NR. 1035.5005 ERSTE Z. 1035.5440 |

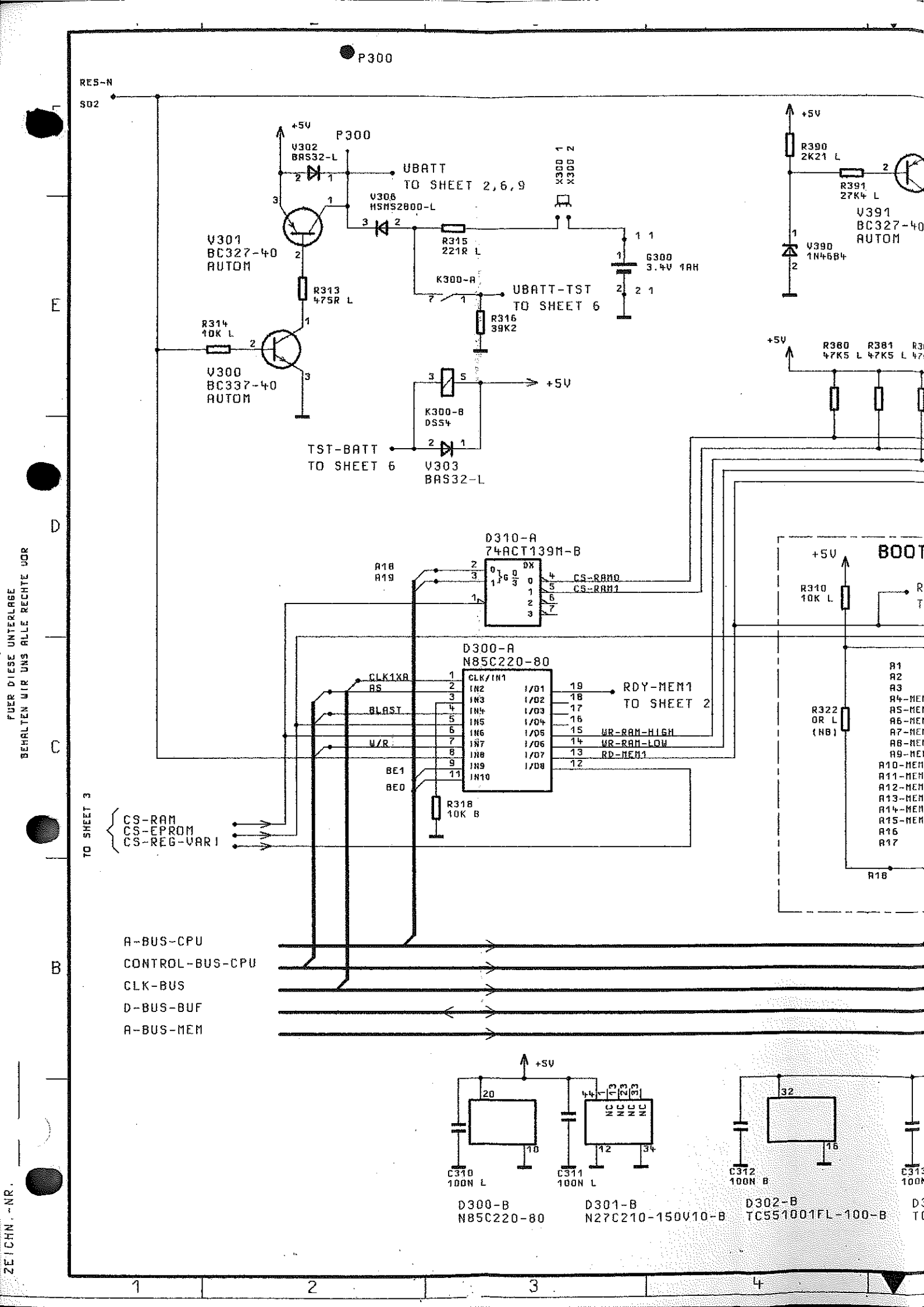



| | | | | | | |
|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NA |
| | | | | BEARB. | | D |
| | | | | GEPR. | | |
| | | | | NORM | | |
| | | | | PLOTT | 03.05.94 | |
| / | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWA | | |
| | | | | ZU GERAET | SMP | |

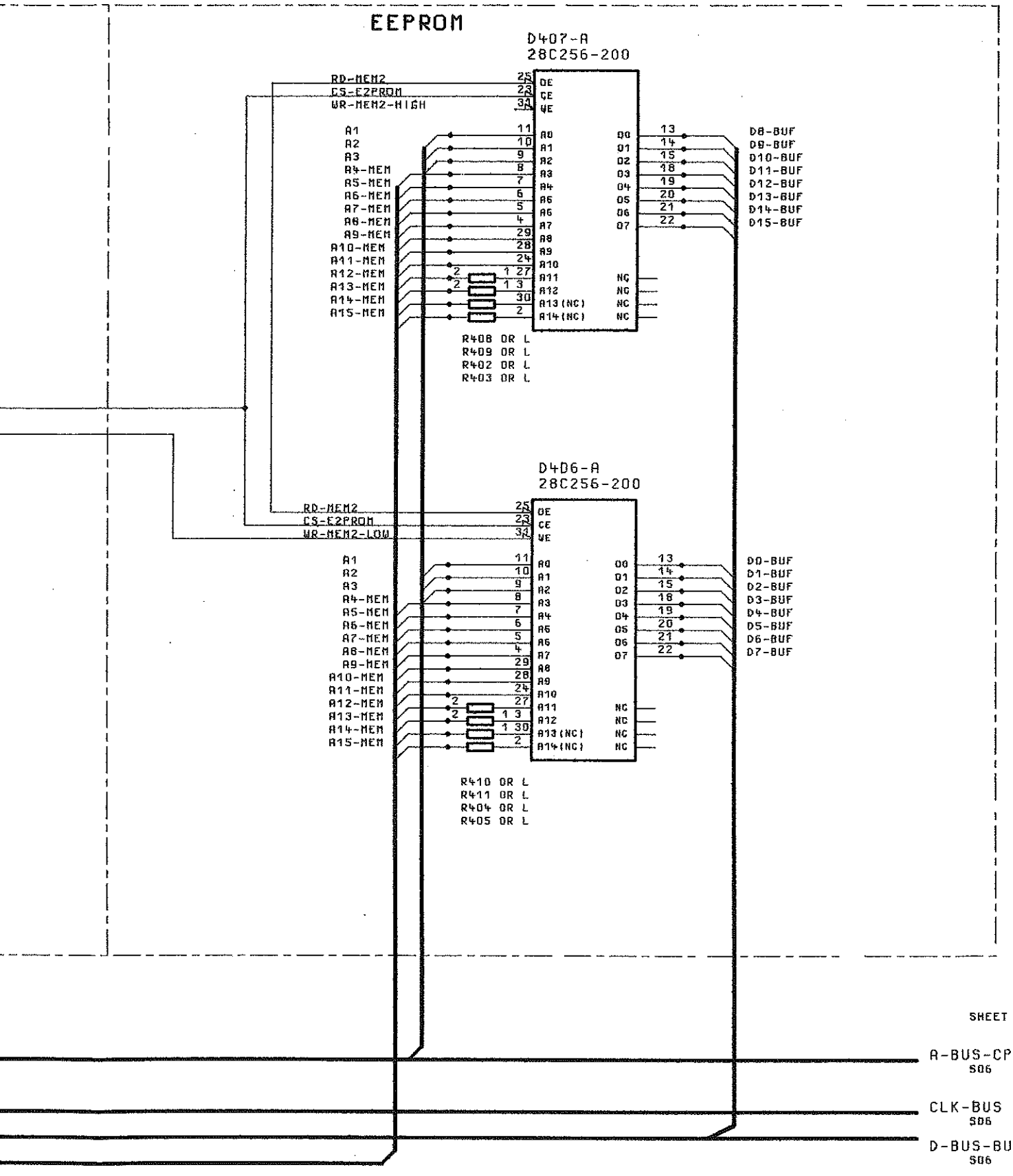

RAM
+5V
R390
2K21 L
R391
27K4 L
V391
BC327-40
AUTOM
V390
1N4684
R392
100K L
R320
100K L
RESIN2
TO SHEET 2
D106-A
74HC132
D106-B
74HC132
EN-MEM-P
TO SHEET 5
D302-A
TC551001FL-100-B
BANKO
HIGH
CS-RAM0
EN-MEM-P
WR-RAM-HIGH
RD-MEM1
R360 47K5 L
R361 47K5 L
R362 47K5 L
R363 47K5 L
R364 47K5 L
WR-RAM-LOW
TO SHEET 3
D304-A
TC551001FL-100-B
LOW
BOOT-EPROM
R310
10K L
RD-MEM1
TO SHEET 3
D301-A
N27C210-150V10-B
R322
0R L
(NB)
R323
0R L
(NB)
R324
1K L
A18
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
D8-BUF
D9-BUF
D10-BUF
D11-BUF
D12-BUF
D13-BUF
D14-BUF
D15-BUF
UBATT
C313
100N B
C314
100N B
C315
100N B
C316
100N B
D303-B
TC551001FL-100-B
D304-B
TC551001FL-100-B
D305-B
TC551001FL-100-B
D310-C
74ACT139M-B




D300-B N85C220-80 | D301-B N27C210-150V10-B | D302-B TC551001FL-100-B | D303-B TC551001FL-100-B | D304-B TC551001FL-100-B | D305 TC55


P300
RES-N
SO2
+5V
V302
BAS32-L
P300
UBATT
TO SHEET 2,6,9
V306
HSMS2800-L
X300 1
X300 2
V301
BC327-40
AUTOM
R315
221R L
G300
3.4V 1AH
K300-A
UBATT-TST
TO SHEET 6
R313
475R L
R316
39K2
R314
10K L
V300
BC337-40
AUTOM
K300-B
DS54
+5V
TST-BATT
TO SHEET 6
V303
BAS32-L
R390
2K21 L
R391
27K4 L
V391
BC327-40
AUTOM
V390
1N4684
R360
47K5 L
R381
47K5 L
D310-A
74ACT139M-B
A18
A19
CS-RAM0
CS-RAM1
D300-A
N85C220-80
CLK1XA
BS
BLAST
W/R
BE1
BE0
RDY-MEM1
TO SHEET 2
WR-RAM-HIGH
WR-RAM-LOW
RD-MEM1
R318
10K B
TO SHEET 3
CS-RAM
CS-EPROM
CS-REG-VARI
BOOT
R310
10K L
R322
OR L
(NB)
A18
A-BUS-CPU
CONTROL-BUS-CPU
CLK-BUS
D-BUS-BUF
A-BUS-MEM
C310
100N L
C311
100N L
C312
100N B
D300-B
N85C220-80
D301-B
N27C210-150V10-B
D302-B
TC551001FL-100-B
FUER DIESE UNTERLAGE
BEHALTEN WIR UNS ALLE RECHTE VOR
ZEICHN.-NR.

# EEPROM



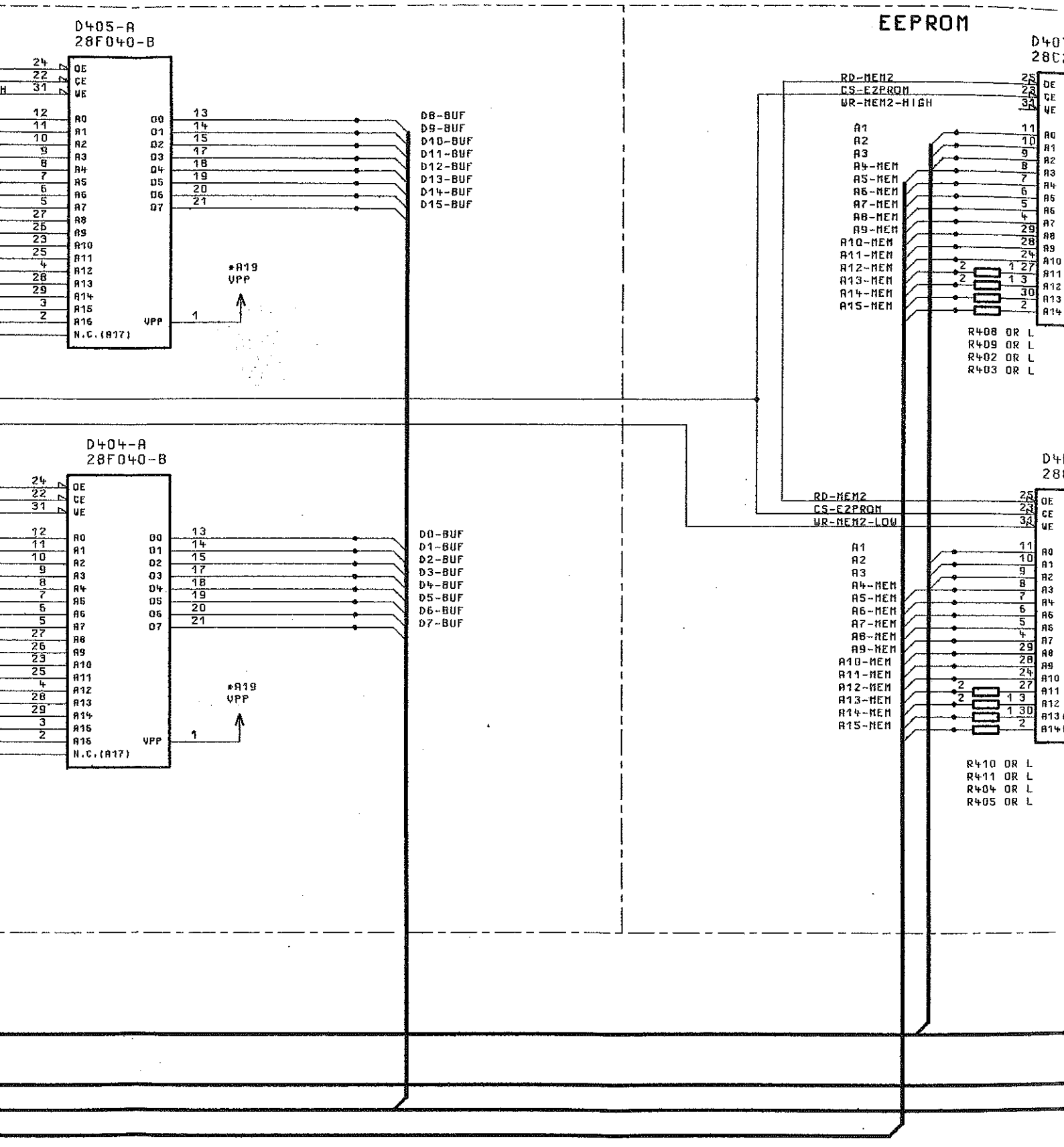

SHEET

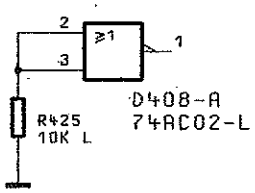
A-BUS-CPU
S06

CLK-BUS
S06

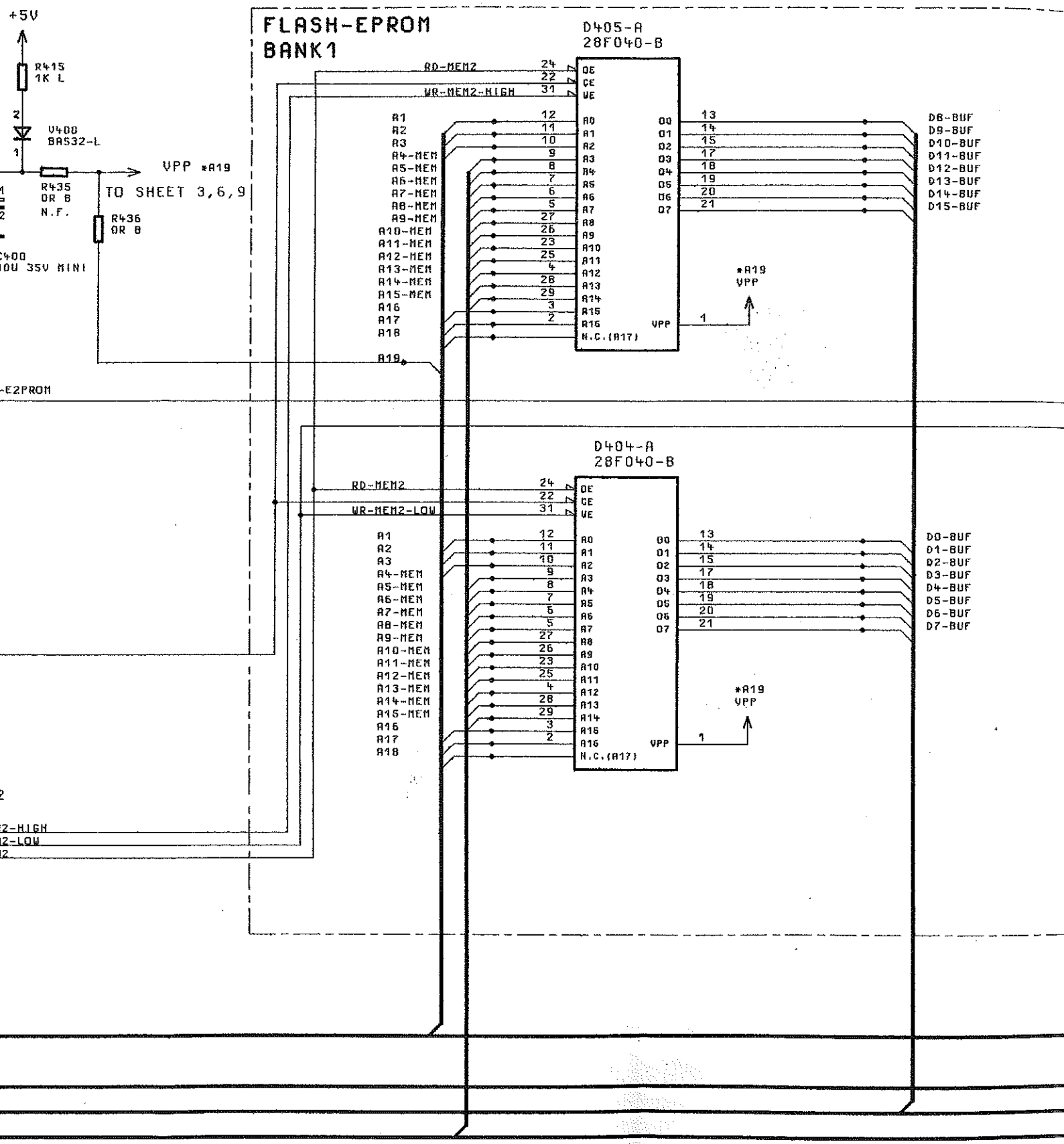
D-BUS-BUF
S06

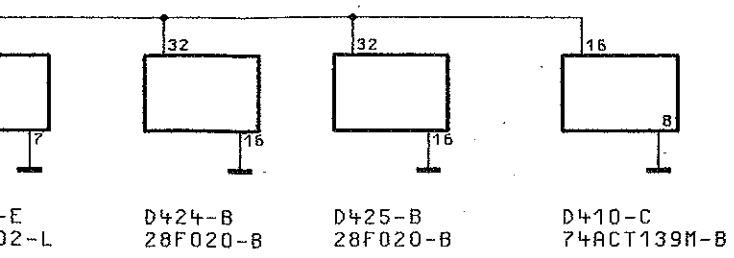
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 16PK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | | | | ZEICHN.-NR. 1035.7308.01S |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | BLATT-NR. 5+ |
| | | | | ZU GERAET SMP | | | REG.I.V. 1035.5005 ERSTE Z. 1035.5440 |

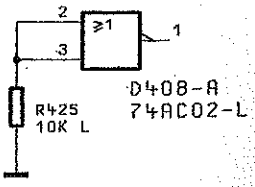


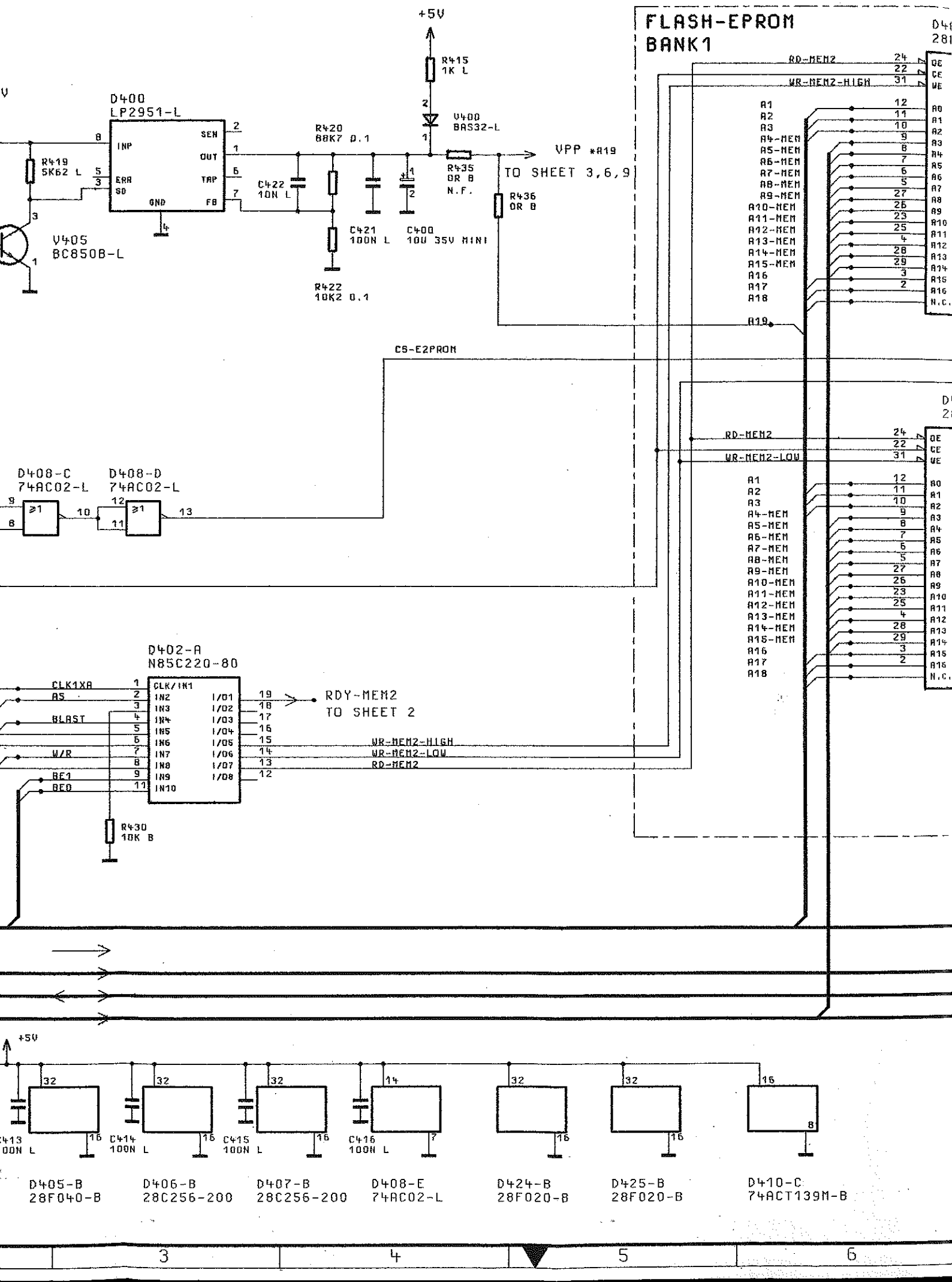



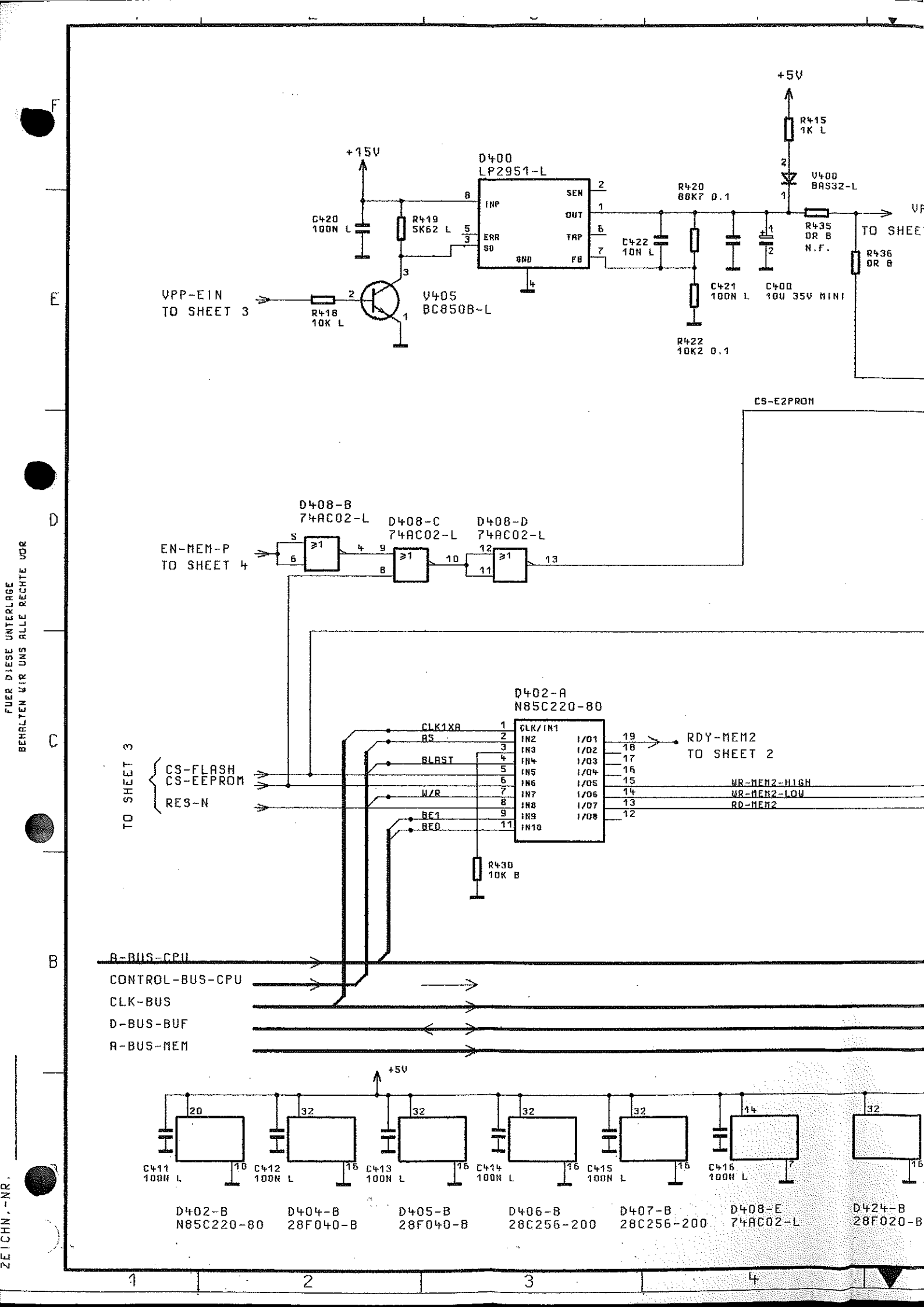

| | | | | | | |
|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 16PK | TAG | NAME |
| | | | | BEARB. | | DR |
| | | | | GEPR. | | |
| | | | | NORM | | |
| | | | | PLOTT | 03.05.94 | |
| / | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | |
| | | | | ZU GERAET | SMP | |


+5V
R415
1K L
V400
BAS32-L
VPP *A19
TO SHEET 3,6,9
R435
0R 8
N.F.
R436
0R 8
C400
10U 35V MINI
-E2PROM
FLASH-EPROM
BANK1
D405-A
28F040-B
RD-MEM2
WR-MEM2-HIGH
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
A19
OE
CE
WE
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
A16
N.C.(A17)
O0
O1
O2
O3
O4
O5
O6
O7
VPP
*A19
VPP
D8-BUF
D9-BUF
D10-BUF
D11-BUF
D12-BUF
D13-BUF
D14-BUF
D15-BUF
D404-A
28F040-B
RD-MEM2
WR-MEM2-LOW
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
2-HIGH
2-LOW
2


32
16
32
16
16
8
7
D424-B
28F020-B
D425-B
28F020-B
D410-C
74ACT139M-B

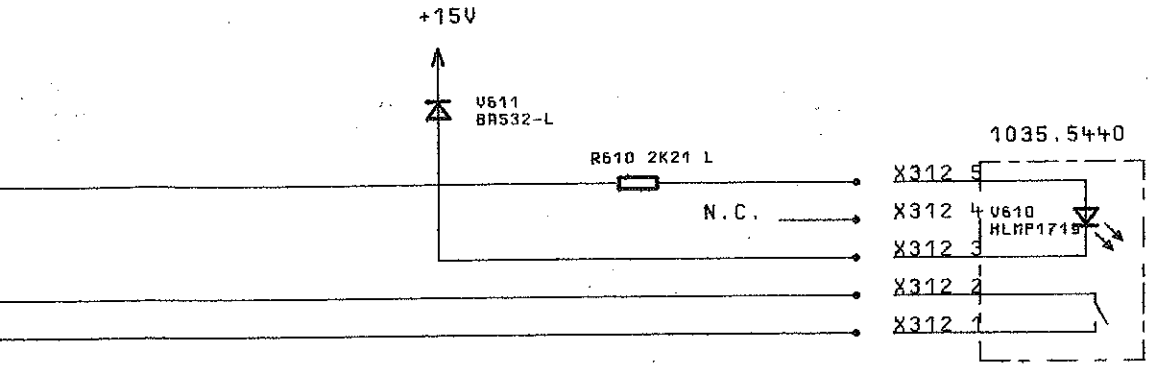

2
≥1
1
3
R425
10K L
D408-A
74AC02-L


FLASH-EPROM
BANK1
+5V
D400
LP2951-L
INP
SEN
OUT
TAP
FB
GND
ERR
SD
R419
5K62 L
R420
88K7 0.1
R415
1K L
V400
BAS32-L
R435
0R 8
N.F.
R436
0R 8
VPP *A19
TO SHEET 3,6,9
C422
10N L
C421
100N L
C400
10U 35V MINI
R422
10K2 0.1
V405
BC850B-L
RD-MEM2
WR-MEM2-HIGH
WR-MEM2-LOW
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
A19
CS-E2PROM
D408-C
74AC02-L
D408-D
74AC02-L
≥1
D402-A
N85C220-80
CLK1X8
AS
BLAST
W/R
BE1
BE0
CLK/IN1
IN2
IN3
IN4
IN5
IN6
IN7
IN8
IN9
IN10
I/O1
I/O2
I/O3
I/O4
I/O5
I/O6
I/O7
I/O8
RDY-MEM2
TO SHEET 2
R430
10K B
+5V
C413
100N L
C414
100N L
C415
100N L
C416
100N L
D405-B
28F040-B
D406-B
28C256-200
D407-B
28C256-200
D408-E
74AC02-L
D424-B
28F020-B
D425-B
28F020-B
D410-C
74ACT139M-B






ZEICHN.-NR.

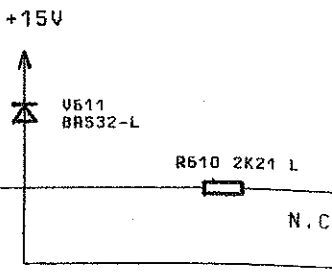



RXD1
TXD1
CTS1
RTS1

X-AXIS
DIAG-5V
DIAG-15V
TRIGGER
AUX-TRIG
SERBUS-CLK
SERBUS-DAT
SERBUS-INT
SERBUS-SYNC
SYSRESET
AC-FAIL

BLANK
MARKER
SWEEP-STOP
MODCTRL-IN
MODCTRL-OUT
RESERVE
RES-P

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | ZEICHN.-NR. 1035.7308.01S |
| | | | | ZU GERAET SMP | | | BLATT-NR. 6+ |
| | | | | REG.I.V. 1035.5005 | | | ERSTE Z. 1035.5440 |




VS12-P

POWER SWITCH

POWER SWITCHGND

N.C.

X-AXIS

DIAG-5V

DIAG-15V

TRIGGER

AUX-TRIG

SERBUS-CLK

SERBUS-DAT

SERBUS-INT

SERBUS-SYNC

SYSRESET

AC-FAIL

BLANK

MARKER

SWEEP-STOP

MODCTRL-IN

MODCTRL-OUT

RESERVE

RES-P

R611
10R L

| | | | | | | |
|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | |
| | | | | BEARB. | | |
| | | | | GEPR. | | |
| | | | | NORM | | |
| | | | | PLOTT | 03.05.94 | |
| | | | | | | |
| / | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHW | | |
| | | | | ZU GERRET | SMP | |

X31B 27 VS12-P

X31B 26 POWER SWITCH
X31B 25 POWER SWITCHGND

X31B 50 N.C.
X31B 49
X31B 48
X31B 47
X31B 46

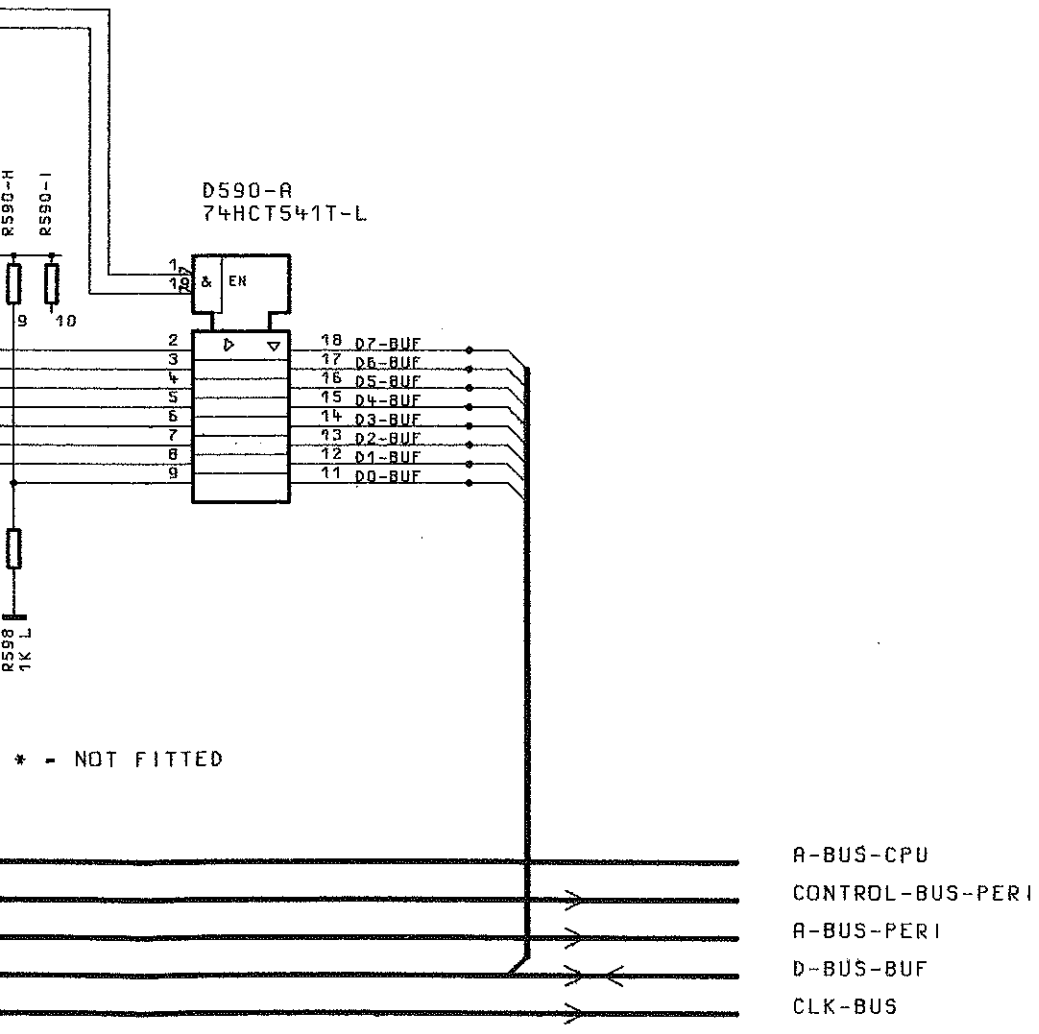
X31B 45 X-AXIS
X31B 44 DIAG-5V
X31B 43 DIAG-15V
X31B 42 TRIGGER
X31B 41 AUX-TRIG
X31B 40 SERBUS-CLK
X31B 39 SERBUS-DAT
X31B 38 SERBUS-INT
X31B 37 SERBUS-SYNC
X31B 36 SYSRESET
X31B 35 AC-FAIL

X31B 34 BLANK
X31B 33 MARKER
X31B 32 SWEEP-STOP
X31B 31 MODCTRL-IN
X31B 30 MODCTRL-OUT
X31B 29 RESERVE
X31B 28 RES-P

R611
10R L



ZEICHN.-NR.




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | | | | ZEICHN.-NR. 1035.7308.01S |
| REND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | BLATT-NR. 7+ V. BL. |
| | | | | ZU GERAET SMP | | | REG.I.V. 1035.5005 ERSTE Z. 1035.5440 |

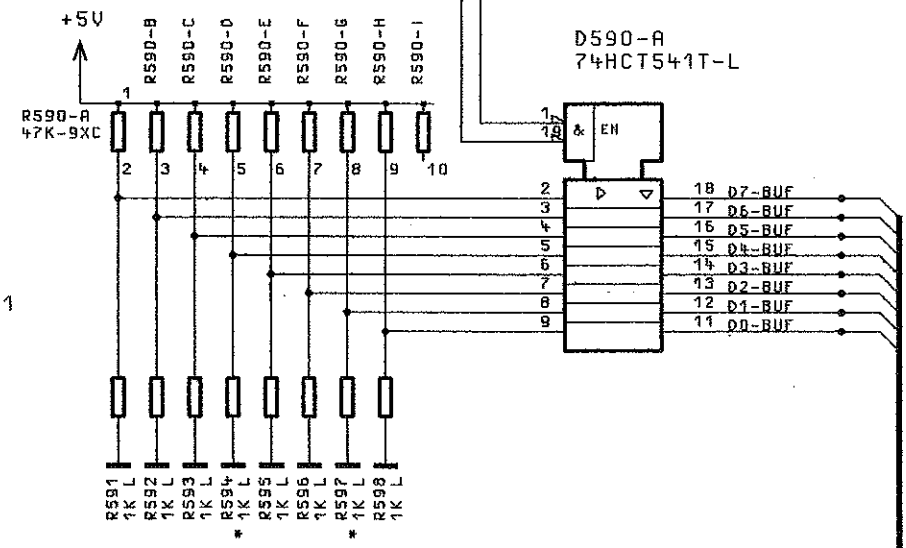
WR-REG1-HIGH

RD-PERI1 TO SHEET 7,8,9

CS-REG1 TO SHEET 7,8
CS-REG2 TO SHEET 7,9
CS-REG3 TO SHEET 7,9

WR-REG2-HIGH TO SHEET 9

WR-REG4-LOW TO SHEET 11

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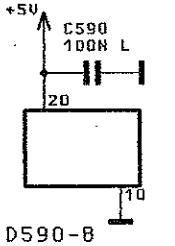
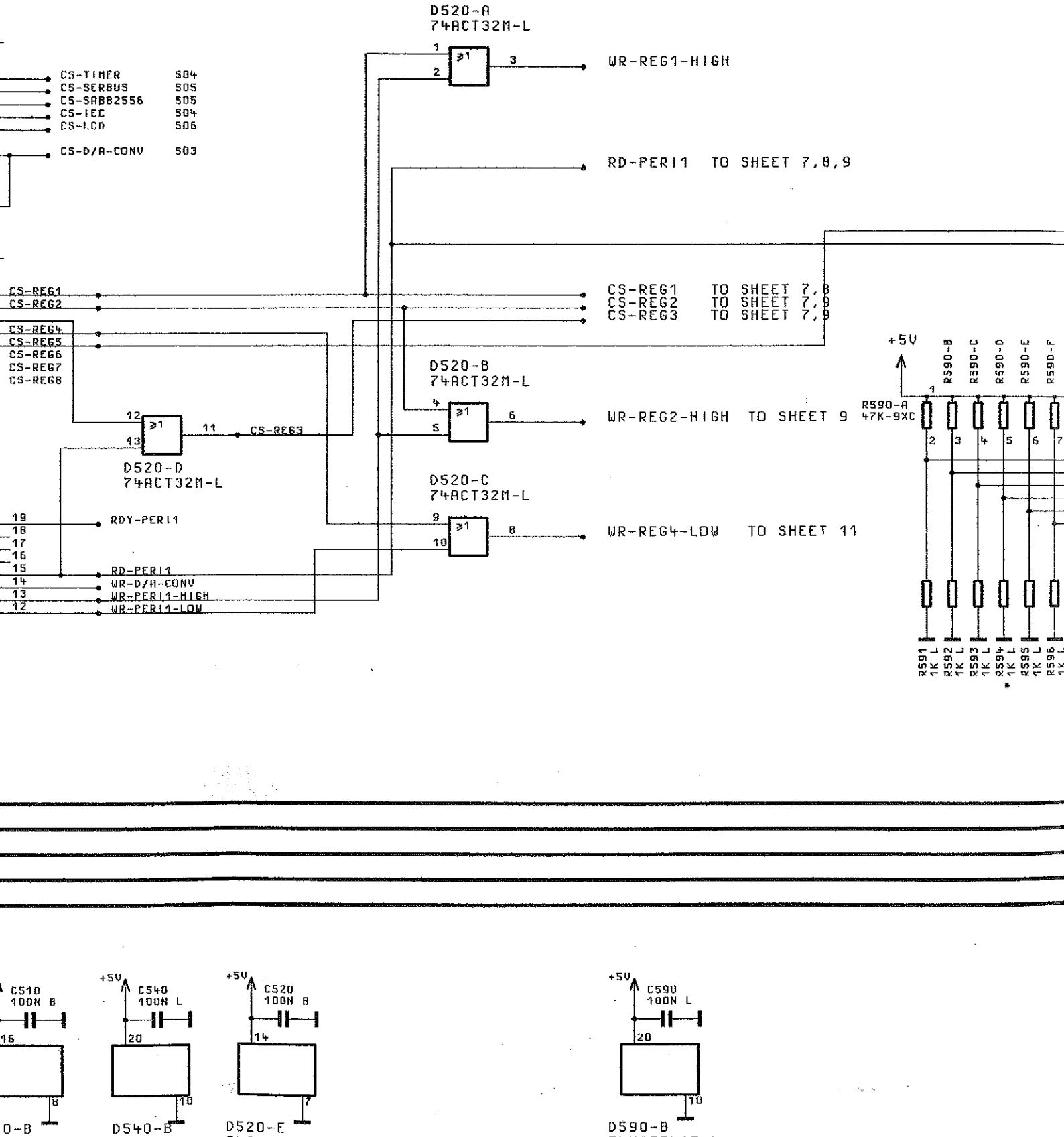
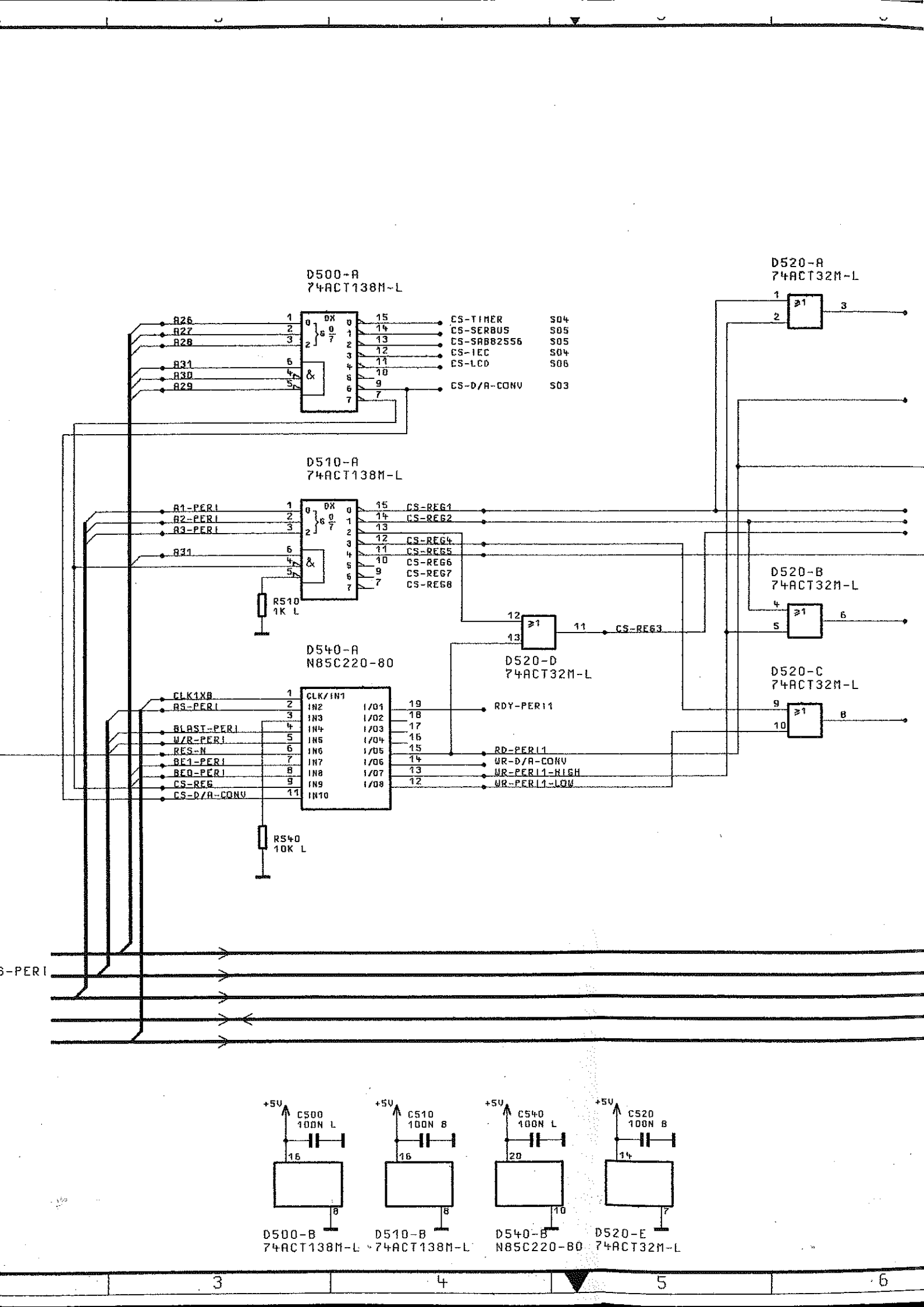


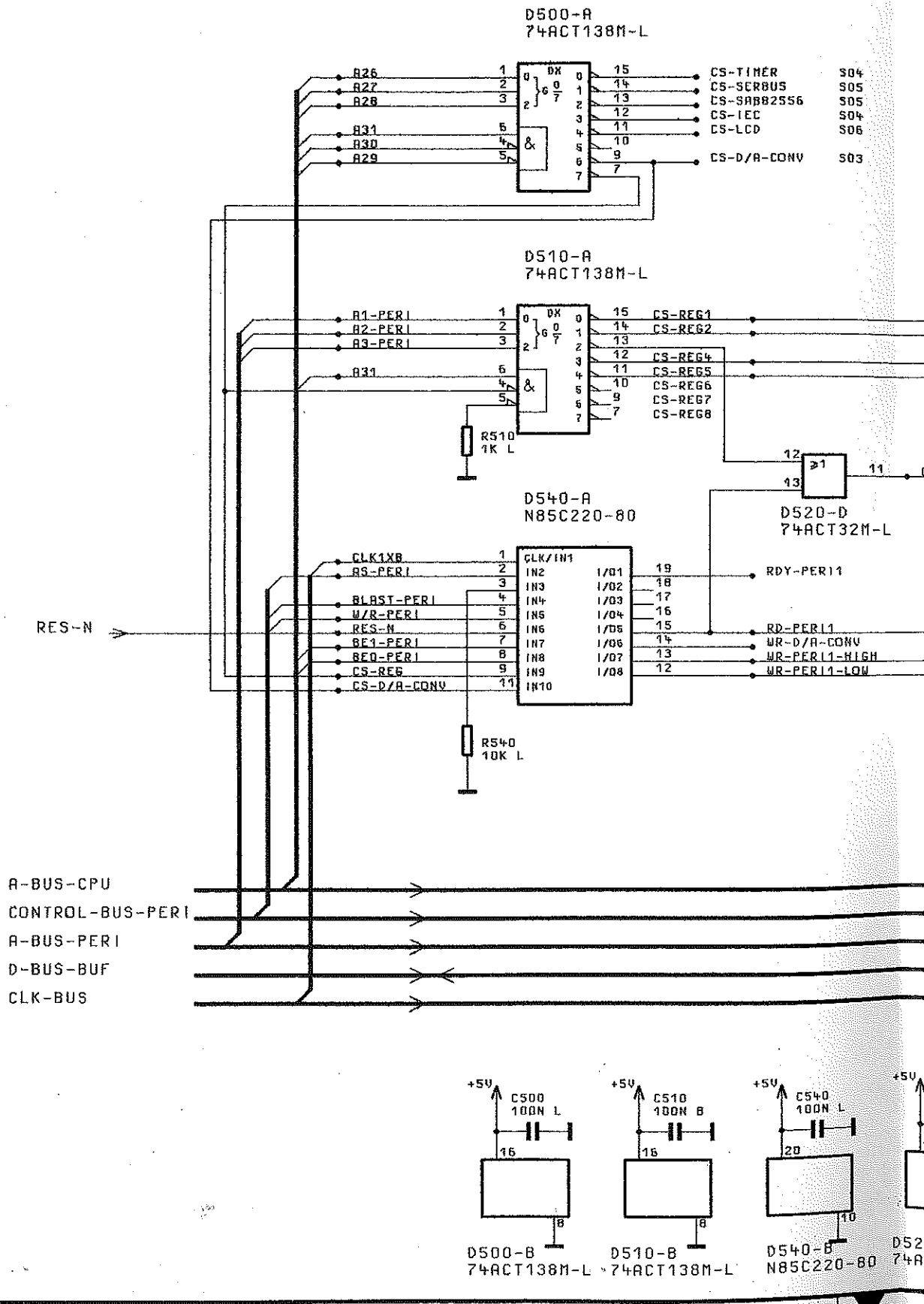

| | | | | | | |
|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | |
| | | | | BEARB. | | |
| | | | | GEPR. | | |
| | | | | NORM | | |
| | | | | PLOTT | 03.05.94 | |
| / | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ZU GERRET | SMP | |

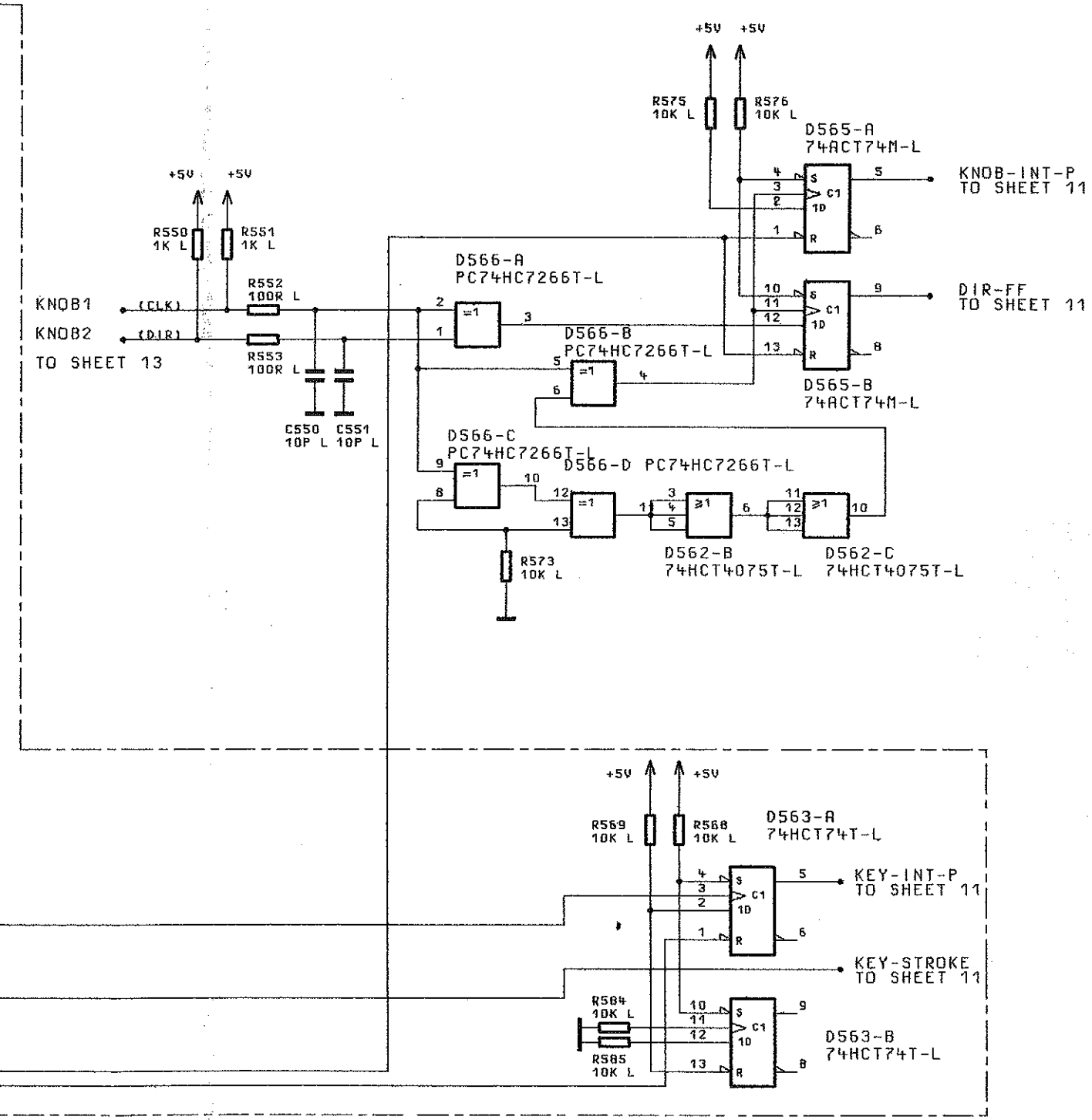
ROHDE&SCHW


D520-A
74ACT32M-L
CS-TIMER S04
CS-SERBUS S05
CS-SAB82556 S05
CS-IEC S04
CS-LCD S06
CS-D/A-CONV S03
WR-REG1-HIGH
RD-PERI1 TO SHEET 7,8,9
CS-REG1 TO SHEET 7,8
CS-REG2 TO SHEET 7,9
CS-REG3 TO SHEET 7,9
CS-REG1
CS-REG2
CS-REG4
CS-REG5
CS-REG6
CS-REG7
CS-REG8
D520-B
74ACT32M-L
WR-REG2-HIGH TO SHEET 9
D520-D
74ACT32M-L
D520-C
74ACT32M-L
WR-REG4-LOW TO SHEET 11
RDY-PERI1
RD-PERI1
WR-D/A-CONV
WR-PERI1-HIGH
WR-PERI1-LOW
+5V
RS90-A
47K-9XC
R590-B
R590-C
R590-D
R590-E
R590-F
R591 1K L
R592 1K L
R593 1K L
R594 1K L
R595 1K L
R596 1K L


C510
100N B
C540
100N L
C520
100N B
+5V
D540-B
N85C220-80
D520-E
74ACT32M-L
C590
100N L
D590-B
74HCT541T-L


D500-A
74ACT138M-L
A26
A27
A28
A31
A30
A29
CS-TIMER S04
CS-SERBUS S05
CS-SAB82556 S05
CS-IEC S04
CS-LCD S06
CS-D/A-CONV S03
D510-A
74ACT138M-L
A1-PERI
A2-PERI
A3-PERI
A31
R510
1K L
CS-REG1
CS-REG2
CS-REG4
CS-REG5
CS-REG6
CS-REG7
CS-REG8
D520-A
74ACT32M-L
D520-B
74ACT32M-L
D520-D
74ACT32M-L
CS-REG3
D520-C
74ACT32M-L
D540-A
N85C220-80
CLK1XB
AS-PERI
BLAST-PERI
W/R-PERI
RES-N
BE1-PERI
BE0-PERI
CS-REG
CS-D/A-CONV
R540
10K L
RDY-PERI1
RD-PERI1
WR-D/A-CONV
WR-PERI1-HIGH
WR-PERI1-LOW
+5V
C500
100N L
C510
100N B
C540
100N L
C520
100N B
D500-B
74ACT138M-L
D510-B
74ACT138M-L
D540-B
N85C220-80
D520-E
74ACT32M-L









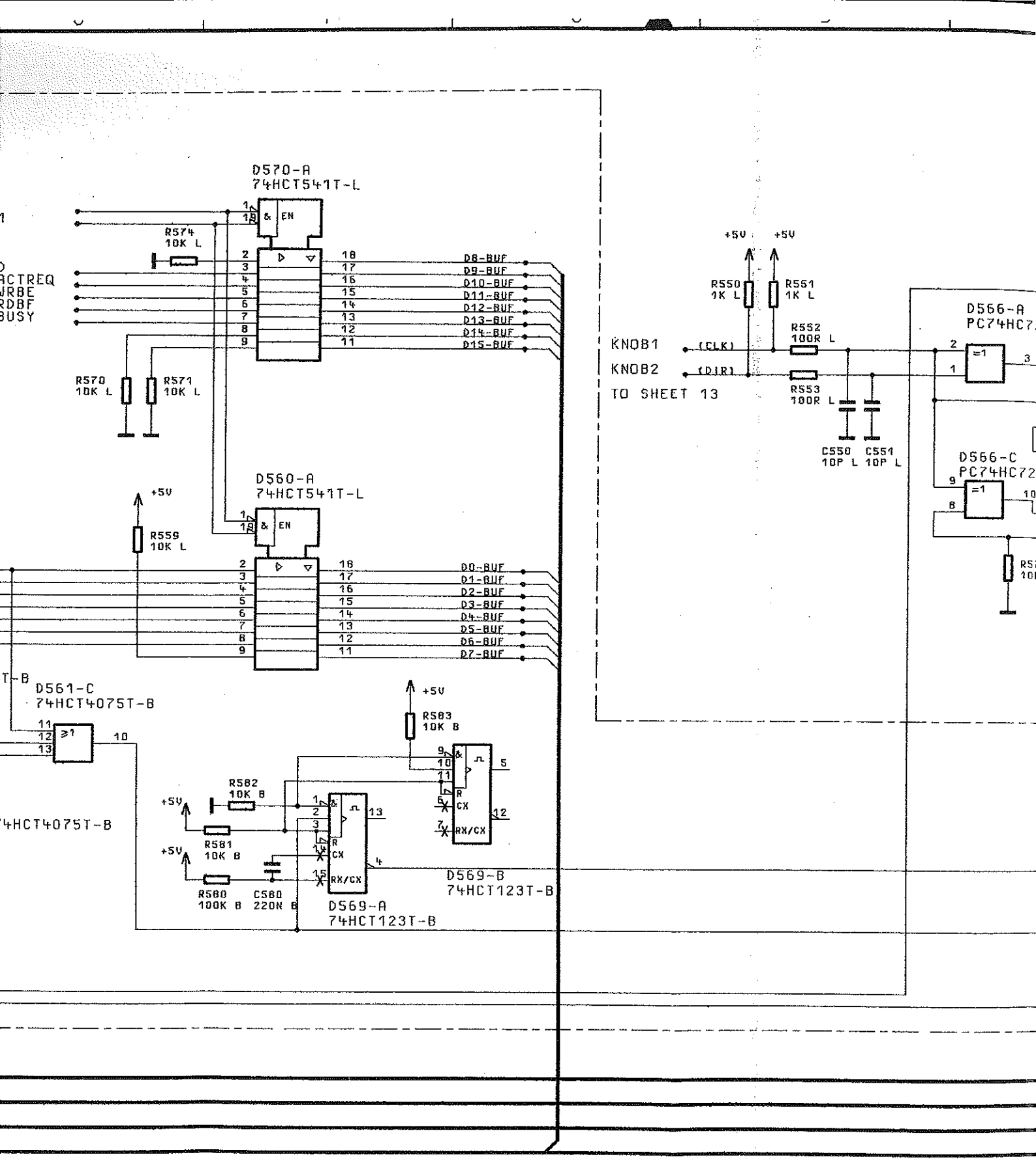
A-BUS-CPU
CONTROL-BUS-PERI
A-BUS-PERI
D-BUS-BUF
CLK-BUS

8-D
CT14T-B

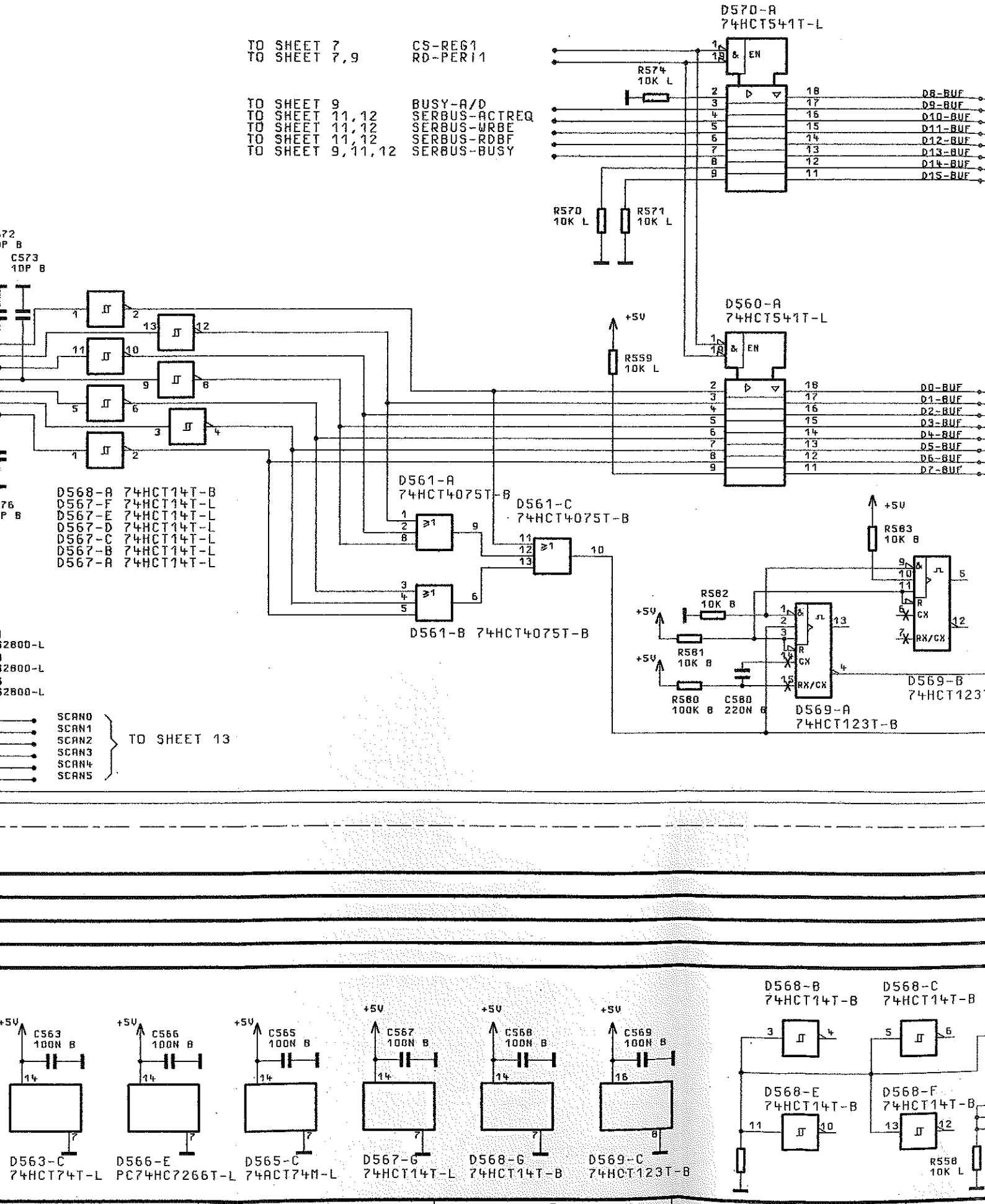
2-A
CT4075T-L

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| | | | | | | | ZEICHN.-NR. 1035.7308.01S |
| | | | | | | | BLATT-NR. 8+ |
| REND. IND. | RENDERUNGS-MITTEILUNG | DATUM | NAME | ZU GERAET | SMP | REG.I.V. | 1035.5005 |
| | | | | | | ERSTE Z. | 1035.5440 |

ROHDE&SCHWARZ



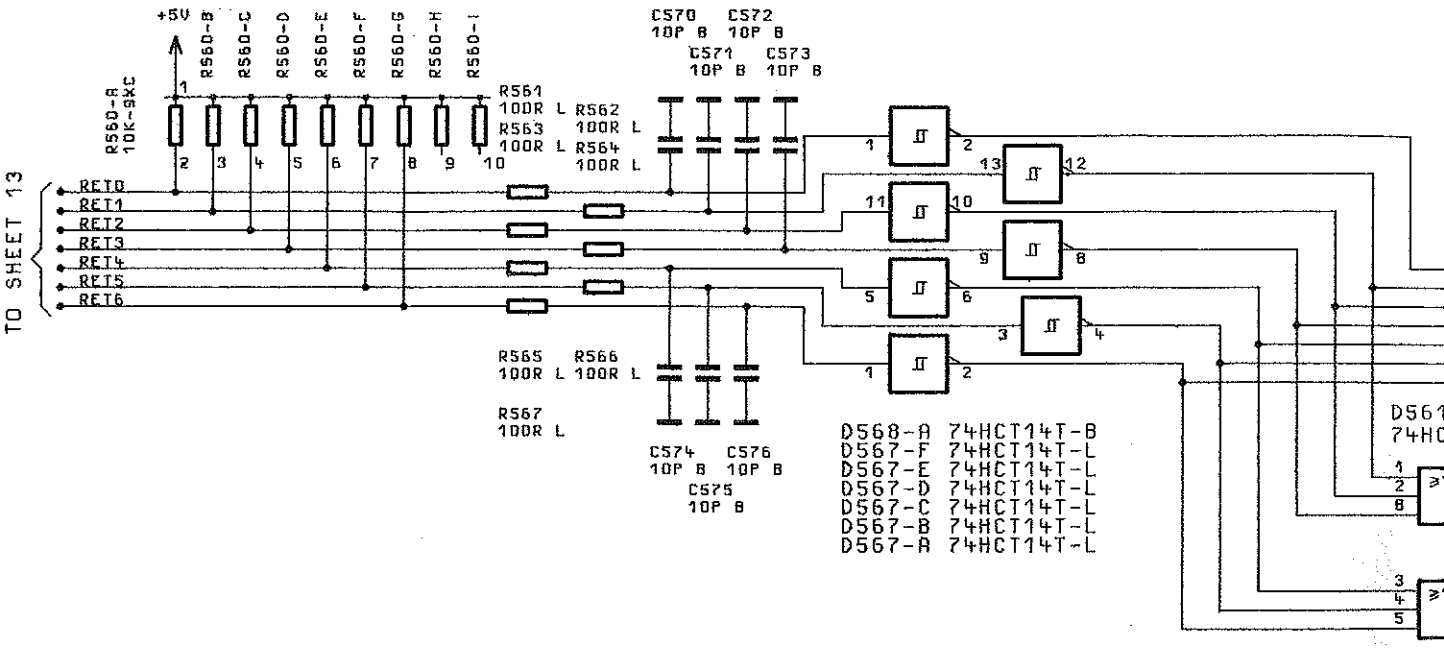

| | | | | | |
|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG |
| | | | | BEARB. | |
| | | | | GEPR. | |
| | | | | NORM | |
| | | | | PLOTT | 03.05. |
| REND. IND. | RENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE& | |
| | | | | ZU GERAET | S |

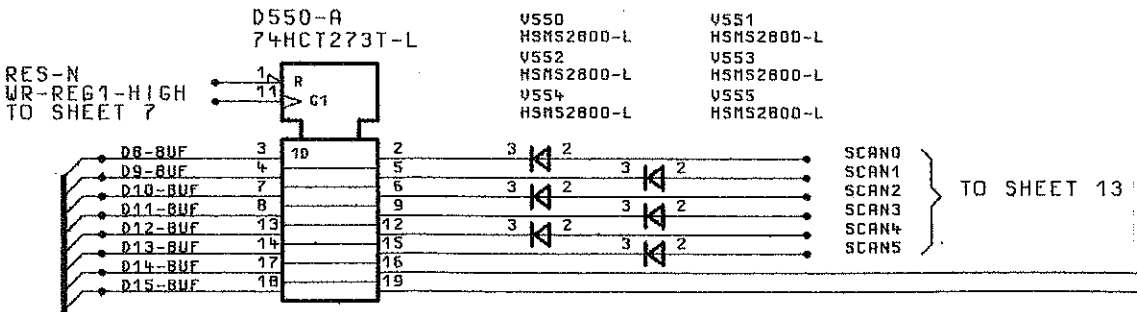

TO SHEET 7 CS-REG1
TO SHEET 7,9 RD-PERI1
TO SHEET 9 BUSY-A/D
TO SHEET 11,12 SERBUS-ACTREQ
TO SHEET 11,12 SERBUS-WRBE
TO SHEET 11,12 SERBUS-RDBF
TO SHEET 9,11,12 SERBUS-BUSY
D570-A 74HCT541T-L
D560-A 74HCT541T-L
R574 10K L
R570 10K L
R571 10K L
R559 10K L
+5V
D8-BUF
D9-BUF
D10-BUF
D11-BUF
D12-BUF
D13-BUF
D14-BUF
D15-BUF
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
C573 10P B
D568-A 74HCT14T-B
D567-F 74HCT14T-L
D567-E 74HCT14T-L
D567-D 74HCT14T-L
D567-C 74HCT14T-L
D567-B 74HCT14T-L
D567-A 74HCT14T-L
D561-A 74HCT4075T-B
D561-C 74HCT4075T-B
D561-B 74HCT4075T-B
RS83 10K B
RS82 10K B
RS81 10K B
RS80 100K B
CS80 220N B
D569-B 74HCT123
D569-A 74HCT123T-B
SCAN0
SCAN1
SCAN2
SCAN3
SCAN4
SCAN5
TO SHEET 13
C563 100N B
C566 100N B
C565 100N B
C567 100N B
C568 100N B
C569 100N B
D563-C 74HCT74T-L
D566-E PC74HC7266T-L
D565-C 74ACT74M-L
D567-G 74HCT14T-L
D568-G 74HCT14T-B
D569-C 74HCT123T-B
D568-B 74HCT14T-B
D568-C 74HCT14T-B
D568-E 74HCT14T-B
D568-F 74HCT14T-B
RS58 10K L

# KEY-INTERFACE

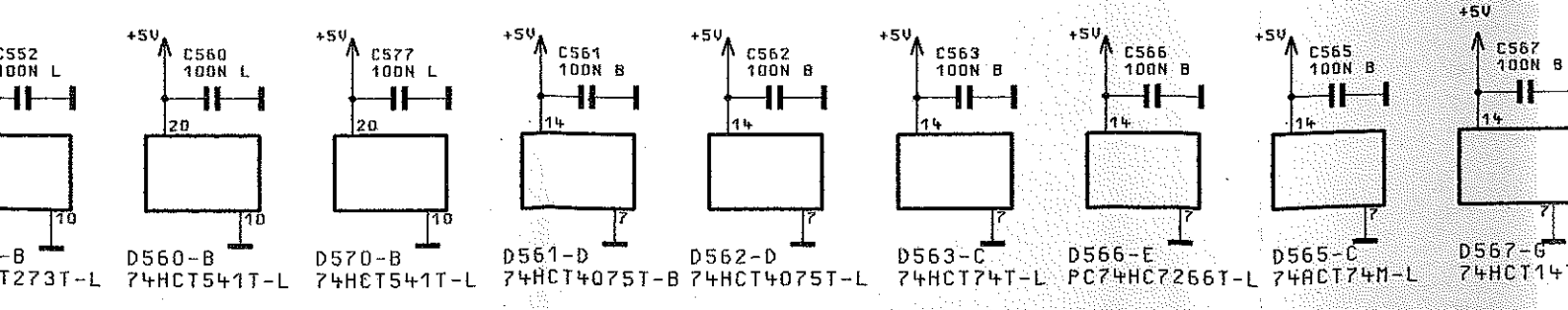
TO SHEET 7
TO SHEET 7,9

TO SHEET 9
TO SHEET 11,12
TO SHEET 11,12
TO SHEET 11,12
TO SHEET 9,11,12

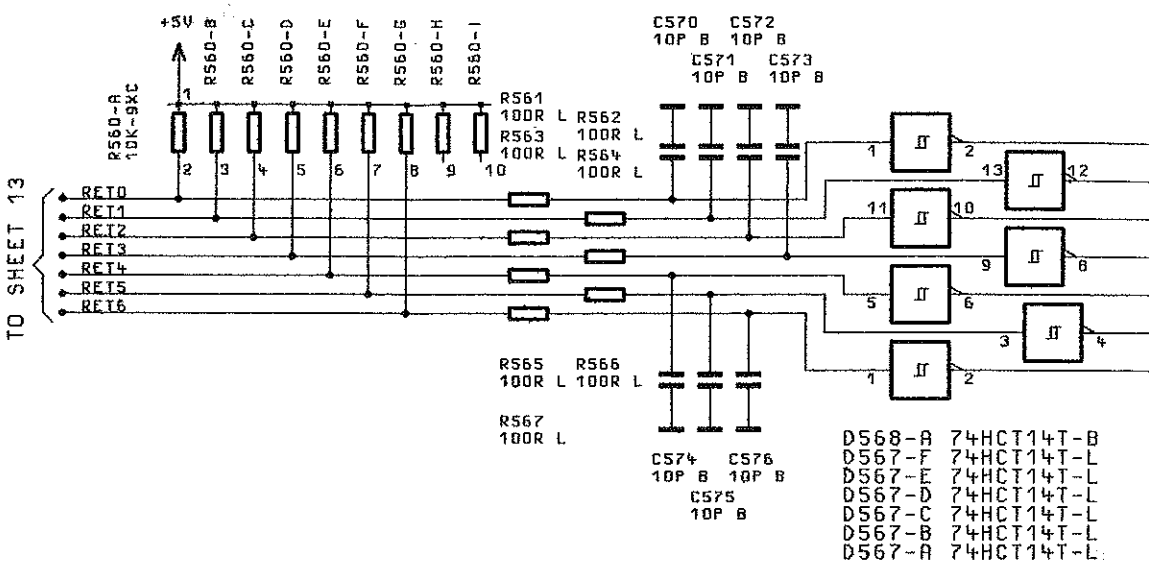


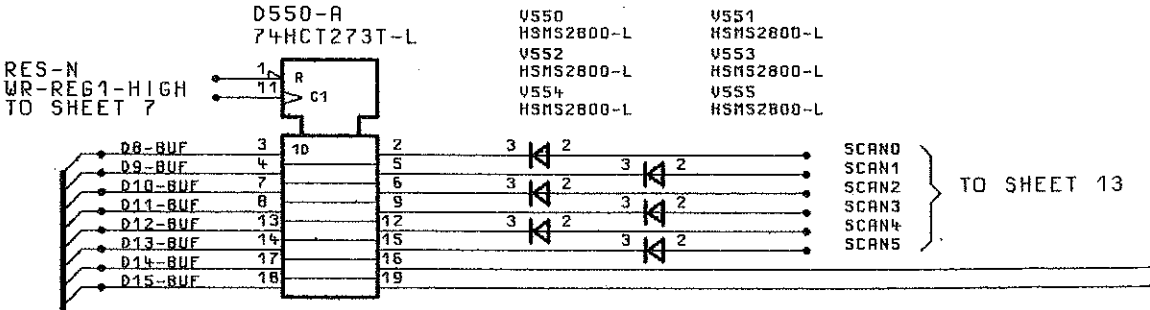




-CPU
DL-BUS-PERI
-PERI
-BUF
US

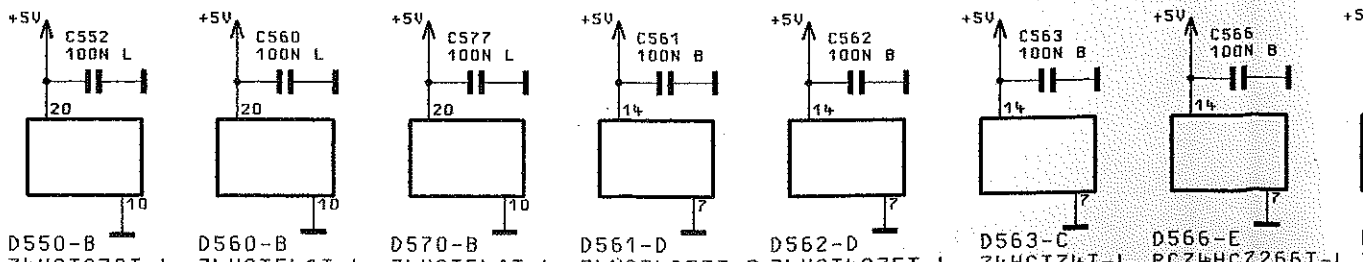


# KEY-INTERFACE



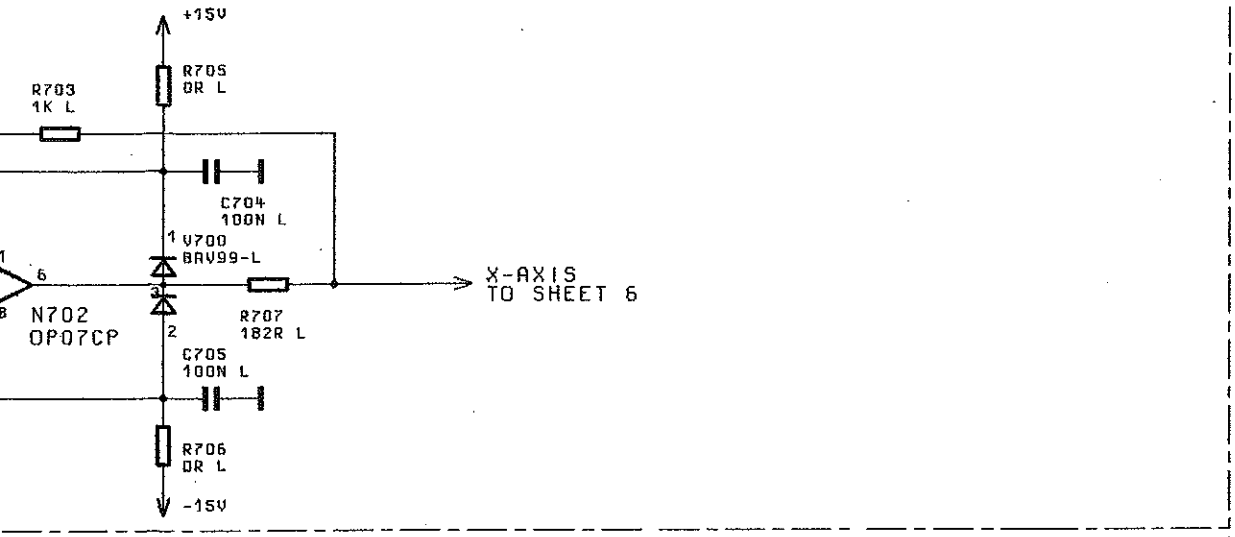



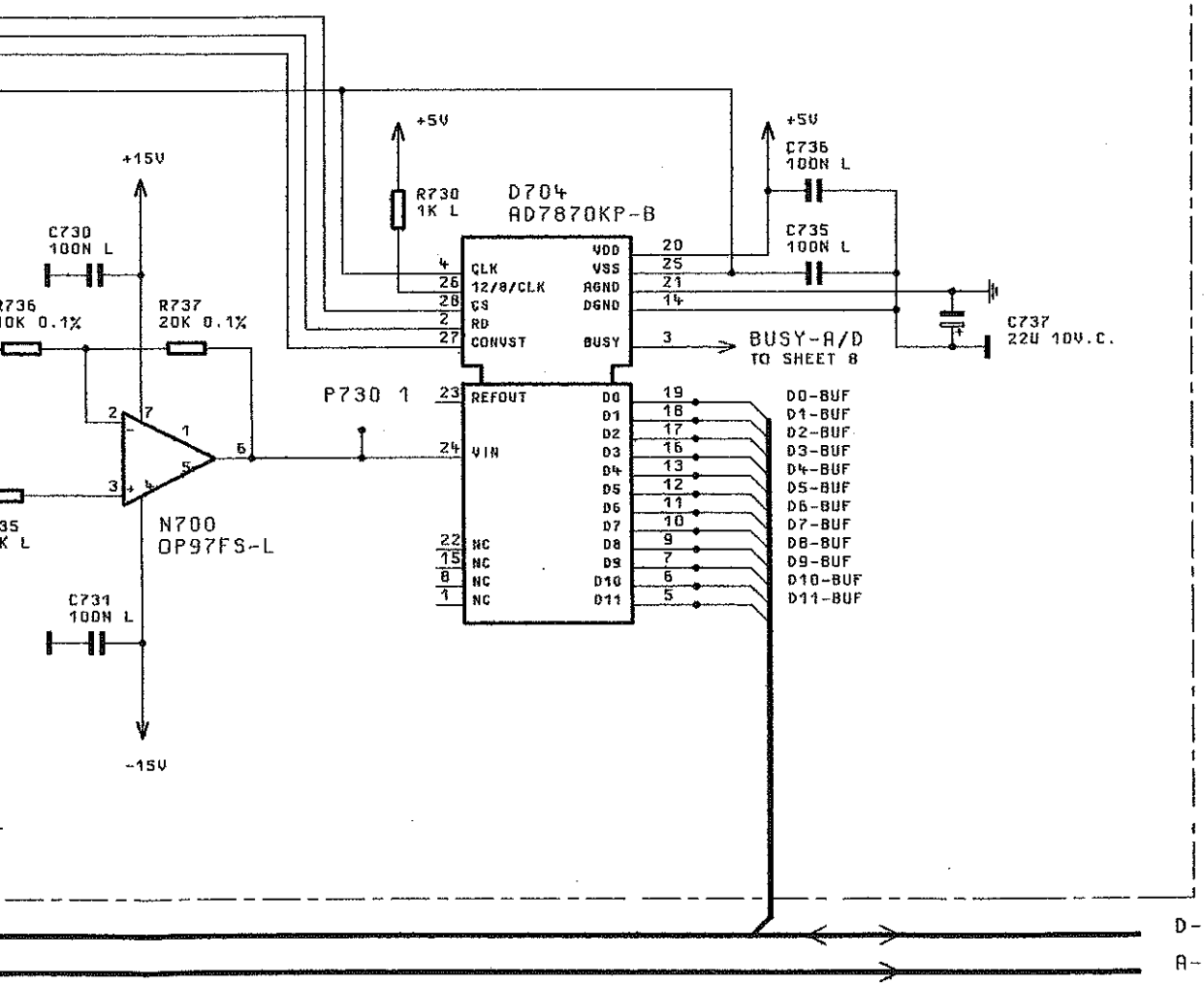

A-BUS-CPU
CONTROL-BUS-PERI
A-BUS-PERI
D-BUS-BUF
CLK-BUS




ZEICHN.-NR.

P730

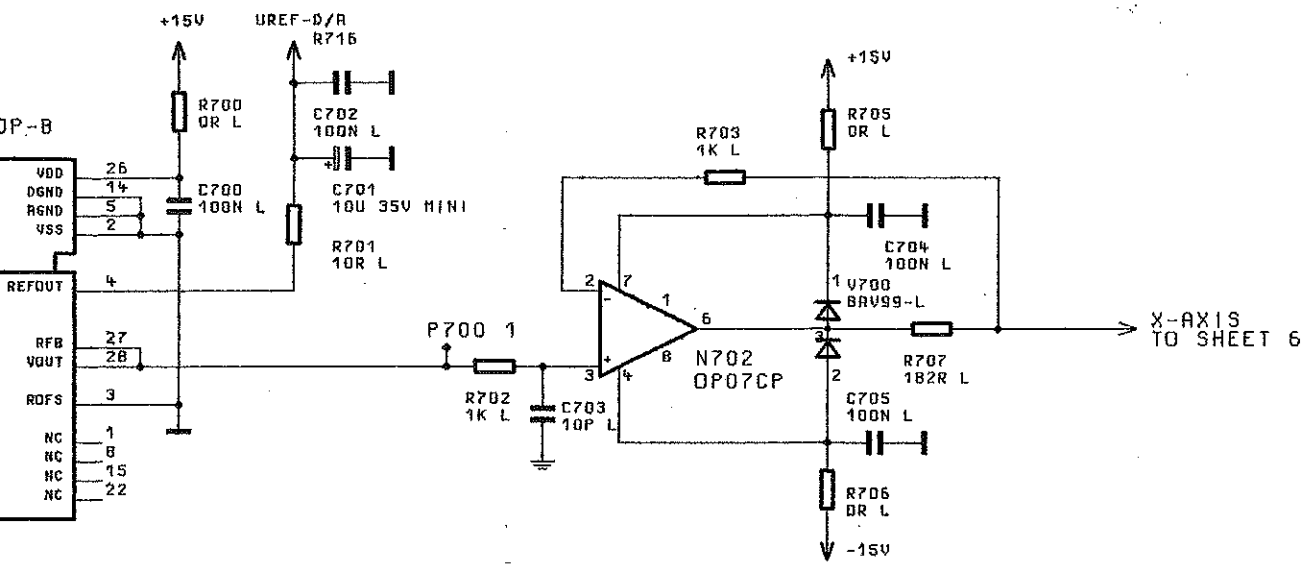


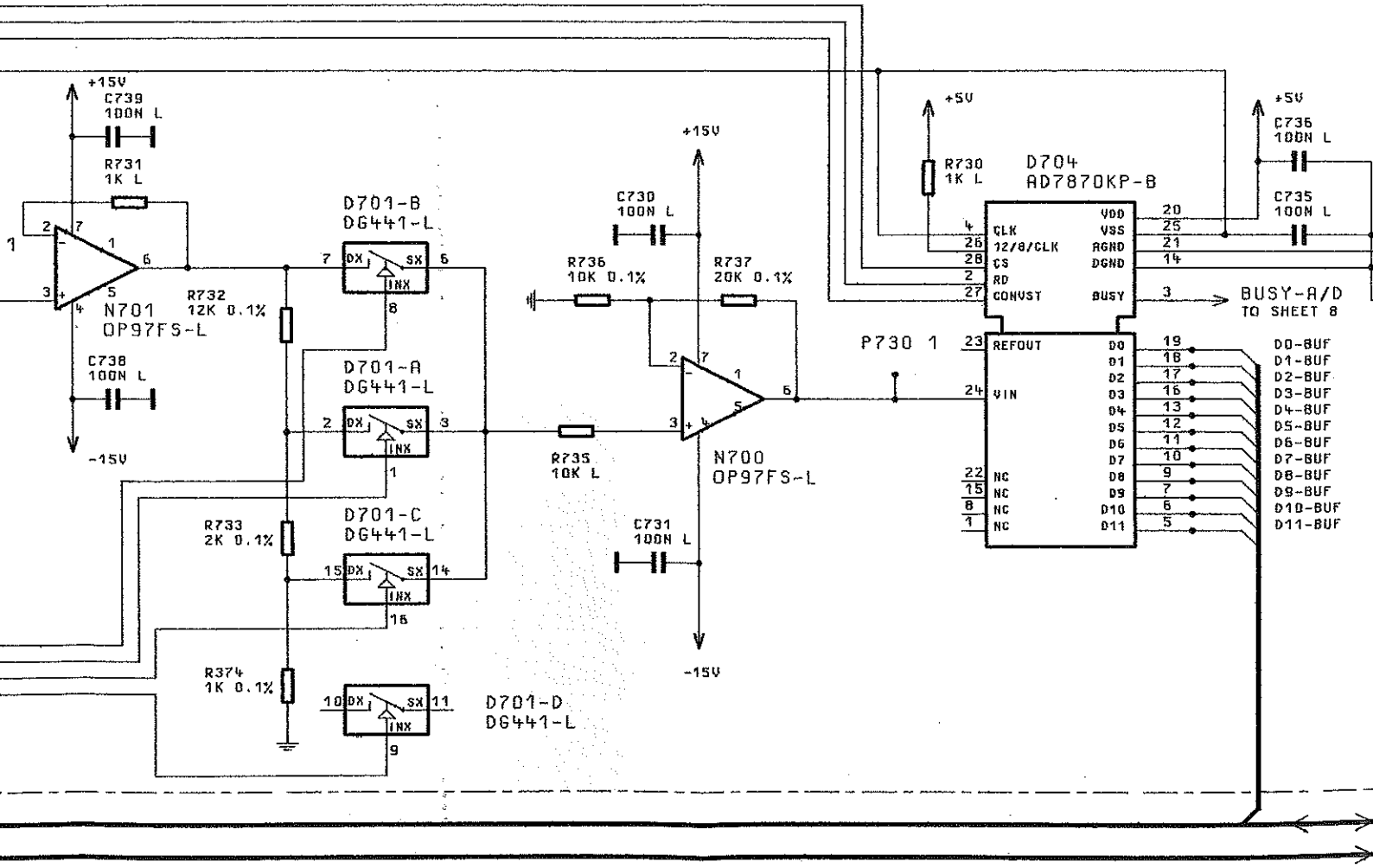




D-BUS-BUF S04

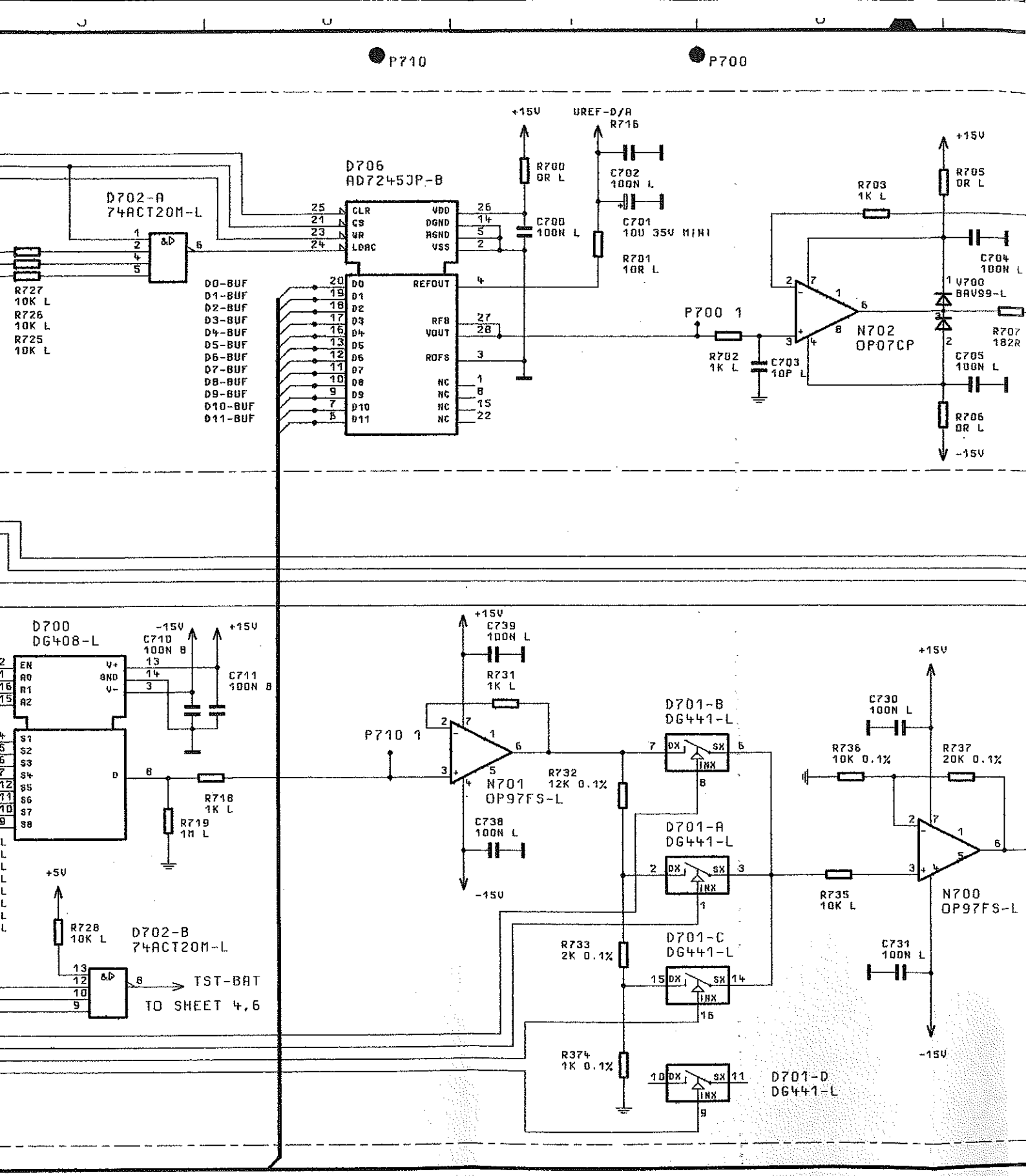
A-BUS-PERI S04

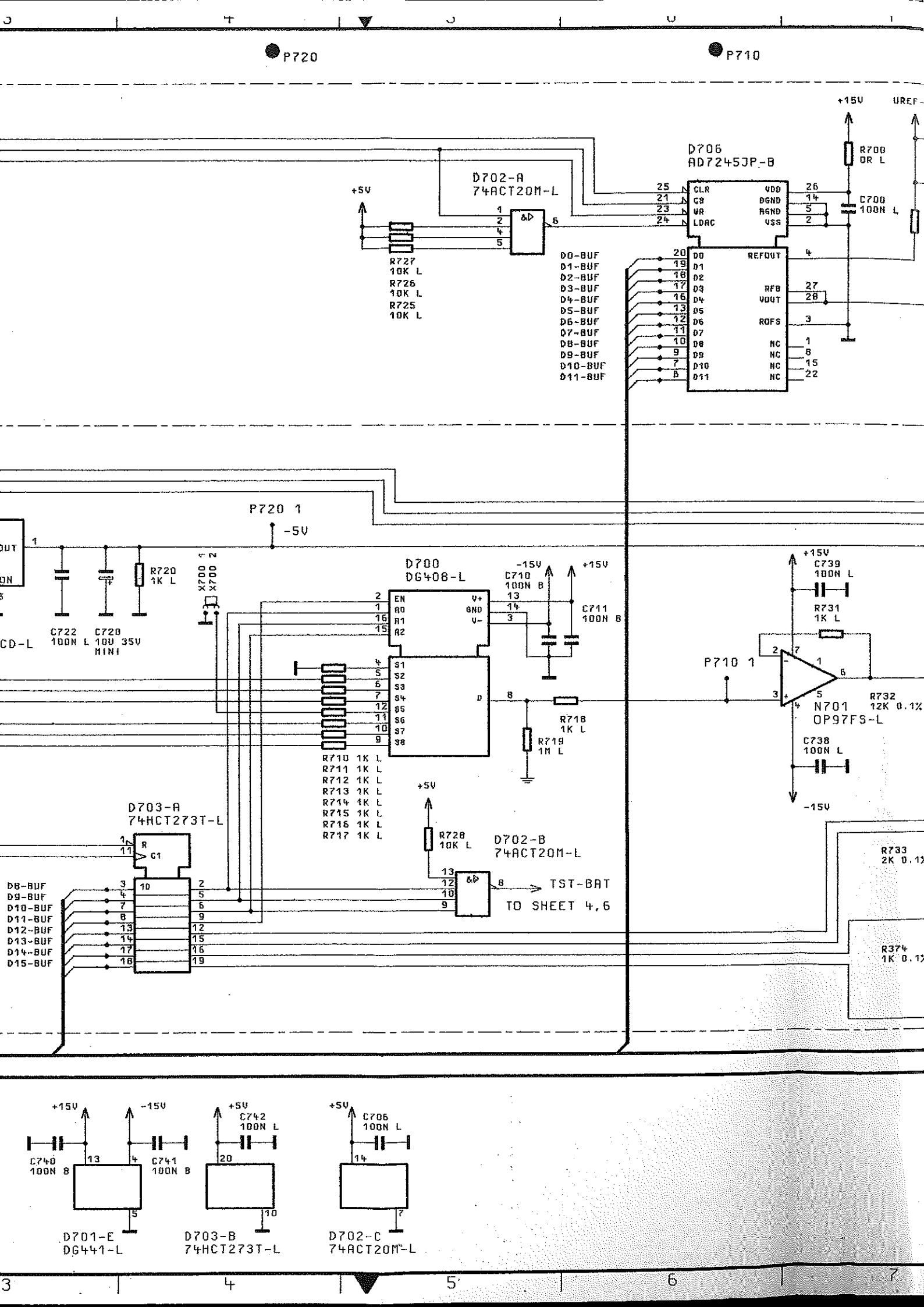
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | ROHDE&SCHWARZ | | | ZEICHN.-NR. 1035.7308.01S |
| REND. IND. | RENDERUNGS-MITTEILUNG | DATUM | NAME | ZU GERRET | SMP | | BLATT-NR. 9+ |
| | | | | REG.I.V. | 1035.5005 | ERSTE Z. | 1035.5440 |




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENE |
| | | | | BEARB. | | DR | |
| | | | | GEPR. | | | |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| | | | | | | | ZEIC |
| / | | | | ROHDE&SCHWARZ | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ZU GERÄET | SMP | | REG.I. |


P710
P700
D702-A
74ACT20M-L
D706
AD7245JP-B
+15V
UREF-D/A
R716
R700
0R L
C702
100N L
C701
10U 35V MINI
R701
10R L
C700
100N L
R727
10K L
R726
10K L
R725
10K L
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
D8-BUF
D9-BUF
D10-BUF
D11-BUF
CLR
CS
WR
LDAC
VDD
DGND
AGND
VSS
REFOUT
RFB
VOUT
ROFS
NC
P700 1
R702
1K L
C703
10P L
N702
OP07CP
R703
1K L
R705
0R L
C704
100N L
V700
BAV99-L
R707
182R
C705
100N L
R706
0R L
-15V
D700
DG408-L
C710
100N B
C711
100N B
EN
A0
A1
A2
V+
GND
V-
S1
S2
S3
S4
S5
S6
S7
S8
D
R718
1K L
R719
1M L
+5V
R728
10K L
D702-B
74ACT20M-L
TST-BAT
TO SHEET 4,6
P710 1
C739
100N L
R731
1K L
N701
OP97FS-L
R732
12K 0.1%
C738
100N L
D701-B
DG441-L
D701-A
DG441-L
D701-C
DG441-L
D701-D
DG441-L
DX
SX
INX
R733
2K 0.1%
R374
1K 0.1%
C730
100N L
R736
10K 0.1%
R737
20K 0.1%
R735
10K L
N700
OP97FS-L
C731
100N L
04/
48730
REND.
IND.


P720
P710
+15V
UREF-
D706
AD7245JP-B
R700
OR L
C700
100N L
D702-A
74ACT20M-L
+5V
R727
10K L
R726
10K L
R725
10K L
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
D8-BUF
D9-BUF
D10-BUF
D11-BUF
CLR
CS
WR
LDAC
VDD
DGND
AGND
VSS
REFOUT
RFB
VOUT
ROFS
NC
P720 1
-5V
R720
1K L
X700
C722
100N L
C720
10U 35V
MINI
D700
DG408-L
-15V
C710
100N B
C711
100N B
R710 1K L
R711 1K L
R712 1K L
R713 1K L
R714 1K L
R715 1K L
R716 1K L
R717 1K L
R718
1K L
R719
1M L
C739
100N L
R731
1K L
P710 1
N701
OP97FS-L
R732
12K 0.1%
C738
100N L
R733
2K 0.1%
R374
1K 0.1%
D703-A
74HCT273T-L
R728
10K L
D702-B
74ACT20M-L
TST-BAT
TO SHEET 4,6
D8-BUF
D9-BUF
D10-BUF
D11-BUF
D12-BUF
D13-BUF
D14-BUF
D15-BUF
C740
100N B
C741
100N B
D701-E
DG441-L
C742
100N L
D703-B
74HCT273T-L
C706
100N L
D702-C
74ACT20M-L

P720

## X-OUTPUT

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

D702-A
74ACT20M-L

+5V

R727
10K L
R726
10K L
R725
10K L

## SELF DIAGNOSE

CS-REG2
RD-PERI1
CS-REG3

-15V

D707
LM79L05ACD-L

C721
100N L

C722
100N L

C720
10U 35V
MINI

R720
1K L

P720 1
-5V

X700 1
X700 2

D700
DG408-L

C718
100N B

DIAG-15V
DIAG-5V
X-AXIS

6 VPP
UREF-D/A
6 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

R719
1M L

D703-A
74HCT273T-L

R-REG2-HIGH

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

R728
10K L

D702-B
74ACT20M-

TST

TO SHEET

D-BUS-BUF
A-BUS-PERI

+15V
-15V

C740
100N B

C741
100N B

D701-E
DG441-L

+5V

C742
100N L

D703-B
74HCT273T-L

+5V

C706
100N L

D702-C
74ACT20M-L

P720

## X-OUTPUT

RES-N
TO SHEET 7 CS-D/A-CONV
TO SHEET 7 WR-D/A-CONV

+5V

R7
10
R7
10
R7
10

## SELF DIAGNOSE

TO SHEET 7 { CS-REG2, RD-PERI1, CS-REG3

-15V

P720 1
-5V

IN OUT COMMON

C721 100N L

D707
LM79L05ACD-L

C722 100N L

C720 100U 35V MINI

R720 1K L

X700 1 2
X700

TO SHEET 6 DIAG-15V
TO SHEET 6 DIAG-5V
TO SHEET 6 X-AXIS

TO SHEET 5,6 VPP
UREF-D/A
TO SHEET 4,6 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

D703-A
74HCT273T-L

WR-REG2-HIGH

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

D-BUS-BUF
A-BUS-PERI

+15V -15V

C740 100N B
C741 100N B

D701-E
DG441-L

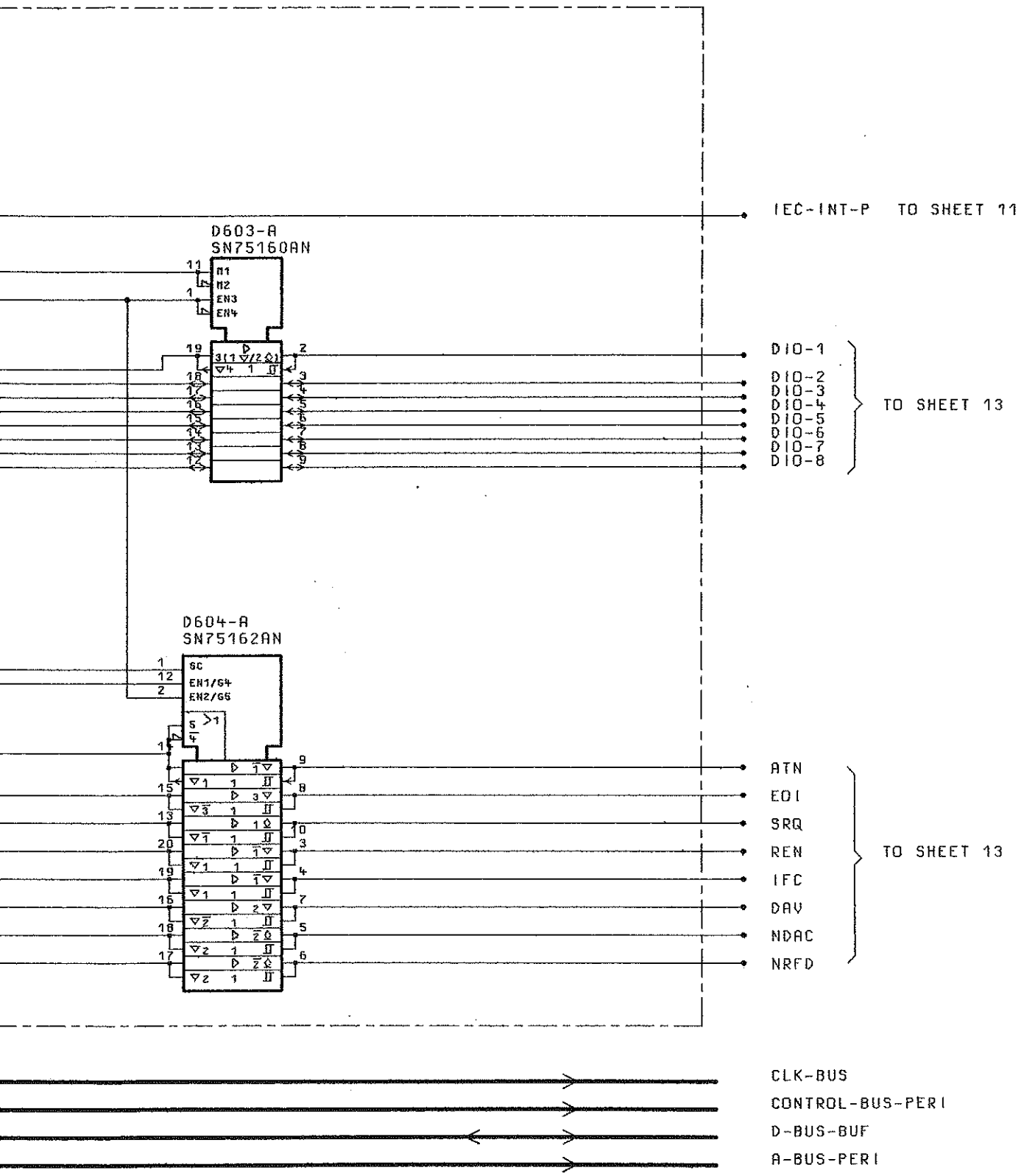
+5V
C742 100N L

D703-B
74HCT273T-L

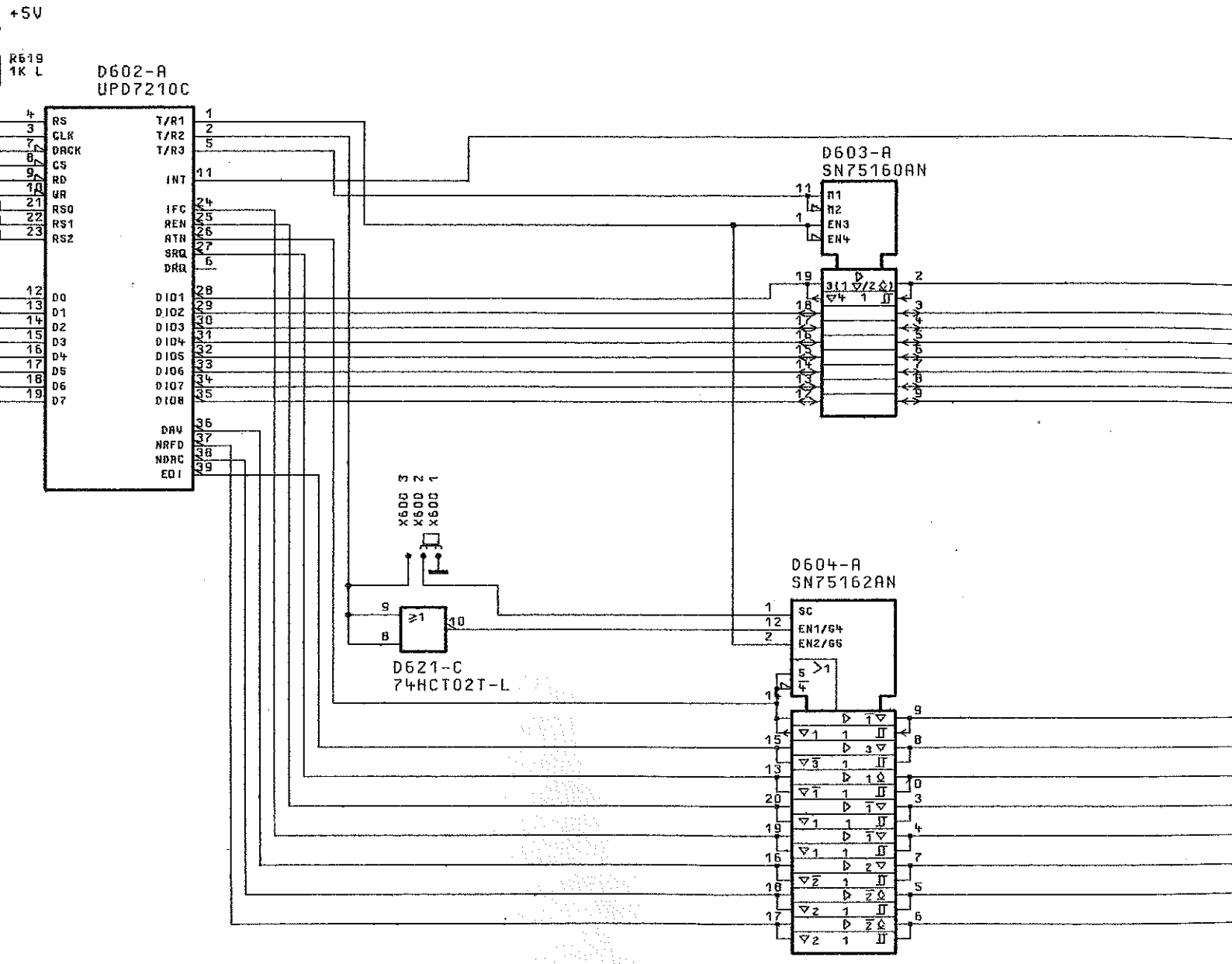
+5V
C706 100N L

D702-C
74ACT20M

ZEICHN.-NR.



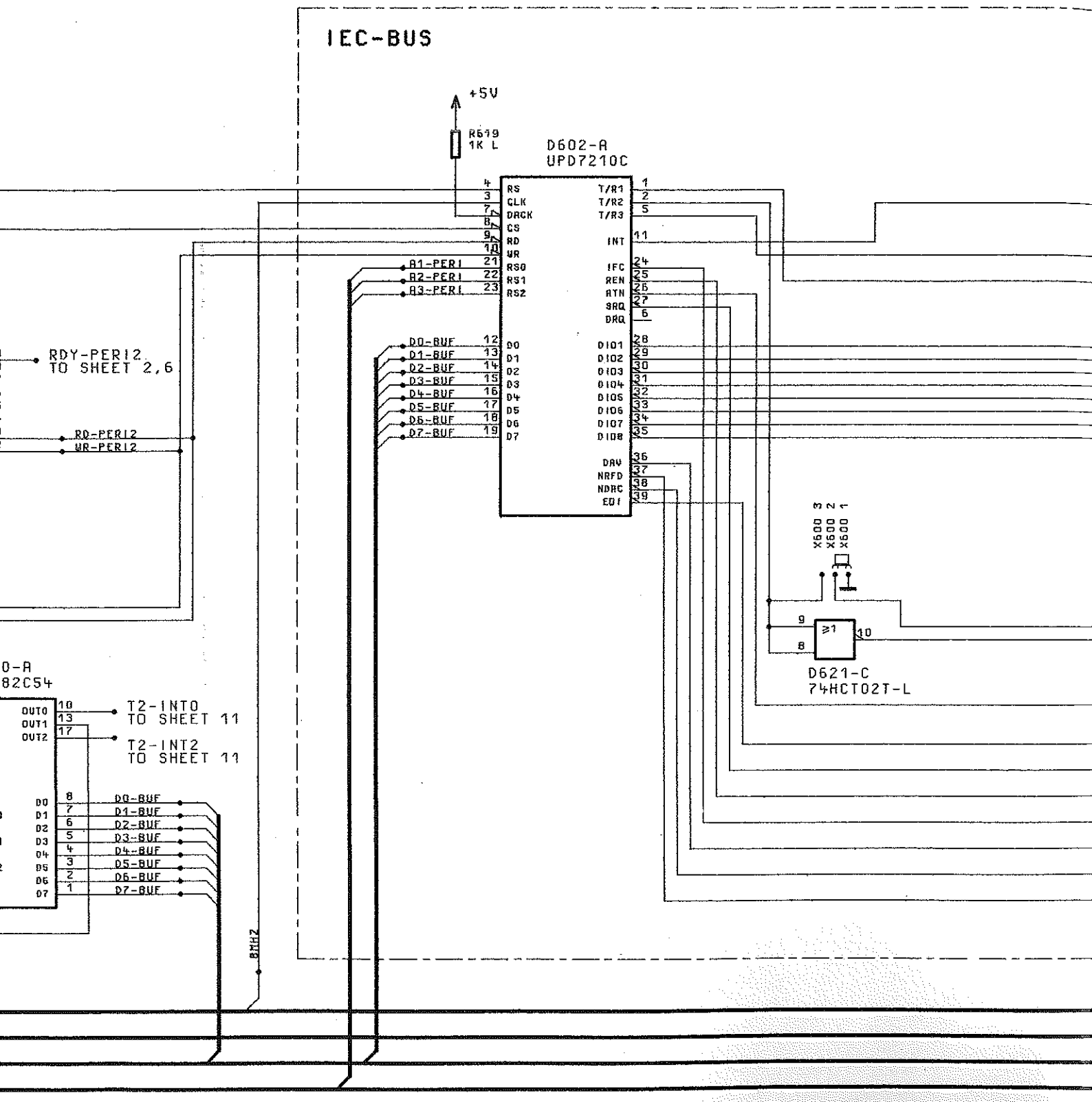

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | | | | ZEICHN.-NR. 1035.7308.01S |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | BLATT-NR. 10+ |
| | | | | ZU GERRET | SMP | | REG.I.V. 1035.5005 ERSTE Z. 1035.5440 |

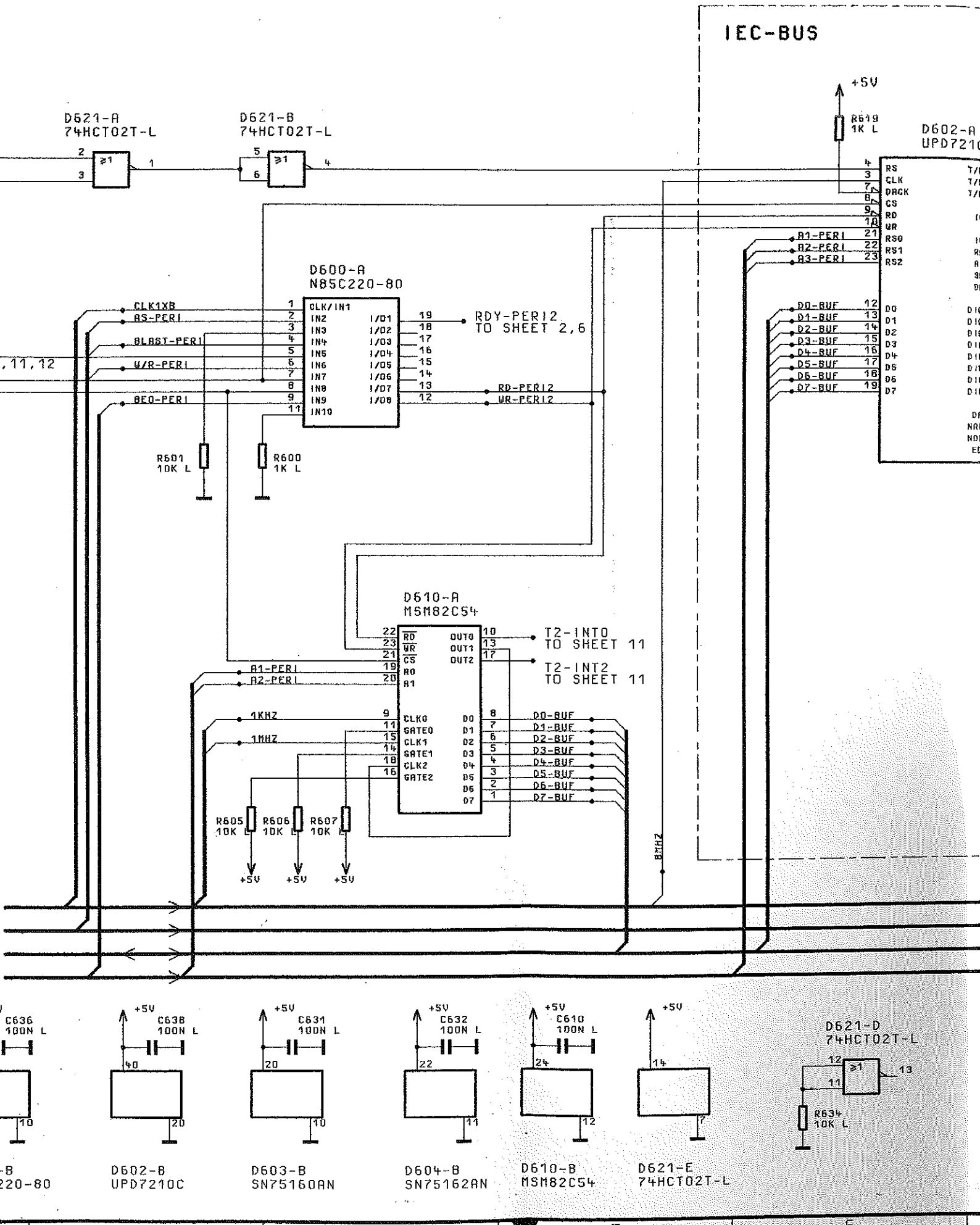


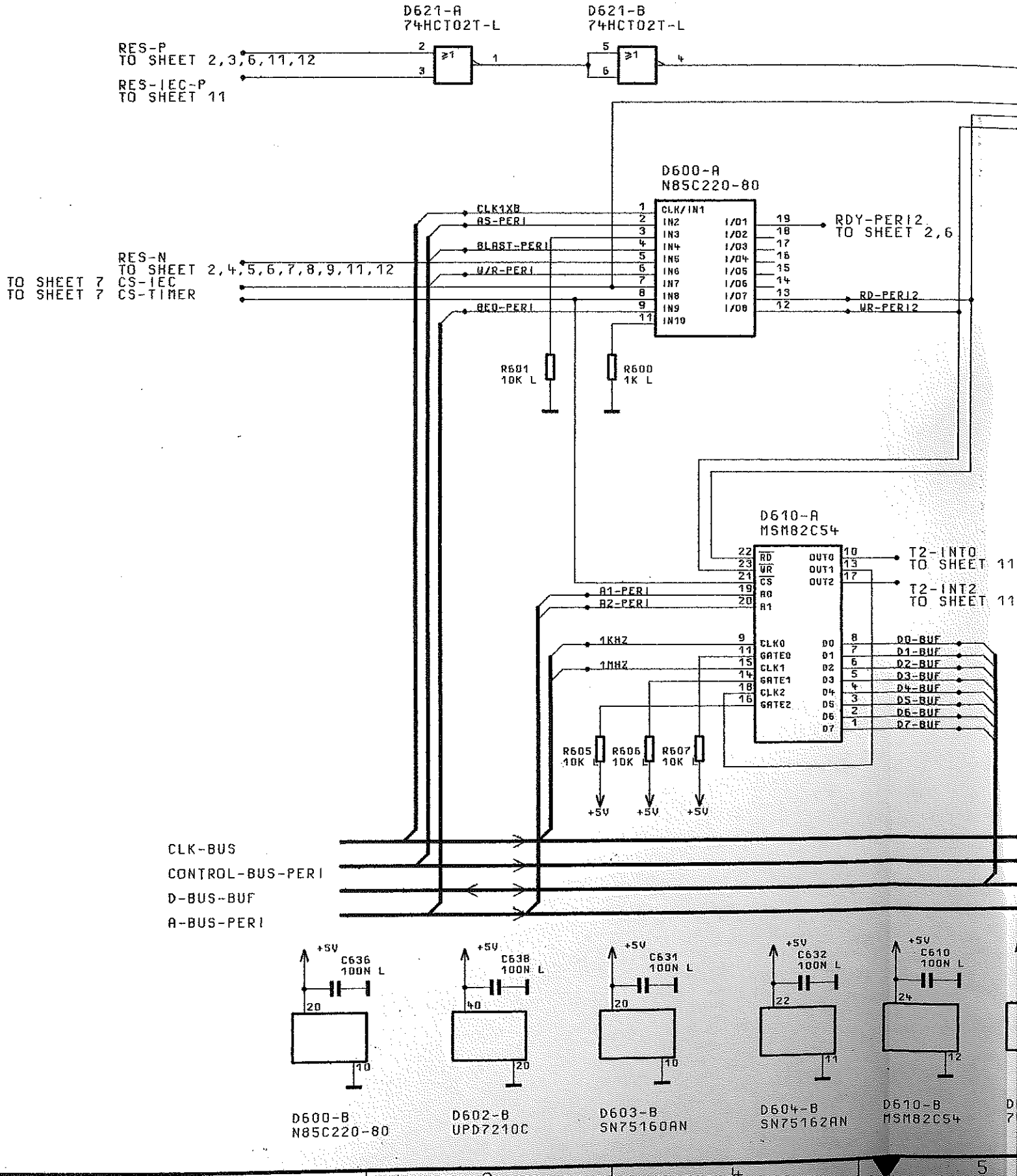

-21-D
-HCT02T-L

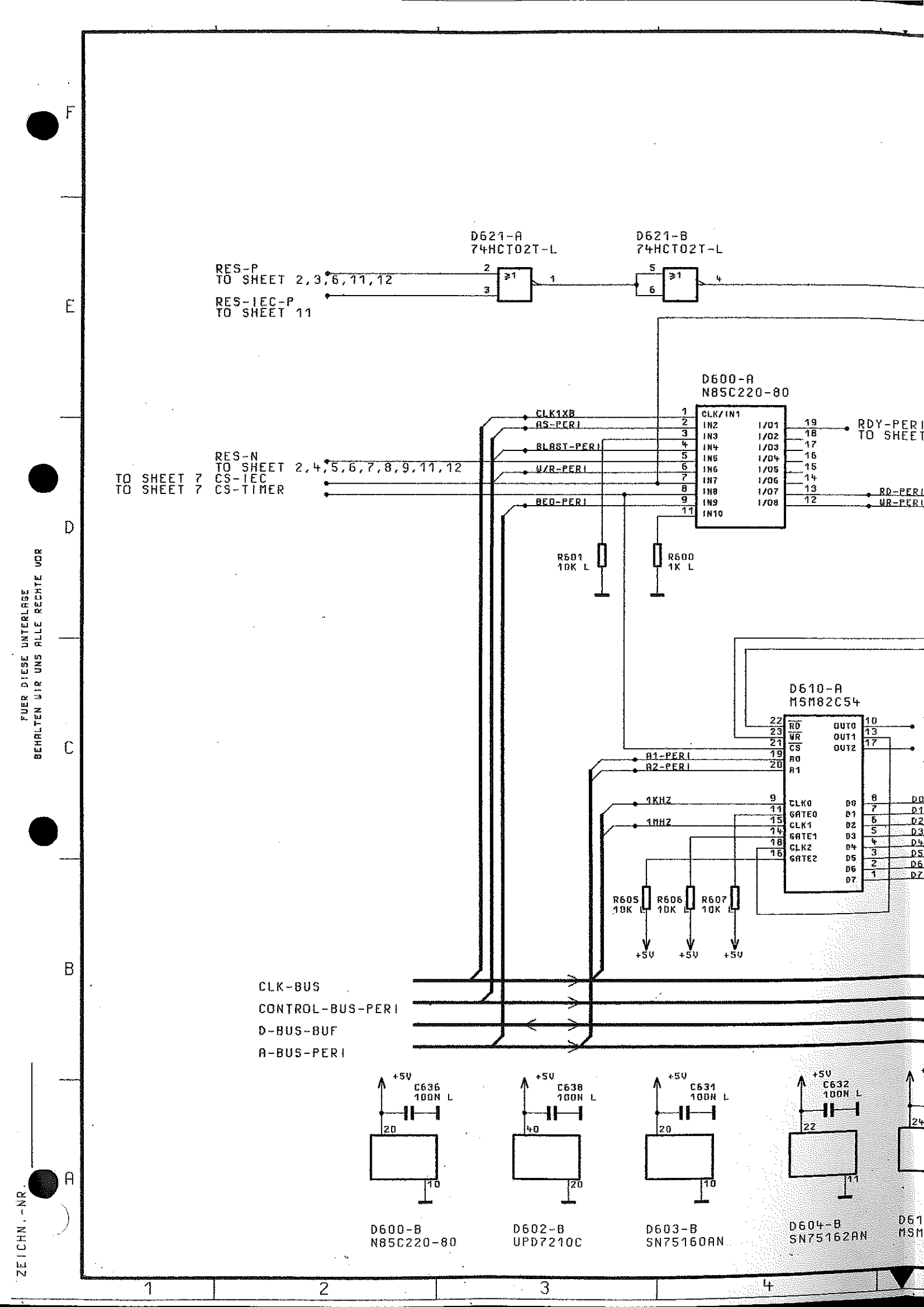
L

| | | | | | | |
|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 16PK | TAG | N |
| | | | | BEARB. | | |
| | | | | GEPR. | | |
| | | | | NORM | | |
| | | | | PLOTT | 03.05.94 | |
| / | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHW | | |
| | | | | ZU GERRET | SMP | |


IEC-BUS
+5V
R619
1K L
D602-A
UPD7210C
RS
CLK
DRCK
CS
RD
WR
RS0
RS1
RS2
T/R1
T/R2
T/R3
INT
IFC
REN
ATN
SRQ
DRQ
DIO1
DIO2
DIO3
DIO4
DIO5
DIO6
DIO7
DIO8
DAV
NRFD
NDAC
EOI
A1-PERI
A2-PERI
A3-PERI
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
RDY-PERI2
TO SHEET 2,6
RD-PERI2
WR-PERI2
X600 3
X600 2
X600 1
≥1
D621-C
74HCT02T-L
T2-INT0
TO SHEET 11
T2-INT2
TO SHEET 11
8MHZ
+5V
C632
100N L
C610
100N L
R634
10K L
D621-D
74HCT02T-L
D621-E
74HCT02T-L
D610-B
MSM82C54

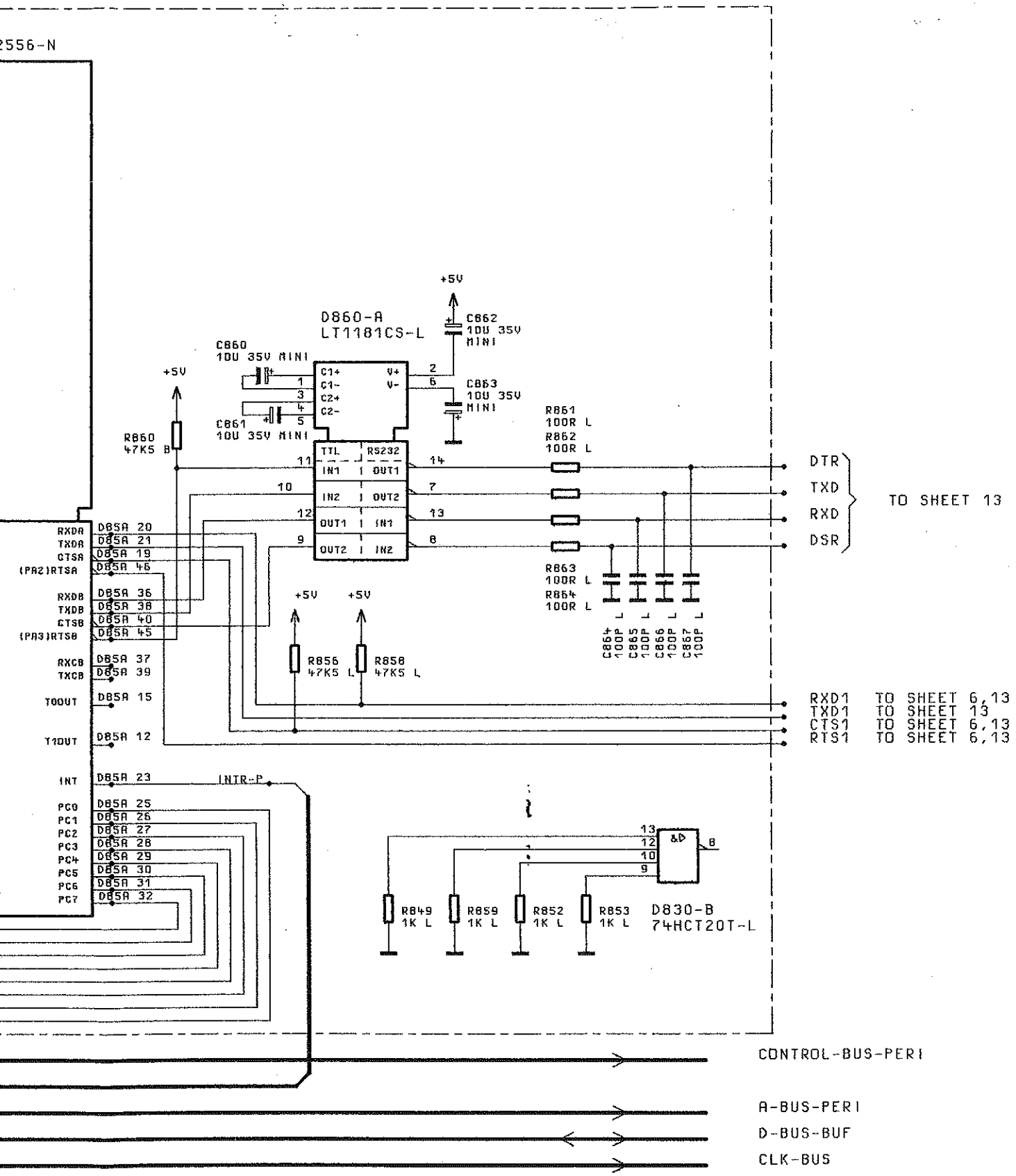

IEC-BUS
D621-A
74HCT02T-L
D621-B
74HCT02T-L
+5V
R619
1K L
D602-A
UPD7210
D600-A
N85C220-80
CLK1XB
AS-PERI
BLAST-PERI
W/R-PERI
BEO-PERI
RDY-PERI2
TO SHEET 2,6
RD-PERI2
WR-PERI2
R601
10K L
R600
1K L
A1-PERI
A2-PERI
A3-PERI
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
D610-A
MSM82C54
T2-INT0
TO SHEET 11
T2-INT2
TO SHEET 11
1KHZ
1MHZ
8MHZ
R605
10K
R606
10K
R607
10K
+5V
C636
100N L
C638
100N L
C631
100N L
C632
100N L
C610
100N L
D621-D
74HCT02T-L
R634
10K L
D602-B
UPD7210C
D603-B
SN75160AN
D604-B
SN75162AN
D610-B
MSM82C54
D621-E
74HCT02T-L


D621-A
74HCT02T-L
D621-B
74HCT02T-L
RES-P
TO SHEET 2,3,6,11,12
RES-IEC-P
TO SHEET 11
D600-A
N85C220-80
CLK1XB
AS-PERI
BLAST-PERI
R/W-PERI
DEO-PERI
RDY-PERI2
TO SHEET 2,6
RD-PERI2
WR-PERI2
RES-N
TO SHEET 2,4,5,6,7,8,9,11,12
TO SHEET 7 CS-IEC
TO SHEET 7 CS-TIMER
R601
10K L
R600
1K L
D610-A
MSM82C54
T2-INT0
TO SHEET 11
T2-INT2
TO SHEET 11
A1-PERI
A2-PERI
1KHZ
1MHZ
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
R605
10K
R606
10K
R607
10K
+5V
CLK-BUS
CONTROL-BUS-PERI
D-BUS-BUF
A-BUS-PERI
C636
100N L
C638
100N L
C631
100N L
C632
100N L
C610
100N L
D600-B
N85C220-80
D602-B
UPD7210C
D603-B
SN75160AN
D604-B
SN75162AN
D610-B
MSM82C54



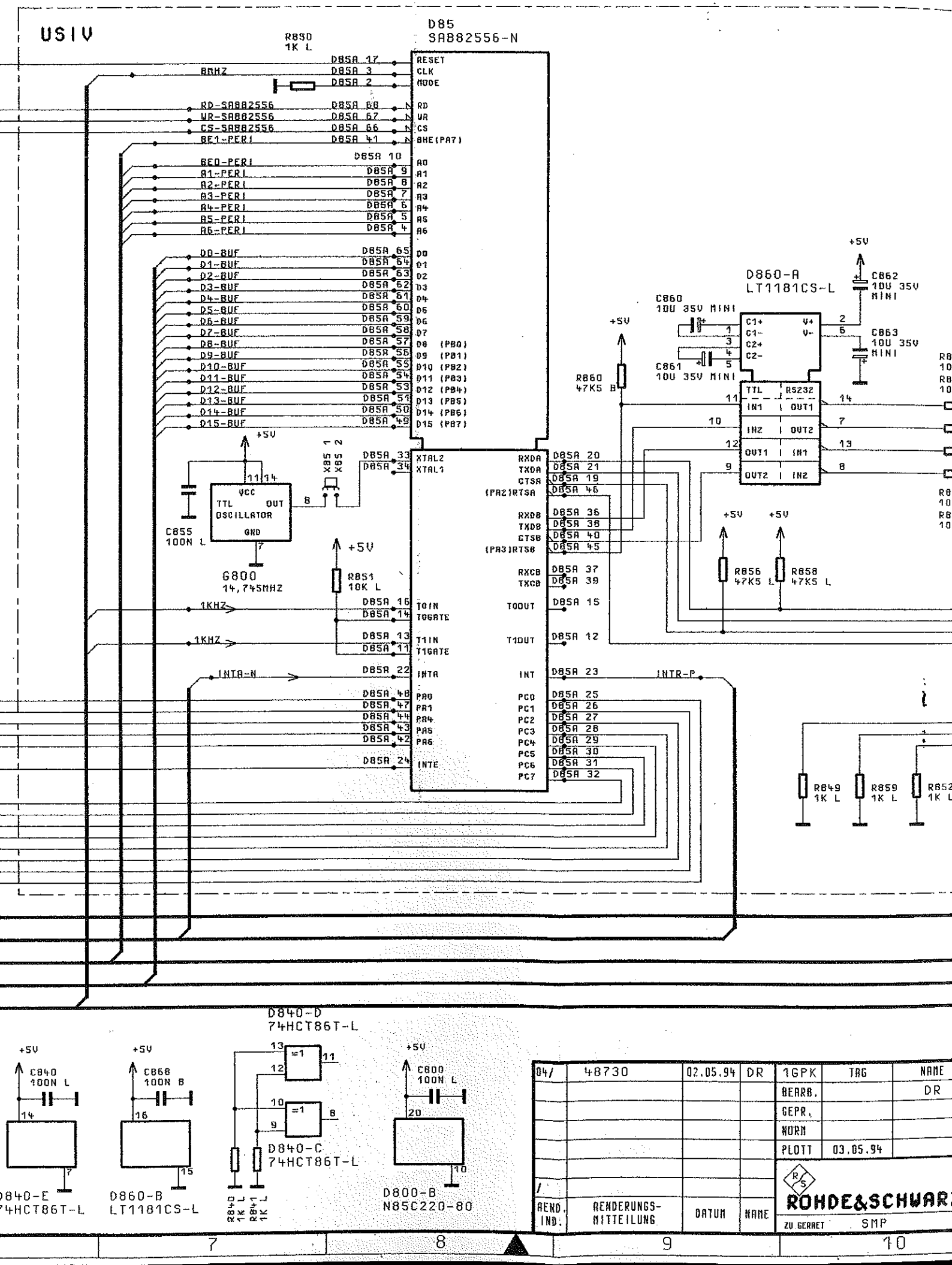



ZEICHN.-NR.

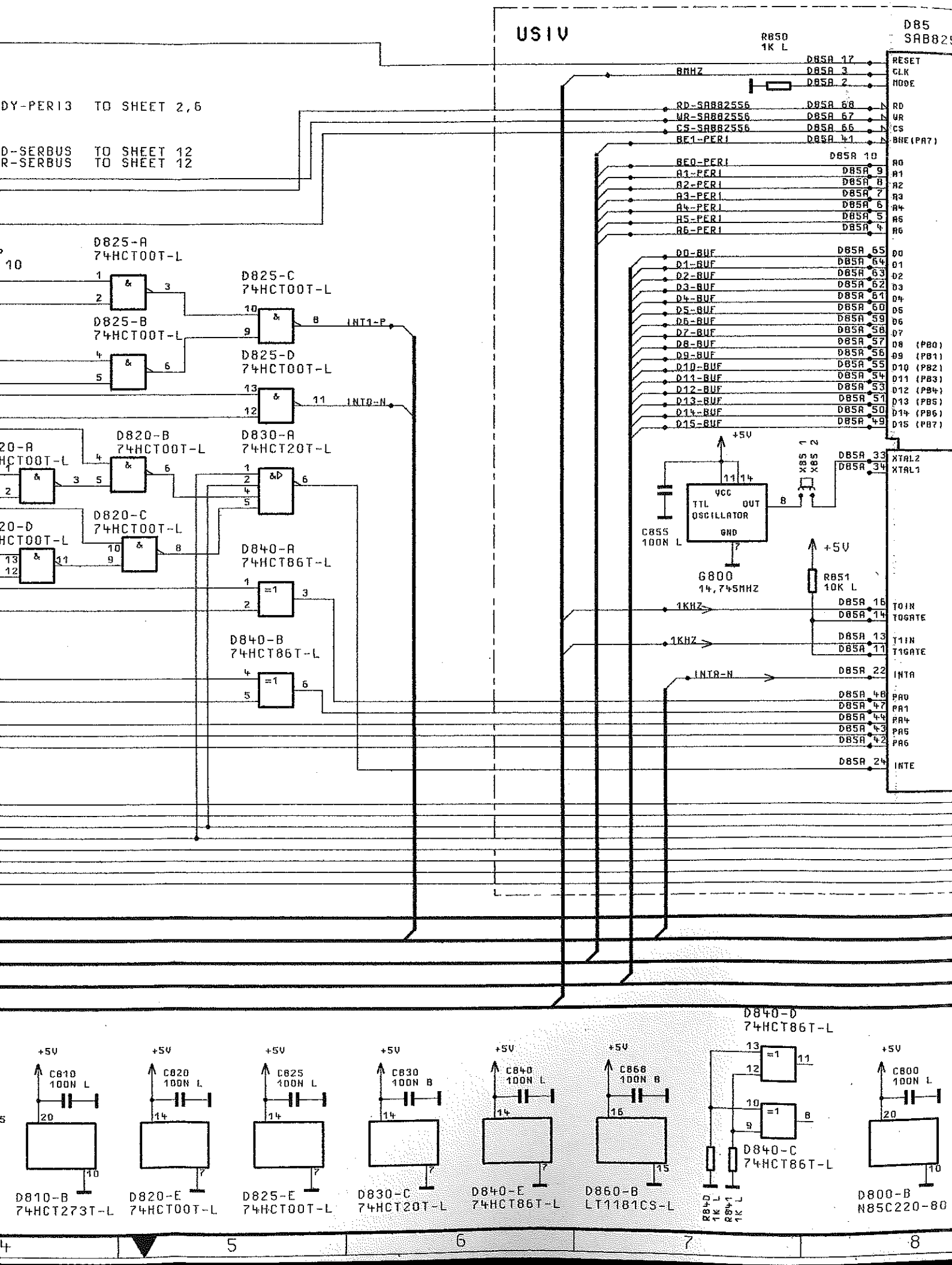


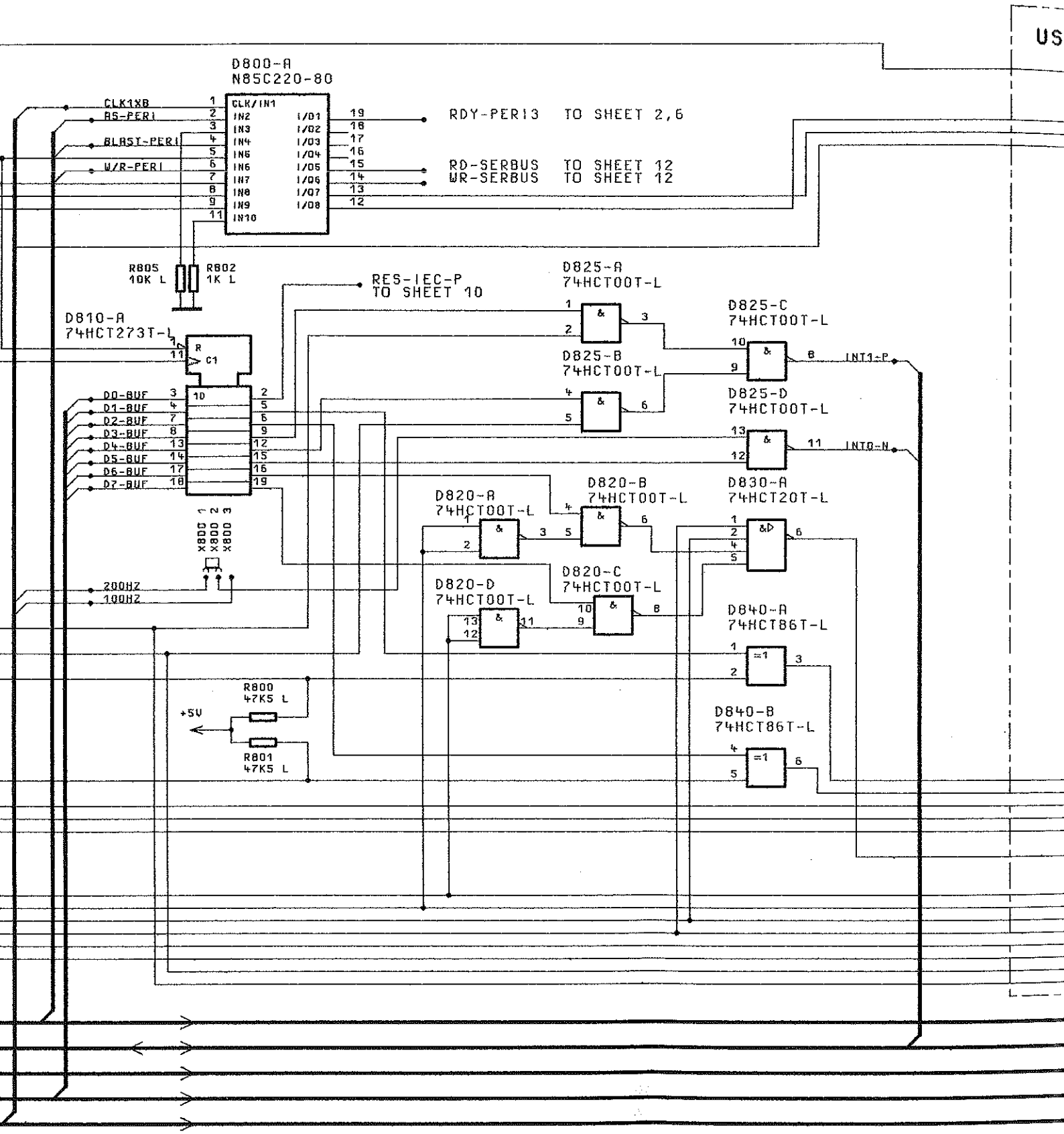

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | ZEICHN.-NR. 1035.7308.01S |
| | | | | ZU GERAET SMP | | | REG.I.V. 1035.5005 ERSTE Z. 1035.5440 |

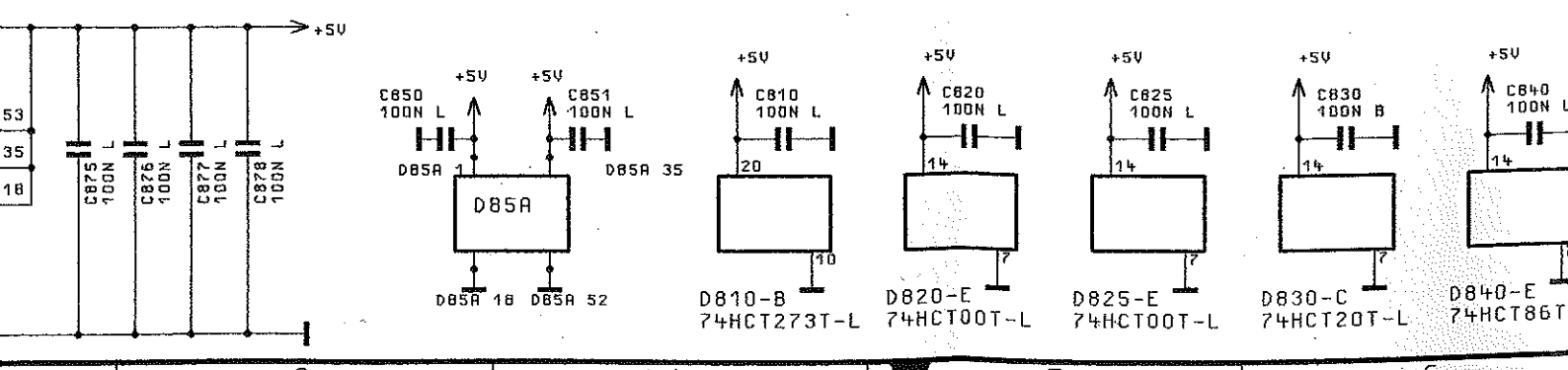
BLATT-NR. 11+ V. BL.

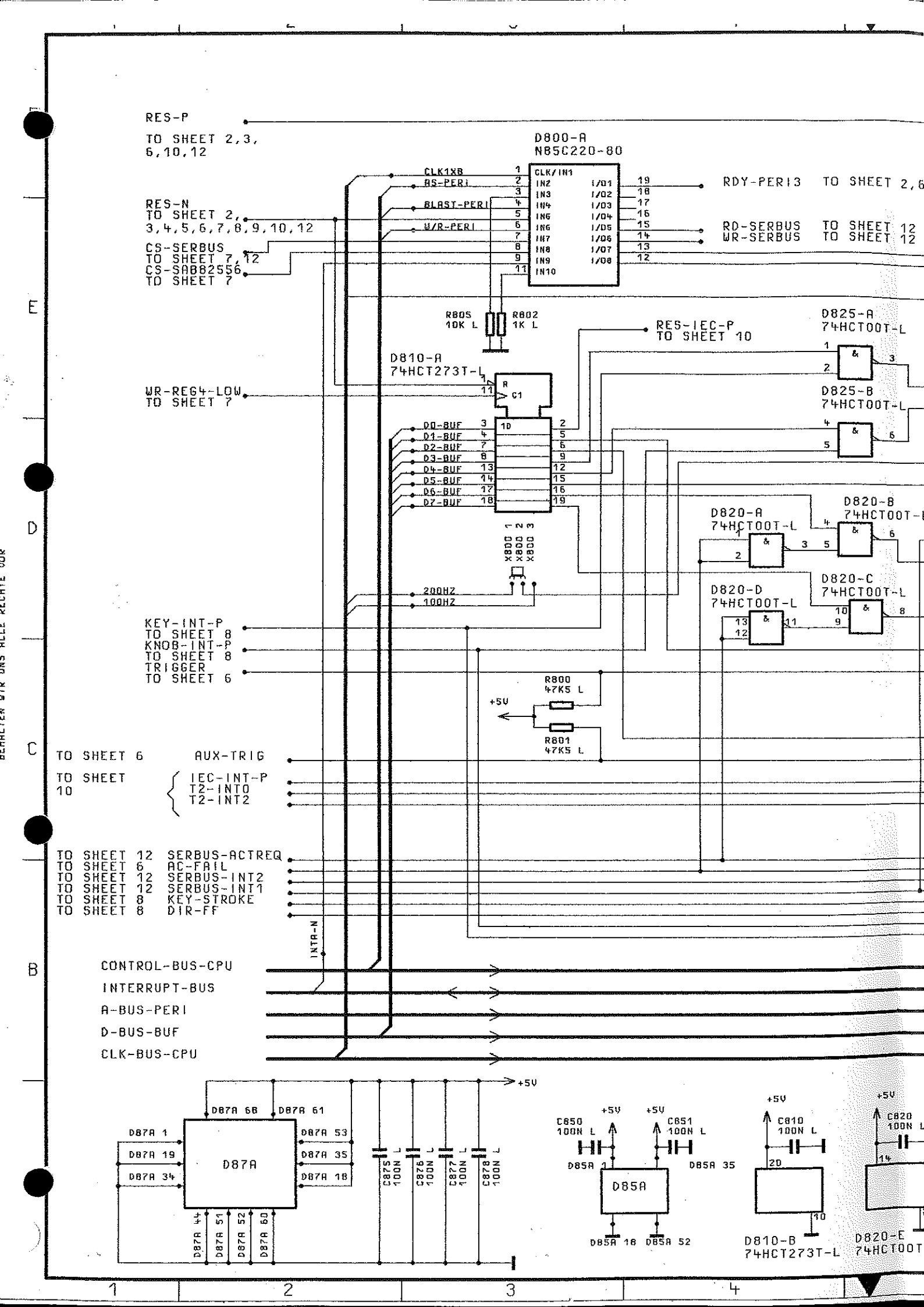


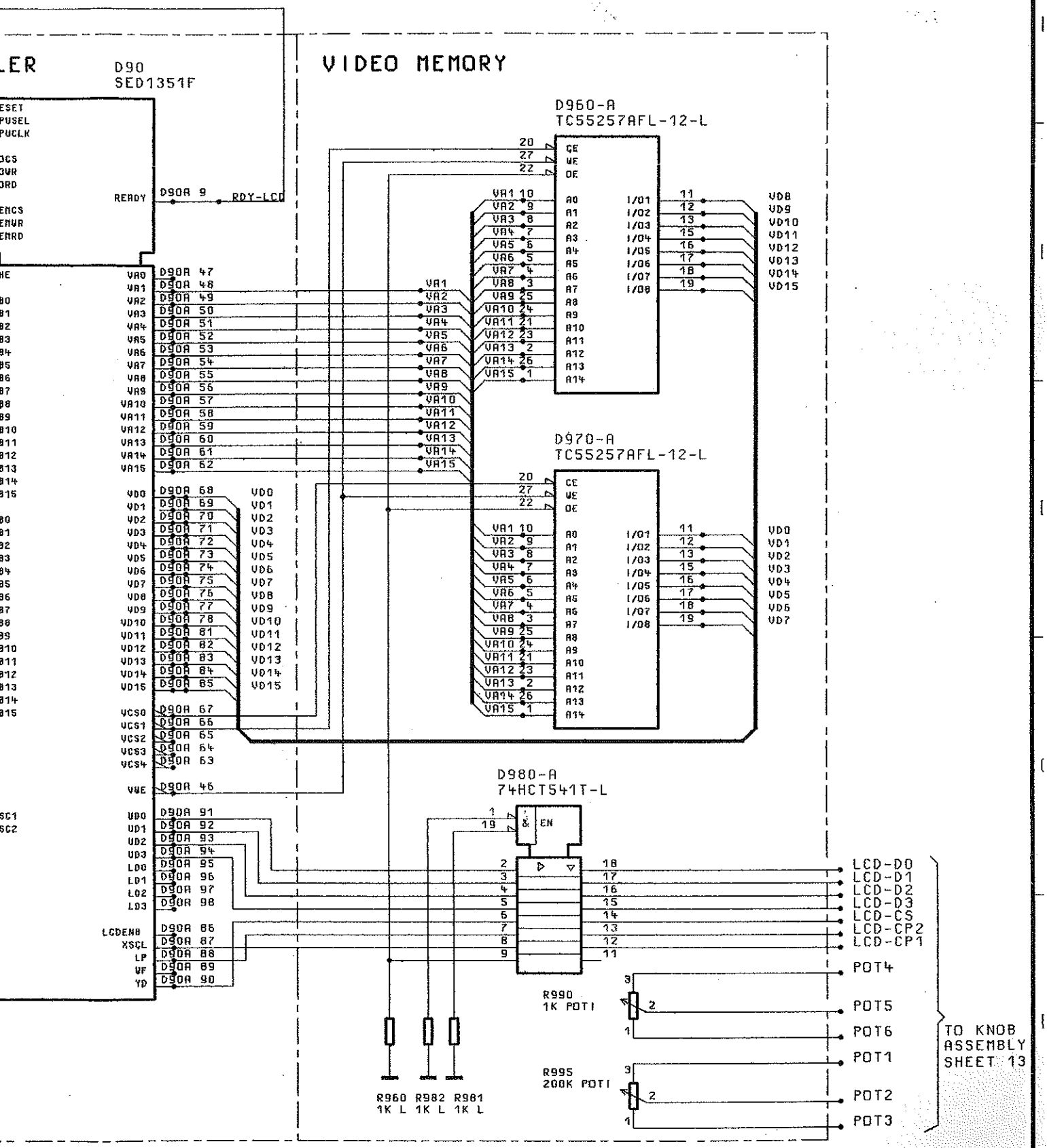

| | | | | | | |
|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME |
| | | | | BEARB. | | DR |
| | | | | GEPR. | | |
| | | | | NORM | | |
| | | | | PLOTT | 03.05.94 | |
| / | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | |
| | | | | ZU GERAET | SMP | |


USIV
D85
SAB825
R850
1K L
8MHZ
D85A 17
D85A 3
D85A 2
RESET
CLK
MODE
DY-PERI3 TO SHEET 2,6
D-SERBUS TO SHEET 12
R-SERBUS TO SHEET 12
RD-SA882556
WR-SA882556
CS-SA882556
BE1-PERI
D85A 68
D85A 67
D85A 66
D85A 41
RD
WR
CS
BHE(PA7)
BE0-PERI
A1-PERI
A2-PERI
A3-PERI
A4-PERI
A5-PERI
A6-PERI
D85A 10
D85A 9
D85A 8
D85A 7
D85A 6
D85A 5
D85A 4
A0
A1
A2
A3
A4
A5
A6
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
D8-BUF
D9-BUF
D10-BUF
D11-BUF
D12-BUF
D13-BUF
D14-BUF
D15-BUF
D85A 65
D85A 64
D85A 63
D85A 62
D85A 61
D85A 60
D85A 59
D85A 58
D85A 57
D85A 56
D85A 55
D85A 54
D85A 53
D85A 51
D85A 50
D85A 49
D0
D1
D2
D3
D4
D5
D6
D7
D8 (PB0)
D9 (PB1)
D10 (PB2)
D11 (PB3)
D12 (PB4)
D13 (PB5)
D14 (PB6)
D15 (PB7)
D825-A
74HCT00T-L
D825-B
74HCT00T-L
D825-C
74HCT00T-L
D825-D
74HCT00T-L
INT1-P
INT0-N
D820-A
74HCT00T-L
D820-B
74HCT00T-L
D820-C
74HCT00T-L
D820-D
74HCT00T-L
D830-A
74HCT20T-L
D840-A
74HCT86T-L
D840-B
74HCT86T-L
+5V
X85 1
X85 2
D85A 33
D85A 34
XTAL2
XTAL1
VCC
TTL OSCILLATOR
OUT
GND
C855
100N L
G800
14,745MHZ
R851
10K L
1KHZ
1KHZ
INTR-N
D85A 16
D85A 14
D85A 13
D85A 11
D85A 22
D85A 46
D85A 47
D85A 44
D85A 43
D85A 42
D85A 24
T0IN
T0GATE
T1IN
T1GATE
INTR
PA0
PA1
PA4
PA5
PA6
INTE
C810
100N L
C820
100N L
C825
100N L
C830
100N B
C840
100N L
C868
100N B
C800
100N L
D840-D
74HCT86T-L
D840-C
74HCT86T-L
R840
1K L
R841
1K L
D810-B
74HCT273T-L
D820-E
74HCT00T-L
D825-E
74HCT00T-L
D830-C
74HCT20T-L
D840-E
74HCT86T-L
D860-B
LT1181CS-L
D800-B
N85C220-80

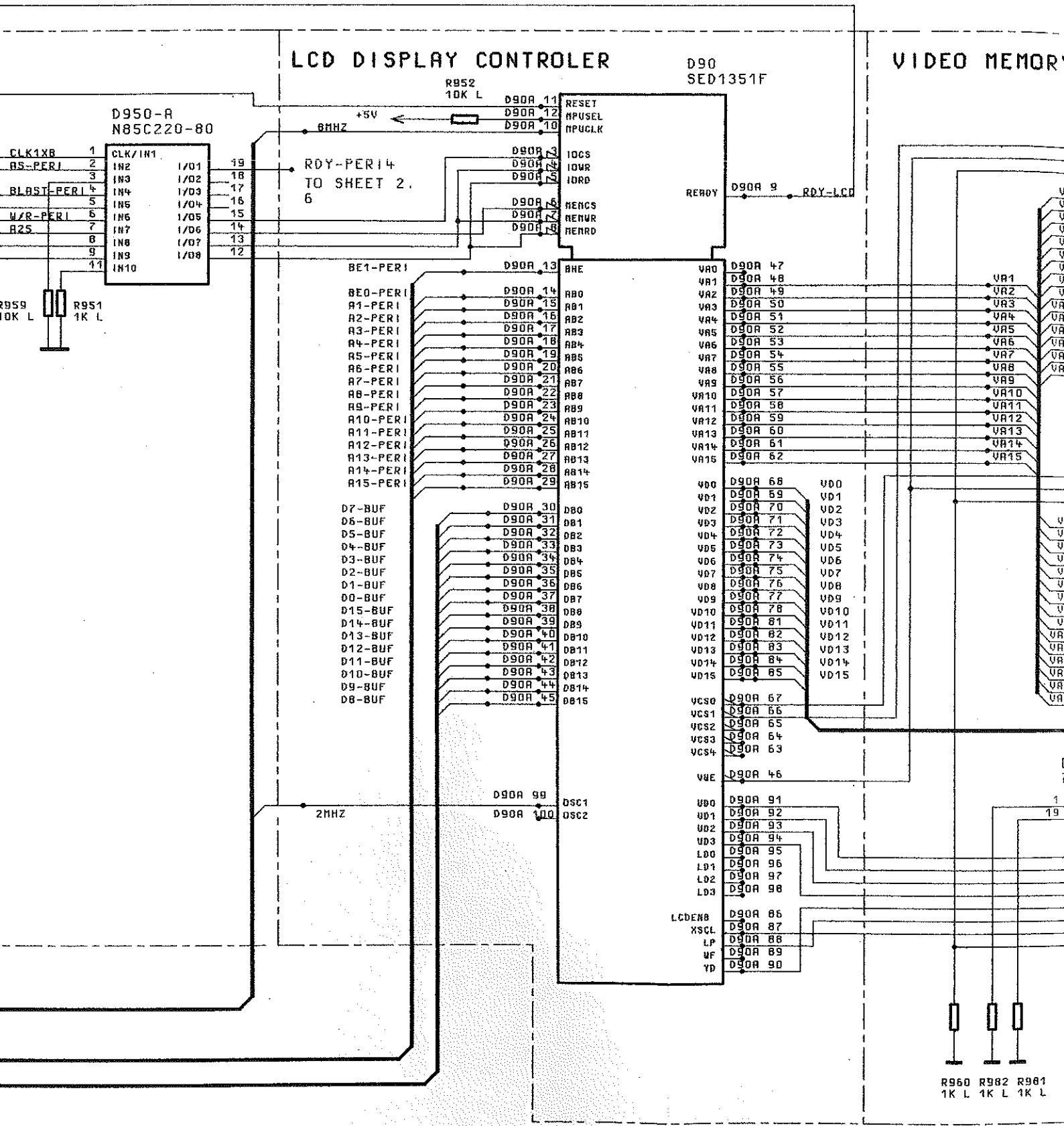

D800-A
N85C220-80
CLK1XB
RS-PERI
BLAST-PERI
W/R-PERI
RDY-PERI3 TO SHEET 2,6
RD-SERBUS TO SHEET 12
WR-SERBUS TO SHEET 12
R805 10K L
R802 1K L
RES-IEC-P TO SHEET 10
D810-A 74HCT273T-L
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
X800 1
X800 2
X800 3
200HZ
100HZ
D825-A 74HCT00T-L
D825-B 74HCT00T-L
D825-C 74HCT00T-L
D825-D 74HCT00T-L
INT1-P
INT0-N
D820-A 74HCT00T-L
D820-B 74HCT00T-L
D820-C 74HCT00T-L
D820-D 74HCT00T-L
D830-A 74HCT20T-L
D840-A 74HCT86T-L
D840-B 74HCT86T-L
R800 47K5 L
R801 47K5 L
+5V


+5V
C850 100N L
C851 100N L
D85A 1
D85A 35
D85A
D85A 18
D85A 52
C875 100N L
C876 100N L
C877 100N L
C878 100N L
C810 100N L
C820 100N L
C825 100N L
C830 100N B
C840 100N L
D810-B 74HCT273T-L
D820-E 74HCT00T-L
D825-E 74HCT00T-L
D830-C 74HCT20T-L
D840-E 74HCT86T

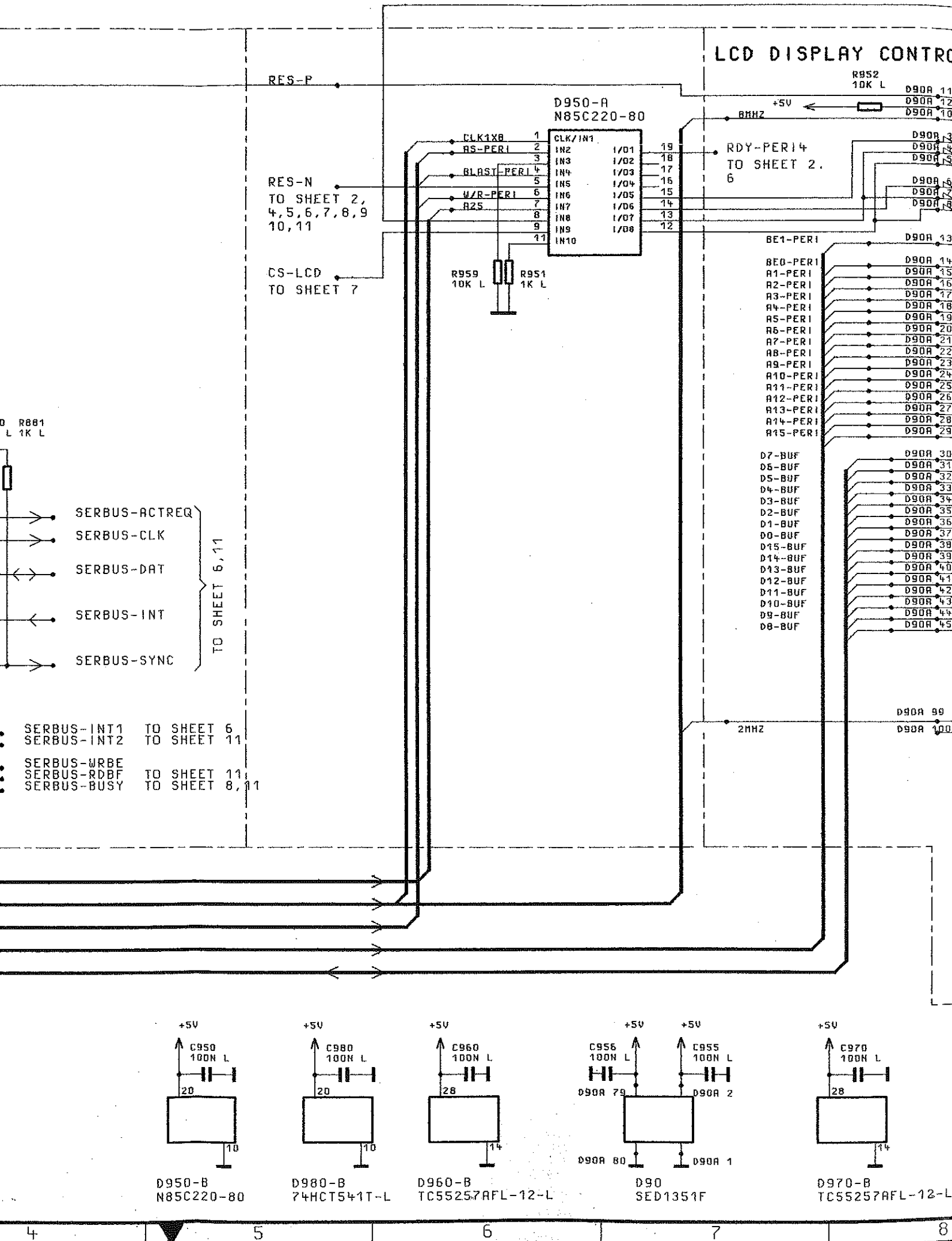

RES-P
TO SHEET 2,3, 6,10,12
D800-A
N85C220-80
CLK1XB
BS-PERI
BLAST-PERI
W/R-PERI
RDY-PERI3 TO SHEET 2,6
RD-SERBUS TO SHEET 12
WR-SERBUS TO SHEET 12
RES-N
TO SHEET 2, 3,4,5,6,7,8,9,10,12
CS-SERBUS
TO SHEET 7,12
CS-SAB82556
TO SHEET 7
R805 10K L
R802 1K L
RES-IEC-P
TO SHEET 10
D825-A
74HCT00T-L
D825-B
74HCT00T-L
D810-A
74HCT273T-L
WR-REG4-LOW
TO SHEET 7
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
D820-A
74HCT00T-L
D820-B
74HCT00T-L
D820-C
74HCT00T-L
D820-D
74HCT00T-L
X800
200HZ
100HZ
KEY-INT-P
TO SHEET 8
KNOB-INT-P
TO SHEET 8
TRIGGER
TO SHEET 6
R800 47K5 L
R801 47K5 L
+5V
TO SHEET 6 AUX-TRIG
TO SHEET 10 IEC-INT-P
T2-INTO
T2-INT2
TO SHEET 12 SERBUS-ACTREQ
TO SHEET 6 AC-FAIL
TO SHEET 12 SERBUS-INT2
TO SHEET 12 SERBUS-INT1
TO SHEET 8 KEY-STROKE
TO SHEET 8 DIR-FF
INTR-N
CONTROL-BUS-CPU
INTERRUPT-BUS
A-BUS-PERI
D-BUS-BUF
CLK-BUS-CPU
D87A
D87A 68
D87A 61
D87A 1
D87A 19
D87A 34
D87A 53
D87A 35
D87A 18
D87A 44
D87A 51
D87A 52
D87A 60
C875 100N L
C876 100N L
C877 100N L
C878 100N L
C850 100N L
C851 100N L
D85A
D85A 1
D85A 35
D85A 18
D85A 52
C810 100N L
D810-B
74HCT273T-L
C820 100N L
D820-E
74HCTOOT



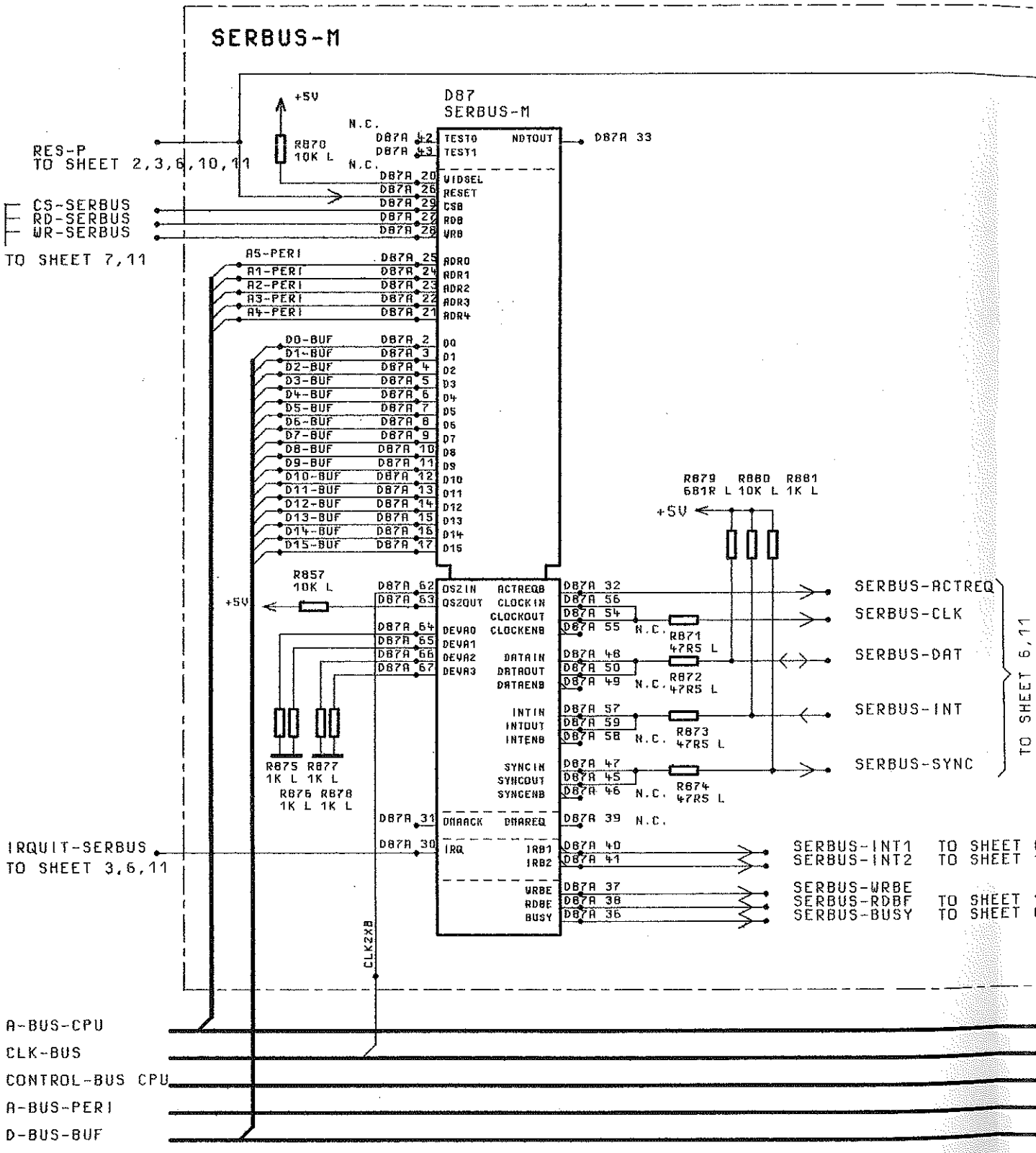

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG | |
| | | | | BEARB. | | DR | RECHNER | |
| | | | | GEPR. | | | PROCESSOR | |
| | | | | NORM | | | | |
| | | | | PLOTT | 03.05.94 | | | |
| / | | | | | | | ZEICHN.-NR. | BLATT-NR. |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | 1035.7308.01S | 12+ |
| | | | | ZU GERAET | SMP | | REG.I.V. 1035.5005 | ERSTE Z. 1035.5440 |



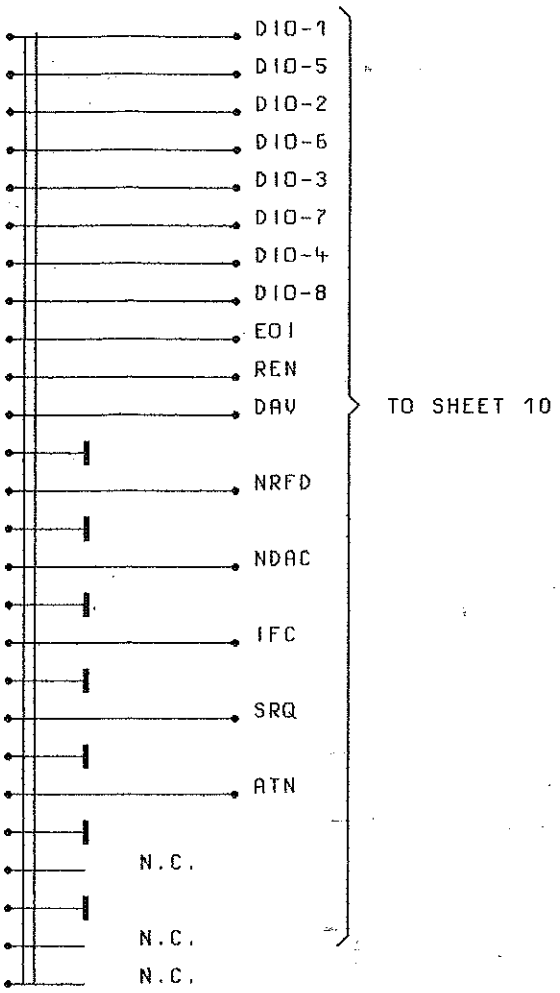

| | | | | | |
|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG |
| | | | | BEARB. | |
| | | | | GEPR. | |
| | | | | NORM | |
| | | | | PLOTT | 03.05.94 |
| / | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCH | |
| | | | | ZU GERAET | SMP |


LCD DISPLAY CONTRO
RES-P
R952
10K L
+5V
8MHZ
D950-A
N85C220-80
CLK1X8
AS-PERI
BLAST-PERI
W/R-PERI
A25
CLK/IN1
IN2
IN3
IN4
IN5
IN6
IN7
IN8
IN9
IN10
I/O1
I/O2
I/O3
I/O4
I/O5
I/O6
I/O7
I/O8
RDY-PERI4
TO SHEET 2.
6
RES-N
TO SHEET 2,
4,5,6,7,8,9
10,11
CS-LCD
TO SHEET 7
R959
10K L
R951
1K L
BE1-PERI
BE0-PERI
A1-PERI
A2-PERI
A3-PERI
A4-PERI
A5-PERI
A6-PERI
A7-PERI
A8-PERI
A9-PERI
A10-PERI
A11-PERI
A12-PERI
A13-PERI
A14-PERI
A15-PERI
D7-BUF
D6-BUF
D5-BUF
D4-BUF
D3-BUF
D2-BUF
D1-BUF
D0-BUF
D15-BUF
D14-BUF
D13-BUF
D12-BUF
D11-BUF
D10-BUF
D9-BUF
D8-BUF
R881
L 1K L
SERBUS-ACTREQ
SERBUS-CLK
SERBUS-DAT
SERBUS-INT
SERBUS-SYNC
TO SHEET 6,11
SERBUS-INT1 TO SHEET 6
SERBUS-INT2 TO SHEET 11
SERBUS-WRBE
SERBUS-RDBF TO SHEET 11
SERBUS-BUSY TO SHEET 8,11
2MHZ
+5V
C950
100N L
C980
100N L
C960
100N L
C956
100N L
C955
100N L
C970
100N L
D90A 79
D90A 2
D90A 80
D90A 1
D950-B
N85C220-80
D980-B
74HCT541T-L
D960-B
TC55257AFL-12-L
D90
SED1351F
D970-B
TC55257AFL-12-L

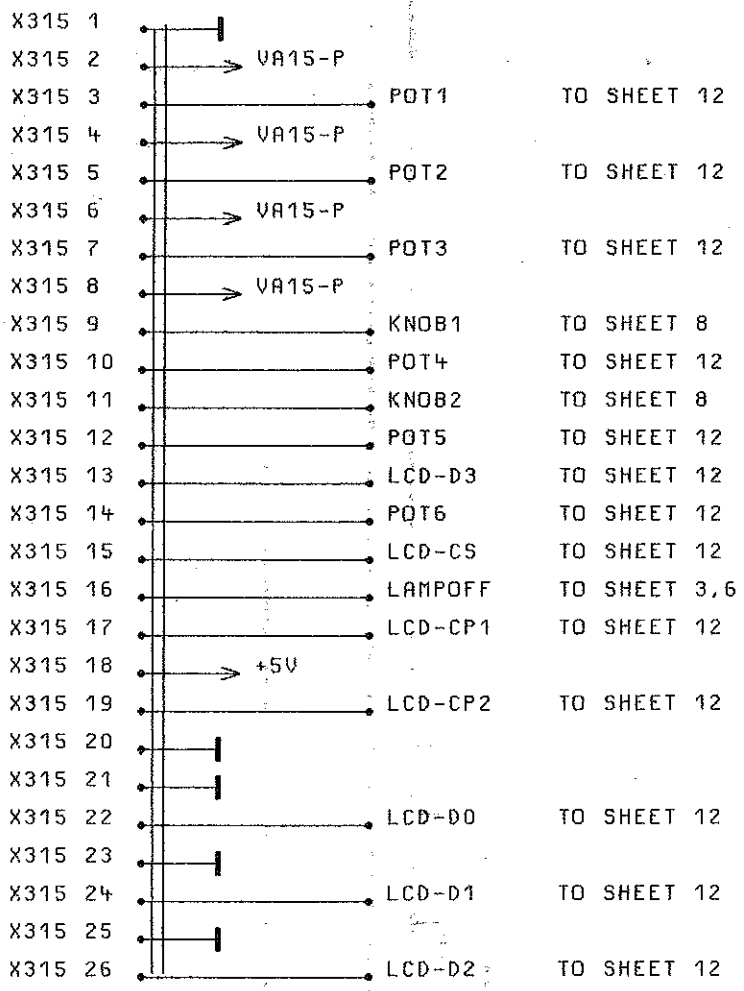
BUS-M
D87
SERBUS-M
+5V
R870
10K L
N.C.
D87A 42
D87A 43
TEST0
TEST1
NDTOUT
D87A 33
D87A 20
D87A 26
D87A 29
D87A 27
D87A 28
VIDSEL
RESET
CSB
RDB
WRB
ADR0
ADR1
ADR2
ADR3
ADR4
D0
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D0-BUF
D1-BUF
D2-BUF
D3-BUF
D4-BUF
D5-BUF
D6-BUF
D7-BUF
D8-BUF
D9-BUF
D10-BUF
D11-BUF
D12-BUF
D13-BUF
D14-BUF
D15-BUF
R857
10K L
R875
1K L
R877
1K L
R876
1K L
R878
1K L
QSZIN
QSZOUT
DEVA0
DEVA1
DEVA2
DEVA3
ACTREQB
CLOCKIN
CLOCKOUT
CLOCKENB
DATAIN
DATAOUT
DATAENB
INTIN
INTOUT
INTENB
SYNCIN
SYNCOUT
SYNCENB
DMAACK
DMAREQ
IRQ
IRB1
IRB2
WRBE
RDBE
BUSY
R879
681R L
R880
10K L
R881
1K L
R871
47R5 L
R872
47R5 L
R873
47R5 L
R874
47R5 L
N.C.
SERBUS-ACTREQ
SERBUS-CLK
SERBUS-DAT
SERBUS-INT
SERBUS-SYNC
TO SHEET 6,11
SERBUS-INT1 TO SHEET 6
SERBUS-INT2 TO SHEET 11
SERBUS-WRBE
SERBUS-RDBF TO SHEET 11
SERBUS-BUSY TO SHEET 8,11
CLK2XB
RES-P
RES-N
TO SHEET 2,
4,5,6,7,8,9
10,11
CS-LCD
TO SHEET 7
CLK1XB
AS-PERI
BLAST-PERI
W/R-PERI
A25
R959
10K L
R95
1K
C950
100N L
C980
100N L
C960
100N L
20
10
14
D950-B
N85C220-80
D980-B
74HCT541T-L
D960-B
TC55257AFL-12



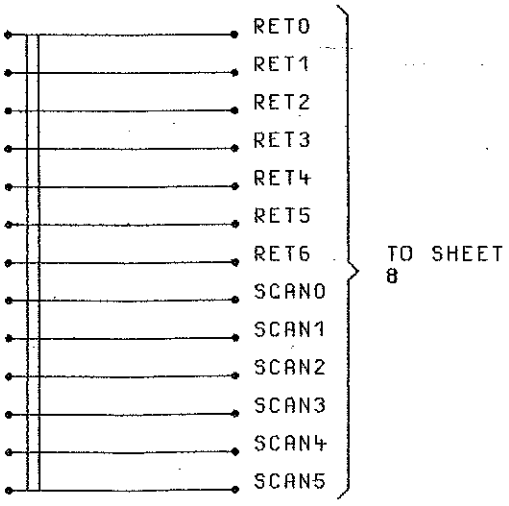
## 25



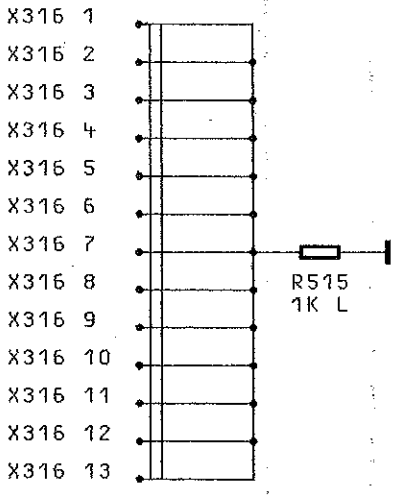

## KNOB



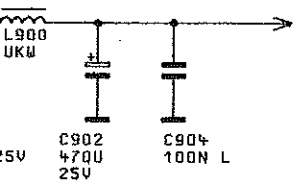

## OARD

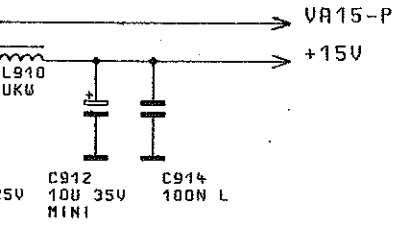


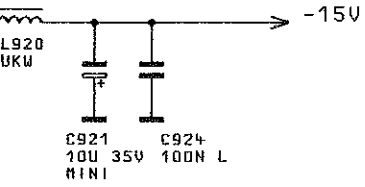

## KEYBOARD




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | DR | RECHNER |
| | | | | GEPR. | | | PROCESSOR |
| | | | | NORM | | | |
| | | | | PLOTT | 03.05.94 | | |
| / | | | | ROHDE&SCHWARZ | | | ZEICHN.-NR. 1035.7308.01S |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ZU GERAET SMP | | | BLATT-NR. 13- |
| | | | | | | | REG.I.V. 1035.5005. ERSTE Z. 1035.5440 |

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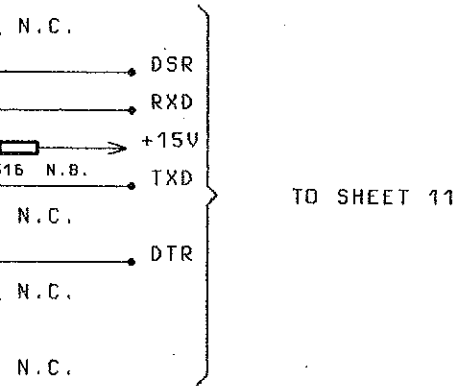
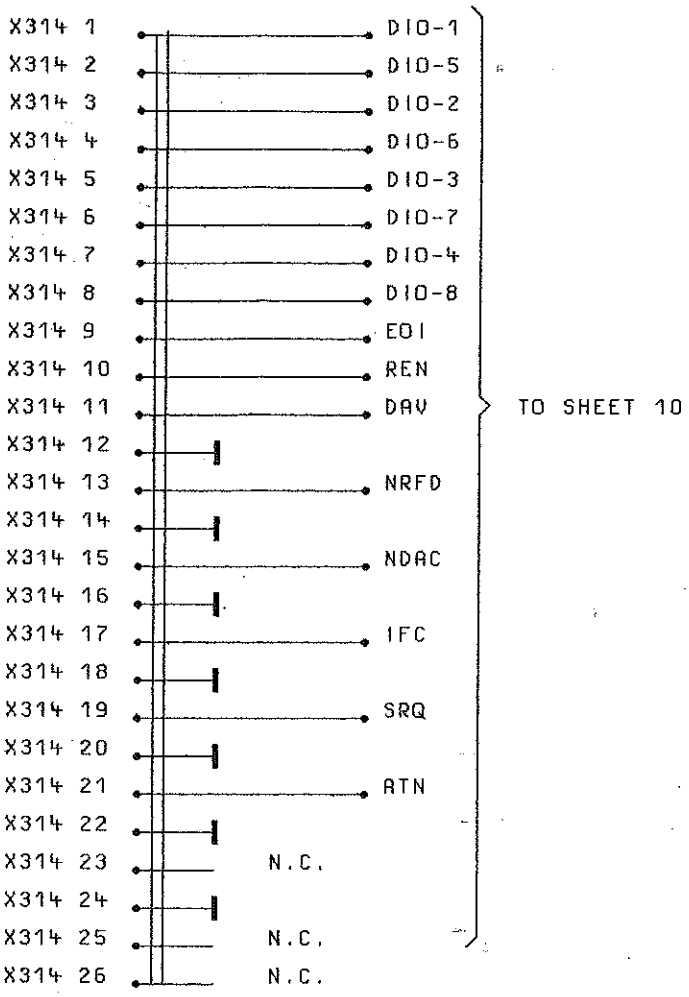
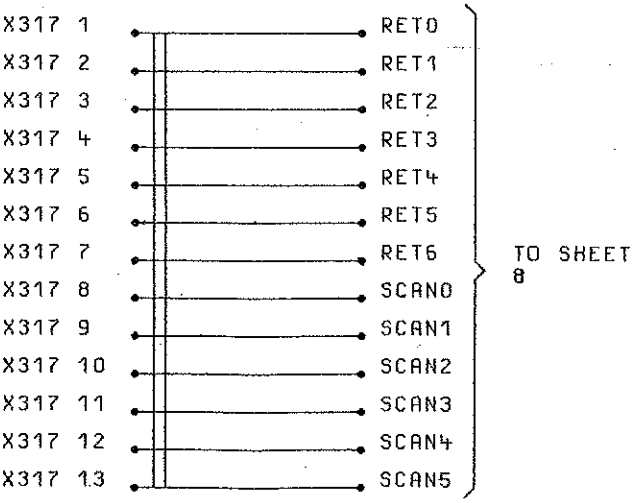


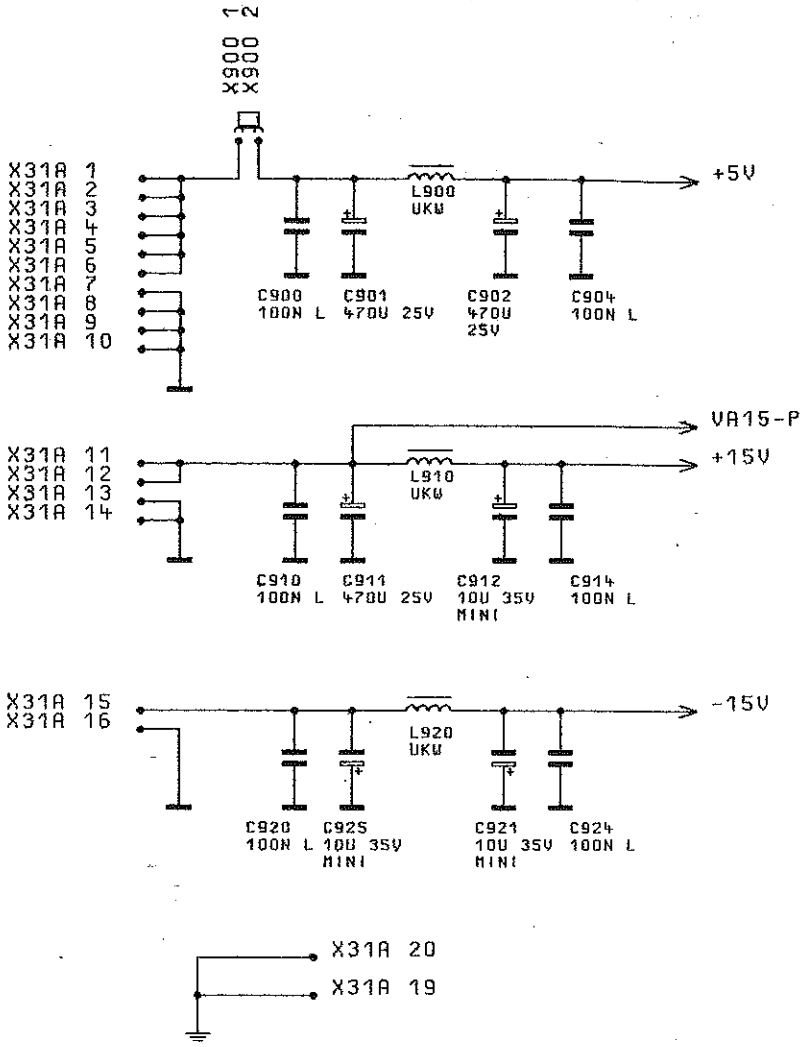

## IEC625



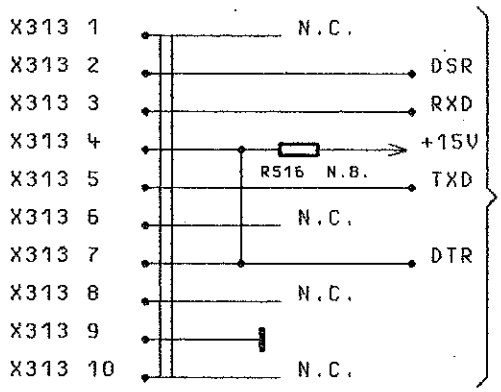

## KEYBOARD




| | | | | | |
|---|---|---|---|---|---|
| 04/ | 48730 | 02.05.94 | DR | 1GPK | TA |
| | | | | BEARB. | |
| | | | | GEPR. | |
| | | | | NORM | |
| | | | | PLOTT | 03.05 |
| / | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE& ZU GERRET | |




## RS232




TO SHEET 11

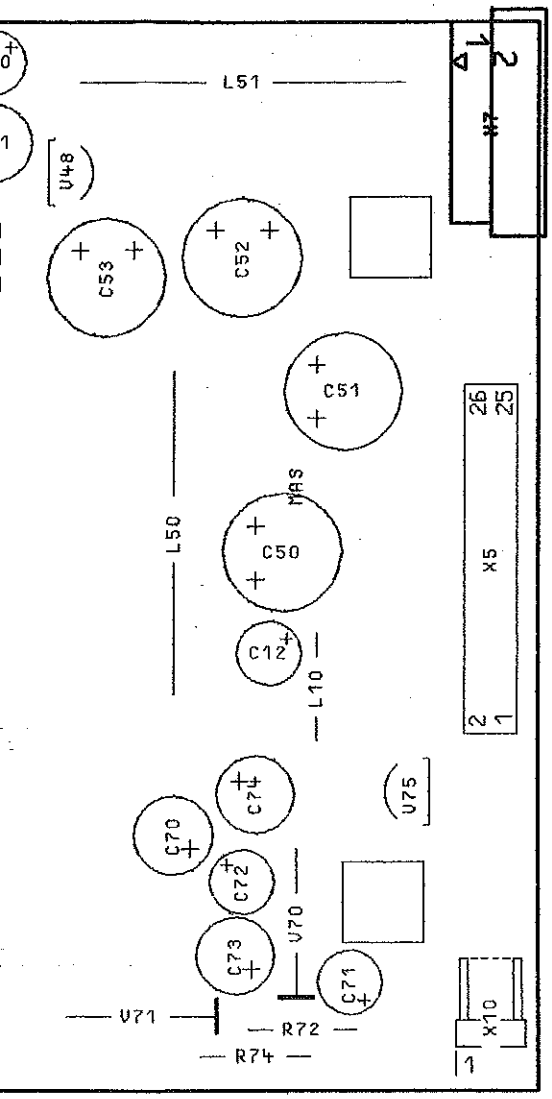
## IEC6

X314 1
X314 2
X314 3
X314 4
X314 5
X314 6
X314 7
X314 8
X314 9
X314 1
X314 1
X314 1
X314 1
X314 1
X314 1
X314 1
X314 1
X314 1
X314 2
X314 2
X314 2
X314 2
X314 2
X314 2
X314 2

## KEYB

X317 1
X317 2
X317 3
X317 4
X317 5
X317 6
X317 7
X317 8
X317 9
X317 1
X317 1
X317 1
X317 1

ZEICHN.-N

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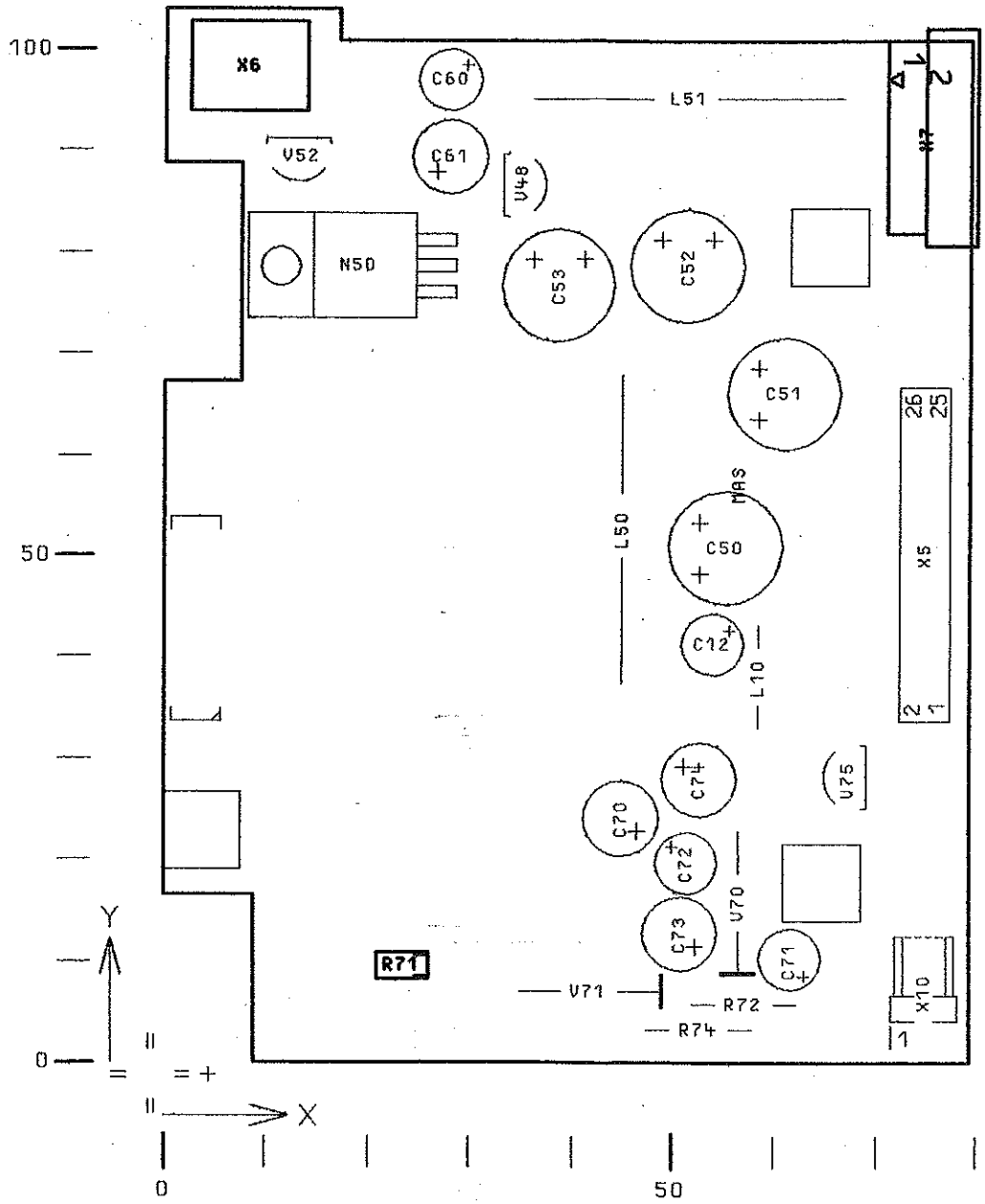
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 06/ | 48730 90 | 07.04.94 | JN | 1GPK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | JN | DREHGEBER |
| | | | | GEPR. | | DR | KNOB ASSEMBLY |
| | | | | NORM | | | Z |
| | | | | PLOTT | 07.04.94 | | |
| / | | | | | | | ZEICHN.-NR. 1035.5592.01 ED |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | BLATT-NR. 1+ V. BL. |
| | | | | ZU GERAET SMP | | | REG.I.V. 1035.5005 ERSTE Z. 1035.5440 |

5 6 7 8



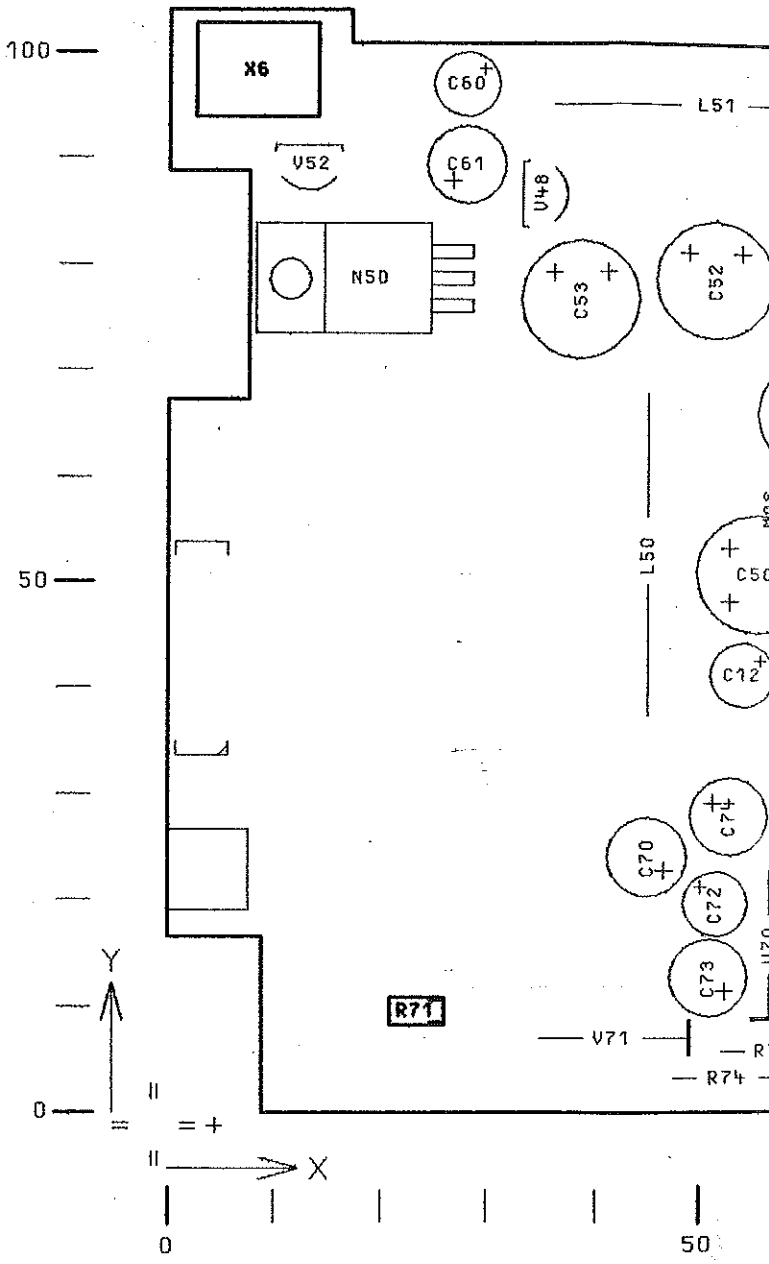

ACHTUNG: EGB!
ELEKTROSTATISCH GEFAEHRDETE BAUELEMENTE ERFORDERN EINE BESONDERE HANDHABUNG.
ATTENTION ESD!
ELECTROSTATIC SENSITIVE DEVICES REQUIRE A SPECIAL HANDLING

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 | NAME |
| | | | | BEARB. | | JN |
| | | | | GEPR. | | DR |
| | | | | NORM | | |
| | | | | PLOTT | 07.04.94 | |
| / | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | | | |

ROHDE&SCHWARZ
ZU GERAET SMP




STELLUNG SEITE B

N ON SIDE B

ACHTUNG: EGB!
ELEKTROSTATISCH GEFAEHRDETE 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 |
| | |
| | |
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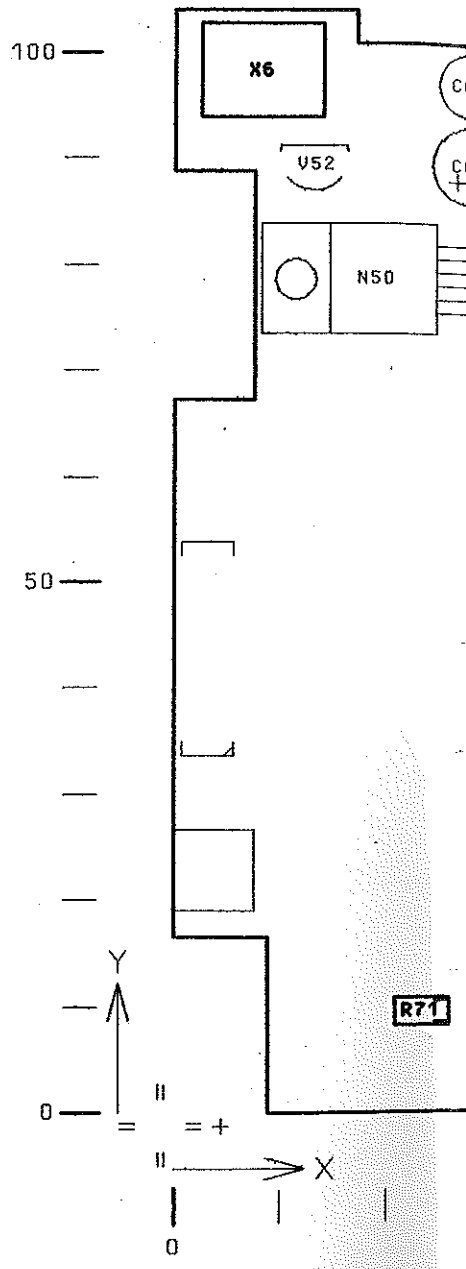
| | |
| | |
| / | |
| AEND. IND. | AENDERUN MITTEILU |



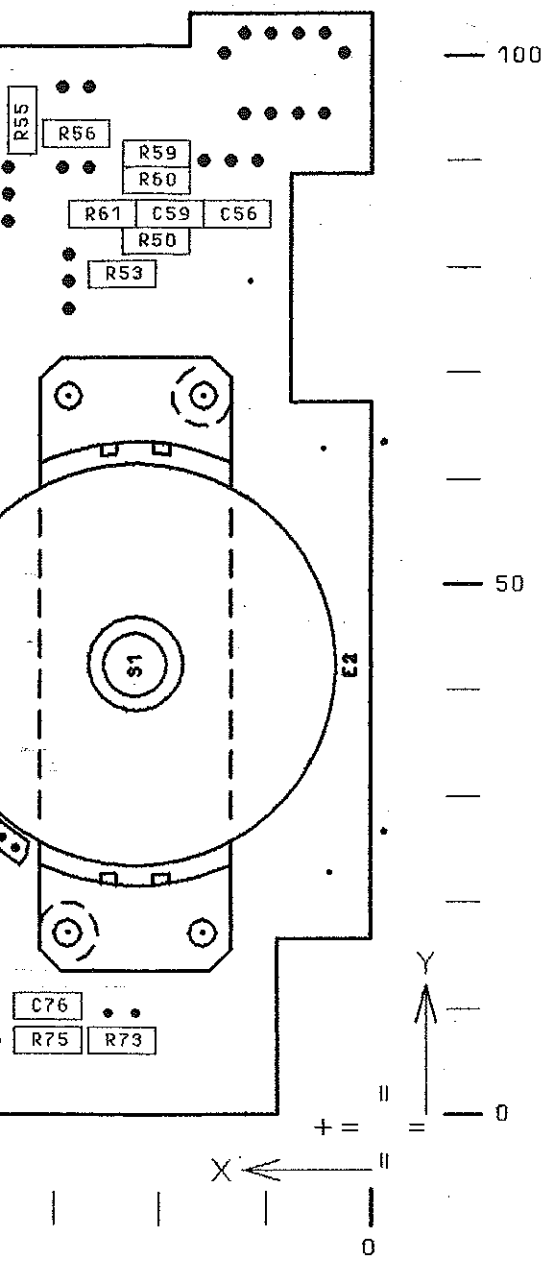

## DARSTELLUNG SEITE B

## VIEW ON SIDE B

ACHTUNG: EGB!
ELEKTROSTATISCH GEFAEHRDETE 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

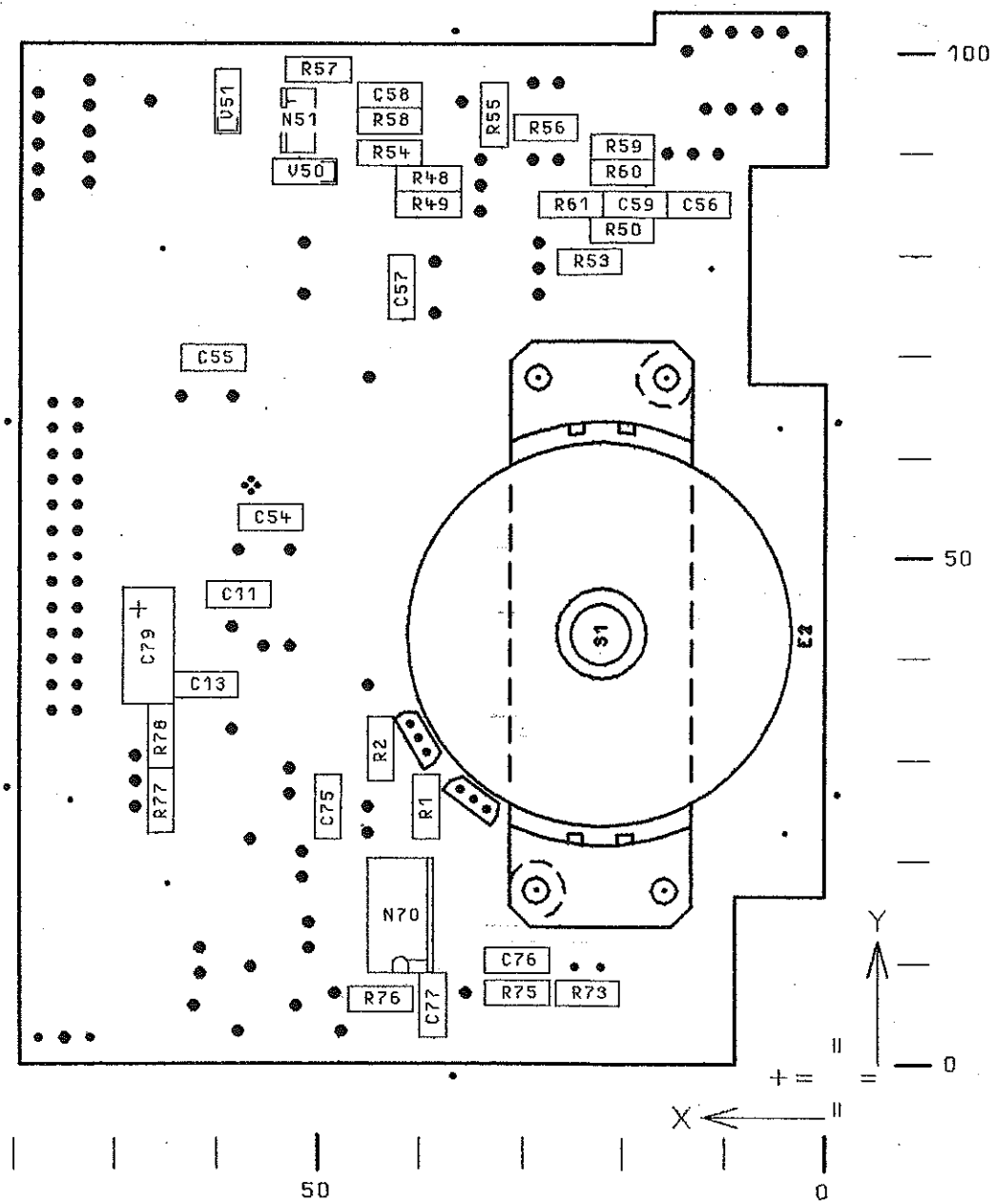
FOR BINDING INFORMATION ON MODEL
TRIMMING AND COMPONENTS VALUES A
NONFITTED COMPONENTS SEE PARTS L







| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 06/ | 48730 90 | 07.04.94 | JN | 1GPK | TAG | NAME | BENENNUNG | |
| | | | | BEARB. | | JN | DREHGEBER | Z |
| | | | | GEPR. | | DR | KNOB ASSEMBLY | |
| | | | | NORM | | | | |
| | | | | PLOTT | 07.04.94 | | | |
| / | | | | | | | ZEICHN.-NR. | BLATT-NR. |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | 1035.5592.01 ED | 2+ |
| | | | | ZU GERAET SMP | | | REG.I.V. 1035.5005 | ERSTE Z. 1035.5440 |

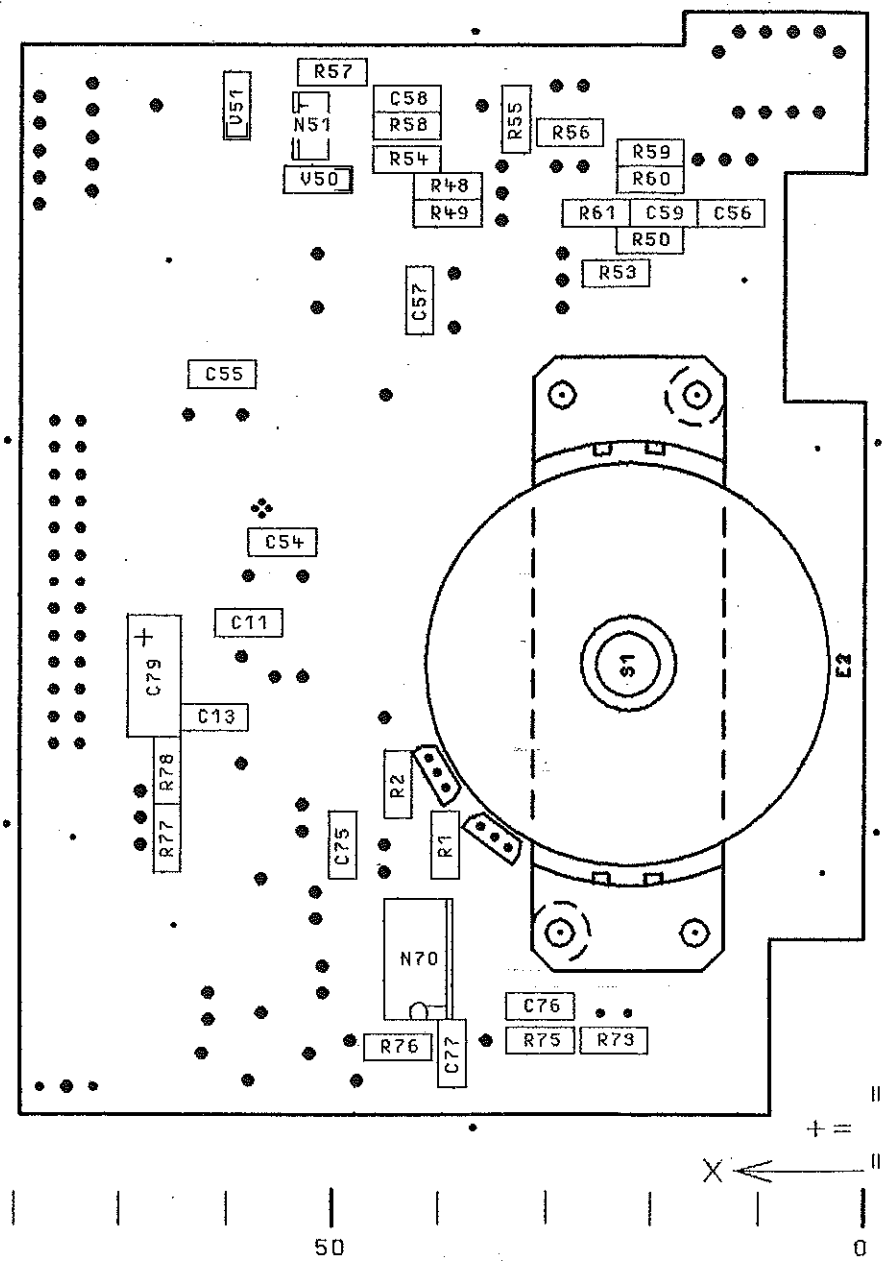



NG: EGB!
TISCH GEFAEHRDETE
E ERFORDERN EINE
RE HANDHABUNG.
ION ESD!
C SENSITIVE DEVICES
SPECIAL HANDLING

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 | 16PK | TAG | NAME | BENENNUNG |
| | | | | BEARB. | | JN | DRE |
| | | | | GEPR. | | DR | KNOB |
| | | | | NORM | | | |
| | | | | PLOTT | 07.04.94 | | |
| | | | | | | | ZEICHN.-NR |
| / | | | | | | | |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | ROHDE&SCHWARZ | | | |
| | | | | ZU GERRET | SMP | | REG.I.V. |




UNG SEITE A

SIDE A

ACHTUNG: EGB!
ELEKTROSTATISCH GEFAEHRDETE 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.

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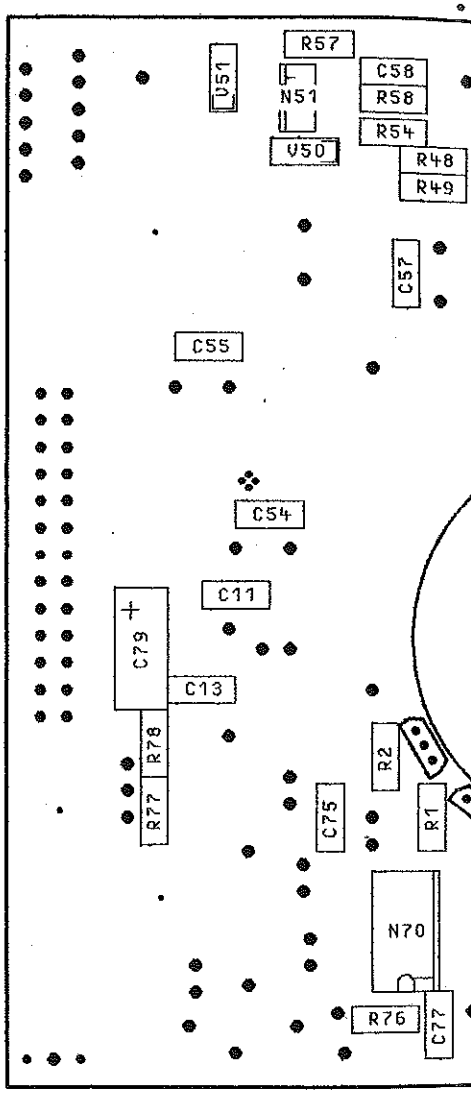


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DARSTELLUNG SEITE A

VIEW ON SIDE A

ACHTUNG: EGB!
ELEKTROSTATISCH GEFAEHRDETE BAUELEMENTE ERFORDERN EINE BESONDERE HANDHABUNG.
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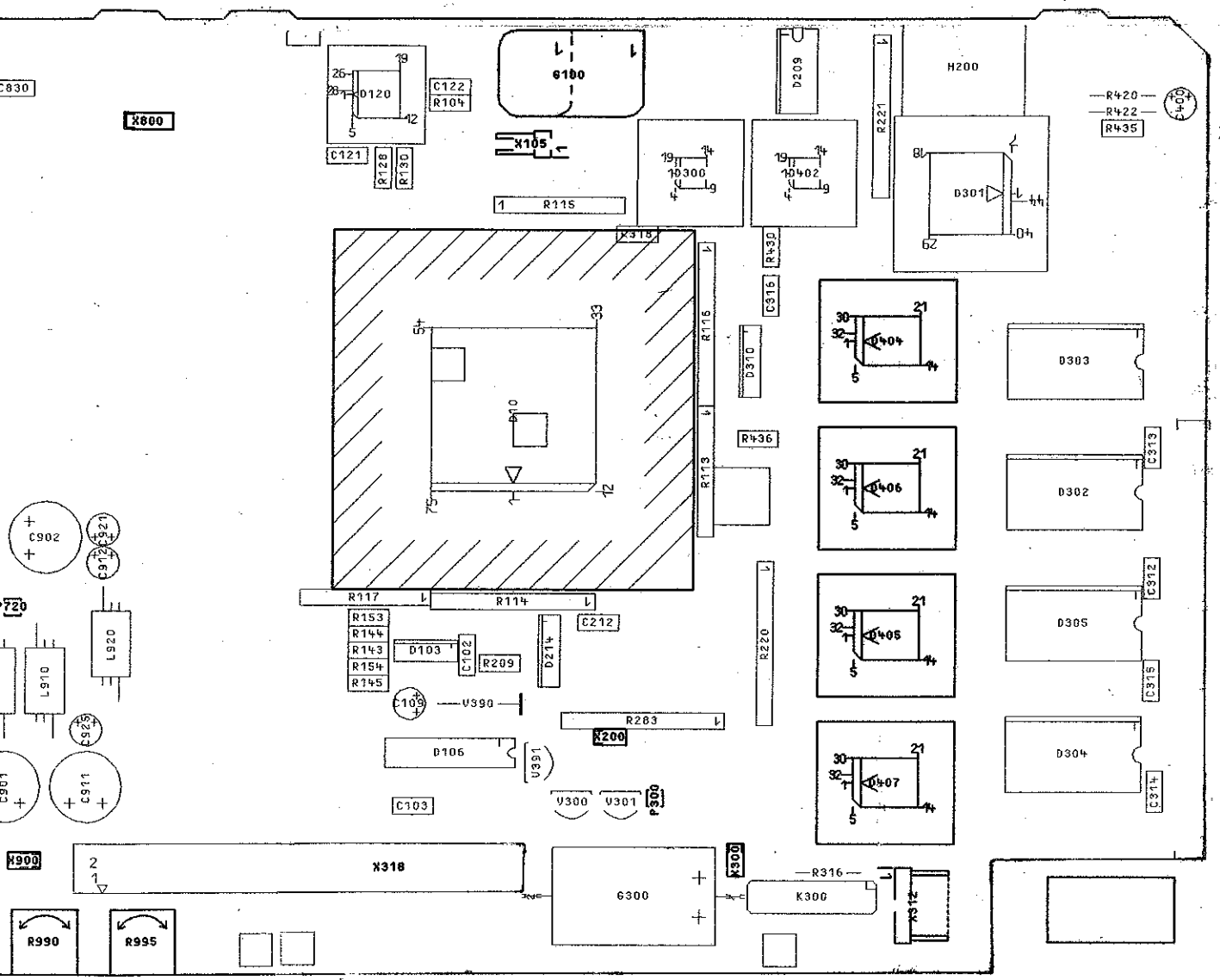
FOR BINDING INFORMATION ON MODELS, TRIMMING AND COMPONENTS VALUES AN... NONFITTED COMPONENTS SEE PARTS LI...




| | | | | | TAG | NAME | BENENNUNG | |
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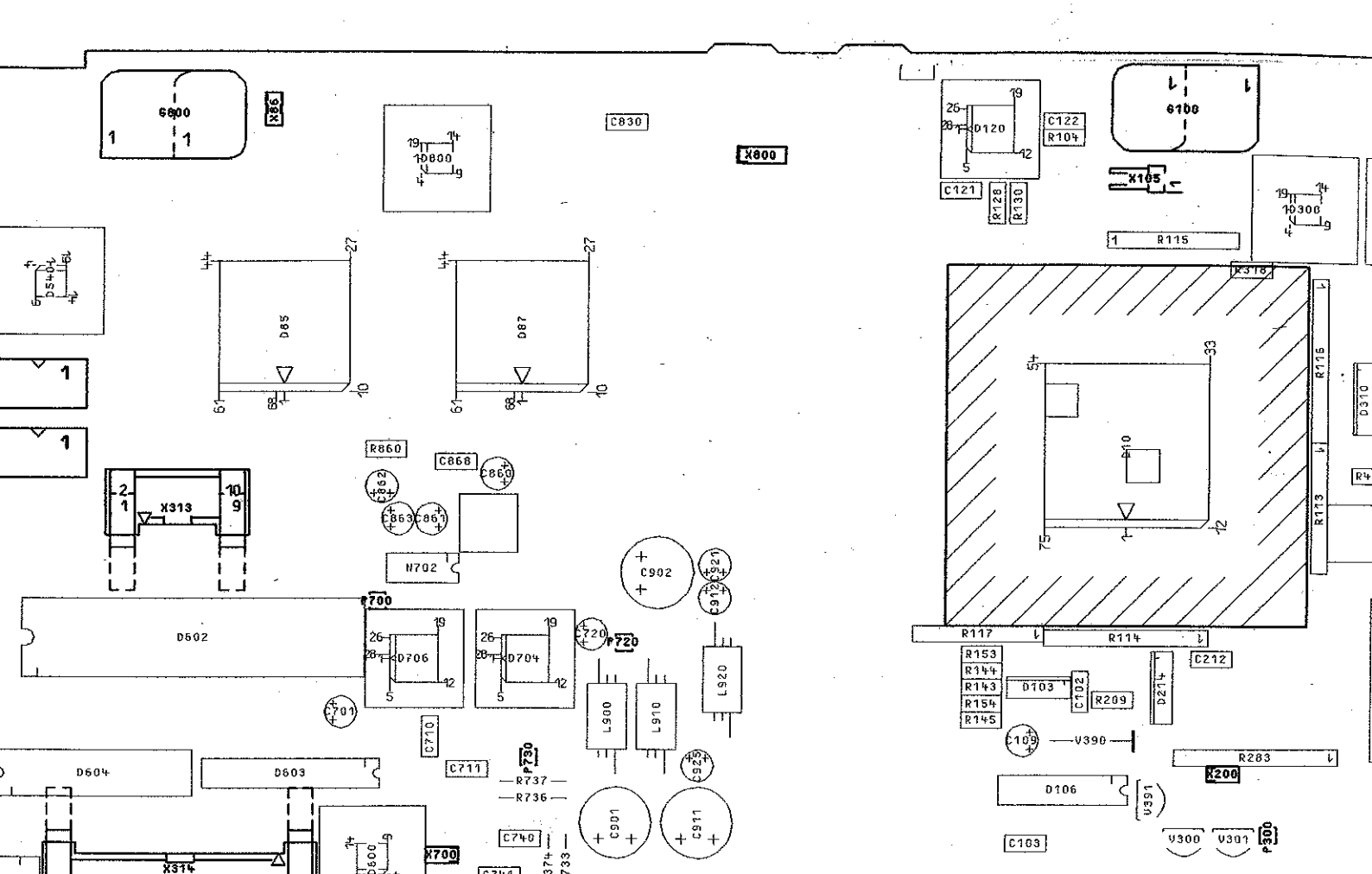
| 04 | | | | BEARB. | | DR | RECHNER | Z |
| | | | | GEPR. | | DR | PROCESSOR | |
| | | | | NORM | | | | |
| | | | | PLOTT | 25.09.92 | | | |
| | | | | ROHDE&SCHWARZ | | | ZEICHN.-NR. 1035.7308.01 | ED |
| | | | | ZU SERIE: | SMP | | REG.L.V. 1035.5005 | ERSTE Z. |
| AEND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME | | | | BLATT-NR. 1+ V. BL. | |




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

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| REND. IND. | AENDERUNGS-MITTEILUNG | DATUM | NAME |
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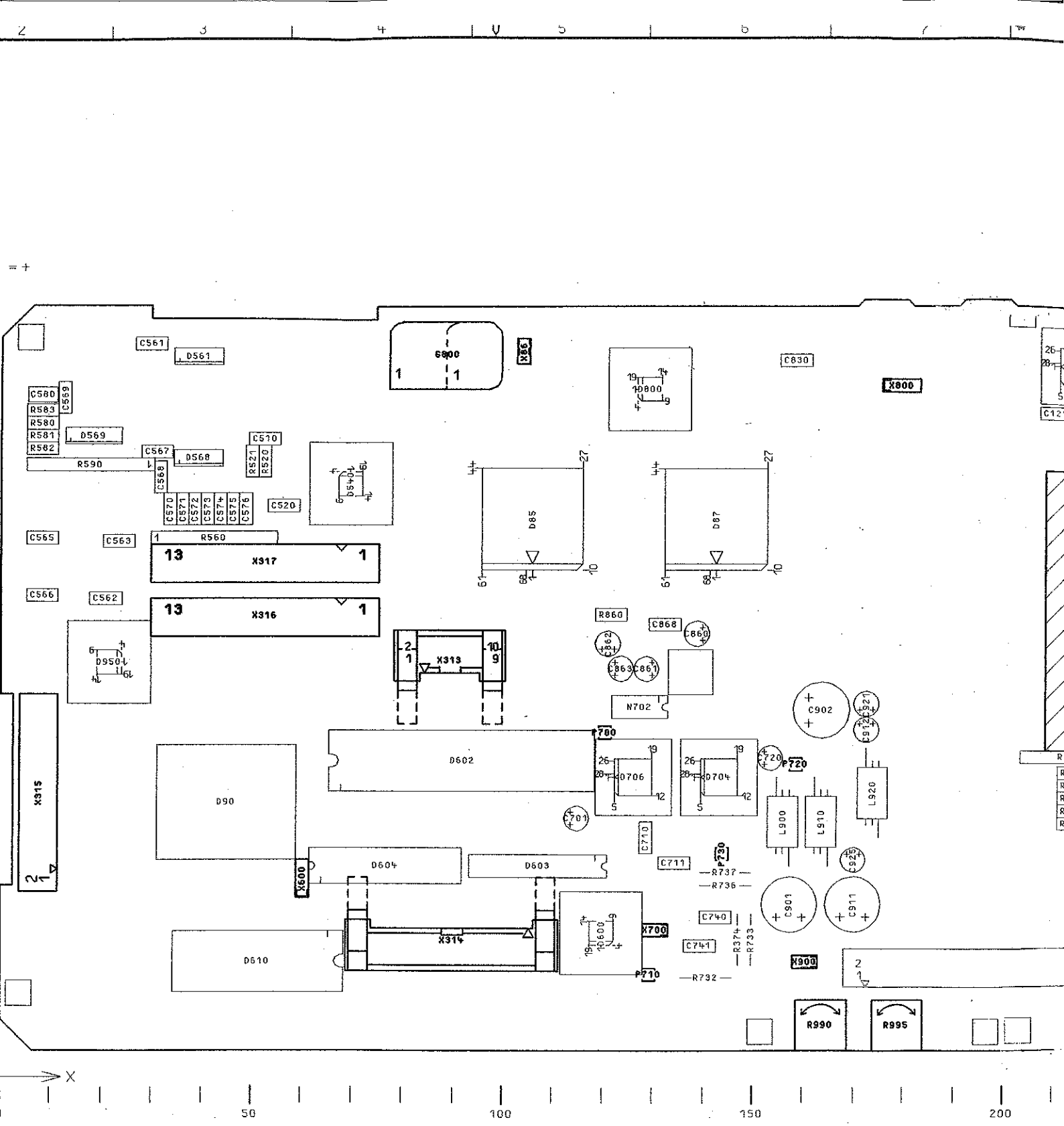


SEITE B

B

ACHTUNG: ESD!
ELEKTROSTATISCH GEFAEHRDETE BAUELEMENTE ERFORDERN EINE BESONDERE HANDHABUNG.
ATTENTION ESD!
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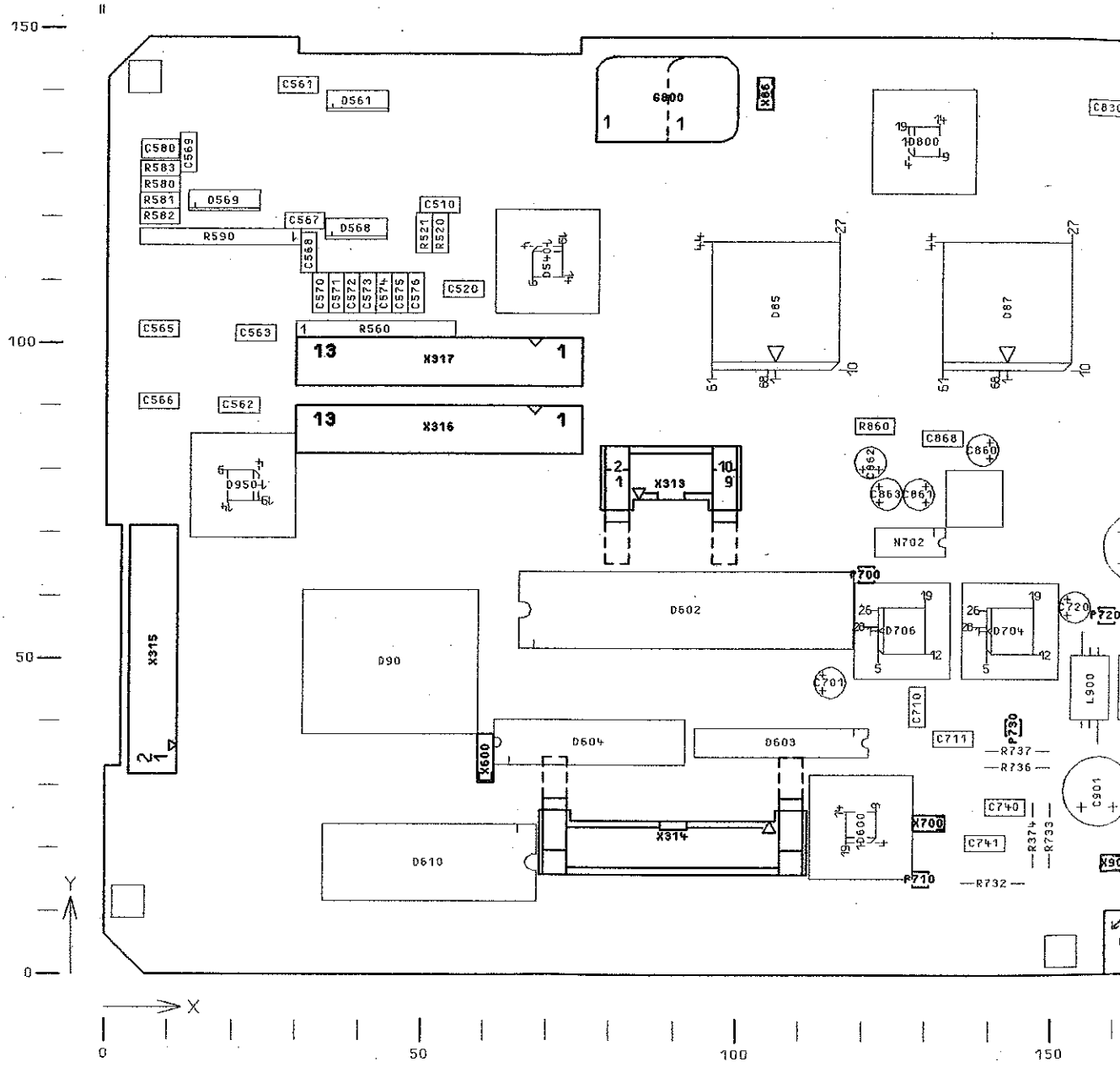




DARSTELLUNG SEITE B
VIEW ON SIDE B

ACHTUNG: EGB!
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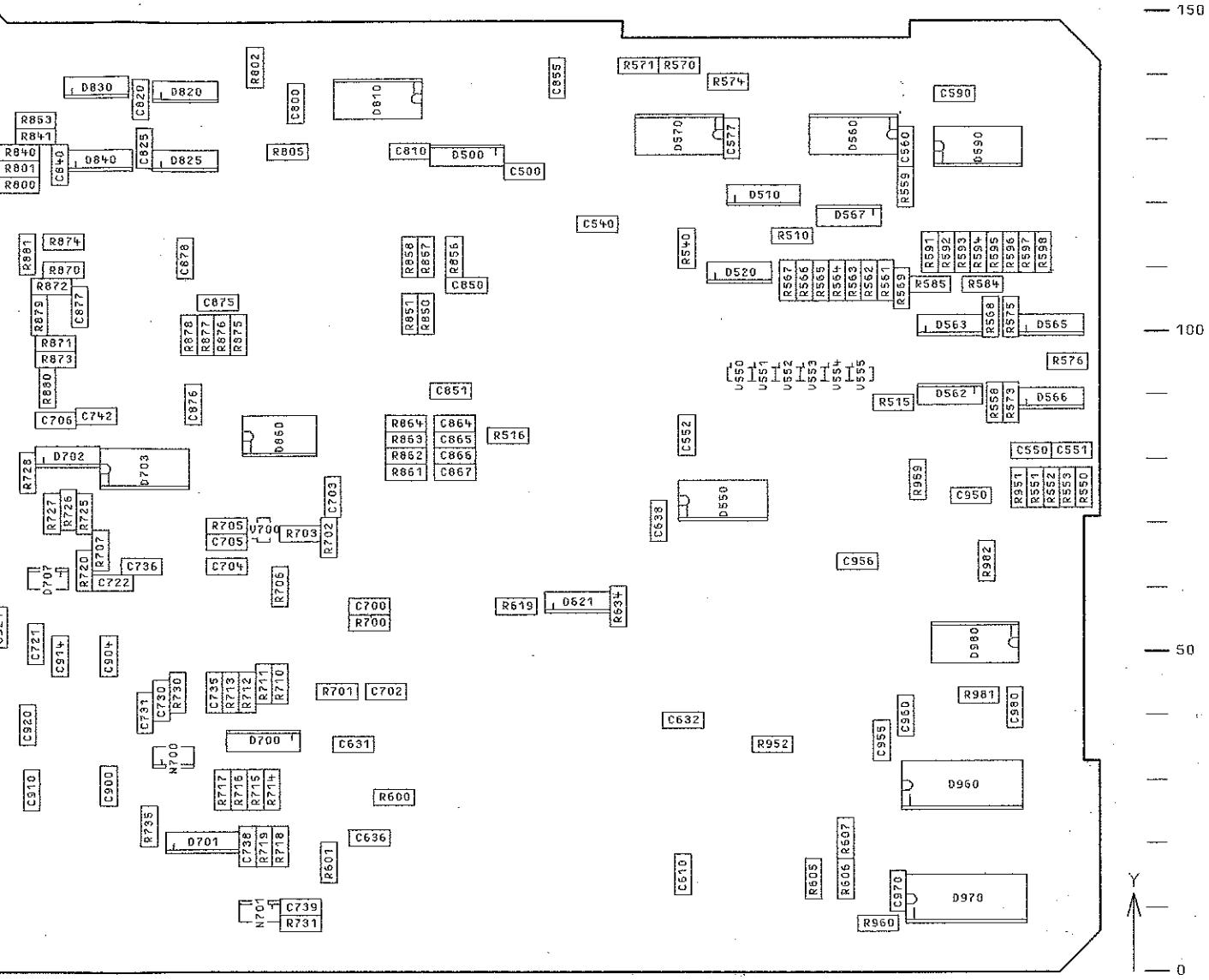


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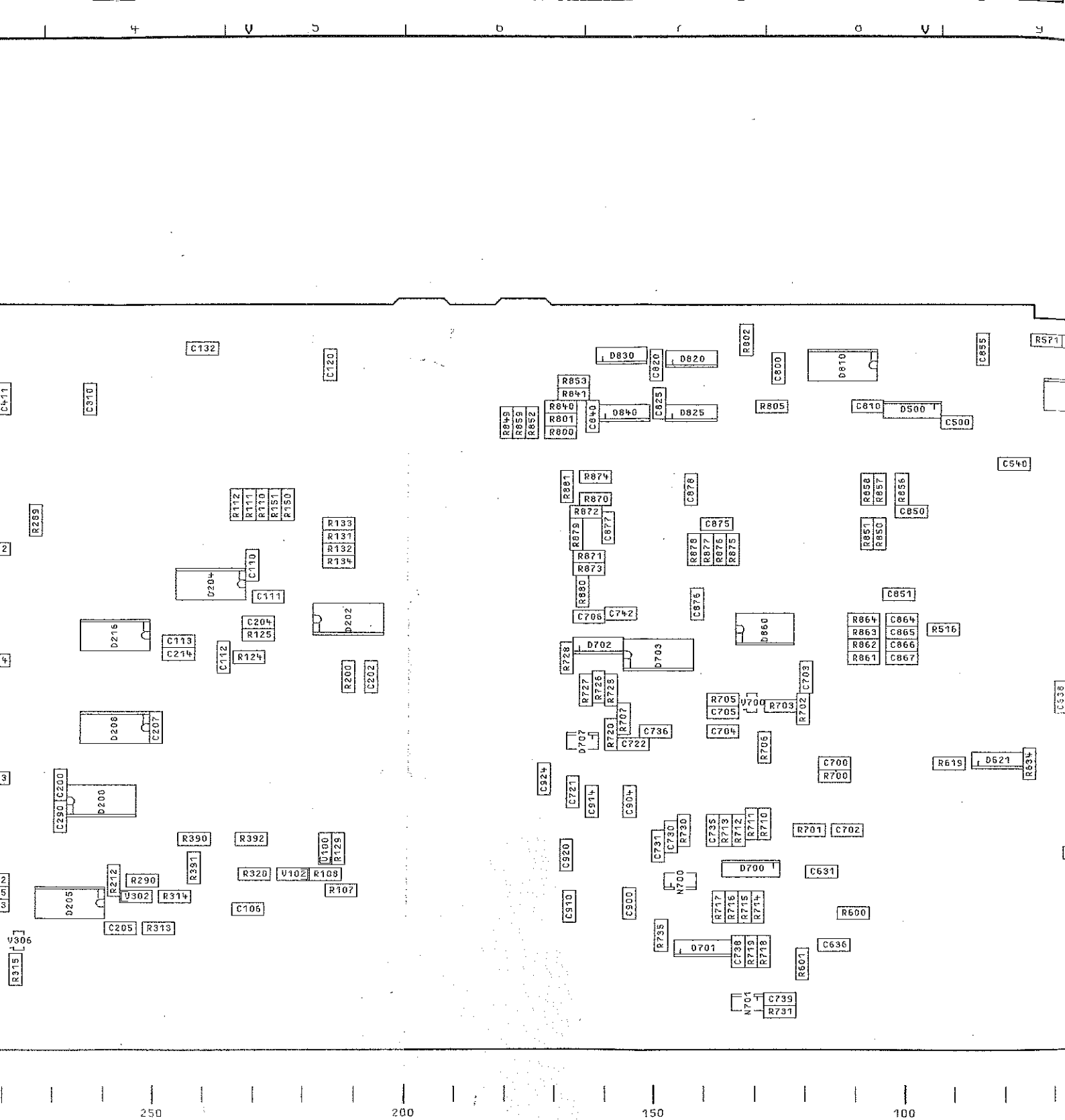
BLATT-NR. 2+

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ENSITIVE DEVICES
CIAL HANDLING

BINDENDE ANGABEN UEBER VARIANTEN,
TRIMMWERTE, BAUTEILWERTE UND
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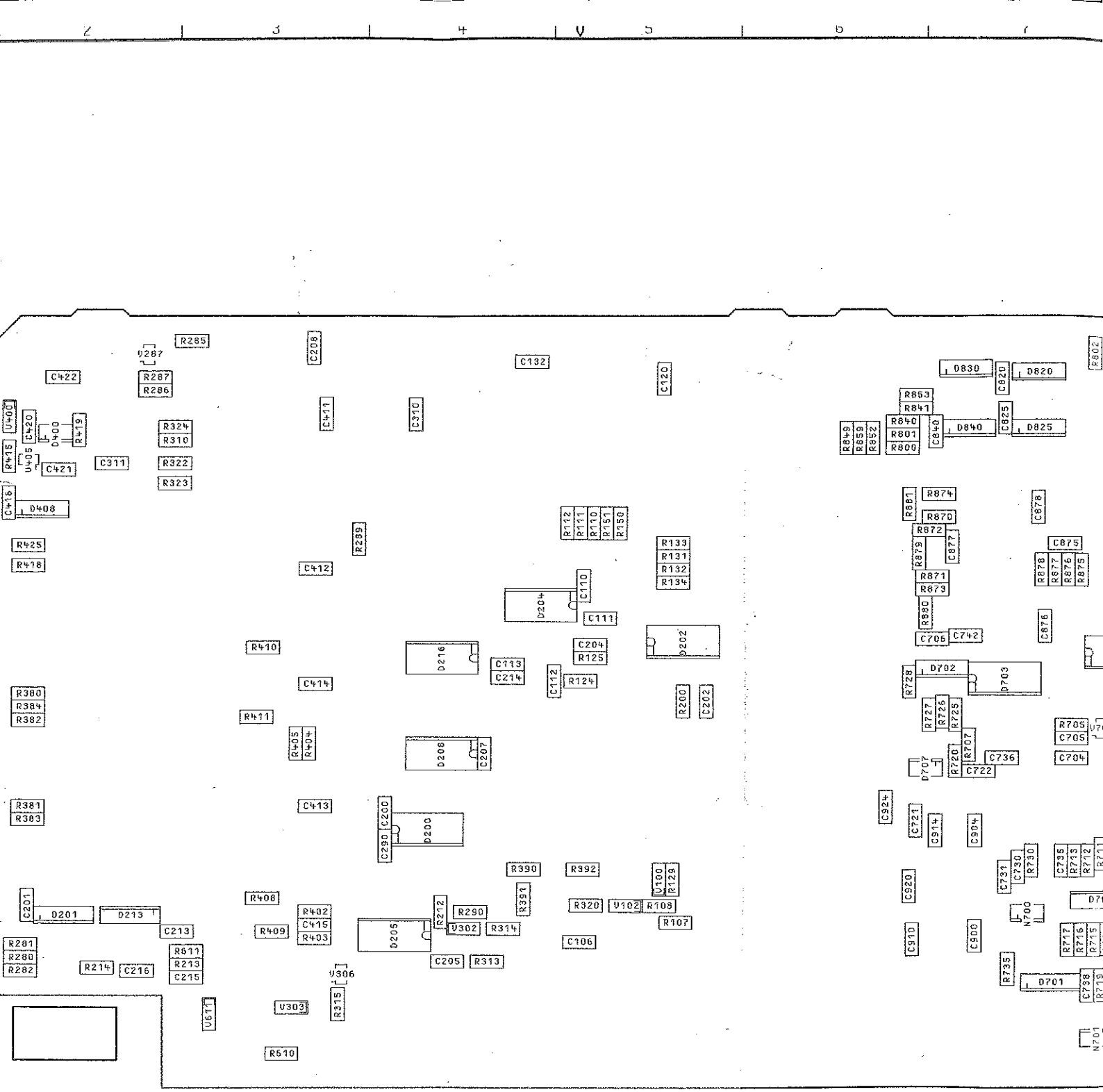


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LLUNG SEITE A

SIDE A

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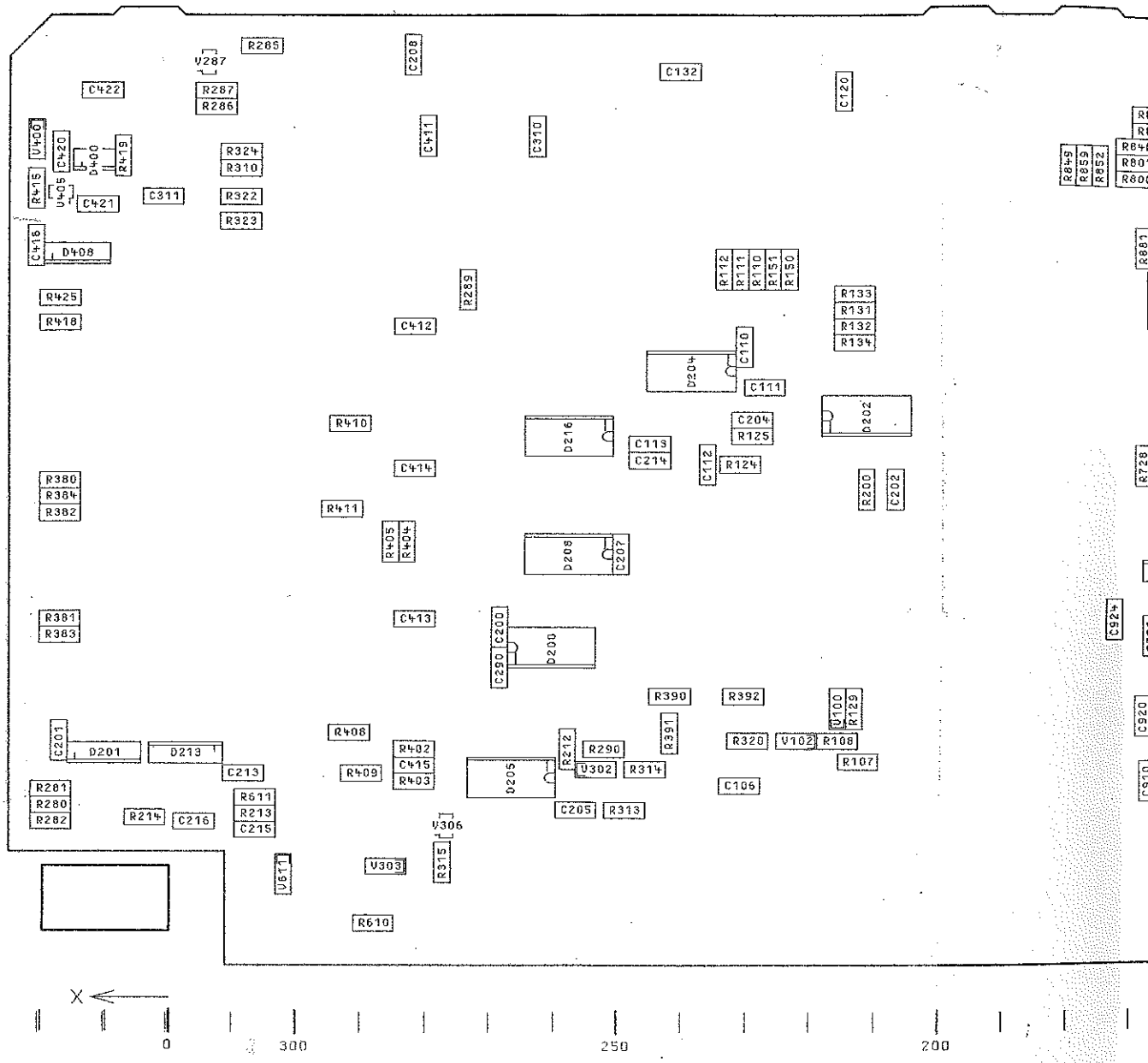


FUER DIESE ZEICHNUNG BEHALTEN WIR UNS ALLE RECHTE VOR.
DIESE ZEICHNUNG IST EIN RECHNERAUSDRUCK, RENDERUNGEN KOENNEN NUR DURCH RENDERN DES DATENSATZES ERFOLGEN

DARSTELLUNG SEITE A

VIEW ON SIDE A

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