

# TX-28PK10F Service Manual

Specifications

Parts List

## Service Support

Service and repair of this product is supported by Panasonic's LUCI interface.

Safety

Block Diagrams

Service Information

Schematic Diagrams

This interface provides a link between the TV and a standard PC to allow a number of diagnostic and control functions to be performed.

For more details contact your local Panasonic company.

Exploded View

PCB Views

BACK

EXIT

# Service Manual



Colour Television

**TX-28PK10F**

**EURO-5L Chassis**

## SPECIFICATIONS

|   |  |
|---|--|
| <b>Power Source:</b>  | 220-240V a.c., 50Hz  |
| Power Consumption:  | 142W   |
| Aerial Impedance:   | 75Ω unbalanced, Coaxial Type   |
| Standby Power Consumption:  | 1,4W   |
| Receiving System:   | PAL-I, B/G, H, D/K, PAL-525/60<br>SECAM L/L', B/G, D/K<br>M.NTSC<br>NTSC (AV only)   |
| Receiving Channels:   | VHF E2-E12<br>VHF A-H (ITALY)<br>VHF R3-R5<br>UHF E21-E69<br>CATV S1-S10 (M1-M10)<br>CATV S21-S41 (HYPERBAND)                                  |
| Intermediate Frequency:   | VHF H1-H2 (ITALY)<br>VHF R1-R2<br>VHF R6-R12<br>CATV (S01-S05)<br>CATV S11-S20 (U1-U10)  |
| Video   | 38,9MHz, 34MHz   |
| Sound   | 32,9MHz, 33,16MHz, 33,4MHz<br>40,4MHz, 32,4MHz (A2 STEREO)<br>33,05MHz, 34,05MHz (NICAM)<br>32,66MHz, 32,4MHz (CZECH STEREO)                   |
| Colour  | 34,47MHz (PAL)<br>34,5MHz, 34,65MHz (SECAM)  |
| Video/Audio Terminals:  |  |
| AUDIO MONITOR OUT   | Audio (RCAx2) 500mV rms 1kΩ  |
| AV1 IN  | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 10kΩ<br>RGB (21 pin)   |
| AV1 OUT   | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 1kΩ  |
| AV2 IN  | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 10kΩ<br>S-Video IN Y: 1V p-p 75Ω<br>(21 pin) C: 0,3V p-p 75Ω                             |
| AV2 OUT   | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 1kΩ<br>Selectable Output (21 pin)  |
| AV3 IN  | S-Video IN Y: 1V p-p 75Ω<br>(4-pin) C: 0,3V p-p 75Ω<br>Audio (RCAx2) 500mV rms 10kΩ  |
| AV4 IN  | Video (RCAx1) 1V p-p 75Ω<br>Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 10kΩ<br>S-Video IN Y: 1V p-p 75Ω<br>(21 pin) C: 0,3V p-p 75Ω |
| AV4 OUT   | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 1kΩ  |
| High Voltage:   | 30,5kV ±1kV  |
| Picture Tube:   | W66LQK185X05   |
| Audio Output:   | 2 x 20W Left/Right   |
| (Music Power)   | 8Ω Impedance   |
| Headphones  | 8Ω Impedance   |
| Accessories supplied:   | Remote Control<br>2 x R6 (UM3) Batteries   |
| Dimensions:   |  |
| Height:   | 503mm  |
| Width:  | 720mm  |
| Depth:  | 527mm  |
| Net Weight:   | 44kg   |
| Specifications are subject to change without notice.                                      |  |
| Weights and dimensions shown are approximate.   |  |
| NOTE: This Service Manual should be used in conjunction with the EURO-5L technical guide. |  |

## TECHNISCHE DATEN

|   |  |
|---|--|
| <b>Netzspannung:</b>  | 220-240V a.c., 50Hz  |
| Leistungsaufnahme:  | 142W   |
| Antennenimpedanz:   | 75Ω asymmetrisch, Koaxial-Typ  |
| Standby   |  |
| Leistungsaufnahme:  | 1,4W   |
| Empfangssystem:   | PAL-I, B/G, H, D/K, PAL-525/60<br>SECAM L/L', B/G, D/K<br>M.NTSC<br>NTSC (nur AV Eingang)  |
| Empfangsbereiche:   | VHF E2-E12<br>VHF A-H (ITALY)<br>VHF R3-R5<br>UHF E21-E69<br>CATV S1-S10 (M1-M10)<br>CATV S21-S41 (HYPERBAND)                                  |
| Zwischenfrequenz:   | VHF H1-H2 (ITALY)<br>VHF R1-R2<br>VHF R6-R12<br>CATV (S01-S05)<br>CATV S11-S20 (U1-U10)  |
| Video   | 38,9MHz, 34MHz   |
| Sound   | 32,9MHz, 33,16MHz, 33,4MHz<br>40,4MHz, 32,4MHz (A2 STEREO)<br>33,05MHz, 34,05MHz (NICAM)<br>32,66MHz, 32,4MHz (CZECH STEREO)                   |
| Colour  | 34,47MHz (PAL)<br>34,5MHz, 34,65MHz (SECAM)  |
| Video/Audio Anschlüsse:   |  |
| AUDIO MONITOR OUT   | Audio (RCAx2) 500mV rms 1kΩ  |
| AV1 EINGANG   | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 10kΩ<br>RGB (21 pin)   |
| AV1 AUSGANG   | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 1kΩ  |
| AV2 EINGANG   | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 10kΩ<br>S-Video IN Y: 1V p-p 75Ω<br>(21 pin) C: 0,3V p-p 75Ω                             |
| AV2 AUSGANG   | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 1kΩ<br>Wählbarer Ausgang   |
| AV3 EINGANG   | S-Video IN Y: 1V p-p 75Ω<br>(4-pin) C: 0,3V p-p 75Ω<br>Audio (RCAx2) 500mV rms 10kΩ  |
| AV4 EINGANG   | Video (RCAx1) 1V p-p 75Ω<br>Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 10kΩ<br>S-Video IN Y: 1V p-p 75Ω<br>(21 pin) C: 0,3V p-p 75Ω |
| AV4 AUSGANG   | Video (21 pin) 1V p-p 75Ω<br>Audio (21 pin) 500mV rms 1kΩ  |
| Hochspannung:   | 30,5kV ±1kV  |
| Bildrohre:  | W66LQK185X05   |
| Ton Ausgangsleistung:   | 2 x 20W Links/Rechts   |
| (Musikleistung)   | 8Ω Impedanz  |
| Kopfhörer:  | 8Ω Impedanz  |
| Mitgel. Zubehör:  | Fernbedienung<br>2 x R6 (UM3) Batterien  |
| Abmessungen:  |  |
| Höhe:   | 503mm  |
| Breite:   | 720mm  |
| Tiefe:  | 527mm  |
| Gewicht:  | 44kg   |
| Änderungen der Technischen Daten vorbehalten.                                     |  |
| Gewichte und Abmessungen sind Näherungsangaben.                                   |  |
| Hinweis: Bitte verwenden Sie das Service Manual zusammen mit dem Technical Guide. |  |

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## SAFETY PRECAUTIONS

### GENERAL GUIDE LINES

1. It is advisable to insert an isolation transformer in the a.c. supply before servicing a hot chassis.
2. When servicing, observe the original lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
4. When the receiver is not being used for a long period of time, unplug the power cord from the a.c. outlet.
5. Potentials as high as 31,5kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazard.

### LEAKAGE CURRENT COLD CHECK

1. Unplug the a.c. cord and connect a jumper between the two prongs of the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered a.c. plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts etc. When the exposed metallic part has a return path to the chassis the reading should be between 4M ohm and 20M ohm. When the exposed metal does not have a return path to the chassis the reading must be infinite.

# INHALT

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## SICHERHEITSVORKEHRUNGEN

### ALLGEMEINE RICHTLINIEN

1. Es ist empfehlenswert einen Trenntransformator in die Stromversorgung zu schalten, bevor Reparaturen an einem Gerät vorgenommen werden, dessen Chassis unter Spannung steht.
2. Bei der Durchführung von Servicearbeiten dürfen die ursprünglichen Kabelanschlüsse nicht vertauscht werden. Dies gilt insbesondere für die Anschlüsse im Hochspannungsteil. Hat sich ein Kurzschluß ereignet, dann sind alle Teile, an denen Spuren von Überhitzung sichtbar sind, auszuwechseln.
3. Nach Beenden der Servicearbeiten ist sicherzustellen, daß alle Sicherheitsvorrichtungen, wie Isolationsstege, Isolationspapiere, Abschirmungen und Isolations -R-C- Glieder wieder richtig eingesetzt sind.
4. Wenn der Fernseher während längerer Zeit nicht in Betrieb gesetzt wird, sollte der Netzstecker aus der Netzsteckdose gezogen werden.
5. Im Betrieb sind Spannungen bis zu 31,5kV in diesem Gerät vorhanden. Die Inbetriebnahme des Fernsehers ohne aufgesetzte Rückwand bringt die Gefahr eines elektrischen Schlages von der Fernseher - Stromversorgung mit sich. Servicearbeiten solten daher auch nie durch Personen versucht werden, die nicht in vollem. Umfang mit den Sicherheitsvorkehrungen beim Umgang mit Hochspannungsgeräten vertraut sind. Vor der Handhabung mit der Bildröhre ist die Anode der Bildrohre immer an dem Empfängerchassis zu entladen.
6. Nach Beenden der Servicearbeiten sind die folgenden Kriechstrom-Prüfungen durchzuführen, um den Kunden vor der Gefahr eines elektrischen Schlages zu schützen.

### MESSUNG DES ISOLATIONSWIDERSTANDES IM ABGESCHALTETEN ZUSTAND

1. Den Netzstecker aus der Netzsteckdose ziehen und die beiden Steckerstifte kurzschließen.
2. Den Geräteschalter des Fernsehgerätes einschalten.
3. Mit einem Ohmmeter den Widerstandswert zwischen dem überbrückten Netzkabelstecker und jendem zugänglichen Metallteil am Gehäuse des Fernsehgerätes, wie Schraubenköpfen, Antennen, Achsen der Regler, Griffassungen usw.messen. Wenn ein zugängliches Metallteil keine Rückleitung zum Chassis hat, Muß die Anzeige unendlich betragen.

## LEAKAGE CURRENT HOT CHECK

1. Plug the a.c. cord directly into the a.c. outlet. Do not use an isolation transformer for this check.
2. Connect a  $2\text{k}\Omega$  10W resistor in series with an exposed metallic part on the receiver and an earth, such as a water pipe.
3. Use an a.c. voltmeter with high impedance to measure the potential across the resistor.
4. Check each exposed metallic part and check the voltage at each point.
5. Reverse the a.c. plug at the outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 1,4V rms. In case a measurement is outside the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

## HOT CHECK CIRCUIT

### SCHALTUNGS AUFBAU FÜR PRUFUNG IM EINGESCHALTETEN ZUSTAND

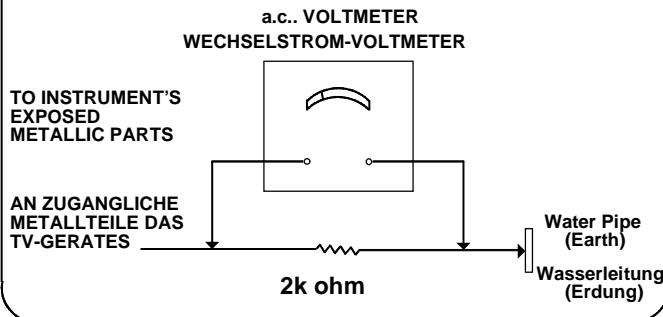


Fig. 1  
Abb. 1

## X-RADIATION WARNING

1. The potential sources of X-Radiation in TV sets are the high voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that the jig is capable of handling 31,5kV without causing X-Radiation.

## NOTE : It is important to use an accurate periodically calibrated high voltage meter.

1. Set the brightness to minimum.
2. Measure the high voltage. The meter should indicate  $30,5\text{kV} \pm 1\text{kV}$ . If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent any X-Radiation possibility, it is essential to use the specified tube.

## MESSUNG DES KRIECHSTROMS IM EINGESCHALTETEN ZUSTAND

1. Den Netzstecker direkt in eine Netzteckdose stecken. Für diese Messung keinen Trenntransformator verwenden.
2. Einen  $2\text{k}\Omega / 10\text{W}$ -Widerstand in Serie mit einem von außen zugänglichen Metallteil am Fernsehgerät und einer guten, Erdung z.B. Wasserleitung, anschließen.
3. Ein Wechselstrom-Voltmeter mit einem Meßbereich von 1000 Ohm.Volt oder größer verwenden, um die Spannung über den Widerstand zu messen.
4. Jedes zugängliche Metallteil prüfen, und an jedem Punkt dies Spannung messen.
5. Den Netzstecker umgekehrt in die Steckdose stecken und jede der obigen Messungen wiederholen.
6. Die Spannung darf an keinem der Punkte 1,4V eff. überschreiten. Wird dieser Wert nicht eingehalten, besteht die Gefahr eines elektrischen Schläges, und das Fernsehgerät sollte daher repariert und nachgeprüft werden, bevor es an den Kunden zurückgegeben wird.

## RÖNTGENSTRahlUNG ACHTUNG :

1. Potentielle Quellen von Röntgenstrahlung in Fernsehgeräten sind das Hochspannungsteil und die Bildröhre.
2. Bei Verwendung eines Bildröhren-Prüfgerätes für den Service ist sicherzustellen, daß es für die Belastung von 31,5kV geeignet ist, ohne daß eine Röntgenstrahlung verursacht wird.

## ANMERKUNG : Es ist wichtig, daß ein präzises, regelmäßig geprüftes Voltmeter verwendet wird.

1. Helligkeit auf Minimum stellen.
2. Die Hochspannung messen. Die Anzeige des Instrumentes sollte  $30,5\text{kV} \pm 1\text{kV}$ . Falls die Anzeige diese Toleranzgrenzen überschreitet, ist die sofortige Behebung nötig, um die Möglichkeit vorzeitigen Komponentenausfalls zu verhindern.
3. Um die Möglichkeit von Röntgenstrahlung zu begrenzen, ist es wichtig, daß nur die vorgeschriebene Bildröhre verwendet wird.

## SERVICE HINTS

### HOW TO REMOVE THE REAR COVER

1. Remove the 9 screws as shown in Fig. 2.



## SERVICE HINWEISE

### ENTFERNEN DER GERÄTERÜCKWAND

1. Die 9 Schrauben entfernen, siehe Abb. 2.

Fig. 2  
Abb. 2

## LOCATION OF CONTROLS

## LAGE DER EINSTELLREGLER

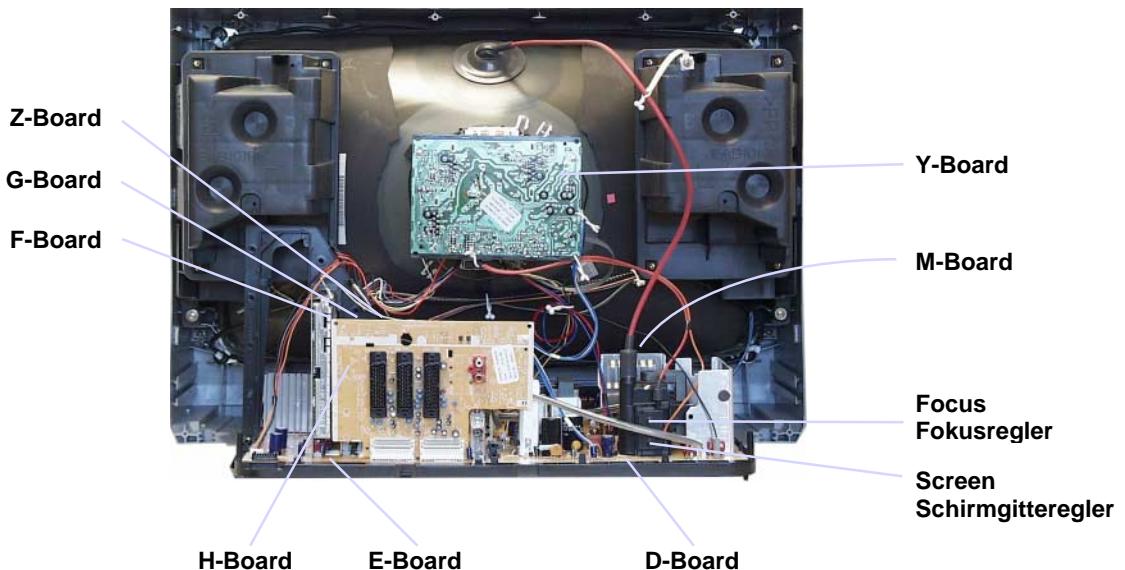


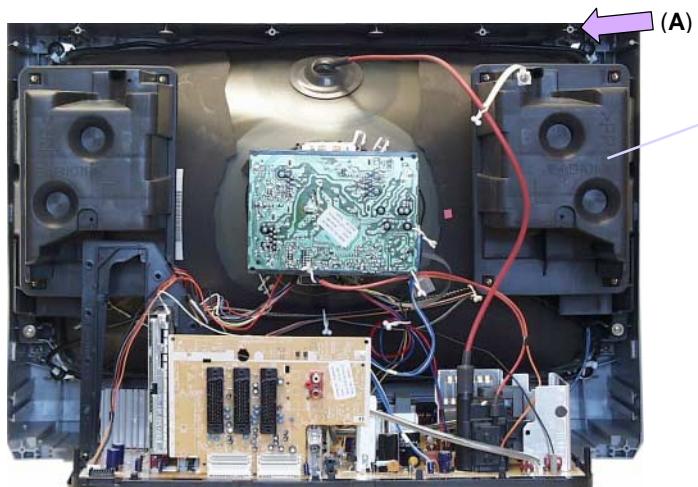
Fig. 3  
Abb. 3

## How to move the chassis into Service position

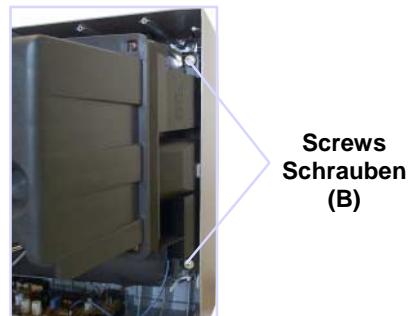
1. Remove the bead clamper from the mains lead and affix, using back cover screw, into top right-hand cabinet rib (**A**), shown in **Fig. 4**.
2. Remove 2 screws (**B**), as shown in **Fig. 5**, and remove speaker assembly.
3. Hold and lift the rear of the chassis and gently pull the chassis toward you, as shown in **Fig. 4**.
4. Release the respective wiring clips and rotate the chassis vertically through 90°, anti-clockwise.
5. Locate the base of the chassis frame into location (**C**), shown in **Fig. 6 / Fig. 8**.
6. Clip the chassis frame onto the bead clamper, shown in **Fig. 6 / Fig. 7**.
7. After servicing replace the bead clamper and speaker, and ensure all wiring is returned to its original position before returning the receiver to the customer.

## Serviceposition für das Chassis

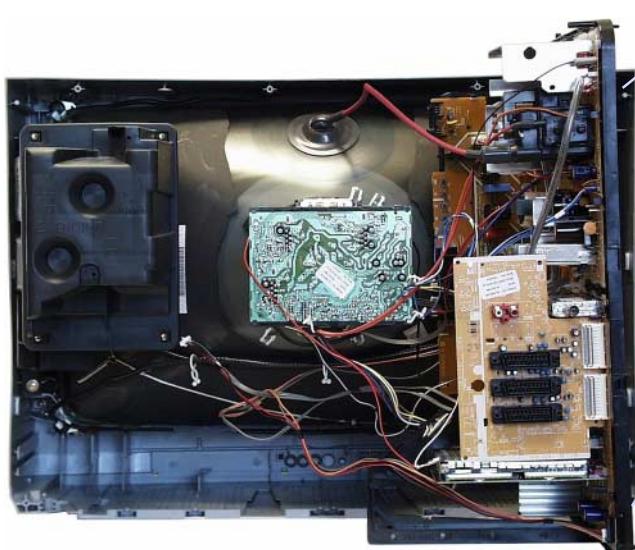
1. Entfernen Sie den Kabelbinder von der Netzteitung und befestigen Sie ihn mit einer Rückwandschraube am Gehäuse an der Position (**A**). (**Abb. 4**)
2. Nach dem Lösen der zwei Schrauben (**B**) kann der rechte Lautsprecher (**Abb. 5**) ausgebaut werden.
3. Das Chassis am hinteren Ende anheben und vorsichtig herausziehen (**Abb. 4**).
4. Die Kabelhalter werden gelöst und das Chassis gegen den Uhrzeigersinn um 90° gedreht.
5. Das untere Ende des Chassis wird in die Halterung (**C**) gesteckt (**Abb. 6 / Abb. 8**).
6. Das obere Ende des Chassis wird in den Kabelbinder eingehängt (**Abb. 6 / Abb. 7**).
7. Nach der Reparatur wird der Lautsprecher wieder eingebaut, der Kabelbinder entfernt und alle Kabelbäume auf die Originalposition in die Halterungen eingesetzt.



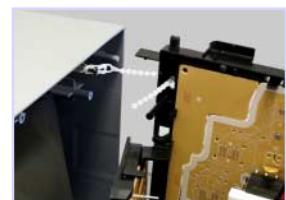
**Fig. 4**  
**Abb. 4**



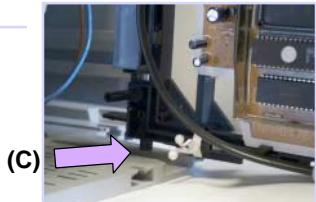
**Fig. 5**  
**Abb. 5**



**Fig. 6**  
**Abb. 6**



**Fig. 7**  
**Abb. 7**



**Fig. 8**  
**Abb. 8**

## SELF CHECK

1. Self-check is used to automatically check the bus lines and hexadecimal code of the TV set.
2. To get into the Self-Check mode press the down (-/v) button on the customer controls at the front of the set, at the same time pressing the **STATUS** button on the remote control, and the screen will show :-

## SELBSTDIAGNOSE

1. Die Selbstdiagnose dient zum automatischen Prüfen der Bus-Leitungen sowie des Hexadezimalcodes des FS-Geräts. Zum Umschalten auf Selbstdiagnose zunächst die Taste "**STATUS**" auf der Fernbedienung und gleichzeitig die-Taste am Bedienteil des FS-Gerätes drücken (-/v), auf dem Bildschirm erscheint hierauf :-
2. Nach der Selbstdiagnose wird das Gerät automatisch auf sämtliche werksseitigen Standardeinstellungen zurückgesetzt :-

|          |      |     |  |
|----------|------|-----|--|
| VPC      | O.K. | PCB | O.K.                                       |
| TUN      | O.K. | Cab | O.K.                                       |
| E2       | O.K. | Sum | Factory use only<br>Nur für<br>Herstellung |
| MSP      | O.K. |     |  |
| DPL      | --   |     |  |
| CI1      | O.K. |     |  |
| CI2      | O.K. |     |  |
| VP       | O.K. |     |  |
| DFU      | O.K. |     |  |
| COL      | --   |     |  |
| PIP      | --   |     |  |
| DIS      | O.K. |     |  |
| OPTION 1 | B9   |     |  |
| OPTION 2 | 7D   |     |  |
| OPTION 3 | 1F   |     |  |
| OPTION 4 | C0   |     |  |
| OPTION 5 | FB   |     |  |
| OPTION 6 | E3   |     |  |

If the CCU ports have been checked and found to be incorrect or not located then " -- " will appear in place of "O.K.". Wenn der Hauptprozessor (CCU) an den Anschlüssen einen Fehler erkennt, oder der entsprechende Anschluss nicht belegt ist, zeigt die entsprechende Position " -- " anstelle von OK an.

### Service Aids

To aid in the service of our current chassis there are a number of Service Aids which have been made available.

- **LUCI** interface kit (Linked Utility Computer Interface)  
Part number: TZS6EZ002  
This contains interface and cables for connecting TV service connector and a PC as well as diagnostic software. As new models are introduced upgrade software will become available.
  - **VICI** (Visual Interactive Computer Information)  
These C.D.'s contain multimedia documentation providing quick access to service information.  
Part No. TZS7EZ006, TZS7EZ005 & TZS8EZ001  
1. Service Manuals  
2. Instruction Books  
3. Technical Information
  - **TASMIN** (Technically Advanced System for Multimedia Interactive Notes)  
As well as providing a first step towards more interactive training this product also achieves quick access to Technical Information.
- NOTE:** This TV also has the option of using a Memory Pack which enables you to copy the preset TV channels into the Memory Pack and then download them onto this or any other EURO-5L TV set.

### Service-Hilfen

Zur Unterstützung der Servicearbeiten stehen weitere Hilfsmittel zur Verfügung.

- **LUCI** interface kit (PC-unterstütztes Diagnosesystem)  
Bestell-Nr.: TZS6EZ002  
Es beinhaltet ein Interface, die Anschlusskabel zum FS-Gerät und die Diagnose-Software. Bei Einführung von neuen Modellen ist ein Update der Software jederzeit möglich.
- **VICI** (Interaktive CD-ROM) mit schnellem Zugriff auf Serviceinformationen.  
Bestell-Nr.: TZS7EZ006, TZS7EZ005 & TZS8EZ001  
1. Service Manuals  
2. Bedienungsanleitungen  
3. Technical Information
- **TASMIN** (Technisch erweitertes System für interaktive Multimedia-Hinweise und Notizen)  
Genauso wie dieses Produkt einen ersten Schritt in Richtung erweitertes interaktives Training bereitstellt, ermöglicht es einen noch schnelleren Zugang zu technischen Informationen.

**HINWEIS:** Dieses FS-Gerät bietet auch die Möglichkeit eines Memory Pack, mit dem Sie die gewählten Fernsehkanäle abspeichern und auf jedes beliebige EURO-5L FS-Gerät umkopieren können.

## ADJUSTMENT PROCEDURE

| Item/Preparation | Adjustments  |            |          |        |         |      |            |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
|------------------|--|------------|----------|--------|---------|------|------------|-----|-----|------|----|------------|----------|----|------------|----|--------|------|----|------------|----------|-----|----------|-----|-----|------|-----|------------|---------|------|-----------|----------|--|------|----|------------|----------|----|------------|-----|-----|------|-----|----------|----------|-----|----------|-----|-----|------|------|----------|----------|------|----------|-----|-----|-------|-----|----------|----------|-----|----------|-----|-----|------|-----|----------|-----------|-----|----------|-----|-----|------|-----|------------|
| <b>+B SET-UP</b> | <p>1. Confirm the following voltages.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 15%;">D-Board</th> <th style="text-align: left; width: 15%;">E-Board</th> <th style="width: 70%;"></th> </tr> </thead> <tbody> <tr> <td>D3 pin5</td> <td>147V</td> <td><math>\pm</math> 3V</td> <td>U8A</td> <td>E19</td> <td>pin8</td> <td>8V</td> <td><math>\pm</math> 0,5V</td> </tr> <tr> <td>D12 pin5</td> <td>5V</td> <td><math>\pm</math> 0,3V</td> <td>U9</td> <td>IC3801</td> <td>pin3</td> <td>9V</td> <td><math>\pm</math> 0,5V</td> </tr> <tr> <td>D13 pin1</td> <td>40V</td> <td><math>\pm</math> 4V</td> <td>U12</td> <td>E22</td> <td>pin8</td> <td>12V</td> <td><math>\pm</math> 0,5V</td> </tr> <tr> <td>D3 pin4</td> <td>205V</td> <td><math>\pm</math> 10V</td> <td>STD5VE26</td> <td></td> <td>pin4</td> <td>5V</td> <td><math>\pm</math> 0,5V</td> </tr> <tr> <td>D14 pin5</td> <td>5V</td> <td><math>\pm</math> 0,5V</td> <td>U15</td> <td>E23</td> <td>pin8</td> <td>15V</td> <td><math>\pm</math> 1V</td> </tr> <tr> <td>D12 pin7</td> <td>15V</td> <td><math>\pm</math> 2V</td> <td>U15</td> <td>E23</td> <td>pin9</td> <td>-15V</td> <td><math>\pm</math> 2V</td> </tr> <tr> <td>D12 pin9</td> <td>-15V</td> <td><math>\pm</math> 2V</td> <td>U33</td> <td>E22</td> <td>pin10</td> <td>33V</td> <td><math>\pm</math> 4V</td> </tr> <tr> <td>D11 pin8</td> <td>12V</td> <td><math>\pm</math> 2V</td> <td>U40</td> <td>E24</td> <td>pin1</td> <td>40V</td> <td><math>\pm</math> 3V</td> </tr> <tr> <td>D11 pin10</td> <td>33V</td> <td><math>\pm</math> 3V</td> <td>U5B</td> <td>E19</td> <td>pin5</td> <td>-5V</td> <td><math>\pm</math> 0,5V</td> </tr> </tbody> </table> | D-Board    | E-Board  |        | D3 pin5 | 147V | $\pm$ 3V   | U8A | E19 | pin8 | 8V | $\pm$ 0,5V | D12 pin5 | 5V | $\pm$ 0,3V | U9 | IC3801 | pin3 | 9V | $\pm$ 0,5V | D13 pin1 | 40V | $\pm$ 4V | U12 | E22 | pin8 | 12V | $\pm$ 0,5V | D3 pin4 | 205V | $\pm$ 10V | STD5VE26 |  | pin4 | 5V | $\pm$ 0,5V | D14 pin5 | 5V | $\pm$ 0,5V | U15 | E23 | pin8 | 15V | $\pm$ 1V | D12 pin7 | 15V | $\pm$ 2V | U15 | E23 | pin9 | -15V | $\pm$ 2V | D12 pin9 | -15V | $\pm$ 2V | U33 | E22 | pin10 | 33V | $\pm$ 4V | D11 pin8 | 12V | $\pm$ 2V | U40 | E24 | pin1 | 40V | $\pm$ 3V | D11 pin10 | 33V | $\pm$ 3V | U5B | E19 | pin5 | -5V | $\pm$ 0,5V |
| D-Board          | E-Board  |            |          |        |         |      |            |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D3 pin5          | 147V   | $\pm$ 3V   | U8A      | E19    | pin8    | 8V   | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D12 pin5         | 5V   | $\pm$ 0,3V | U9       | IC3801 | pin3    | 9V   | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D13 pin1         | 40V  | $\pm$ 4V   | U12      | E22    | pin8    | 12V  | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D3 pin4          | 205V   | $\pm$ 10V  | STD5VE26 |        | pin4    | 5V   | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D14 pin5         | 5V   | $\pm$ 0,5V | U15      | E23    | pin8    | 15V  | $\pm$ 1V   |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D12 pin7         | 15V  | $\pm$ 2V   | U15      | E23    | pin9    | -15V | $\pm$ 2V   |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D12 pin9         | -15V   | $\pm$ 2V   | U33      | E22    | pin10   | 33V  | $\pm$ 4V   |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D11 pin8         | 12V  | $\pm$ 2V   | U40      | E24    | pin1    | 40V  | $\pm$ 3V   |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D11 pin10        | 33V  | $\pm$ 3V   | U5B      | E19    | pin5    | -5V  | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| <b>Cut-Off</b>   | 1. Receive a Greyscale signal.<br>2. Degauss the tube externally.<br>3. Set the TV into Service Mode 1.<br>4. Select Cutoff mode.  |            |          |        |         |      |            |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |

## ABGLEICH

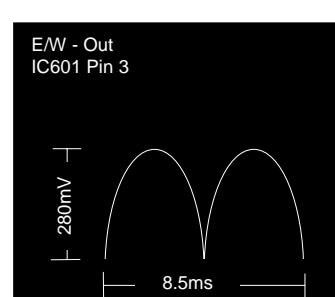
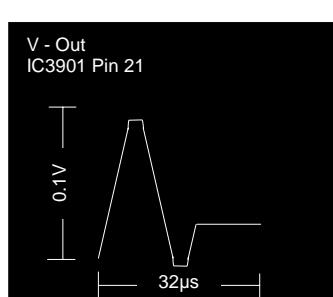
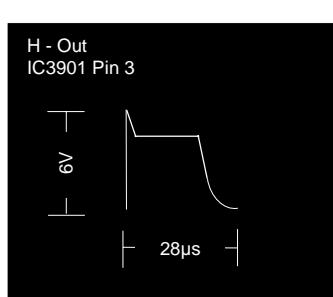
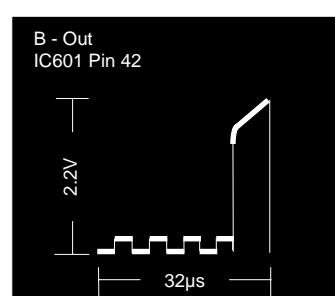
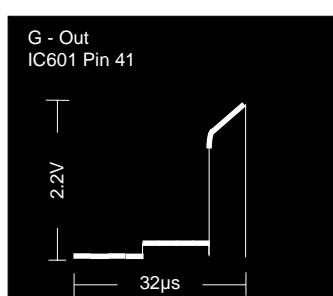
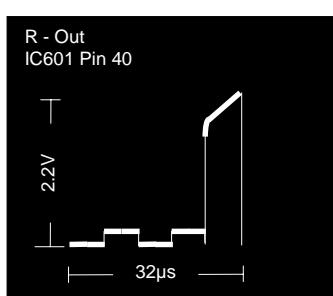
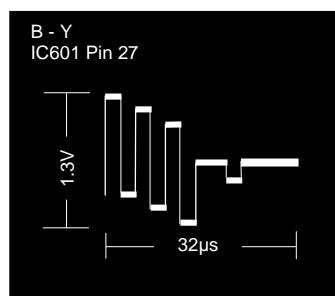
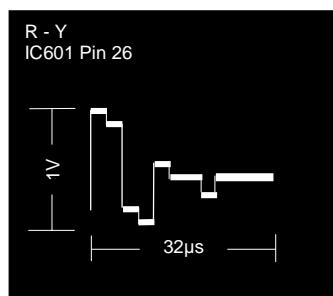
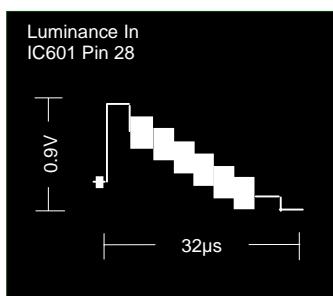
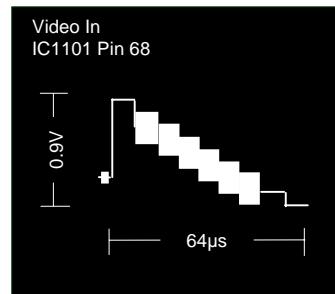
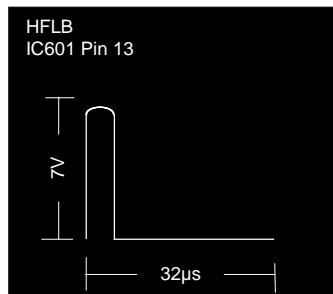
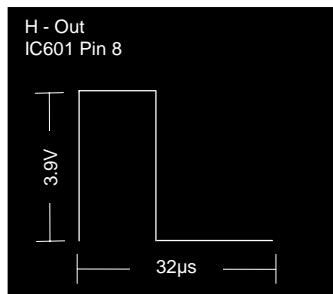
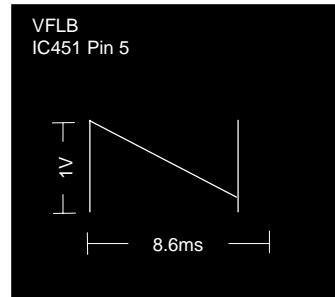
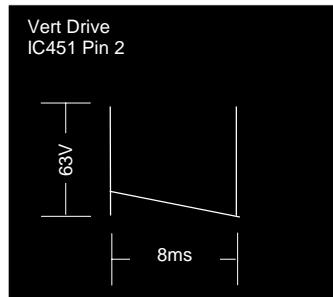
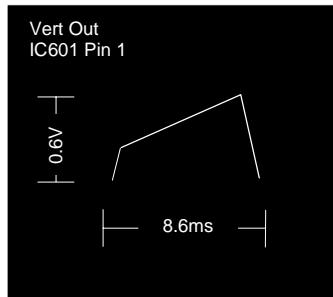
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|----------------------|--|------------|----------|--------|---------|------|------------|-----|-----|------|----|------------|----------|----|------------|----|--------|------|----|------------|----------|-----|----------|-----|-----|------|-----|------------|---------|------|-----------|----------|--|------|----|------------|----------|----|------------|-----|-----|------|-----|----------|----------|-----|----------|-----|-----|------|------|----------|----------|------|----------|-----|-----|-------|-----|----------|----------|-----|----------|-----|-----|------|-----|----------|-----------|-----|----------|-----|-----|------|-----|------------|
| <b>+B - Abgleich</b> | <p>1. Folgende Spannungen sind zu überprüfen.</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 15%;">D-Board</th> <th style="text-align: left; width: 15%;">E-Board</th> <th style="width: 70%;"></th> </tr> </thead> <tbody> <tr> <td>D3 pin5</td> <td>147V</td> <td><math>\pm</math> 3V</td> <td>U8A</td> <td>E19</td> <td>pin8</td> <td>8V</td> <td><math>\pm</math> 0,5V</td> </tr> <tr> <td>D12 pin5</td> <td>5V</td> <td><math>\pm</math> 0,3V</td> <td>U9</td> <td>IC3801</td> <td>pin3</td> <td>9V</td> <td><math>\pm</math> 0,5V</td> </tr> <tr> <td>D13 pin1</td> <td>40V</td> <td><math>\pm</math> 4V</td> <td>U12</td> <td>E22</td> <td>pin8</td> <td>12V</td> <td><math>\pm</math> 0,5V</td> </tr> <tr> <td>D3 pin4</td> <td>205V</td> <td><math>\pm</math> 10V</td> <td>STD5VE26</td> <td></td> <td>pin4</td> <td>5V</td> <td><math>\pm</math> 0,5V</td> </tr> <tr> <td>D14 pin5</td> <td>5V</td> <td><math>\pm</math> 0,5V</td> <td>U15</td> <td>E23</td> <td>pin8</td> <td>15V</td> <td><math>\pm</math> 1V</td> </tr> <tr> <td>D12 pin7</td> <td>15V</td> <td><math>\pm</math> 2V</td> <td>U15</td> <td>E23</td> <td>pin9</td> <td>-15V</td> <td><math>\pm</math> 2V</td> </tr> <tr> <td>D12 pin9</td> <td>-15V</td> <td><math>\pm</math> 2V</td> <td>U33</td> <td>E22</td> <td>pin10</td> <td>33V</td> <td><math>\pm</math> 4V</td> </tr> <tr> <td>D11 pin8</td> <td>12V</td> <td><math>\pm</math> 2V</td> <td>U40</td> <td>E24</td> <td>pin1</td> <td>40V</td> <td><math>\pm</math> 3V</td> </tr> <tr> <td>D11 pin10</td> <td>33V</td> <td><math>\pm</math> 3V</td> <td>U5B</td> <td>E19</td> <td>pin5</td> <td>-5V</td> <td><math>\pm</math> 0,5V</td> </tr> </tbody> </table> | D-Board    | E-Board  |        | D3 pin5 | 147V | $\pm$ 3V   | U8A | E19 | pin8 | 8V | $\pm$ 0,5V | D12 pin5 | 5V | $\pm$ 0,3V | U9 | IC3801 | pin3 | 9V | $\pm$ 0,5V | D13 pin1 | 40V | $\pm$ 4V | U12 | E22 | pin8 | 12V | $\pm$ 0,5V | D3 pin4 | 205V | $\pm$ 10V | STD5VE26 |  | pin4 | 5V | $\pm$ 0,5V | D14 pin5 | 5V | $\pm$ 0,5V | U15 | E23 | pin8 | 15V | $\pm$ 1V | D12 pin7 | 15V | $\pm$ 2V | U15 | E23 | pin9 | -15V | $\pm$ 2V | D12 pin9 | -15V | $\pm$ 2V | U33 | E22 | pin10 | 33V | $\pm$ 4V | D11 pin8 | 12V | $\pm$ 2V | U40 | E24 | pin1 | 40V | $\pm$ 3V | D11 pin10 | 33V | $\pm$ 3V | U5B | E19 | pin5 | -5V | $\pm$ 0,5V |
| D-Board              | E-Board  |            |          |        |         |      |            |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D3 pin5              | 147V   | $\pm$ 3V   | U8A      | E19    | pin8    | 8V   | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D12 pin5             | 5V   | $\pm$ 0,3V | U9       | IC3801 | pin3    | 9V   | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D13 pin1             | 40V  | $\pm$ 4V   | U12      | E22    | pin8    | 12V  | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D3 pin4              | 205V   | $\pm$ 10V  | STD5VE26 |        | pin4    | 5V   | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D14 pin5             | 5V   | $\pm$ 0,5V | U15      | E23    | pin8    | 15V  | $\pm$ 1V   |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D12 pin7             | 15V  | $\pm$ 2V   | U15      | E23    | pin9    | -15V | $\pm$ 2V   |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D12 pin9             | -15V   | $\pm$ 2V   | U33      | E22    | pin10   | 33V  | $\pm$ 4V   |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D11 pin8             | 12V  | $\pm$ 2V   | U40      | E24    | pin1    | 40V  | $\pm$ 3V   |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| D11 pin10            | 33V  | $\pm$ 3V   | U5B      | E19    | pin5    | -5V  | $\pm$ 0,5V |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |
| <b>Cut-Off</b>       | 1. Testbild empfangen.<br>2. Bildröhre entmagnetisieren.<br>3. Service-Mode 1 anwählen.<br>4. Im Service-Mode den Abgleichpunkt Cutoff-Mode wählen .   |            |          |        |         |      |            |     |     |      |    |            |          |    |            |    |        |      |    |            |          |     |          |     |     |      |     |            |         |      |           |          |  |      |    |            |          |    |            |     |     |      |     |          |          |     |          |     |     |      |      |          |          |      |          |     |     |       |     |          |          |     |          |     |     |      |     |          |           |     |          |     |     |      |     |            |

## WAVEFORM PATTERN TABLE

## SIGNAL TABELLE

**NOTE:** All waveforms have been taken using a standard colour bar pattern.

**HINWEIS:** Alle oszillogramme wurden unter Verwendung des Standard Farbbalken Testbildes aufgenommen.



## ALIGNMENT SETTINGS:

(The figures below are nominal and used for representative purposes only.)

1. Set the Bass to maximum position, set the Treble to minimum position, press the down button (- / v) on the customer controls at the front of the TV and at the same time press the **INDEX** button on the remote control, this will place the TV into the Service Mode.
2. Press the **RED / GREEN** buttons to step up / down through the functions.
3. Press the **YELLOW / BLUE** buttons to alter the function values.
4. Press the **STR** button after each adjustment has been made to store the required values.
5. To exit the Service Mode, press the "**N**" button.

| Alignment Function   |                       | Settings / Special features  |
|----------------------|-----------------------|--|
| Horizontal Position  | H-Pos<br>+020         | Optimum setting.   |
| Vertical Position    | V-Pos<br>+024         | Optimum setting.   |
| Horizontal Amplitude | H-Amp<br>+049         | Optimum setting.   |
| Vert. Amplitude      | V-Amp<br>+029         | Optimum setting.   |
| EW-amplitude         | E/W-Amp1<br>+022      | Optimum setting.   |
| EW-amplitude         | E/W-Amp2<br>+000      | Optimum setting.   |
| Trapezium-comp       | Trapez-1<br>+033      | Optimum setting.   |
| Horizontal-Parallel  | H-Parallel<br>+032    | Optimum setting.   |
| Vertical Linearity   | V-Lin<br>+004         | Optimum setting.   |
| DVCO                 | DVCO<br>000           | Receive a PAL Colour Bar Pattern. For DVCO alignment press " <b>Blue</b> " button, wait until the colours are stable and press " <b>STR</b> ". |
| Cut-off DC           | Cut-off<br>O.K.       | To adjust Cutoff adjust the screen VR until the display shows "O.K."   |
| Highlight            | High 0031 0031 0031   | Contrast Maximum<br>A.I.Off<br>Optimum setting.  |
| Sub-Brightness       | Sub-Brightness<br>000 | Optimum setting.   |

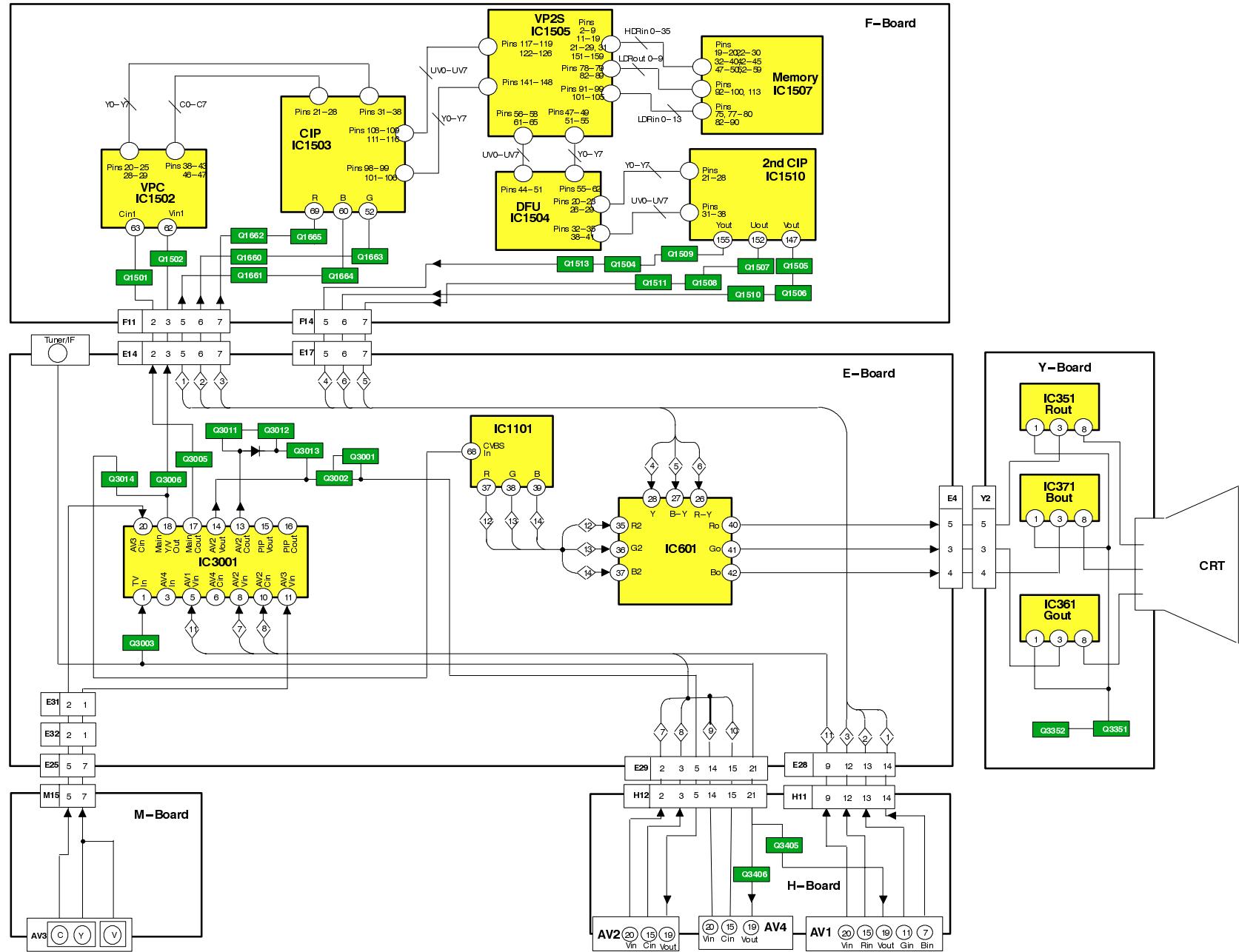
## ABGLEICHTABELLE:

(Die angegebenen Werte sind Mittelwerte und können individuell nach oben oder unten nach dem korrekten Abgleich abweichen.)

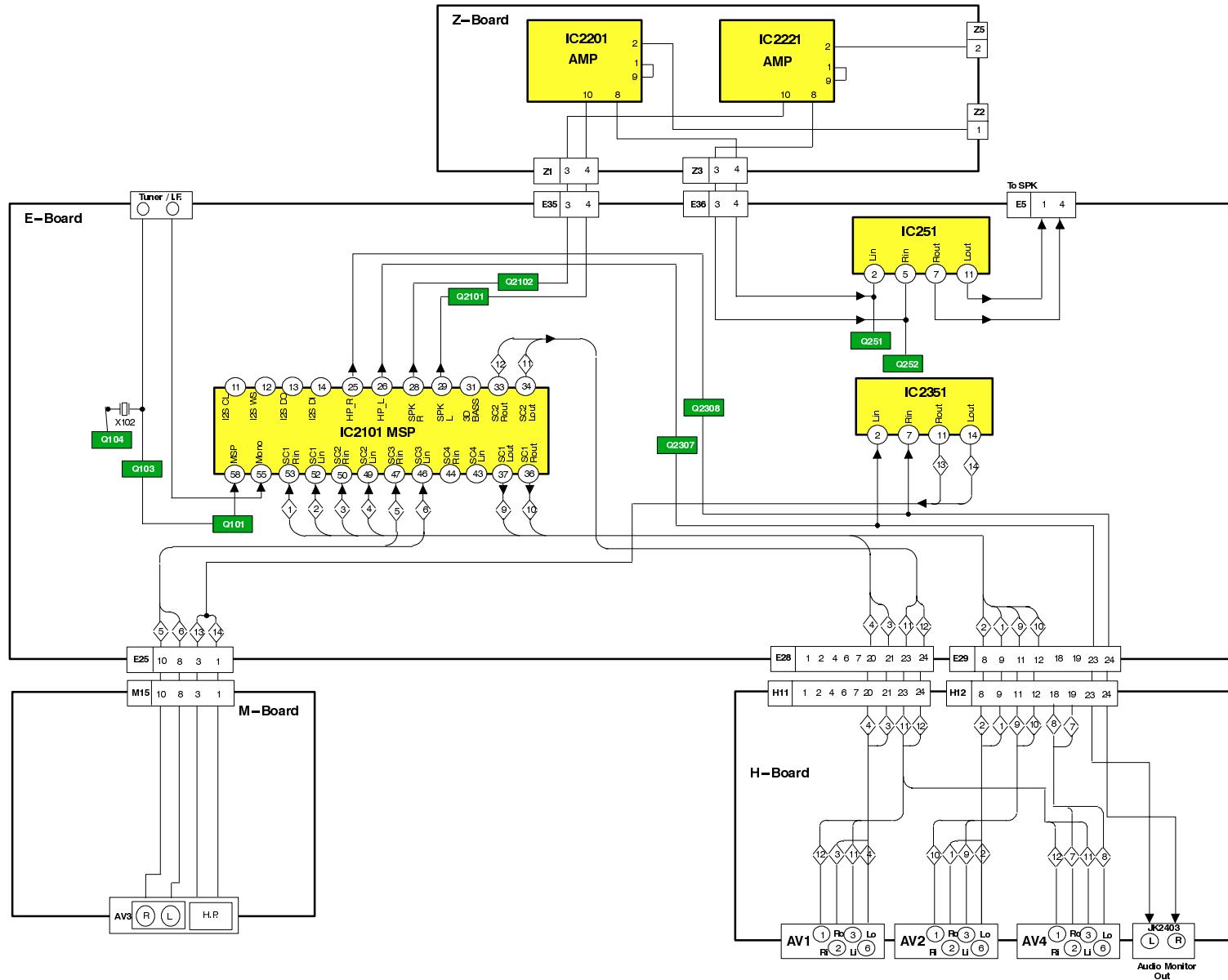
1. Um in den Service-Mode zu gelangen, gehen sie bitte wie folgt vor.
2. Stellen sie im Toneinstellungs-Menü die Bässe auf Maximum und die Höhen auf Minimum.
3. Halten sie die **INDEX**-Taste auf der Fernbedienung gedrückt und drücken zusätzlich die Taste **-/v** im Bedienteil des TV-Gerätes. Auf dem Bildschirm erscheint die entsprechende Anzeige für den Service-Mode.
4. Die einzelnen Funktionen mit Hilfe der **RO滕** und **GRÜNEN** Taste anwählen.
5. Mit der **GELBEN** und **BLAUEN** Taste die Werte der einzelnen Funktionen ändern.
6. Nach jeder Einstellung die Taste **STR** auf der Fernbedienung drücken, um die geänderten Werte abzuspeichern.
7. Zum Verlassen des Service-Modus die "**N**" - Taste auf der Fernbedienung drücken.

| Abgleichfunktion      |                       | Einstellung / Besondere Merkmale  |
|-----------------------|-----------------------|---|
| Horizontal Position   | H-Pos<br>+020         | Optimale Einstellung.   |
| Vertikale Position    | V-Pos<br>+024         | Optimale Einstellung.   |
| Horizontale Amplitude | H-Amp<br>+049         | Optimale Einstellung.   |
| Vertikale Amplitude   | V-Amp<br>+029         | Optimale Einstellung.   |
| OW-amplitude          | E/W-Amp1<br>+022      | Optimale Einstellung.   |
| OW-amplitude          | E/W-Amp2<br>+000      | Optimale Einstellung.   |
| Trapez-Kompensation   | Trapez-1<br>+033      | Optimale Einstellung.   |
| Horizontale-Parallel  | H-Parallel<br>+032    | Optimale Einstellung.   |
| Vertikale linearität  | V-Lin<br>+004         | Optimale Einstellung.   |
| DVCO                  | DVCO<br>000           | Ein Farbbalken-Testbild empfangen. Zum Abgleich des Farboszillators (DVCO) die <b>blau</b> Taste drücken. Nachdem ein leichtes Flackern in den Farbbalken zum Stillstand gekommen ist, die <b>STR</b> -Taste drücken. |
| Cut-off DC            | Cut-off<br>O.K.       | Den Abgleichwert solange ändern, bis OK auf dem Bildschirm erscheint. Den Wert abspeichern.   |
| Highlight             | High 0031 0031 0031   | Contrast Maximum<br>A.I.Off<br>Optimale Einstellung.  |
| Sub-Brightness        | Sub-Brightness<br>000 | Optimale Einstellung.   |

# VIDEO BLOCK DIAGRAM BILDSIGNAL BLOCKSCHEMA

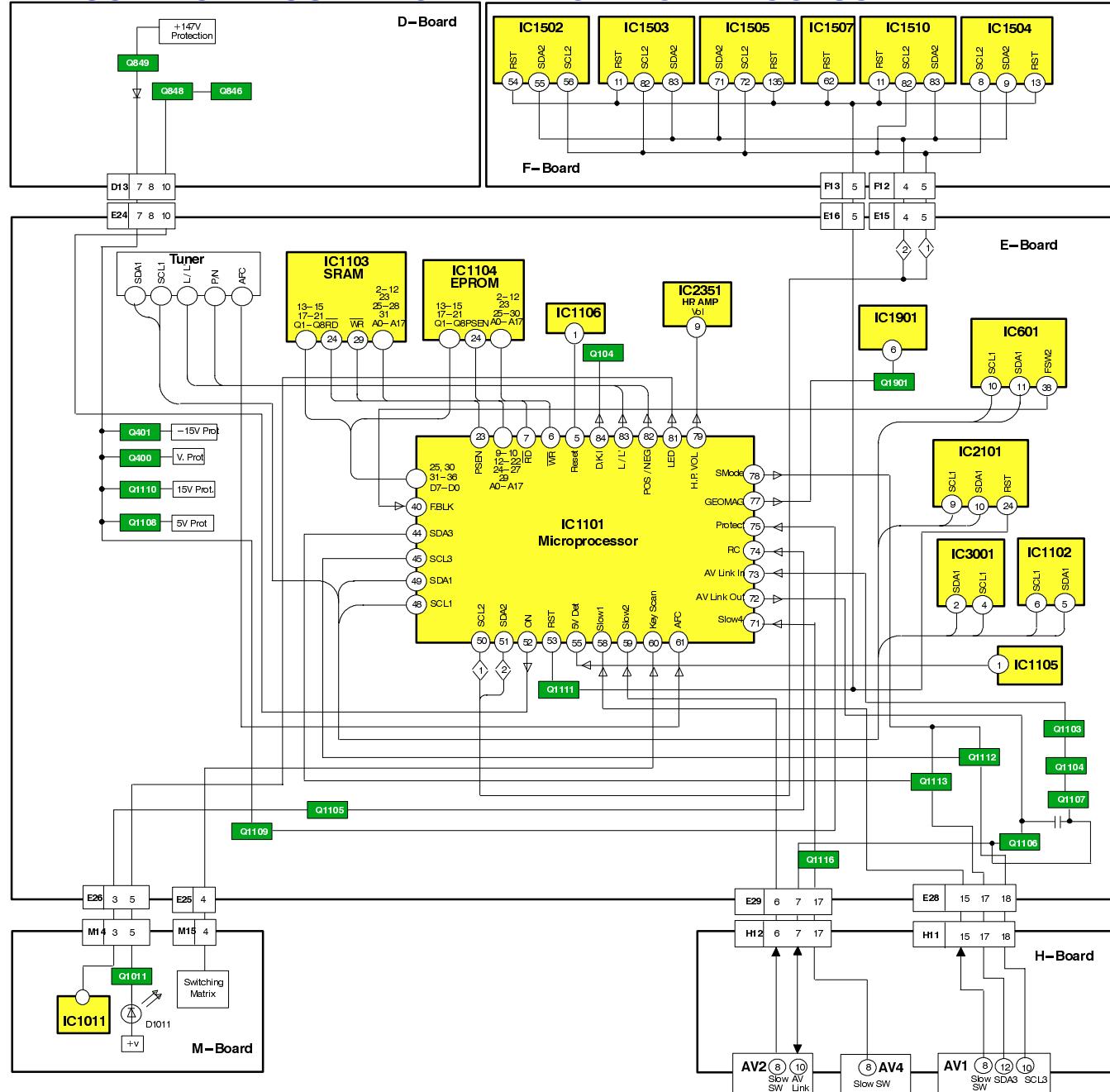


# AUDIO BLOCK DIAGRAM TONSIGNAL BLOCKSCHEMA

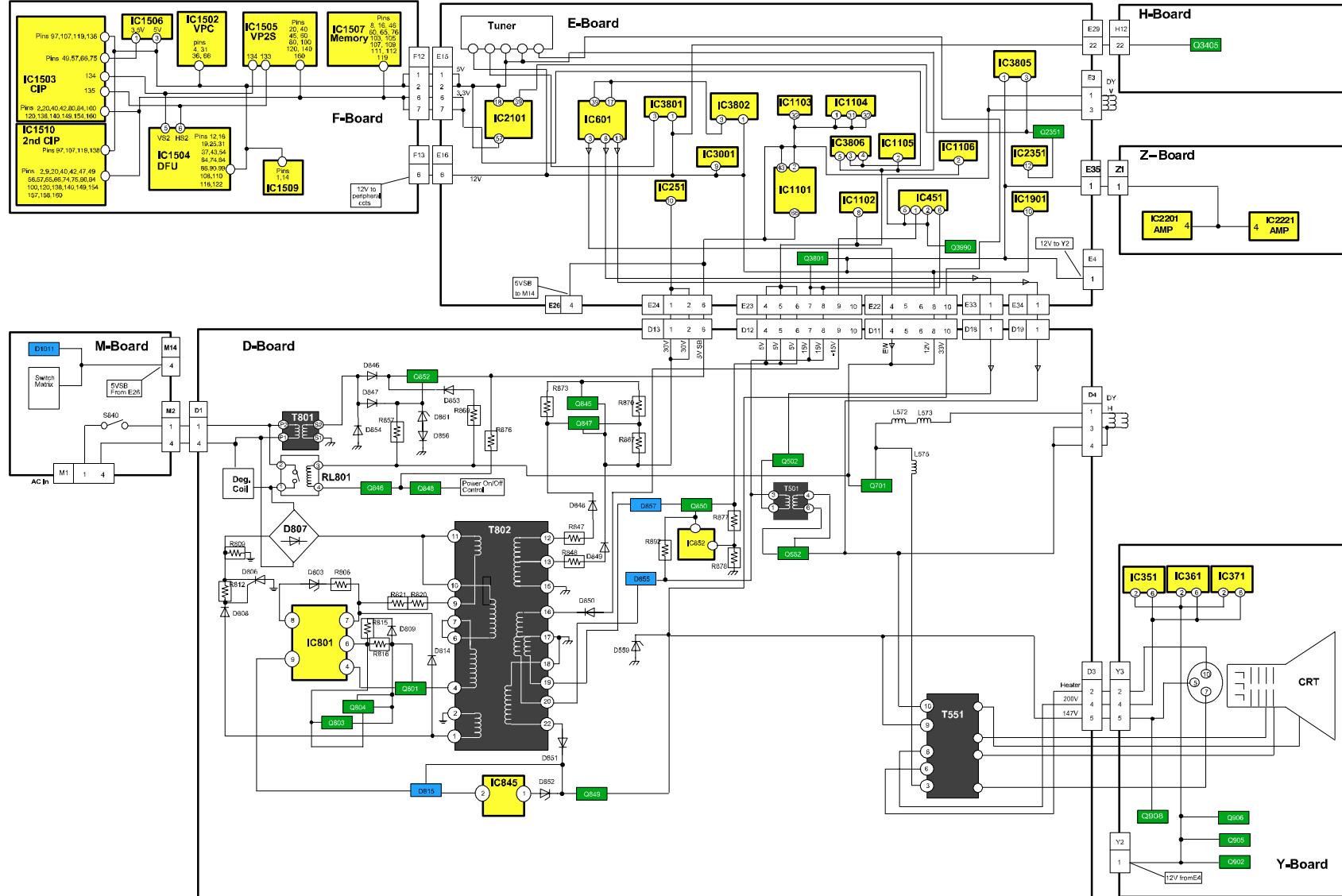


# CONTROL BLOCK DIAGRAM KONTROLL BLOCKSCHEMA

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# POWER SUPPLY & DEFLECTION BLOCK DIAGRAM STROMVERSORGUNGS BLOCKSCHEMA



## PARTS LOCATION

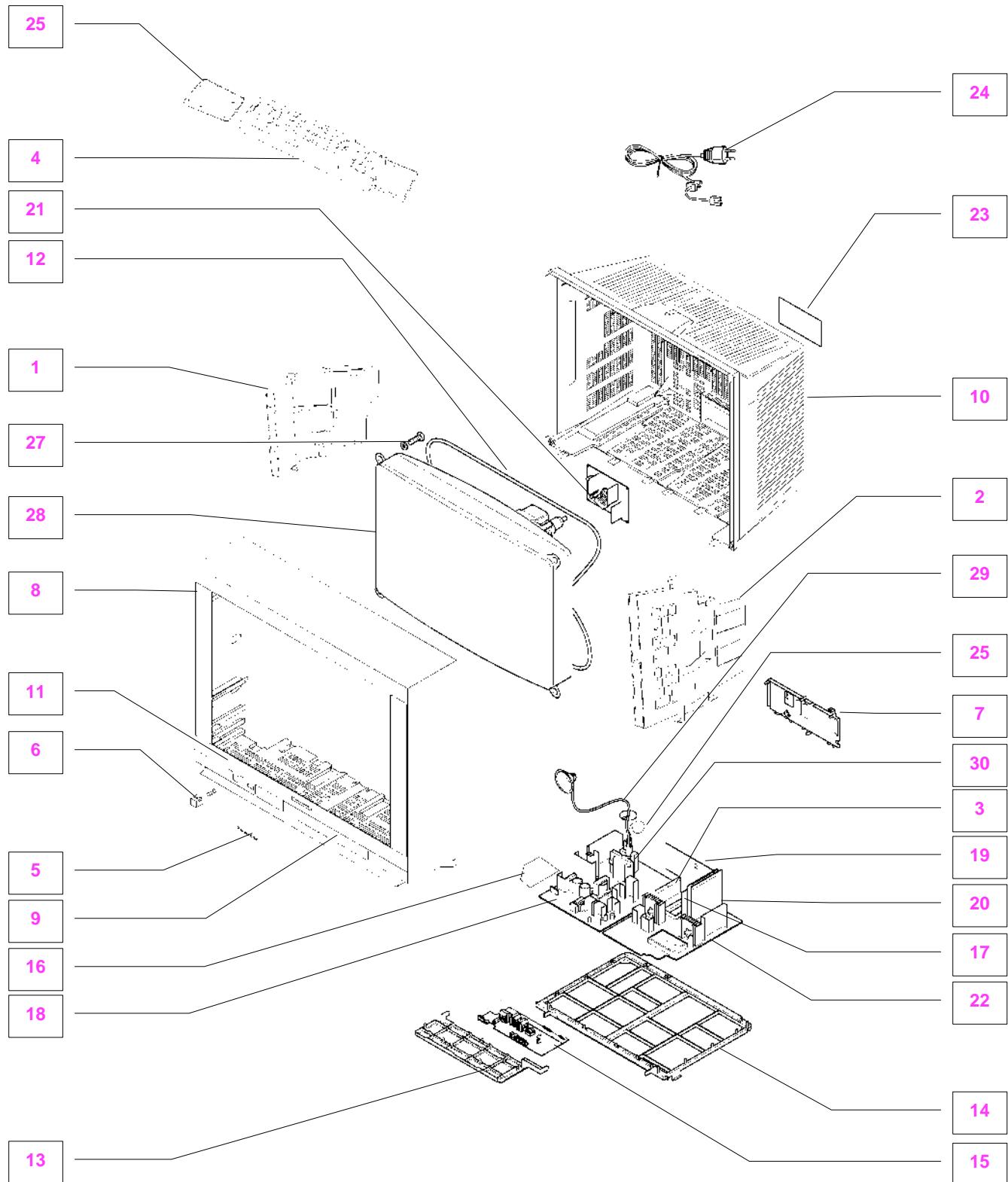
### NOTE:

The numbers on the exploded view below refer to the mechanical section of the Replacement Parts List.

## EXPLOSIONSZEICHNUNG

### Anmerking:

Die Nummer auf den mechanischen Teilen Zeigt die Bezugsnummer der Ersatzteilliste an.



## REPLACEMENT PARTS LIST

### Important Safety Notice

Components Identified by  mark have special characteristics important for safety.  
When replacing any of these components, use only manufacturers specified parts.  
\* In case of ordering these spare parts, please always add the complete Model-Type number to your order.

## ERSATZTEILLISTE

### Wichtiger Sicherheitshinweis

Teile, die mit einem Hinweis  gekennzeichnet sind wichtig für die Sicherheit. Solite ein Auswechseln erforderlich sein, sind unbedingt Originalteile einzusetzen.  
Bei der Bestellung von Ersatzteilen, die mit \* gekennzeichnet sind, geben Sie bitte unbedingt die vollständige Typenbezeichnung mit an.

| Cct Ref                         | Parts Number | Description            |
|---------------------------------|--------------|------------------------|
| <b>MECHANICAL PARTS</b>         |              |                        |
| 1                               | EAB10106BL   | LEFT SPEAKER           |
| 2                               | EAB10106BR   | RIGHT SPEAKER          |
| 3                               | ENG29505GR   | TUNER                  |
| 4                               | EUR511211    | REMOTE CONTROL         |
| 5                               | TBMA060      | PANASONIC BADGE        |
| 6                               | TBX8E068     | POWER BUTTON           |
| 7                               | TKP8E1253-3  | REAR AV PANEL          |
| 8                               | TKP8E1284    | SPEAKER NET            |
| 9                               | TKP8E1316    | DOOR LID               |
| 10                              | TKU8E00470-1 | REAR COVER             |
| 11                              | TKY8E380-2   | CABINET                |
| 12                              | TLK8E05153   | DEGAUSS COIL           |
| 13                              | TMW8E031     | CONTROL BRACKET        |
| 14                              | TMX8E027     | CHASSIS FRAME          |
| 15                              | TNP8EM022AB  | M P.C.B.               |
| 16                              | TNP8EQ002AF  | Q P.C.B.               |
| 17                              | TNP8EZ001AA  | Z P.C.B.               |
| 18                              | TNPA1014AV   | D P.C.B.               |
| 19                              | TNPA1047AC   | H P.C.B.               |
| 20                              | TNPA1068AG   | F P.C.B.               |
| 21                              | TNPA1353AT   | Y P.C.B.               |
| 22                              | TNPH0176BM   | E P.C.B.               |
| 23                              | TQF8E2907    | MODEL LABEL            |
| 24                              | TSX8E0033    | POWER CORD             |
| 25                              | UR51EC904A   | BATTERY COVER (REMOTE) |
| 26                              | VP17005-32   | CRT FIXING SCREW       |
| 27                              | W66LQK185X05 | C.R.T.                 |
| 28                              | ZTBZAD550A   | ANODE CABLE            |
| 29                              | ZTFM05005A   | F.B.T.                 |
| <b>MISCELLANEOUS COMPONENTS</b> |              |                        |
|                                 | TBLG3019     | SET FOOT (FRONT)       |
|                                 | TBLG3020     | SET FOOT (REAR)        |
|                                 | TBM8E1863-2  | REAR AV LABEL          |
|                                 | TBM8E1935    | PRESET LABEL           |
|                                 | TBM8E1936-1  | BLANKING LABEL         |
|                                 | TEK6940      | LID CATCH              |
|                                 | TES2298      | CRT EARTH SPRING       |
|                                 | TES8E019     | POWER BUTTON SPRING    |
|                                 | TKP8E1288    | LED COVER              |
|                                 | TKP8E1300    | I.R. COVER             |
|                                 | TLK8E05154   | GEOMAGNETIC COIL       |
|                                 | TMW8E030     | LED HOLDER             |
|                                 | TMX8E025     | P.C.B. BRACKET         |
|                                 | TPC8E4748-1  | OUTER CARTON           |
|                                 | TPD8E687     | CUSHION TOP            |
|                                 | TPD8E688     | CUSHION BOTTOM         |
|                                 | UM-3DJ-2P    | BATTERY PACK           |
| IC1101                          | PCSZT-084A-1 | IC SOCKET              |
| IC1104                          | 832AG11D-ESL | IC SOCKET              |
| R842                            | 232266296706 | THERMISTOR             |
| R843                            | 232266296706 | THERMISTOR             |

| Cct Ref                  | Parts Number | Description           |
|--------------------------|--------------|-----------------------|
| RL801                    | TSE1885-1    | RELAY                 |
| SOD1                     | 31221212478  | FIX CLIP              |
| SOD9                     | 31221212478  | FIX CLIP              |
| <b>INSTRUCTION BOOKS</b> |              |                       |
|                          | TQB8E2848A   | GERMAN                |
|                          | TQB8E2848BD  | DUTCH/FRENCH          |
|                          | TQB8E2848CE  | ITALIAN/SPANISH       |
|                          | TQB8E2848FG  | SWEDISH/NORG.         |
|                          | TQB8E2848HK  | FINNISH/DANISH        |
| <b>I.C.s</b>             |              |                       |
| IC251                    | LA4282       | AUDIO OUTPUT          |
| IC351                    | TDA6111Q-N4  | RGB OUTPUT            |
| IC361                    | TDA6111Q-N4  | RGB OUTPUT            |
| IC371                    | TDA6111Q-N4  | RGB OUTPUT            |
| IC381                    | TL431CLPM    | REGULATOR             |
| IC451                    | LA7845N      | VERTICAL OUTPUT       |
| IC601                    | TDA9330HN1G  | VIDEO PROCESSOR       |
| IC801                    | AN8029       | POWER SUPPLY          |
| IC845                    | SE140N       | ERROR AMPLIFIER       |
| IC852                    | TL431CLPM    | REGULATOR             |
| IC1011                   | RPM-637CBRL  | LED RECEIVER          |
| IC1101                   | SDA5450C59   | MICRO PROCESSOR       |
| IC1102                   | X24C0502YD   | EAROM*                |
| IC1103                   | KM681000CLP  | SRAM                  |
| IC1104                   | 27C2001-H14  | EPROM *               |
| IC1105                   | MN1381-R(TA) | RESET                 |
| IC1106                   | MN1381-R(TA) | RESET                 |
| IC1502                   | VPC3215CB8TP | VIDEO PROCESSOR       |
| IC1503                   | MB87F1720    | CIP                   |
| IC1504                   | FJB007S      | DFU                   |
| IC1505                   | MB87F2131    | VP2S                  |
| IC1506                   | AN77L035M-E1 | 3.5V REGULATOR        |
| IC1507                   | MB87H2010    | MEMORY                |
| IC1509                   | TLC2932IPWL  | CLOCK CONVERTOR       |
| IC1510                   | MB87F1720    | CIP                   |
| IC1901                   | LA6515       | EARTH CORRECTION      |
| IC2101                   | MSP3410DPPC5 | AUDIO PROCESSOR       |
| IC2201                   | AN6554NSF-E2 | OPERATIONAL AMPLIFIER |
| IC2221                   | AN6554NSF-E2 | OPERATIONAL AMPLIFIER |
| IC2351                   | AN7108       | H.P. AMPLIFIER        |
| IC3001                   | TEA6415C     | VIDEO SWITCH          |
| IC3801                   | AN7809FLB    | 9V REGULATOR          |
| IC3802                   | AN7708FLB    | 8V REGULATOR          |
| IC3805                   | AN7808LB     | 8V REGULATOR          |
| IC3806                   | SI-3033C     | 3.5V REGULATOR        |
| <b>FUSES</b>             |              |                       |
| F840                     | XBA2C50TH15  | FUSE                  |
| F845                     | TR5-T3150    | FUSE                  |
| F846                     | TR5-T1250    | FUSE                  |
| F8401                    | EYF52BC      | FUSE HOLDER           |
| F8402                    | EYF52BC      | FUSE HOLDER           |

| Cct Ref       | Parts Number | Description |
|---------------|--------------|-------------|
| <b>DIODES</b> |              |             |
| D001          | MA4020       | DIODE       |
| D002          | MA4020       | DIODE       |
| D252          | MA165TA5     | DIODE       |
| D253          | MA700TA5     | DIODE       |
| D254          | MA700TA5     | DIODE       |
| D255          | MA165TA5     | DIODE       |
| D351          | ERA15-04V3   | DIODE       |
| D352          | ERA15-04V3   | DIODE       |
| D361          | ERA15-04V3   | DIODE       |
| D362          | ERA15-04V3   | DIODE       |
| D371          | ERA15-04V3   | DIODE       |
| D372          | ERA15-04V3   | DIODE       |
| D387          | MA2160LFS    | DIODE       |
| D400          | MA4104       | DIODE       |
| D401          | MA165TA5     | DIODE       |
| D402          | MA165TA5     | DIODE       |
| D404          | EU02AV1      | DIODE       |
| D405          | MA165TA5     | DIODE       |
| D408          | MA165TA5     | DIODE       |
| D502          | 1SS254T-77   | DIODE       |
| D503          | EU02         | DIODE       |
| D504          | EU02         | DIODE       |
| D505          | ERA81004V3   | DIODE       |
| D556          | AU02V0       | DIODE       |
| D559          | MTZJT-7736A  | DIODE       |
| D560          | 1SS252T-77   | DIODE       |
| D561          | 1SS254T-77   | DIODE       |
| D563          | RH3GLF102    | DIODE       |
| D565          | MTZJT-7736A  | DIODE       |
| D566          | MA165TA5     | DIODE       |
| D571          | FMV-3GULF730 | DIODE       |
| D575          | 1SS252T-77   | DIODE       |
| D601          | MA29TA5      | DIODE       |
| D603          | MA4075       | DIODE       |
| D605          | MA4062       | DIODE       |
| D607          | MA165TA5     | DIODE       |
| D610          | MA4043       | DIODE       |
| D611          | MA165TA5     | DIODE       |
| D612          | MA165TA5     | DIODE       |
| D615          | MA165TA5     | DIODE       |
| D616          | MA178TA5     | DIODE       |
| D617          | MTZJT-779.1C | DIODE       |
| D618          | MTZJT-779.1C | DIODE       |
| D621          | MTZJT-778.2A | DIODE       |
| D651          | MA165TA5     | DIODE       |
| D652          | MA165TA5     | DIODE       |
| D653          | MA4360       | DIODE       |
| D654          | MTZJT-777.5B | DIODE       |
| D701          | AU02V0       | DIODE       |
| D803          | MTZJT-7712C  | DIODE       |
| D807          | RBV-608LF-B  | DIODE       |
| D809          | ERA22-02V3   | DIODE       |
| D810          | MA2180BLFS   | DIODE       |
| D812          | MTZJT-775.6B | DIODE       |
| D813          | MA700TA5     | DIODE       |
| D814          | AU01ZV0      | DIODE       |
| D815          | PC123FY2     | DIODE       |
| D818          | TMPG10G3     | DIODE       |
| D819          | ERA81004V3   | DIODE       |
| D820          | MA4100       | DIODE       |
| D821          | EU02AV0      | DIODE       |
| D845          | MA165TA5     | DIODE       |
| D846          | 1SR124-4AT82 | DIODE       |
| D847          | ERA15-01V3   | DIODE       |
| D848          | EU02         | DIODE       |

| Cct Ref            | Parts Number | Description |
|--------------------|--------------|-------------|
| D849               | FMGG26S      | DIODE       |
| D850               | ERB32-02E    | DIODE       |
| D851               | FMGG2CSLF116 | DIODE       |
| D852               | MA4062       | DIODE       |
| D853               | 1N4150T-77   | DIODE       |
| D854               | ERA15-01V3   | DIODE       |
| D855               | D10SC6MRL    | DIODE       |
| D856               | MA165TA5     | DIODE       |
| D857               | FML22SLF610  | DIODE       |
| D860               | 1SS254T-77   | DIODE       |
| D861               | MTZJT-775.1C | DIODE       |
| D866               | MTZJT-7727D  | DIODE       |
| D901               | 1SS254T-77   | DIODE       |
| D902               | 1SS254T-77   | DIODE       |
| D903               | 1SS254T-77   | DIODE       |
| D910               | R2KNLFA1     | DIODE       |
| D1011              | LN81RPHL     | DIODE       |
| D1102              | MA4051       | DIODE       |
| D1103              | MA4051       | DIODE       |
| D1104              | MA165TA5     | DIODE       |
| D1105              | MA165TA5     | DIODE       |
| D1107              | MA165TA5     | DIODE       |
| D1109              | MA165TA5     | DIODE       |
| D1110              | MA165TA5     | DIODE       |
| D1111              | MA165TA5     | DIODE       |
| D1112              | MA165TA5     | DIODE       |
| D1501              | MA151ATX     | DIODE       |
| D2101              | MTZJT-7712C  | DIODE       |
| D2102              | MTZJT-7712C  | DIODE       |
| D2351              | MTZJT-775.6B | DIODE       |
| D3006              | MA4100       | DIODE       |
| D3008              | MA723TA5     | DIODE       |
| D3009              | MA170        | DIODE       |
| D3011              | MA858TA5     | DIODE       |
| D3351              | 1SS254T-77   | DIODE       |
| D3352              | MA165TA5     | DIODE       |
| D3353              | MA165TA5     | DIODE       |
| D3354              | MA165TA5     | DIODE       |
| D3401              | MTZJT-7712C  | DIODE       |
| D3402              | MTZJT-7712C  | DIODE       |
| D3803              | MTZJT-774.7A | DIODE       |
| D3804              | MTZJT-778.2A | DIODE       |
| D3805              | ERA81004V3   | DIODE       |
| D3990              | MTZJT-7724D  | DIODE       |
| <b>TRANSISTORS</b> |              |             |
| Q101               | BC847B       | TRANSISTOR  |
| Q103               | BC847B       | TRANSISTOR  |
| Q104               | BC847B       | TRANSISTOR  |
| Q251               | 2SD1328STX   | TRANSISTOR  |
| Q252               | 2SD1328STX   | TRANSISTOR  |
| Q253               | BC847B       | TRANSISTOR  |
| Q254               | BC857B       | TRANSISTOR  |
| Q400               | BC847B       | TRANSISTOR  |
| Q401               | BC847B       | TRANSISTOR  |
| Q502               | 2SC2925STA   | TRANSISTOR  |
| Q552               | 2SC5144LB230 | TRANSISTOR  |
| Q553               | 2SC1473-RN   | TRANSISTOR  |
| Q554               | 2SC1473-RN   | TRANSISTOR  |
| Q602               | BC857B       | TRANSISTOR  |
| Q603               | BC857B       | TRANSISTOR  |
| Q604               | BC857B       | TRANSISTOR  |
| Q607               | BC857B       | TRANSISTOR  |
| Q608               | BC857B       | TRANSISTOR  |
| Q701               | 2SK2538000LB | TRANSISTOR  |
| Q801               | 2SK1365LB106 | TRANSISTOR  |
| Q803               | 2SD965-R     | TRANSISTOR  |

| Cct Ref | Parts Number | Description |
|---------|--------------|-------------|
| Q804    | 2SA719-TA    | TRANSISTOR  |
| Q845    | 2SA684R      | TRANSISTOR  |
| Q846    | BC547B/126   | TRANSISTOR  |
| Q847    | BC557B/126   | TRANSISTOR  |
| Q848    | BC547B/126   | TRANSISTOR  |
| Q849    | 2SA1018QTA   | TRANSISTOR  |
| Q850    | 2SD1474PLB   | TRANSISTOR  |
| Q852    | 2SC1318-S    | TRANSISTOR  |
| Q853    | BC557C/126   | TRANSISTOR  |
| Q854    | BC557C/126   | TRANSISTOR  |
| Q902    | BC847B       | TRANSISTOR  |
| Q903    | BC847B       | TRANSISTOR  |
| Q904    | BC857B       | TRANSISTOR  |
| Q905    | BC847B       | TRANSISTOR  |
| Q906    | BC847B       | TRANSISTOR  |
| Q907    | BC857B       | TRANSISTOR  |
| Q908    | 2SA1535ARLB  | TRANSISTOR  |
| Q909    | 2SC3944ARLB  | TRANSISTOR  |
| Q1011   | BC557B/126   | TRANSISTOR  |
| Q1103   | BC847B       | TRANSISTOR  |
| Q1104   | BC847B       | TRANSISTOR  |
| Q1105   | BC847B       | TRANSISTOR  |
| Q1106   | BC847B       | TRANSISTOR  |
| Q1107   | BC847B       | TRANSISTOR  |
| Q1108   | BC847B       | TRANSISTOR  |
| Q1109   | BC847B       | TRANSISTOR  |
| Q1110   | BC847B       | TRANSISTOR  |
| Q1111   | BC847B       | TRANSISTOR  |
| Q1112   | BC847B       | TRANSISTOR  |
| Q1113   | BC847B       | TRANSISTOR  |
| Q1116   | BC847B       | TRANSISTOR  |
| Q1118   | BC857B       | TRANSISTOR  |
| Q1501   | BC857B       | TRANSISTOR  |
| Q1502   | BC857B       | TRANSISTOR  |
| Q1503   | BC847B       | TRANSISTOR  |
| Q1504   | BC847B       | TRANSISTOR  |
| Q1505   | BC847B       | TRANSISTOR  |
| Q1506   | BC847B       | TRANSISTOR  |
| Q1507   | BC847B       | TRANSISTOR  |
| Q1508   | BC847B       | TRANSISTOR  |
| Q1509   | BC847B       | TRANSISTOR  |
| Q1510   | BC847B       | TRANSISTOR  |
| Q1511   | BC847B       | TRANSISTOR  |
| Q1513   | BC857B       | TRANSISTOR  |
| Q1660   | BC847B       | TRANSISTOR  |
| Q1661   | BC847B       | TRANSISTOR  |
| Q1662   | BC847B       | TRANSISTOR  |
| Q1663   | BC847B       | TRANSISTOR  |
| Q1664   | BC847B       | TRANSISTOR  |
| Q1665   | BC847B       | TRANSISTOR  |
| Q1666   | BC847B       | TRANSISTOR  |
| Q1667   | BC847B       | TRANSISTOR  |
| Q1901   | BC847B       | TRANSISTOR  |
| Q2101   | BC860B       | TRANSISTOR  |
| Q2102   | BC860B       | TRANSISTOR  |
| Q2301   | BC847B       | TRANSISTOR  |
| Q2302   | BC847B       | TRANSISTOR  |
| Q2305   | BC857B       | TRANSISTOR  |
| Q2307   | BC860B       | TRANSISTOR  |
| Q2308   | BC860B       | TRANSISTOR  |
| Q2351   | BC847B       | TRANSISTOR  |
| Q2352   | BC847B       | TRANSISTOR  |
| Q3001   | BC857B       | TRANSISTOR  |
| Q3002   | BC847B       | TRANSISTOR  |
| Q3003   | BC847B       | TRANSISTOR  |
| Q3005   | BC847B       | TRANSISTOR  |

| Cct Ref             | Parts Number | Description |
|---------------------|--------------|-------------|
| Q3006               | BC847B       | TRANSISTOR  |
| Q3010               | BC857B       | TRANSISTOR  |
| Q3011               | BC857B       | TRANSISTOR  |
| Q3012               | BC847B       | TRANSISTOR  |
| Q3013               | BC847B       | TRANSISTOR  |
| Q3014               | BC847B       | TRANSISTOR  |
| Q3351               | BC847B       | TRANSISTOR  |
| Q3352               | BC857B       | TRANSISTOR  |
| Q3401               | BC847B       | TRANSISTOR  |
| Q3402               | BC847B       | TRANSISTOR  |
| Q3403               | BC847B       | TRANSISTOR  |
| Q3404               | BC847B       | TRANSISTOR  |
| Q3405               | BC847B       | TRANSISTOR  |
| Q3406               | BC847B       | TRANSISTOR  |
| Q3801               | 2SD1474PLB   | TRANSISTOR  |
| Q3990               | BC847B       | TRANSISTOR  |
| <b>TRANSFORMERS</b> |              |             |
| T501                | ETH19Y187AY  | TRANSFORMER |
| T801                | ETP35KAN619U | TRANSFORMER |
| T802                | ETS49AH1W7AD | TRANSFORMER |
| <b>COILS</b>        |              |             |
| J5                  | ELESN2R2KA   | COIL        |
| J341                | EXCELSA39V   | COIL        |
| J361                | EXCELSA39V   | COIL        |
| JA1                 | ELJFC2R2KF   | COIL        |
| JA10                | ELJFC2R2KF   | COIL        |
| L002                | EXCELDR35V   | COIL        |
| L003                | EXCELDR35V   | COIL        |
| L004                | EXCELSA35T   | COIL        |
| L005                | TLT100K991R  | COIL        |
| L007                | EXCELDR35V   | COIL        |
| L008                | ELJFC2R2KF   | COIL        |
| L009                | ELJFC2R2KF   | COIL        |
| L251                | EXCELSA35T   | COIL        |
| L252                | EXCELSA35T   | COIL        |
| L253                | EXCELSA35T   | COIL        |
| L254                | EXCELSA35T   | COIL        |
| L351                | ELB4C070B    | DELAY LINE  |
| L353                | TLT120K991R  | COIL        |
| L361                | ELB4C070B    | DELAY LINE  |
| L363                | TLT082K991R  | COIL        |
| L371                | ELB4C070B    | DELAY LINE  |
| L373                | TLT120K991R  | COIL        |
| L381                | TLT220K991R  | COIL        |
| L501                | ELELN101KA   | COIL        |
| L554                | EXCELDR35V   | COIL        |
| L556                | EXCELDR35C   | COIL        |
| L572                | ELHKL070B    | COIL        |
| L573                | ELHKL067B    | COIL        |
| L575                | ELC18B221L   | COIL        |
| L601                | EXCELDR25V   | COIL        |
| L602                | EXCELDR35V   | COIL        |
| L603                | TLT033K991R  | COIL        |
| L604                | ELEXT2R7KA   | COIL        |
| L605                | ELEXT2R7KA   | COIL        |
| L606                | ELEXT2R7KA   | COIL        |
| L607                | ELEXT2R7KA   | COIL        |
| L701                | ELC18B801L   | COIL        |
| L809                | EXCELDR35C   | COIL        |
| L810                | EXCELSA39V   | COIL        |
| L811                | EXCELSA39V   | COIL        |
| L812                | EXCELDR35V   | COIL        |
| L813                | EXCELDR35V   | COIL        |
| L817                | EXCELDR35V   | COIL        |
| L819                | EXCELSA39V   | COIL        |
| L845                | EXCELSA35T   | COIL        |













| Cct Ref | Parts Number | Description |       |    |        |  |
|---------|--------------|-------------|-------|----|--------|--|
| R3012   | ERJ6GEYJ104  | S.M.CARB    | 0.1W  | 5% | 100K Ω |  |
| R3013   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3014   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3015   | ERJ6GEYJ470  | S.M.CARB    | 0.1W  | 5% | 47 Ω   |  |
| R3016   | ERJ6GEYJ121  | S.M.CARB    | 0.1W  | 5% | 120 Ω  |  |
| R3017   | ERJ6GEYJ390  | S.M.CARB    | 0.1W  | 5% | 39 Ω   |  |
| R3018   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3019   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3020   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3021   | ERJ6GEYJ681  | S.M.CARB    | 0.1W  | 5% | 680 Ω  |  |
| R3022   | ERJ6GEYJ680  | S.M.CARB    | 0.1W  | 5% | 68 Ω   |  |
| R3023   | ERQ14AJ390   | FUSIBLE     | 0.25W | 5% | 39 Ω ▲ |  |
| R3024   | ERJ6GEYJ683  | S.M.CARB    | 0.1W  | 5% | 68K Ω  |  |
| R3025   | ERJ6GEYJ153  | S.M.CARB    | 0.1W  | 5% | 15K Ω  |  |
| R3026   | ERJ6GEYJ221  | S.M.CARB    | 0.1W  | 5% | 220 Ω  |  |
| R3027   | ERJ6GEYJ100  | S.M.CARB    | 0.1W  | 5% | 10 Ω   |  |
| R3028   | ERJ6GEYJ681  | S.M.CARB    | 0.1W  | 5% | 680 Ω  |  |
| R3029   | ERJ6GEYJ100  | S.M.CARB    | 0.1W  | 5% | 10 Ω   |  |
| R3030   | ERJ6GEYJ153  | S.M.CARB    | 0.1W  | 5% | 15K Ω  |  |
| R3031   | ERJ6GEYJ472  | S.M.CARB    | 0.1W  | 5% | 4K7 Ω  |  |
| R3033   | ERJ6GEYJ103  | S.M.CARB    | 0.1W  | 5% | 10K Ω  |  |
| R3034   | ERJ6GEYJ103  | S.M.CARB    | 0.1W  | 5% | 10K Ω  |  |
| R3035   | ERJ6GEYJ103  | S.M.CARB    | 0.1W  | 5% | 10K Ω  |  |
| R3036   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3037   | ERJ6GEYJ103  | S.M.CARB    | 0.1W  | 5% | 10K Ω  |  |
| R3038   | ERJ6GEYJ332  | S.M.CARB    | 0.1W  | 5% | 3K3 Ω  |  |
| R3039   | ERJ6GEYJ332  | S.M.CARB    | 0.1W  | 5% | 3K3 Ω  |  |
| R3040   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3043   | ERJ6GEYJ471  | S.M.CARB    | 0.1W  | 5% | 470 Ω  |  |
| R3045   | ERJ6GEY0R00  | S.M.CARB    | 0.1W  | 5% | 0 Ω    |  |
| R3046   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω   |  |
| R3047   | ERJ6GEY0R00  | S.M.CARB    | 0.1W  | 5% | 0 Ω    |  |
| R3048   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω   |  |
| R3053   | ERJ6GEYJ220  | S.M.CARB    | 0.1W  | 5% | 22 Ω   |  |
| R3057   | ERJ6GEYJ151  | S.M.CARB    | 0.1W  | 5% | 150 Ω  |  |
| R3058   | ERJ6GEYJ104  | S.M.CARB    | 0.1W  | 5% | 100K Ω |  |
| R3059   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω   |  |
| R3060   | ERJ6GEYJ471  | S.M.CARB    | 0.1W  | 5% | 470 Ω  |  |
| R3061   | ERJ6GEYJ153  | S.M.CARB    | 0.1W  | 5% | 15K Ω  |  |
| R3062   | ERJ6GEYJ562  | S.M.CARB    | 0.1W  | 5% | 5K6 Ω  |  |
| R3063   | ERJ6GEYJ222  | S.M.CARB    | 0.1W  | 5% | 2K2 Ω  |  |
| R3064   | ERJ6GEYJ272  | S.M.CARB    | 0.1W  | 5% | 2K7 Ω  |  |
| R3065   | ERJ6GEYJ333  | S.M.CARB    | 0.1W  | 5% | 33K Ω  |  |
| R3066   | ERJ6GEYJ471  | S.M.CARB    | 0.1W  | 5% | 470 Ω  |  |
| R3067   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω   |  |
| R3068   | ERJ6GEYJ563  | S.M.CARB    | 0.1W  | 5% | 56K Ω  |  |
| R3069   | ERJ6GEYJ183  | S.M.CARB    | 0.1W  | 5% | 18K Ω  |  |
| R3070   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω   |  |
| R3071   | ERJ6GEYJ621  | S.M.CARB    | 0.1W  | 5% | 620 Ω  |  |
| R3072   | ERJ6GEYJ103  | S.M.CARB    | 0.1W  | 5% | 10K Ω  |  |
| R3073   | ERJ6GEYJ393  | S.M.CARB    | 0.1W  | 5% | 39K Ω  |  |
| R3074   | ERJ6GEYJ473  | S.M.CARB    | 0.1W  | 5% | 47K Ω  |  |
| R3075   | ERJ6GEYJ472  | S.M.CARB    | 0.1W  | 5% | 4K7 Ω  |  |
| R3076   | ERJ6GEYJ331  | S.M.CARB    | 0.1W  | 5% | 330 Ω  |  |
| R3077   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3078   | ERJ6GEY0R00  | S.M.CARB    | 0.1W  | 5% | 0 Ω    |  |
| R3079   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3080   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3081   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3082   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3087   | ERJ6GEYJ750  | S.M.CARB    | 0.1W  | 5% | 75 Ω   |  |
| R3113   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3114   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω  |  |
| R3125   | ERJ6GEYJ681  | S.M.CARB    | 0.1W  | 5% | 680 Ω  |  |
| R3126   | ERJ6GEYJ681  | S.M.CARB    | 0.1W  | 5% | 680 Ω  |  |
| R3281   | ERD25TJ750   | CARBON      | 0.25W | 5% | 75 Ω   |  |

| Cct Ref | Parts Number | Description |       |    |          |  |
|---------|--------------|-------------|-------|----|----------|--|
| R3282   | ERD25TJ750   | CARBON      | 0.25W | 5% | 75 Ω     |  |
| R3284   | ERD25TJ102   | CARBON      | 0.25W | 5% | 1K Ω     |  |
| R3285   | ERD25TJ102   | CARBON      | 0.25W | 5% | 1K Ω     |  |
| R3351   | ERJ6GEYJ220  | S.M.CARB    | 0.1W  | 5% | 22 Ω     |  |
| R3352   | ERJ6GEYJ472  | S.M.CARB    | 0.1W  | 5% | 4K7 Ω    |  |
| R3353   | ERJ6GEYJ474  | S.M.CARB    | 0.1W  | 5% | 470K Ω   |  |
| R3354   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3355   | ERJ6GEYJ391  | S.M.CARB    | 0.1W  | 5% | 390 Ω    |  |
| R3356   | ERJ6GEYJ682  | S.M.CARB    | 0.1W  | 5% | 6K8 Ω    |  |
| R3357   | ERJ6GEYJ682  | S.M.CARB    | 0.1W  | 5% | 6K8 Ω    |  |
| R3358   | ERJ6GEYJ682  | S.M.CARB    | 0.1W  | 5% | 6K8 Ω    |  |
| R3360   | ERDS1TJ471   | CARBON      | 0.5W  | 5% | 470 Ω    |  |
| R3361   | ERO50PKF1133 | METAL       | 0.5W  | 5% | 110K Ω ▲ |  |
| R3401   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3402   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3403   | ERJ6GEYJ333  | S.M.CARB    | 0.1W  | 5% | 33K Ω    |  |
| R3404   | ERJ6GEYJ333  | S.M.CARB    | 0.1W  | 5% | 33K Ω    |  |
| R3405   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3406   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3407   | ERJ6GEYJ153  | S.M.CARB    | 0.1W  | 5% | 15K Ω    |  |
| R3408   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3409   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3410   | ERJ6GEYJ104  | S.M.CARB    | 0.1W  | 5% | 100K Ω   |  |
| R3412   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3413   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3414   | ERJ6GEYJ750  | S.M.CARB    | 0.1W  | 5% | 75 Ω     |  |
| R3415   | ERJ6GEYJ104  | S.M.CARB    | 0.1W  | 5% | 100K Ω   |  |
| R3416   | ERJ6GEYJ333  | S.M.CARB    | 0.1W  | 5% | 33K Ω    |  |
| R3417   | ERJ6GEYJ104  | S.M.CARB    | 0.1W  | 5% | 100K Ω   |  |
| R3418   | ERJ6GEYJ104  | S.M.CARB    | 0.1W  | 5% | 100K Ω   |  |
| R3419   | ERJ6GEYJ333  | S.M.CARB    | 0.1W  | 5% | 33K Ω    |  |
| R3420   | ERJ6GEYJ750  | S.M.CARB    | 0.1W  | 5% | 75 Ω     |  |
| R3421   | ERJ6GEYJ750  | S.M.CARB    | 0.1W  | 5% | 75 Ω     |  |
| R3422   | ERJ6GEYJ153  | S.M.CARB    | 0.1W  | 5% | 15K Ω    |  |
| R3423   | ERJ6GEYJ470  | S.M.CARB    | 0.1W  | 5% | 47 Ω     |  |
| R3424   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3425   | ERJ6GEYJ221  | S.M.CARB    | 0.1W  | 5% | 220 Ω    |  |
| R3426   | ERJ6GEYJ680  | S.M.CARB    | 0.1W  | 5% | 68 Ω     |  |
| R3427   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3428   | ERJ6GEYJ680  | S.M.CARB    | 0.1W  | 5% | 68 Ω     |  |
| R3429   | ERJ6GEYJ100  | S.M.CARB    | 0.1W  | 5% | 10 Ω     |  |
| R3430   | ERJ6GEYJ103  | S.M.CARB    | 0.1W  | 5% | 10K Ω    |  |
| R3431   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3432   | ERJ6GEYJ221  | S.M.CARB    | 0.1W  | 5% | 220 Ω    |  |
| R3433   | ERJ6GEYJ332  | S.M.CARB    | 0.1W  | 5% | 3K3 Ω    |  |
| R3434   | ERJ6GEYJ333  | S.M.CARB    | 0.1W  | 5% | 33K Ω    |  |
| R3435   | ERJ6GEYJ680  | S.M.CARB    | 0.1W  | 5% | 68 Ω     |  |
| R3436   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3437   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3438   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3439   | ERJ6GEYJ333  | S.M.CARB    | 0.1W  | 5% | 33K Ω    |  |
| R3440   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3441   | ERJ6GEYJ153  | S.M.CARB    | 0.1W  | 5% | 15K Ω    |  |
| R3443   | ERJ6GEYJ750  | S.M.CARB    | 0.1W  | 5% | 75 Ω     |  |
| R3444   | ERJ6GEYJ470  | S.M.CARB    | 0.1W  | 5% | 47 Ω     |  |
| R3445   | ERJ6GEYJ750  | S.M.CARB    | 0.1W  | 5% | 75 Ω     |  |
| R3446   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3447   | ERJ6GEYJ102  | S.M.CARB    | 0.1W  | 5% | 1K Ω     |  |
| R3452   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3453   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3454   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3455   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3801   | ERJ6GEYJ101  | S.M.CARB    | 0.1W  | 5% | 100 Ω    |  |
| R3802   | ERJ6GEYJ221  | S.M.CARB    | 0.1W  | 5% | 220 Ω    |  |
| R3803   | ERG3FJ100    | METAL       | 3W    | 5% | 10 Ω ▲   |  |
| R3990   | ERJ6GEYJ472  | S.M.CARB    | 0.1W  | 5% | 4K7 Ω    |  |

| Cct Ref           | Parts Number | Description |      |              |              |
|-------------------|--------------|-------------|------|--------------|--------------|
| R3991             | ERJ6GEYJ103  | S.M.CARB    | 0.1W | 5%           | 10K $\Omega$ |
| R3992             | ERJ6GEYJ103  | S.M.CARB    | 0.1W | 5%           | 10K $\Omega$ |
| R3993             | ERJ6GEYJ103  | S.M.CARB    | 0.1W | 5%           | 10K $\Omega$ |
| R3994             | ERJ6GEYJ103  | S.M.CARB    | 0.1W | 5%           | 10K $\Omega$ |
| <b>CAPACITORS</b> |              |             |      |              |              |
| C002              | ECA1HMR33GB  | ELECT       | 50V  | 0.33 $\mu$ F |              |
| C003              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C004              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C005              | ECA1CM221GB  | ELECT       | 16V  | 220 $\mu$ F  |              |
| C006              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C007              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C008              | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF        |              |
| C009              | ECA1CM221GB  | ELECT       | 16V  | 220 $\mu$ F  |              |
| C010              | ECA1HM4R7GB  | ELECT       | 50V  | 4.7 $\mu$ F  |              |
| C011              | ECUV1H100DCX | S.M. CAP    | 50V  | 10pF         |              |
| C012              | ECUV1H100DCX | S.M. CAP    | 50V  | 10pF         |              |
| C013              | ECA1CM470GB  | ELECT       | 16V  | 47 $\mu$ F   |              |
| C014              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C015              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C017              | ECUV1H100DCX | S.M. CAP    | 50V  | 10pF         |              |
| C018              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C019              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C103              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C104              | ECJ2VF1H103Z | ELECT       | 350V | 10nF         |              |
| C107              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C108              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C109              | ECUY1C184KBX | S.M. CAP    | 16V  | 180nF        |              |
| C110              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C111              | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |              |
| C251              | ECA1HM101GB  | ELECT       | 50V  | 100 $\mu$ F  |              |
| C252              | ECJ2VB1H103K | ELECT       | 350V | 10nF         |              |
| C253              | ECA1HM4R7GB  | ELECT       | 50V  | 4.7 $\mu$ F  |              |
| C254              | ECQM1H684J   | FILM        | 50V  | 680nF        |              |
| C255              | ECA1EHG101B  | ELECT       | 50V  | 100nF        |              |
| C256              | ECJ2VB1H103K | ELECT       | 350V | 10nF         |              |
| C257              | ECA1HM4R7GB  | ELECT       | 50V  | 4.7 $\mu$ F  |              |
| C258              | ECA1HM101GB  | ELECT       | 50V  | 100 $\mu$ F  |              |
| C259              | ECQM1H684J   | FILM        | 50V  | 680nF        |              |
| C260              | ECA1VM102GB  | ELECT       | 35V  | 1nF          |              |
| C261              | ECA1VM102GB  | ELECT       | 35V  | 1nF          |              |
| C263              | ECA1HM010GB  | ELECT       | 50V  | 1 $\mu$ F    |              |
| C264              | ECA1HM222E   | ELECT       | 50V  | 2.2nF        |              |
| C266              | ECA1HM010GB  | ELECT       | 50V  | 1 $\mu$ F    |              |
| C267              | ECQM1H224J   | FILM        | 50V  | 220nF        |              |
| C268              | ECQM1H224J   | FILM        | 50V  | 220nF        |              |
| C269              | ECA1HM470GB  | ELECT       | 50V  | 47 $\mu$ F   |              |
| C270              | ECQM1H224J   | FILM        | 50V  | 220nF        |              |
| C271              | ECQM1H224J   | FILM        | 50V  | 220nF        |              |
| C277              | ECUV1H102JCX | S.M. CAP    | 50V  | 1nF          |              |
| C278              | ECUV1H102JCX | S.M. CAP    | 50V  | 1nF          |              |
| C352              | ECUV1H224ZFX | S.M. CAP    | 50V  | 220nF        |              |
| C353              | ECUV1H104KBX | S.M. CAP    | 50V  | 100nF        |              |
| C354              | ECQM2104KZ   | FILM        | 250V | 100nF        |              |
| C355              | ECKC2H102J   | CERAMIC     | 500V | 1nF          | ⚠            |
| C362              | ECUV1H224ZFX | S.M. CAP    | 50V  | 220nF        |              |
| C363              | ECUV1H104KBX | S.M. CAP    | 50V  | 100nF        |              |
| C364              | ECQM2104KZ   | FILM        | 250V | 100nF        |              |
| C365              | ECKC2H102J   | CERAMIC     | 500V | 1nF          | ⚠            |
| C372              | ECUV1H224ZFX | S.M. CAP    | 50V  | 220nF        |              |
| C373              | ECUV1H104KBX | S.M. CAP    | 50V  | 100nF        |              |
| C374              | ECQM2104KZ   | FILM        | 250V | 100nF        |              |
| C375              | ECKC2H102J   | CERAMIC     | 500V | 1nF          | ⚠            |
| C381              | ECA1HM101GB  | ELECT       | 50V  | 100 $\mu$ F  |              |
| C382              | ECA1CM471GB  | ELECT       | 16V  | 470 $\mu$ F  |              |
| C383              | ECUV1H103KBX | S.M. CAP    | 50V  | 10nF         |              |
| C384              | ECQM2104KZ   | FILM        | 250V | 100nF        |              |

| Cct Ref | Parts Number | Description |      |              |   |
|---------|--------------|-------------|------|--------------|---|
| C385    | ECA2EM220B   | ELECT       | 250V | 22 $\mu$ F   |   |
| C386    | ECKC3D152J   | CERAMIC     | 2KV  | 1.5nF        | ⚠ |
| C388    | ECUV1H331KBX | S.M. CAP    | 50V  | 330pF        |   |
| C389    | ECUV1H331KBX | S.M. CAP    | 50V  | 330pF        |   |
| C390    | ECUV1H150JCX | S.M. CAP    | 50V  | 15pF         |   |
| C391    | ECUV1H150JCX | S.M. CAP    | 50V  | 15pF         |   |
| C392    | ECUV1H150JCX | S.M. CAP    | 50V  | 15pF         |   |
| C395    | ECQM1H104J   | FILM        | 50V  | 100nF        |   |
| C396    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C400    | ECA1VM102GB  | ELECT       | 35V  | 1nF          |   |
| C402    | ECA1HM010GB  | ELECT       | 50V  | 1 $\mu$ F    |   |
| C404    | ECEA1HU471   | ELECT       | 50V  | 470 $\mu$ F  |   |
| C407    | ECQB1224KFW  | FILM        | 100V | 220nF        |   |
| C411    | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF          |   |
| C501    | ECQM1H224J   | FILM        | 50V  | 220nF        |   |
| C502    | ECQM2104KZ   | FILM        | 250V | 100nF        |   |
| C503    | ECKC2H102J   | CERAMIC     | 500V | 1nF          | ⚠ |
| C504    | ECQB1H223K   | FILM        | 50V  | 22nF         |   |
| C505    | ECA1EM332E   | ELECT       | 25V  | 3300 $\mu$ F |   |
| C506    | ECKC2H102J   | CERAMIC     | 500V | 1nF          | ⚠ |
| C507    | ECA1EM332E   | ELECT       | 25V  | 3300 $\mu$ F |   |
| C552    | ECWH20102JVY | FILM        | 200V | 1 $\mu$ F    |   |
| C553    | ECQP1223JZW  | FILM        | 100V | 22nF         |   |
| C554    | ECQB1H152K   | FILM        | 50V  | 1.5nF        |   |
| C555    | ECWH20622JVB | FILM        | 200V | 6.2nF        |   |
| C556    | ECEA2CNR47SB | ELECT       | 160V | 0.47 $\mu$ F |   |
| C557    | ECKC2H331J   | CERAMIC     | 500V | 330pF        | ⚠ |
| C558    | ECA2EM330B   | ELECT       | 250V | 33 $\mu$ F   |   |
| C563    | ECWF2564JBB  | FILM        | 200V | 560nF        | ⚠ |
| C564    | ECKC1H103JB  | CERAMIC     | 50V  | 10nF         |   |
| C565    | ECQP1223JZW  | FILM        | 100V | 22nF         |   |
| C572    | ECWH20622JVB | FILM        | 200V | 6.2nF        |   |
| C573    | ECQF4153JZH  | FILM        | 400V | 1.5nF        | ⚠ |
| C574    | ECWF4564JBB  | FILM        | 400V | 560nF        |   |
| C575    | ECWF4624JBB  | FILM        | 400V | 620nF        |   |
| C581    | ECQF4153JZH  | FILM        | 400V | 1.5nF        | ⚠ |
| C584    | ECKC3D391J   | CERAMIC     | 2KV  | 390pF        | ⚠ |
| C602    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C603    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C604    | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF         |   |
| C605    | ECA1CM221GB  | ELECT       | 16V  | 220 $\mu$ F  |   |
| C606    | ECA1AM332E   | ELECT       | 10V  | 3300 $\mu$ F |   |
| C607    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C608    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C609    | ECA1HM3R3GB  | ELECT       | 50V  | 3.3 $\mu$ F  |   |
| C610    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C611    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C612    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C613    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C614    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C615    | ECJ2VB1C104K | ELECT       | 350V | 100nF        |   |
| C616    | ECQM1H104J   | FILM        | 50V  | 100nF        |   |
| C617    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C618    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C620    | ECUV1H050DCX | S.M. CAP    | 50V  | 5pF          |   |
| C622    | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF         |   |
| C623    | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF         |   |
| C624    | ECUV1H820JCX | S.M. CAP    | 50V  | 82pF         |   |
| C625    | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF         |   |
| C626    | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF         |   |
| C627    | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF         |   |
| C628    | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF         |   |
| C632    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C633    | ECJ2VF1H104Z | ELECT       | 350V | 100nF        |   |
| C635    | ECA1EM101GB  | ELECT       | 25V  | 100 $\mu$ F  |   |
| C636    | ECUV1H103ZFX | S.M. CAP    | 50V  | 10nF         |   |

| Cct Ref | Parts Number | Description |       |        |   |
|---------|--------------|-------------|-------|--------|---|
| C637    | ECUV1H470JCX | S.M. CAP    | 50V   | 47pF   |   |
| C638    | ECUV1H270JCX | S.M. CAP    | 50V   | 27pF   |   |
| C639    | ECJ2VF1H104Z | ELECT       | 350V  | 100nF  |   |
| C641    | ECUV1H101JCX | S.M. CAP    | 50V   | 100pF  |   |
| C643    | ECUV1H102KBX | S.M. CAP    | 50V   | 1nF    |   |
| C644    | ECQM1H104J   | FILM        | 50V   | 100nF  |   |
| C645    | ECQM1H104J   | FILM        | 50V   | 100nF  |   |
| C646    | ECUV1H103KBX | S.M. CAP    | 50V   | 10nF   |   |
| C651    | ECJ2VB1C224K | ELECT       | 350V  | 220nF  |   |
| C701    | ECQV1H105JZ  | FILM        | 50V   | 1μF    |   |
| C702    | ECKC2H102J   | CERAMIC     | 500V  | 1nF    | ⚠ |
| C807    | ECQB1H473K   | FILM        | 50V   | 47nF   |   |
| C808    | ECQM1H334J   | FILM        | 50V   | 330nF  |   |
| C811    | ECQB1H104J   | FILM        | 50V   | 100nF  |   |
| C812    | ECQB1H562K   | FILM        | 50V   | 5.6nF  |   |
| C813    | ECKC2H472J   | CERAMIC     | 500V  | 4.7nF  | ⚠ |
| C814    | ECKC2H472J   | CERAMIC     | 500V  | 4.7nF  | ⚠ |
| C816    | ECQB1H122J   | FILM        | 50V   | 1.2nF  |   |
| C817    | ECKC2H472J   | CERAMIC     | 500V  | 4.7nF  | ⚠ |
| C818    | ECKC2H472J   | CERAMIC     | 500V  | 4.7nF  | ⚠ |
| C819    | ECOS2WB221DB | ELECT       | 16V   | 220μF  |   |
| C821    | ECQB1H222J   | FILM        | 50V   | 2.2nF  |   |
| C822    | ECKC3D821JB  | CERAMIC     | 2KV   | 820pF  | ⚠ |
| C823    | EEUFA1V221B  | CERAMIC     | 35V   | 220μF  |   |
| C824    | ECQB1H221KF3 | FILM        | 50V   | 220μF  |   |
| C826    | ECQB1H473K   | FILM        | 50V   | 47nF   |   |
| C827    | ECKCNS332J   | CERAMIC     | 1.2KV | 3.3nF  | ⚠ |
| C833    | ECQB1H682K   | FILM        | 50V   | 6.8nF  |   |
| C835    | ECQB1H332K   | FILM        | 50V   | 3.3nF  |   |
| C840    | 222233510224 | FILM        | 250V  | 220nF  |   |
| C841    | ECQE2A474MWB | FILM        | 250V  | 470nF  |   |
| C845    | ECQE6104K    | FILM        | 600V  | 100nF  | ⚠ |
| C847    | ECEA1EN101UB | ELECT       | 25V   | 100μF  |   |
| C848    | ECKC2H331J   | CERAMIC     | 500V  | 330pF  | ⚠ |
| C849    | ECKC2H391J   | CERAMIC     | 500V  | 390pF  | ⚠ |
| C850    | ECKC3D331J   | CERAMIC     | 2KV   | 330pF  | ⚠ |
| C852    | ECKC3D222JB  | CERAMIC     | 2KV   | 2200pF | ⚠ |
| C853    | ECEA1CU332   | ELECT       | 16V   | 3300μF |   |
| C854    | ECA1EM221GB  | ELECT       | 25V   | 220pF  |   |
| C855    | ECEA1HU102   | ELECT       | 50V   | 1000μF |   |
| C856    | ECA1EM332E   | ELECT       | 25V   | 3300μF |   |
| C857    | ECA1EM471GB  | ELECT       | 25V   | 470μF  |   |
| C858    | 43504A2277M0 | ELECT       | 400V  | 270μF  |   |
| C859    | ECKC2H471J   | CERAMIC     | 500V  | 470pF  | ⚠ |
| C861    | 222215990032 | FILM        | 250V  | 220μF  |   |
| C863    | ECA1EM332E   | ELECT       | 25V   | 3300μF |   |
| C864    | ECA0JM102GB  | ELECT       | 6.3V  | 1000μF |   |
| C866    | ECA1HM101GB  | ELECT       | 50V   | 100μF  |   |
| C867    | ECA1CM222E   | ELECT       | 16V   | 2.2nF  |   |
| C868    | ECA1CM100GB  | ELECT       | 16V   | 10μF   |   |
| C869    | ECA1HM101GB  | ELECT       | 50V   | 100μF  |   |
| C871    | ECA0JM102GB  | ELECT       | 6.3V  | 1000μF |   |
| C872    | ECA1CM222E   | ELECT       | 16V   | 2.2nF  |   |
| C901    | ECUV1H030CCX | S.M. CAP    | 50V   | 30pF   |   |
| C902    | ECA1VM101GB  | ELECT       | 35V   | 100μF  |   |
| C904    | ECJ2VF1H103Z | ELECT       | 350V  | 10nF   |   |
| C906    | ECUV1H681JCX | S.M. CAP    | 50V   | 680pF  |   |
| C907    | ECUV1H121JCX | S.M. CAP    | 50V   | 120pF  |   |
| C908    | ECUV1H151JCX | S.M. CAP    | 50V   | 150pF  |   |
| C909    | ECKC2H472J   | CERAMIC     | 500V  | 4.7nF  | ⚠ |
| C910    | ECKC2H472J   | CERAMIC     | 500V  | 4.7nF  | ⚠ |
| C911    | ECUV1H151JCX | S.M. CAP    | 50V   | 150pF  |   |
| C912    | ECA2EM220B   | ELECT       | 250V  | 22μF   |   |
| C913    | ECA1HM101GB  | ELECT       | 50V   | 100μF  |   |
| C914    | ECA1HM101GB  | ELECT       | 50V   | 100μF  |   |
| C916    | ECA2EM220B   | ELECT       | 250V  | 22μF   |   |

| Cct Ref | Parts Number | Description |       |       |  |
|---------|--------------|-------------|-------|-------|--|
| C917    | ECA1HM100GB  | ELECT       | 50V   | 10μF  |  |
| C918    | ECJ2VF1H103Z | ELECT       | 350V  | 10nF  |  |
| C1011   | ECKC1H101J   | CERAMIC     | 50V   | 100pF |  |
| C1012   | ECA1VM470B   | ELECT       | 35V   | 47μF  |  |
| C1013   | ECKC1H103JB  | CERAMIC     | 50V   | 10nF  |  |
| C1014   | ECA1HM101GB  | ELECT       | 50V   | 100μF |  |
| C1101   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1102   | ECUV1H101JCX | S.M. CAP    | 50V   | 100pF |  |
| C1103   | ECUV1H220JCX | S.M. CAP    | 50V   | 22pF  |  |
| C1104   | ECUV1H220JCX | S.M. CAP    | 50V   | 22pF  |  |
| C1107   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1108   | ECJ2VB1C104K | ELECT       | 350V  | 100nF |  |
| C1109   | ECJ2VB1C104K | ELECT       | 350V  | 100nF |  |
| C1113   | ECJ2VB1C104K | ELECT       | 350V  | 100nF |  |
| C1114   | ECA1HM101GB  | ELECT       | 50V   | 100μF |  |
| C1116   | ECUV1H560JCX | S.M. CAP    | 50V   | 56pF  |  |
| C1117   | ECUV1H221JCX | S.M. CAP    | 50V   | 220pF |  |
| C1118   | ECJ3VB1C474K | ELECT       | 3.5KV | 470nF |  |
| C1120   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1121   | ECUV1H472KBX | S.M. CAP    | 50V   | 4.7nF |  |
| C1122   | ECA1HM010GB  | ELECT       | 50V   | 1μF   |  |
| C1123   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1124   | ECUV1H471JCX | S.M. CAP    | 50V   | 470pF |  |
| C1125   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1126   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1127   | ECA1HM101GB  | ELECT       | 50V   | 100μF |  |
| C1128   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1129   | ECA1HM101GB  | ELECT       | 50V   | 100μF |  |
| C1130   | ECUV1H103KBX | S.M. CAP    | 50V   | 10nF  |  |
| C1131   | ECUV1H221JCX | S.M. CAP    | 50V   | 220pF |  |
| C1138   | ECUV1H224ZFX | S.M. CAP    | 50V   | 220nF |  |
| C1145   | ECJ2VB1H333K | ELECT       | 350V  | 33nF  |  |
| C1147   | ECA1CM331B   | ELECT       | 16V   | 330μF |  |
| C1148   | ECJ2VB1C224K | ELECT       | 350V  | 220nF |  |
| C1501   | ECUV1H330JCX | S.M. CAP    | 50V   | 33pF  |  |
| C1502   | ECUV1H471JCX | S.M. CAP    | 50V   | 470pF |  |
| C1503   | ECUV1H390JCX | S.M. CAP    | 50V   | 39pF  |  |
| C1504   | ECUV1H680JCX | S.M. CAP    | 50V   | 68pF  |  |
| C1505   | ECUV1H820JCX | S.M. CAP    | 50V   | 82pF  |  |
| C1506   | ECUV1H331JCX | S.M. CAP    | 50V   | 330pF |  |
| C1507   | ECUV1H102KBX | S.M. CAP    | 50V   | 1nF   |  |
| C1508   | ECEA1HN010UB | ELECT       | 50V   | 1μF   |  |
| C1509   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1510   | ECA1HM101GB  | ELECT       | 50V   | 100μF |  |
| C1511   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1512   | ECUV1H030CCX | S.M. CAP    | 50V   | 30pF  |  |
| C1513   | ECA1HM100GB  | ELECT       | 50V   | 10μF  |  |
| C1514   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1515   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1516   | ECUV1H030CCX | S.M. CAP    | 50V   | 30pF  |  |
| C1517   | ECUV1H473ZFX | S.M. CAP    | 50V   | 47nF  |  |
| C1518   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1519   | ECA1HM101GB  | ELECT       | 50V   | 100μF |  |
| C1521   | ECA1HM101GB  | ELECT       | 50V   | 100μF |  |
| C1522   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1523   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1524   | ECA1VM470B   | ELECT       | 35V   | 47μF  |  |
| C1525   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1527   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1528   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1529   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1530   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1532   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1533   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1534   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |
| C1535   | ECJ2VF1H104Z | ELECT       | 350V  | 100nF |  |

| Cct Ref | Parts Number | Description |      |       |  |
|---------|--------------|-------------|------|-------|--|
| C1536   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1537   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1538   | EEUNA1E220B  | CERAMIC     | 25V  | 22µF  |  |
| C1539   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1540   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1541   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1542   | ECA1CM471GB  | ELECT       | 16V  | 470µF |  |
| C1543   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1544   | EEUNA1E220B  | CERAMIC     | 25V  | 22µF  |  |
| C1545   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1546   | ECA1HM101GB  | ELECT       | 50V  | 100µF |  |
| C1547   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1548   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1549   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1550   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1551   | EEUNA1E220B  | CERAMIC     | 25V  | 22µF  |  |
| C1552   | ECA1HM101GB  | ELECT       | 50V  | 100µF |  |
| C1553   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1554   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1555   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1556   | ECA1HM101GB  | ELECT       | 50V  | 100µF |  |
| C1557   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1558   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1559   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1560   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1561   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1562   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1563   | ECA1HM101GB  | ELECT       | 50V  | 100µF |  |
| C1564   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1565   | ECUV1H270JCX | S.M. CAP    | 50V  | 27pF  |  |
| C1567   | ECA1HM101GB  | ELECT       | 50V  | 100µF |  |
| C1568   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1569   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1570   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1571   | ECA1CM471GB  | ELECT       | 16V  | 470µF |  |
| C1572   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1573   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1574   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1575   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1576   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1577   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1578   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1579   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1580   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1581   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1582   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1583   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1584   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1585   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1586   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1587   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1588   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1589   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1590   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1591   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1592   | ECA1CM221GB  | ELECT       | 16V  | 220µF |  |
| C1593   | ECA1CM221GB  | ELECT       | 16V  | 220µF |  |
| C1594   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1595   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1596   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1597   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1598   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1599   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1600   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1601   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1602   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |

| Cct Ref | Parts Number | Description |      |       |  |
|---------|--------------|-------------|------|-------|--|
| C1603   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1604   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1605   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1606   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1607   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1608   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1609   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1610   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1611   | ECA1CM471GB  | ELECT       | 16V  | 470µF |  |
| C1612   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1614   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1615   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1616   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1617   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1618   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1619   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1620   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1621   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1622   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1623   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1624   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1625   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1626   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1627   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1628   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1629   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1630   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1631   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1632   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1633   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1636   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1637   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1638   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1639   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1642   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1643   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1644   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1645   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1647   | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF  |  |
| C1648   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1649   | ECA1HM101GB  | ELECT       | 50V  | 100µF |  |
| C1650   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1651   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1652   | ECA1HM101GB  | ELECT       | 50V  | 100µF |  |
| C1653   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1654   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1655   | ECA1VM470B   | ELECT       | 35V  | 47µF  |  |
| C1656   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1658   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1659   | ECA1VM470B   | ELECT       | 35V  | 47µF  |  |
| C1660   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1661   | ECA1HM101GB  | ELECT       | 50V  | 100µF |  |
| C1662   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1663   | ECUV1H560JCX | S.M. CAP    | 50V  | 56pF  |  |
| C1664   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |  |
| C1666   | ECUV1H390JCX | S.M. CAP    | 50V  | 39pF  |  |
| C1667   | ECUV1H820JCX | S.M. CAP    | 50V  | 82pF  |  |
| C1668   | ECUV1H680JCX | S.M. CAP    | 50V  | 68pF  |  |
| C1669   | ECUV1H271JCX | S.M. CAP    | 50V  | 270pF |  |
| C1670   | ECUV1H391JCX | S.M. CAP    | 50V  | 390pF |  |
| C1671   | ECUV1H390JCX | S.M. CAP    | 50V  | 39pF  |  |
| C1672   | ECUV1H820JCX | S.M. CAP    | 50V  | 82pF  |  |
| C1673   | ECUV1H680JCX | S.M. CAP    | 50V  | 68pF  |  |
| C1674   | ECUV1H271JCX | S.M. CAP    | 50V  | 270pF |  |
| C1675   | ECUV1H391JCX | S.M. CAP    | 50V  | 390pF |  |
| C1676   | ECUV1H390JCX | S.M. CAP    | 50V  | 39pF  |  |

| Cct Ref | Parts Number | Description |      |       |
|---------|--------------|-------------|------|-------|
| C1677   | ECUV1H820JCX | S.M. CAP    | 50V  | 82pF  |
| C1678   | ECUV1H680JCX | S.M. CAP    | 50V  | 68pF  |
| C1679   | ECUV1H271JCX | S.M. CAP    | 50V  | 270pF |
| C1680   | ECUV1H391JCX | S.M. CAP    | 50V  | 390pF |
| C1681   | ECUV1H820JCX | S.M. CAP    | 50V  | 82pF  |
| C1682   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C1683   | ECUV1H101JCX | S.M. CAP    | 50V  | 100pF |
| C1685   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C1686   | ECUV1H101JCX | S.M. CAP    | 50V  | 100pF |
| C1688   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C1689   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C1690   | ECJ2VF1C105Z | ELECT       | 350V | 1µF   |
| C1691   | ECJ2VF1C105Z | ELECT       | 350V | 1µF   |
| C1692   | EEUNA1E220B  | CERAMIC     | 25V  | 22µF  |
| C1693   | ECA1HM101GB  | ELECT       | 50V  | 100µF |
| C1695   | ECUV1H221JCX | S.M. CAP    | 50V  | 220pF |
| C1696   | EEUNA1E220B  | CERAMIC     | 25V  | 22µF  |
| C1697   | EEUNA1E220B  | CERAMIC     | 25V  | 22µF  |
| C1698   | EEUNA1E220B  | CERAMIC     | 25V  | 22µF  |
| C1901   | ECQM1H474J   | FILM        | 50V  | 470nF |
| C1902   | ECQM1H474J   | FILM        | 50V  | 470nF |
| C1903   | ECA1EM470GB  | ELECT       | 25V  | 47µF  |
| C1904   | ECUV1H103ZFX | S.M. CAP    | 50V  | 10nF  |
| C1905   | ECJ2VB1C224K | ELECT       | 350V | 220nF |
| C2103   | ECUV1H391KBX | S.M. CAP    | 50V  | 390pF |
| C2104   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF   |
| C2105   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF   |
| C2106   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF   |
| C2107   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF   |
| C2108   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF   |
| C2109   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF   |
| C2110   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF   |
| C2111   | ECA1CM100GB  | ELECT       | 16V  | 10µF  |
| C2112   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C2113   | ECA1CM100GB  | ELECT       | 16V  | 10µF  |
| C2114   | ECA1HM101GB  | ELECT       | 50V  | 100µF |
| C2115   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C2116   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF   |
| C2117   | ECUV1H471KBX | S.M. CAP    | 50V  | 470pF |
| C2118   | ECA1HM3R3GB  | ELECT       | 50V  | 3.3µF |
| C2119   | ECUV1H471KBX | S.M. CAP    | 50V  | 470pF |
| C2120   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C2121   | ECUV1H221JCX | S.M. CAP    | 50V  | 220pF |
| C2122   | ECUV1H221JCX | S.M. CAP    | 50V  | 220pF |
| C2123   | ECUV1H221JCX | S.M. CAP    | 50V  | 220pF |
| C2124   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C2125   | ECA1CM100GB  | ELECT       | 16V  | 10µF  |
| C2126   | ECUV1H221JCX | S.M. CAP    | 50V  | 220pF |
| C2127   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C2128   | ECUV1H221JCX | S.M. CAP    | 50V  | 220pF |
| C2129   | ECA1CM100GB  | ELECT       | 16V  | 10µF  |
| C2130   | ECUV1H221JCX | S.M. CAP    | 50V  | 220pF |
| C2131   | ECQM1H334J   | FILM        | 50V  | 330nF |
| C2132   | ECEA1HKA100  | ELECT       | 50V  | 10pF  |
| C2133   | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF  |
| C2134   | ECUV1H470JCX | S.M. CAP    | 50V  | 47pF  |
| C2135   | ECUV1H070DCX | S.M. CAP    | 50V  | 7pF   |
| C2137   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C2138   | ECUV1H010CCX | S.M. CAP    | 50V  | 1pF   |
| C2139   | ECUV1H010CCX | S.M. CAP    | 50V  | 1pF   |
| C2141   | ECUV1H560JCX | S.M. CAP    | 50V  | 56pF  |
| C2142   | ECA1CM100GB  | ELECT       | 16V  | 10µF  |
| C2144   | ECUV1H560JCX | S.M. CAP    | 50V  | 56pF  |
| C2146   | ECEA1HKA100  | ELECT       | 50V  | 10pF  |
| C2147   | ECUV1H103KBX | S.M. CAP    | 50V  | 10nF  |
| C2148   | ECUV1H103KBX | S.M. CAP    | 50V  | 10nF  |

| Cct Ref | Parts Number | Description |      |       |
|---------|--------------|-------------|------|-------|
| C2200   | ECUV1H562KBX | S.M. CAP    | 50V  | 5.6nF |
| C2201   | ECA1HM100GB  | ELECT       | 50V  | 10µF  |
| C2203   | ECA1VM470B   | ELECT       | 35V  | 47µF  |
| C2204   | ECA1HM4R7GB  | ELECT       | 50V  | 4.7µF |
| C2205   | ECUV1H562KBX | S.M. CAP    | 50V  | 5.6nF |
| C2206   | ECA1HM2R2GB  | ELECT       | 50V  | 2.2µF |
| C2207   | ECJ2VB1H822K | CERAMIC     | 50V  | 8.2nF |
| C2208   | ECUV1H823KBX | S.M. CAP    | 50V  | 82nF  |
| C2209   | ECUV1H681JCX | S.M. CAP    | 50V  | 680pF |
| C2211   | ECJ2VB1C104K | ELECT       | 350V | 100nF |
| C2212   | ECJ2VB1C104K | ELECT       | 350V | 100nF |
| C2214   | ECUY1C154KBX | CAPACITO    |      | 100nF |
| C2215   | ECUV1H103KBX | S.M. CAP    | 50V  | 10nF  |
| C2216   | ECUV1H121JCX | S.M. CAP    | 50V  | 120pF |
| C2217   | ECUV1H121JCX | S.M. CAP    | 50V  | 120pF |
| C2220   | ECUV1H562KBX | S.M. CAP    | 50V  | 5.6nF |
| C2221   | ECA1HM100GB  | ELECT       | 50V  | 10µF  |
| C2223   | ECA1VM470B   | ELECT       | 35V  | 47µF  |
| C2224   | ECA1HM4R7GB  | ELECT       | 50V  | 4.7µF |
| C2225   | ECUV1H562KBX | S.M. CAP    | 50V  | 5.6nF |
| C2226   | ECA1HM2R2GB  | ELECT       | 50V  | 2.2µF |
| C2227   | ECJ2VB1H822K | CERAMIC     | 50V  | 8.2nF |
| C2228   | ECUV1H823KBX | S.M. CAP    | 50V  | 82nF  |
| C2229   | ECUV1H681JCX | S.M. CAP    | 50V  | 680pF |
| C2231   | ECJ2VB1C104K | ELECT       | 350V | 100nF |
| C2232   | ECJ2VB1C104K | ELECT       | 350V | 100nF |
| C2234   | ECUY1C154KBX | CAPACITO    |      | 100nF |
| C2235   | ECUV1H103KBX | S.M. CAP    | 50V  | 10nF  |
| C2240   | ECA1CM470GB  | ELECT       | 16V  | 47µF  |
| C2242   | ECA1CM471GB  | ELECT       | 16V  | 470µF |
| C2301   | ECA1CM470GB  | ELECT       | 16V  | 47µF  |
| C2302   | ECA1CM470GB  | ELECT       | 16V  | 47µF  |
| C2307   | ECUV1H103KBX | S.M. CAP    | 50V  | 10nF  |
| C2308   | ECUV1H103KBX | S.M. CAP    | 50V  | 10nF  |
| C2353   | ECA1CM471GB  | ELECT       | 16V  | 470µF |
| C2356   | ECA1HM4R7GB  | ELECT       | 50V  | 4.7µF |
| C2357   | ECUV1H151JCX | S.M. CAP    | 50V  | 150pF |
| C2358   | ECUV1H151JCX | S.M. CAP    | 50V  | 150pF |
| C2359   | ECA1HM4R7GB  | ELECT       | 50V  | 4.7µF |
| C2361   | ECA1CM470GB  | ELECT       | 16V  | 47µF  |
| C2362   | ECA1HM101GB  | ELECT       | 50V  | 100µF |
| C2363   | ECEA1HU221   | ELECT       | 50V  | 220µF |
| C2364   | ECEA1HU221   | ELECT       | 50V  | 220µF |
| C2365   | ECA1HM101GB  | ELECT       | 50V  | 100µF |
| C2366   | ECA0JM222GB  | ELECT       | 6.3V | 2.2nF |
| C2367   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C2370   | ECA1HM100GB  | ELECT       | 50V  | 10µF  |
| C2371   | ECUV1H472KBX | S.M. CAP    | 50V  | 4.7nF |
| C2372   | ECUV1H472KBX | S.M. CAP    | 50V  | 4.7nF |
| C2375   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C2377   | ECUV1H102JCX | S.M. CAP    | 50V  | 1nF   |
| C2378   | ECUV1H102JCX | S.M. CAP    | 50V  | 1nF   |
| C2381   | ECKC1H103JB  | CERAMIC     | 50V  | 10nF  |
| C2382   | ECKC1H103JB  | CERAMIC     | 50V  | 10nF  |
| C2430   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF |
| C2431   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF |
| C2437   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF |
| C2438   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF |
| C3001   | ECUV1H103ZFX | S.M. CAP    | 50V  | 10nF  |
| C3002   | ECA1CM470GB  | ELECT       | 16V  | 47µF  |
| C3003   | ECUV1H102ZFX | S.M. CAP    | 50V  | 1nF   |
| C3004   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C3005   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |
| C3006   | ECA1HM4R7GB  | ELECT       | 50V  | 4.7µF |
| C3007   | ECA1HM4R7GB  | ELECT       | 50V  | 4.7µF |
| C3008   | ECJ2VF1H104Z | ELECT       | 350V | 100nF |

| Cct Ref | Parts Number | Description |      |        |  |
|---------|--------------|-------------|------|--------|--|
| C3009   | ECUV1H473ZFX | S.M. CAP    | 50V  | 47nF   |  |
| C3010   | ECUV1H680JCX | S.M. CAP    | 50V  | 68pF   |  |
| C3011   | ECA1CM221GB  | ELECT       | 16V  | 220µF  |  |
| C3012   | ECA1CM470GB  | ELECT       | 16V  | 47µF   |  |
| C3013   | ECA1CM470GB  | ELECT       | 16V  | 47µF   |  |
| C3014   | EEUNA1A470B  | CERAMIC     | 10V  | 47µF   |  |
| C3015   | ECJ2VF1H104Z | ELECT       | 350V | 100nF  |  |
| C3016   | ECA1CM470GB  | ELECT       | 16V  | 47µF   |  |
| C3017   | ECJ2VF1H104Z | ELECT       | 350V | 100nF  |  |
| C3018   | ECJ2VF1H104Z | ELECT       | 350V | 100nF  |  |
| C3021   | ECA1CM331B   | ELECT       | 16V  | 330µF  |  |
| C3022   | ECA1CM102B   | ELECT       | 16V  | 1000µF |  |
| C3023   | ECA1HM100GB  | ELECT       | 50V  | 10µF   |  |
| C3024   | ECA1HM2R2GB  | ELECT       | 50V  | 2.2µF  |  |
| C3025   | ECA1CM470GB  | ELECT       | 16V  | 47µF   |  |
| C3027   | ECJ2VF1H104Z | ELECT       | 350V | 100nF  |  |
| C3028   | ECUV1H470JRX | S.M. CAP    | 50V  | 47pF   |  |
| C3120   | ECUV1H103KBX | S.M. CAP    | 50V  | 10nF   |  |
| C3122   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF    |  |
| C3123   | ECUV1H103KBX | S.M. CAP    | 50V  | 10nF   |  |
| C3124   | ECUV1H102KBX | S.M. CAP    | 50V  | 1nF    |  |
| C3255   | ECA1HM4R7GB  | ELECT       | 50V  | 4.7µF  |  |
| C3256   | ECA1HM4R7GB  | ELECT       | 50V  | 4.7µF  |  |
| C3282   | ECKC1H561J   | CERAMIC     | 50V  | 560pF  |  |
| C3284   | ECKC1H561J   | CERAMIC     | 50V  | 560pF  |  |
| C3351   | ECA1CM221GB  | ELECT       | 16V  | 220µF  |  |
| C3401   | ECEA1HKA100  | ELECT       | 50V  | 10pF   |  |
| C3402   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3403   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3404   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3405   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3406   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3407   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3408   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3409   | ECEA1HKA4R7  | ELECT       | 50V  | 4.7µF  |  |
| C3410   | ECEA1HKA100  | ELECT       | 50V  | 10pF   |  |
| C3411   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3412   | ECEA1HKA4R7  | ELECT       | 50V  | 4.7µF  |  |
| C3413   | ECUV1H102JCX | S.M. CAP    | 50V  | 1nF    |  |
| C3414   | ECEA1HKA100  | ELECT       | 50V  | 10pF   |  |
| C3415   | ECEA1HKA100  | ELECT       | 50V  | 10pF   |  |
| C3416   | ECEA1HKA4R7  | ELECT       | 50V  | 4.7µF  |  |
| C3417   | ECEA1HKA100  | ELECT       | 50V  | 10pF   |  |
| C3418   | ECEA1HKA100  | ELECT       | 50V  | 10pF   |  |
| C3419   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3420   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3421   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3422   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3423   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3424   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3425   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3426   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3427   | ECUV1H102JCX | S.M. CAP    | 50V  | 1nF    |  |
| C3428   | ECEA1HKA4R7  | ELECT       | 50V  | 4.7µF  |  |
| C3429   | ECEA1CKA220  | ELECT       | 16V  | 22µF   |  |
| C3430   | ECEA1HKA4R7  | ELECT       | 50V  | 4.7µF  |  |
| C3431   | ECEA1CN470   | ELECT       | 16V  | 47µF   |  |
| C3432   | ECJ2VF1H104Z | ELECT       | 350V | 100nF  |  |
| C3433   | ECA1CM221GB  | ELECT       | 16V  | 220µF  |  |
| C3434   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3435   | ECEA1HKA100  | ELECT       | 50V  | 10pF   |  |
| C3436   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3437   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3438   | ECEA1HKA4R7  | ELECT       | 50V  | 4.7µF  |  |
| C3439   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |
| C3440   | ECUV1H561JCX | S.M. CAP    | 50V  | 560pF  |  |

| Cct Ref                    | Parts Number | Description       |      |       |   |
|----------------------------|--------------|-------------------|------|-------|---|
| C3441                      | ECEA1HKA100  | ELECT             | 50V  | 10pF  |   |
| C3442                      | ECUV1H561JCX | S.M. CAP          | 50V  | 560pF |   |
| C3443                      | ECUV1H561JCX | S.M. CAP          | 50V  | 560pF |   |
| C3444                      | ECEA1HKA4R7  | ELECT             | 50V  | 4.7µF |   |
| C3445                      | ECUV1H102JCX | S.M. CAP          | 50V  | 1nF   |   |
| C3446                      | ECEA1HKA4R7  | ELECT             | 50V  | 4.7µF |   |
| C3447                      | ECUV1H561JCX | S.M. CAP          | 50V  | 560pF |   |
| C3448                      | ECUV1H561JCX | S.M. CAP          | 50V  | 560pF |   |
| C3802                      | ECA1CM100GB  | ELECT             | 16V  | 10µF  |   |
| C3803                      | ECA1EM100GB  | ELECT             | 25V  | 0.1µF |   |
| C3804                      | ECJ2VF1H104Z | ELECT             | 350V | 100nF |   |
| C3805                      | ECUV1H224ZFX | S.M. CAP          | 50V  | 220nF |   |
| C3806                      | ECA1HM101GB  | ELECT             | 50V  | 100µF |   |
| C3807                      | ECA1HM100GB  | ELECT             | 50V  | 10µF  |   |
| C3808                      | ECA1CM470GB  | ELECT             | 16V  | 47µF  |   |
| C3810                      | ECUV1H103KBX | S.M. CAP          | 50V  | 10nF  |   |
| C3814                      | ECA1HM010GB  | ELECT             | 50V  | 1µF   |   |
| C3816                      | ECA1CM471GB  | ELECT             | 16V  | 470µF |   |
| C3817                      | ECA1CM221GB  | ELECT             | 16V  | 220µF |   |
| C3818                      | ECUV1H103KBX | S.M. CAP          | 50V  | 10nF  |   |
| C3819                      | ECA1HM010GB  | ELECT             | 50V  | 1µF   |   |
| C3821                      | ECA1HM010GB  | ELECT             | 50V  | 1µF   |   |
| C3823                      | ECJ2VF1H104Z | ELECT             | 350V | 100nF |   |
| C3824                      | ECUV1H103KBX | S.M. CAP          | 50V  | 10nF  |   |
| C3825                      | ECJ2VB1C224K | ELECT             | 350V | 220nF |   |
| C3827                      | ECUV1H224ZFX | S.M. CAP          | 50V  | 220nF |   |
| R561                       | ECQB1H123J   | FILM              | 50V  | 12nF  |   |
| <b>TERMINALS AND LINKS</b> |              |                   |      |       |   |
| JK2403                     | TJB8E014     | RCA TERMINAL (2P) |      |       |   |
| JK3281                     | TJB8E026     | AV TERMINAL       |      |       |   |
| JK3401                     | 0350536400   | SCART SOCKET      |      |       |   |
| JK3402                     | 0350536400   | SCART SOCKET      |      |       |   |
| JK3403                     | 0350536400   | SCART SOCKET      |      |       |   |
| R847                       | TSF19252     | FS LINK           |      |       | ▲ |
| R848                       | TSF19402     | FS LINK           |      |       | ▲ |
| R1914                      | TSF19161     | FS LINK           |      |       | ▲ |
| <b>SWITCHES</b>            |              |                   |      |       |   |
| S840                       | ESB92S11B    | SWITCH            |      |       | ▲ |
| S1071                      | EVQ23405R    | SWITCH            |      |       |   |
| S1072                      | EVQ23405R    | SWITCH            |      |       |   |
| S1073                      | EVQ23405R    | SWITCH            |      |       |   |
| S1074                      | EVQ23405R    | SWITCH            |      |       |   |
| S1075                      | EVQ23405R    | SWITCH            |      |       |   |

## SCHEMATIC DIAGRAMS FOR MODEL

TX-28PK10F

(EURO-5L CHASSIS)

### IMPORTANT SAFETY NOTICE

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

### NOTES

#### 1. RESISTOR

All resistors are carbon 1/4W resistor, unless marked otherwise.

Unit of resistance is OHM ( $\Omega$ ) ( $k=1,000$ ,  $M=1,000,000$ )

#### 2. CAPACITORS

All capacitors are ceramic 50V unless marked otherwise  
Unit of capacitance is  $\mu F$  unless otherwise stated.

#### 3. COIL

Unit of inductance is  $\mu H$ , unless otherwise stated.

#### 4. Components marked "L" on the schematic diagram shows leadless parts.

#### 5. TEST POINT



Test Point Position

#### 6. EARTH SYMBOL

Chassis Earth (Cold)



Line Earth (Hot)

#### 7. VOLTAGE MEASUREMENT

Voltage is measured by a d.c. voltmeter

Measurement conditions are as follows:

Power source a.c. 220V-240V, 50Hz

Receiving Signal Colour Bar signal (RF)

All customer controls Maximum position

#### 8.

Indicates the Video signal path

#### 8.

Indicates the Audio signal path

These schematic diagrams are the latest at time of printing and are subject to change without notice.

### REMARKS

1. The Power Supply Circuit contains a circuit area which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. All circuits except the Power Circuit, are COLD. Take the following precautions :-
  - a. Do not touch the hot part, or the hot and cold parts at the same time, as you are liable to a shock hazard.
  - b. Do not short circuit the hot and cold circuits as electrical components may be damaged.
  - c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously as this may cause fuse failure. Connect the earth of the instruments to the earth connection of the circuit being measured.
  - d. Make sure to disconnect the power plug before removing the chassis.

## ZEICHENERKLÄRUNG FÜR MODELL

TX-28PK10F

(EURO-5L CHASSIS)

### WICHTIGER SICHERHEITSHINWEIS

Teile, die mit einen Hinweis  gekennzeichnet sind, sind wichtig für die Sicherheit. Sollte ein Auswechseln erforderlich sein, sind unbedingt Originalteile einzusetzen.

### ANMERKUNG

#### 1. WIDERSTÄNDE

Alle 1/4W Widerstände sind Kohlewiderstände, Abweichungen sind folgt gekennzeichnet.

Die Maßeinheit ist OHM ( $\Omega$ ) ( $k=1,000$ ,  $M=1,000,000$ )

#### 2. KONDENSATOREN

Alle Kondensatoren sind Keramikausführungen. Spannungsfestigkeit 50V. Abweichungen sind wie folgt gekennzeichnet. Die Maßeinheit ist  $\mu F$ , wenn keine anderen Bezeichnungen genannt sind.

#### 3. SPULEN

Die Maßeinheit ist  $\mu H$ , Abweichungen sind gekennzeichnet.

#### 4. Mit "L" gekennzeichnete Teile sind ohne Anschlußdrähte.

#### 5. TESTPUNKTE



Kennzeichnung der Testpunktposition

#### 6. MASSE SYMBOL



Erdung am Chassis



Erdung an Masse-Leitung

#### 7. SPANNUNGSMESSUNG

Spannungsmessungen sind mit einem d.c.-Voltmeter durchzuführen. Die Meßbedingungen sind folgende:

Netzspannung a.c. 220V-240V, 50Hz

Wiedergabe Signal Farbbalken-Testbild

Wiedergabesignal Farbbalken-Testbild (HF)

#### 8.

Videosignalweg

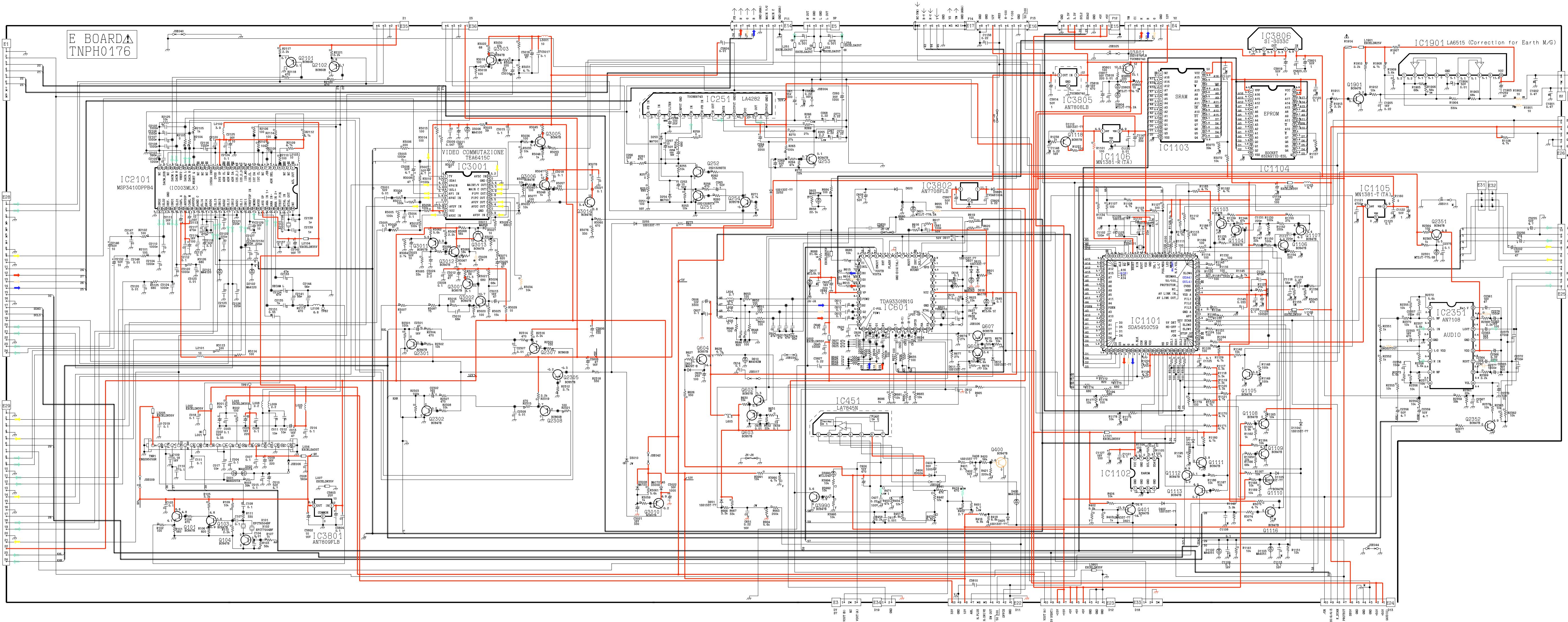
#### 8.

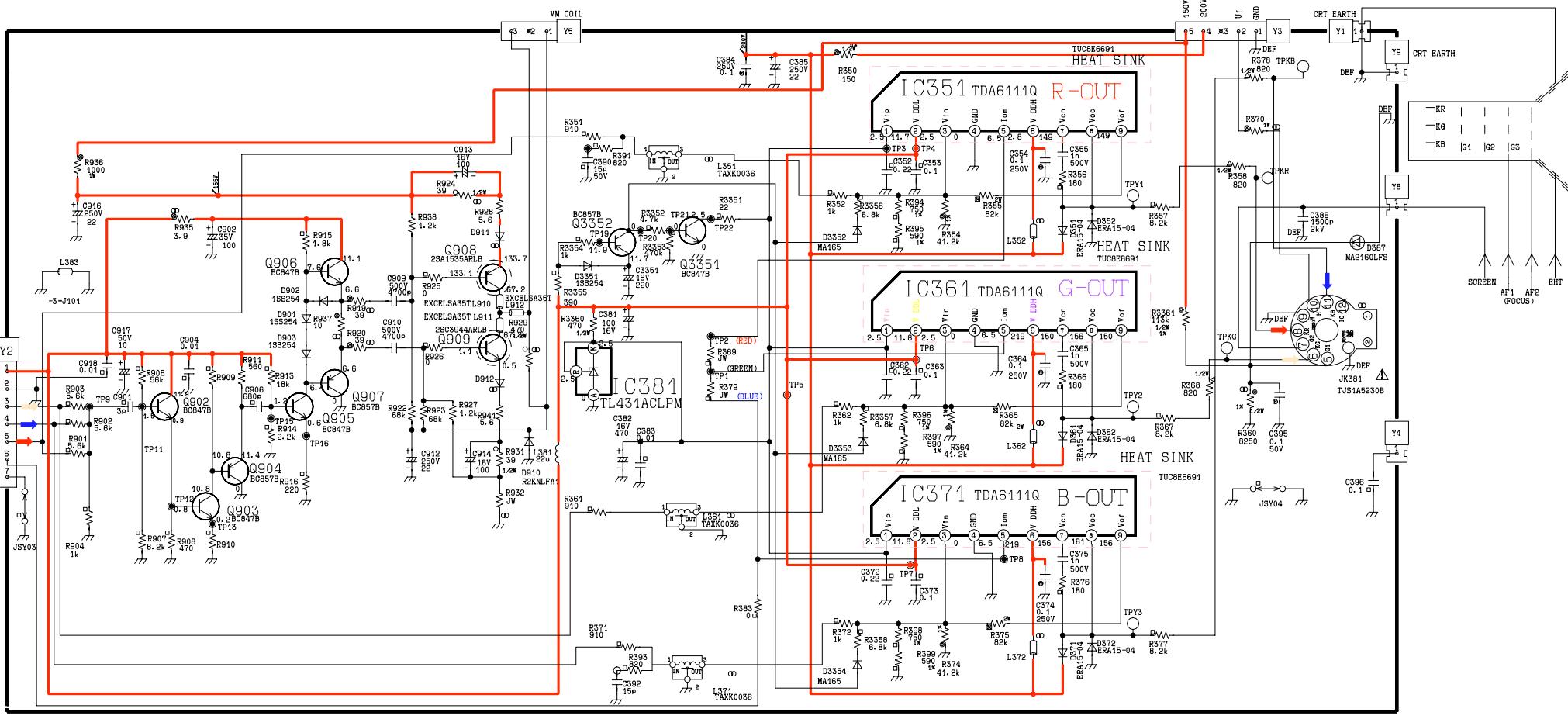
Audiosignalweg

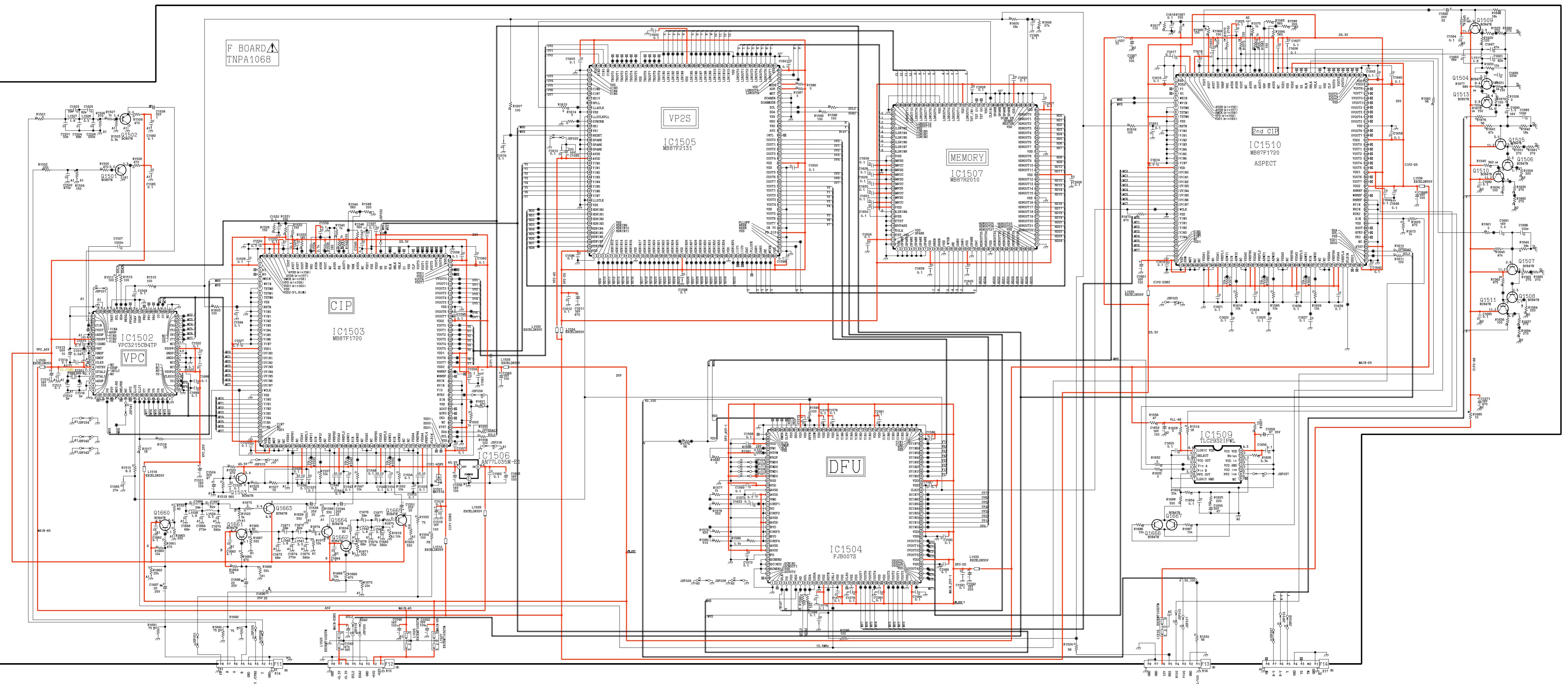
Änderungen im Laufe der Fertigung sind möglich.

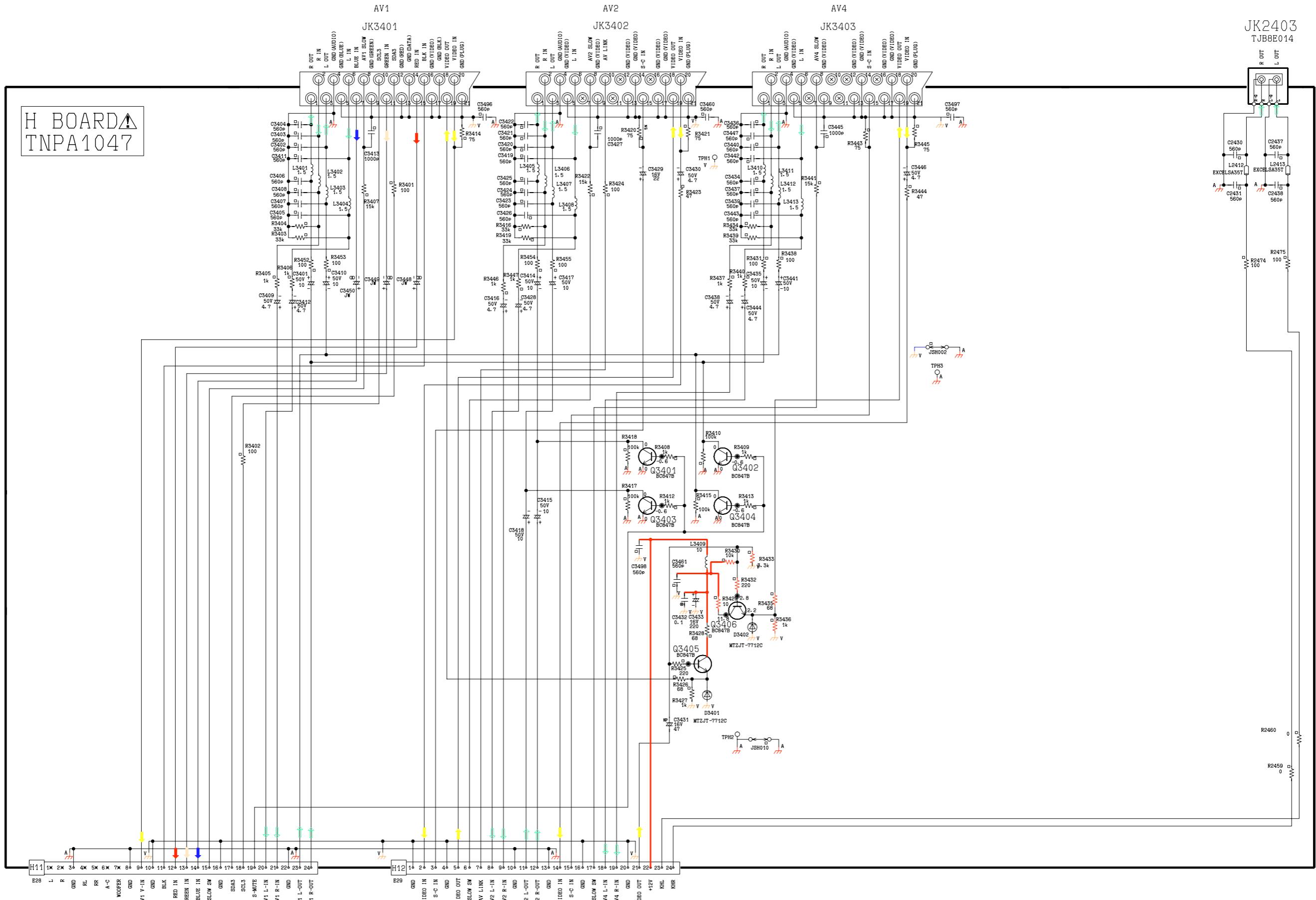
### BEMERKUNGEN

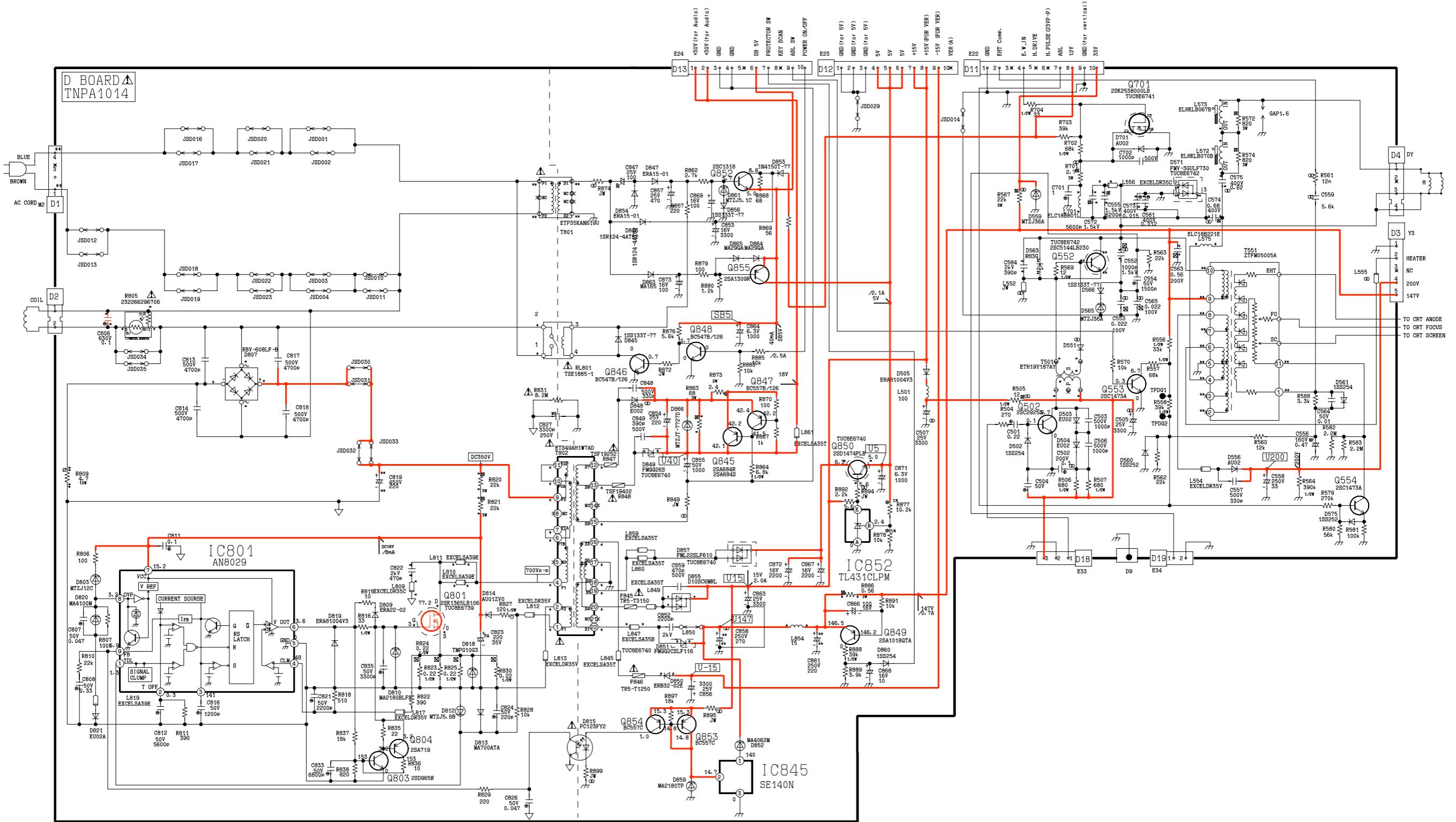
1. Das Schaltnetzteil enthält Bereiche, die direkt mit dem Netz verbunden sind. Diese Bereiche sind im Schaltplan mit HOT gekennzeichnet. Alle anderen Schaltungen sind mit COLD gekennzeichnet und haben keine direkte Verbindung mit dem Netz :-
  - a. Weder die Leitungen im heißen noch Leitungen im heißen und im kalten Bereich gleichzeitig berühren. Es besteht die Gefahr eines elektrischen Schlages.
  - b. Keinesfalls die Leitungen im heißen Bereich mit denen im kalten Bereich verbinden oder kurzschließen. Dies kann zur Zerstörung von Bauteilen oder Sicherungen führen. Außerdem ist die elektrische Betriebssicherheit des Gerätes nicht mehr gegeben.
  - c. Keine Messinstrumente gleichzeitig an Leitungen im heißen und kalten Bereich anschließen. Sicherungen könnten zerstört werden. Die Erde des Messinstrumentes immer mit der des zu prüfenden Schaltkreises verbinden.
  - d. Vor Ausbau des Chassis, Stecker aus der Netzsteckdose ziehen.

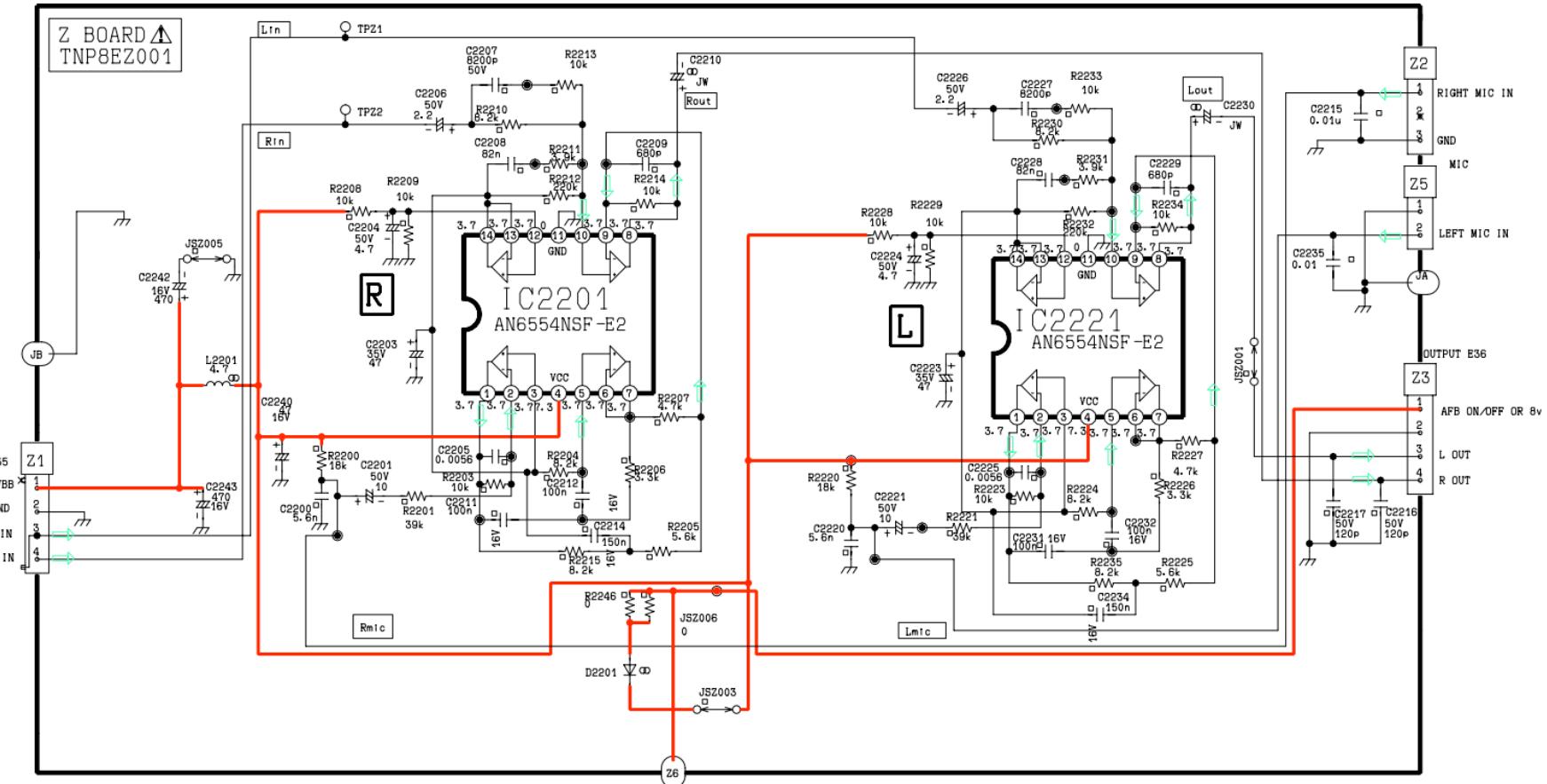


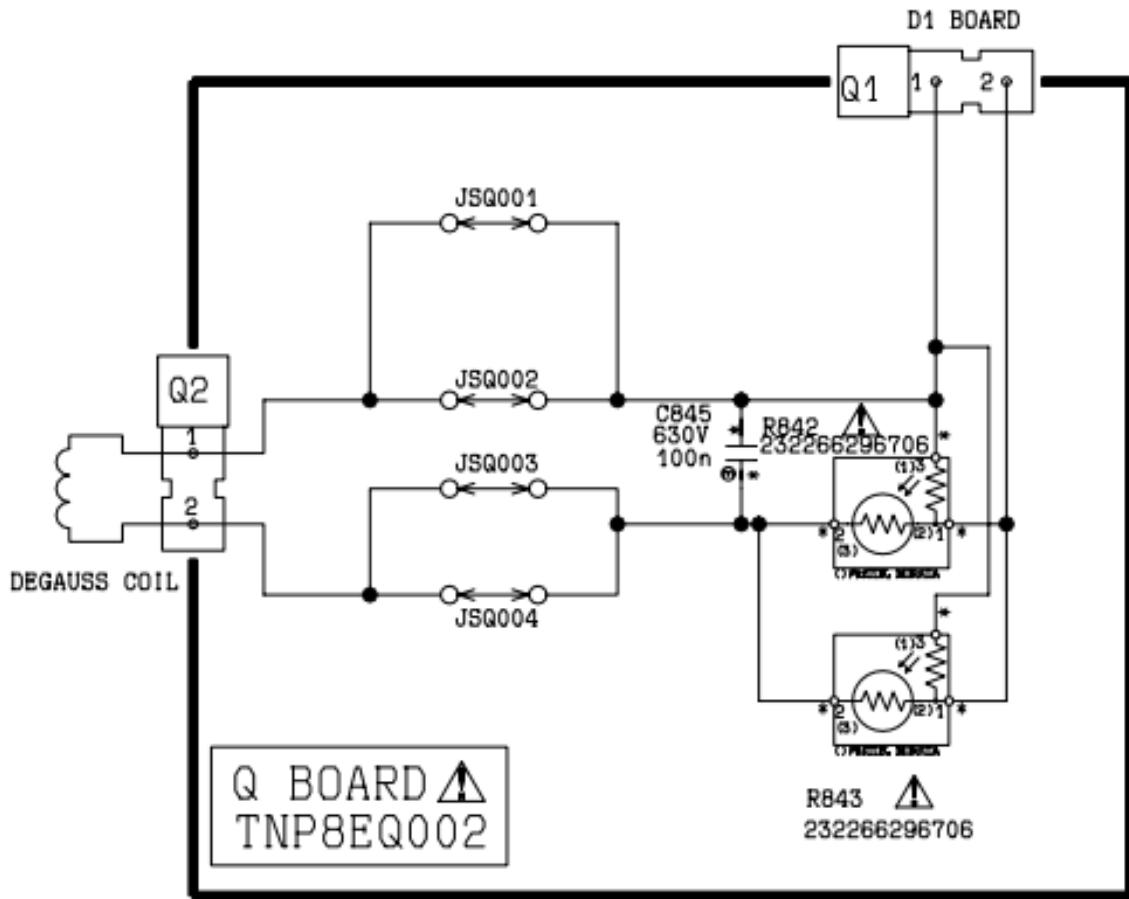


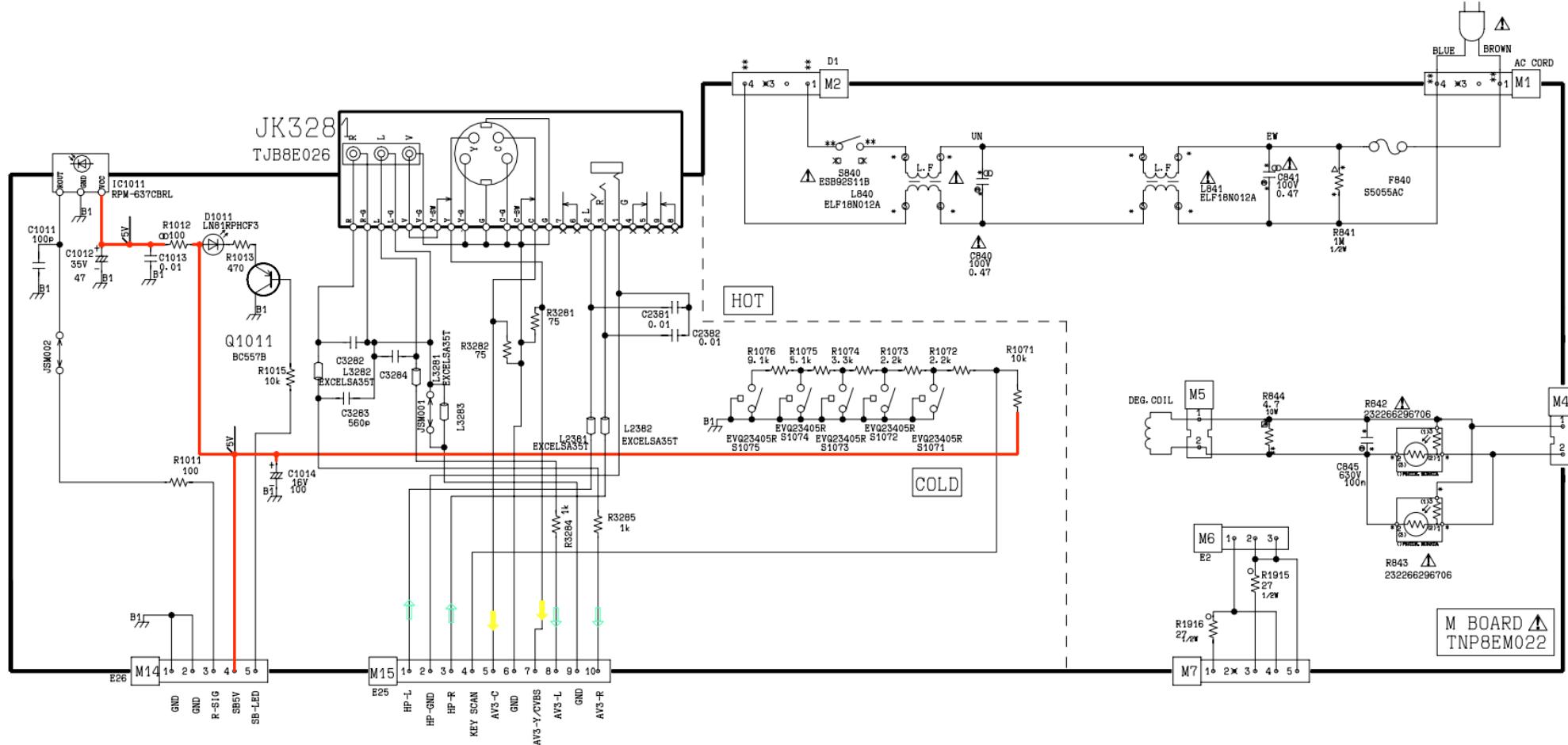










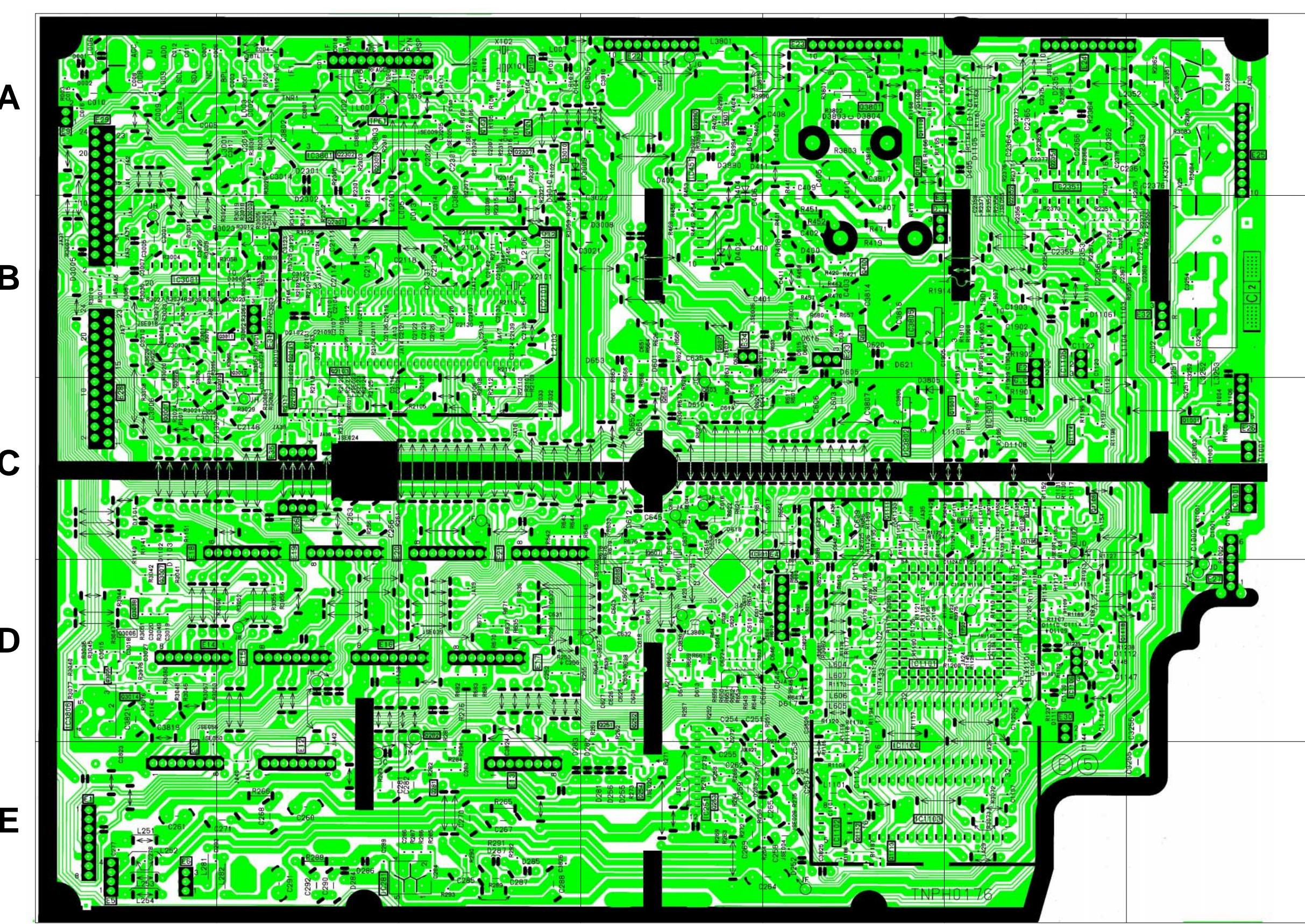


## CONDUCTOR VIEWS

## ANSICHT DER LEITERBAHNEN

E - BOARD TNPH0176

| TRAN'S   | DIODE'S  |           |
|----------|----------|-----------|
| Q101 A3  | D001 A1  | D2364 A6  |
| Q103 A3  | D002 A1  | D3005 B1  |
| Q104 A3  | D252 E5  | D3006 B2  |
| Q251 D4  | D253 E5  | D3008 B4  |
| Q252 D4  | D254 E5  | D3009 A3  |
| Q253 E4  | D255 E4  | D3010 A3  |
| Q254 E4  | D256 E4  | D3011 B1  |
| Q281 E3  | D281 E4  | D3803 A5  |
| Q282 D3  | D282 E4  | D3804 A5  |
| Q400 B5  | D283 E4  | D3805 C5  |
| Q401 A4  | D284 E2  | D3990 A4  |
| Q601 B5  | D285 E3  |           |
| Q602 B4  | D286 E2  | I.C.'S    |
| Q603 C4  | D400 B5  | IC251 E4  |
| Q604 C4  | D401 A4  | IC281 E2  |
| Q607 C4  | D402 A4  | IC451 A4  |
| Q608 D4  | D403 B4  | IC601 C4  |
| Q1001 C7 | D404 A4  | IC1001 C7 |
| Q1105 C6 | D405 A6  | IC1101 D5 |
| Q1106 C6 | D408 B5  | IC1102 E5 |
| Q1107 C6 | D411 A4  | IC1103 E5 |
| Q1108 A5 | D601 B4  | IC1104 D5 |
| Q1109 A5 | D603 D5  | IC1105 B6 |
| Q1110 A5 | D605 B5  | IC1106 D6 |
| Q1111 C5 | D607 B5  | IC1901 C6 |
| Q1112 E5 | D609 B5  | IC2101 B3 |
| Q1113 E5 | D610 C4  | IC2351 A6 |
| Q1114 C6 | D611 C4  | IC3001 B1 |
| Q1116 C6 | D612 C4  | IC3801 A2 |
| Q1118 D6 | D615 B5  | IC3802 C5 |
| Q1901 C6 | D616 B5  | IC3805 B5 |
| Q2101 B2 | D617 D5  | IC3806 D1 |
| Q2102 C2 | D618 C4  |           |
| Q2103 B2 | D620 B5  | T.P.'S    |
| Q2301 B2 | D651 C4  | TPE1 A2   |
| Q2302 A2 | D652 C4  | TPE2 B3   |
| Q2305 A2 | D653 B4  | TPE23 D6  |
| Q2307 A3 | D1001 C7 |           |
| Q2308 A3 | D1101 C1 |           |
| Q2351 A6 | D1102 C1 |           |
| Q2352 A6 | D1103 C1 |           |
| Q3001 C1 | D1104 A6 |           |
| Q3002 B1 | D1105 A6 |           |
| Q3003 B2 | D1106 B6 |           |
| Q3005 D1 | D1107 C5 |           |
| Q3006 D1 | D1108 C6 |           |
| Q3007 D1 | D1109 D6 |           |
| Q3008 D1 | D1110 D6 |           |
| Q3010 A3 | D1111 D6 |           |
| Q3011 B2 | D1112 D6 |           |
| Q3012 B2 | D2101 B2 |           |
| Q3013 B2 | D2102 B2 |           |
| Q3014 D1 | D2301 A2 |           |
| Q3801 A5 | D2302 A2 |           |
| Q3990 A4 | D2351 A6 |           |



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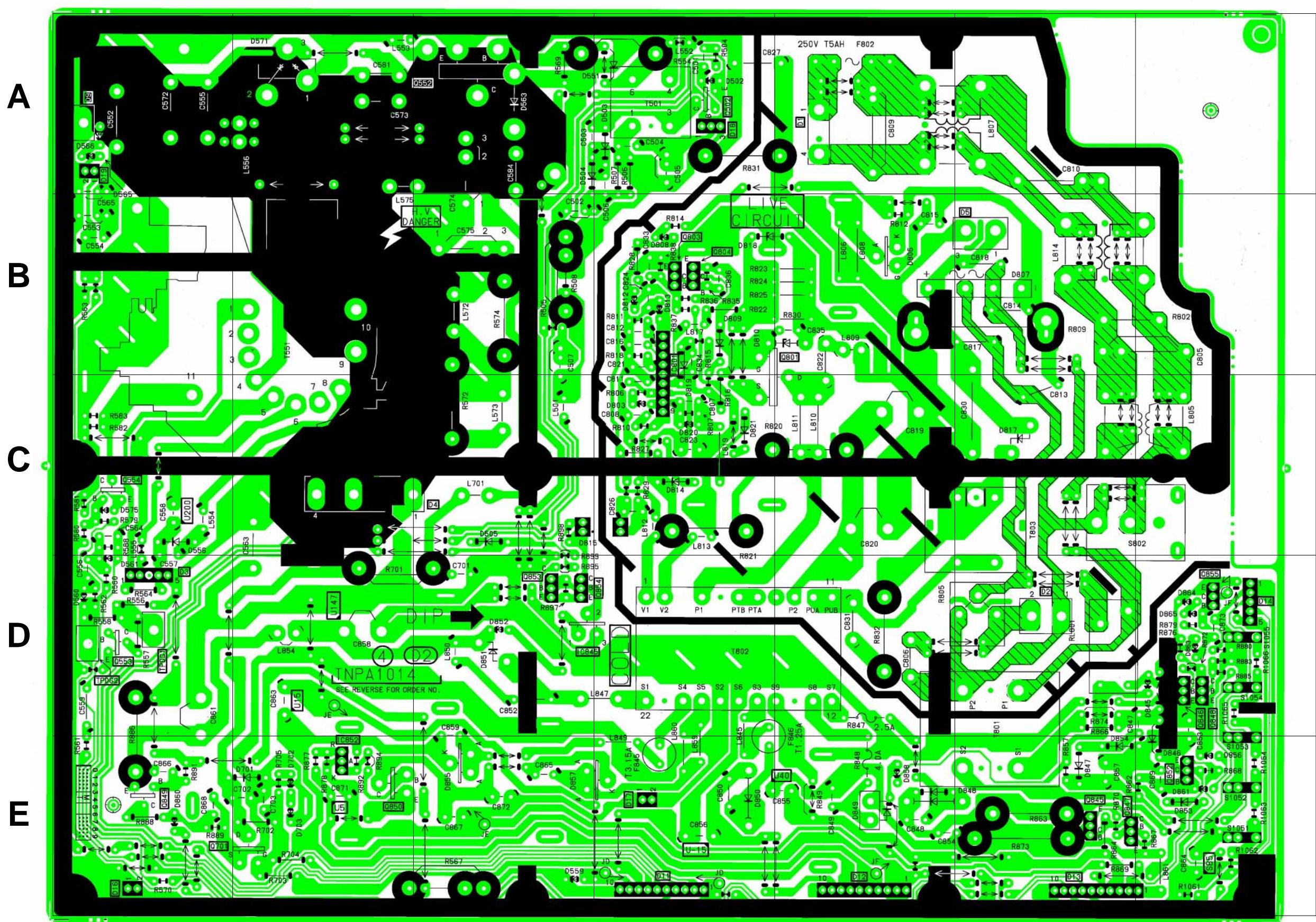
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D - BOARD TNPA1014

| DIODE'S | D853 E7  |
|---------|----------|
| D503 A4 | D854 E6  |
| D504 A3 | D855 E3  |
| D505 C3 | D856 E7  |
| D551 A4 | D857 E3  |
| D556 C1 | D858 E5  |
| D559 E3 | D860 E1  |
| D560 D1 | D861 E7  |
| D561 D1 | D863 D7  |
| D563 A3 | D864 D7  |
| D565 A1 |          |
| D566 A1 | TRAN'S   |
| D571 A2 | Q502 A4  |
| D575 C1 | Q552 A3  |
| D701 E2 | Q553 D1  |
| D702 E2 | Q554 C1  |
| D803 C4 | Q701 E1  |
| D807 B6 | Q801 B5  |
| D808 B4 | Q803 B4  |
| D809 B4 | Q804 B4  |
| D810 B4 | Q845 E6  |
| D812 B4 | Q846 D7  |
| D813 B4 | Q847 E6  |
| D814 C4 | Q848 D7  |
| D815 C3 | Q849 E1  |
| D817 C6 | Q850 E2  |
| D818 B4 | Q852 E7  |
| D819 C4 | Q853 D3  |
| D820 C4 | Q854 D3  |
| D821 C4 |          |
| D845 D7 | I.C'S    |
| D846 E7 | IC801 B4 |
| D847 E6 | IC845 D3 |
| D848 E6 | IC852 E2 |
| D849 E5 |          |
| D850 E4 | T.P.'S   |
| D851 D3 | TPDG1 D1 |
| D852 D3 | TPDG2 D1 |



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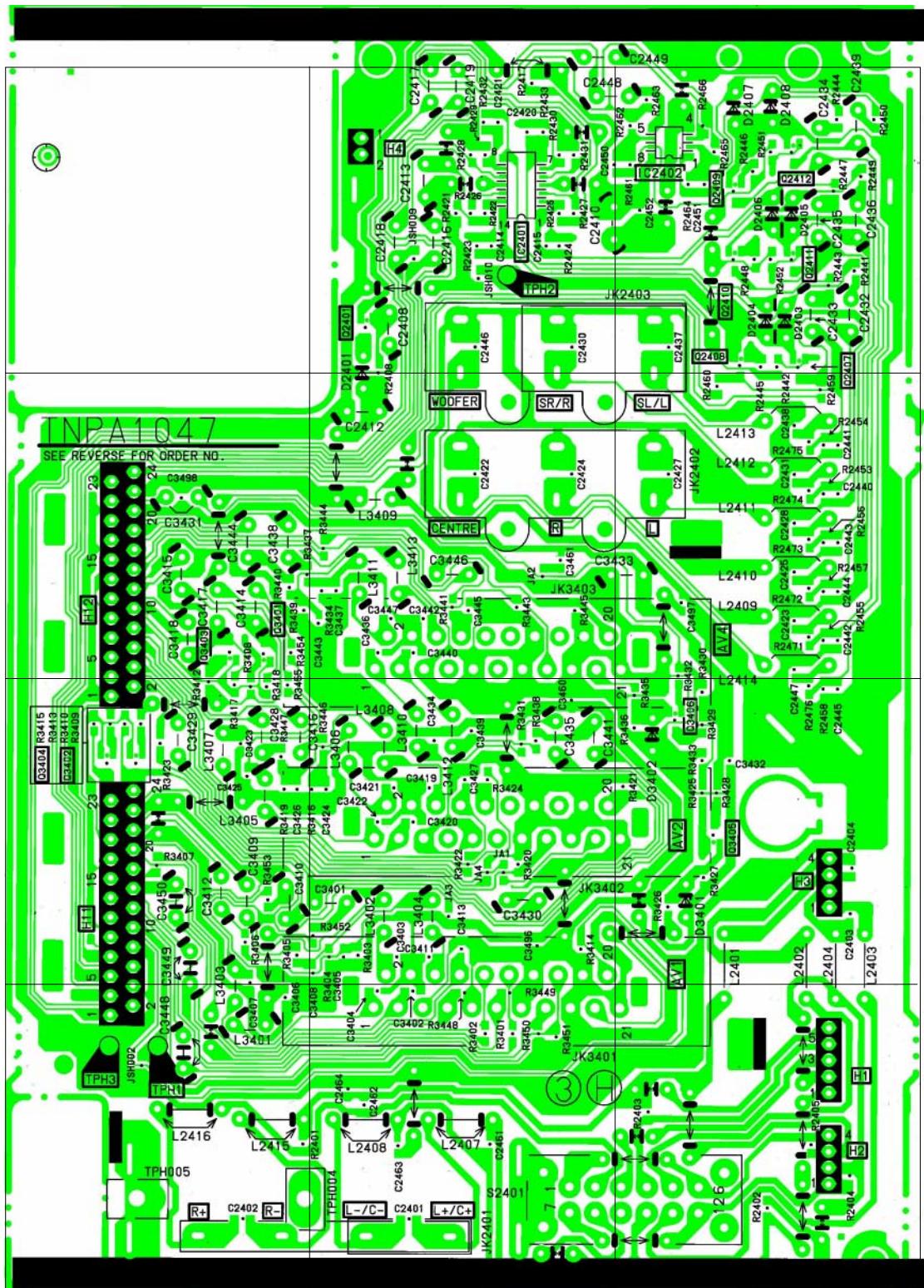
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## H - BOARD TNPA1047

| TRAN'S  |    |
|---------|----|
| Q2401   | A2 |
| Q2407   | A3 |
| Q2408   | A3 |
| Q2409   | A3 |
| Q2410   | A3 |
| Q2411   | A3 |
| Q2412   | A3 |
| Q3401   | B1 |
| Q3402   | C1 |
| Q3403   | B1 |
| Q3404   | C1 |
| Q3405   | C3 |
| Q3406   | C3 |
| DIODE'S |    |
| D2401   | A2 |
| D2403   | A3 |
| D2404   | A3 |
| D2405   | A3 |
| D2406   | A3 |
| D2407   | A3 |
| D2408   | A3 |
| D3401   | C3 |
| D3402   | C3 |
| T.P.'S  |    |
| TPH1    | D1 |
| TPH2    | A2 |
| TPH3    | D1 |
| TPH004  | D1 |
| TPH005  | D1 |
| I.C.'S  |    |
| IC2401  | A2 |
| IC2402  | A3 |

A



1

2

3

# Y - BOARD TNPA1353

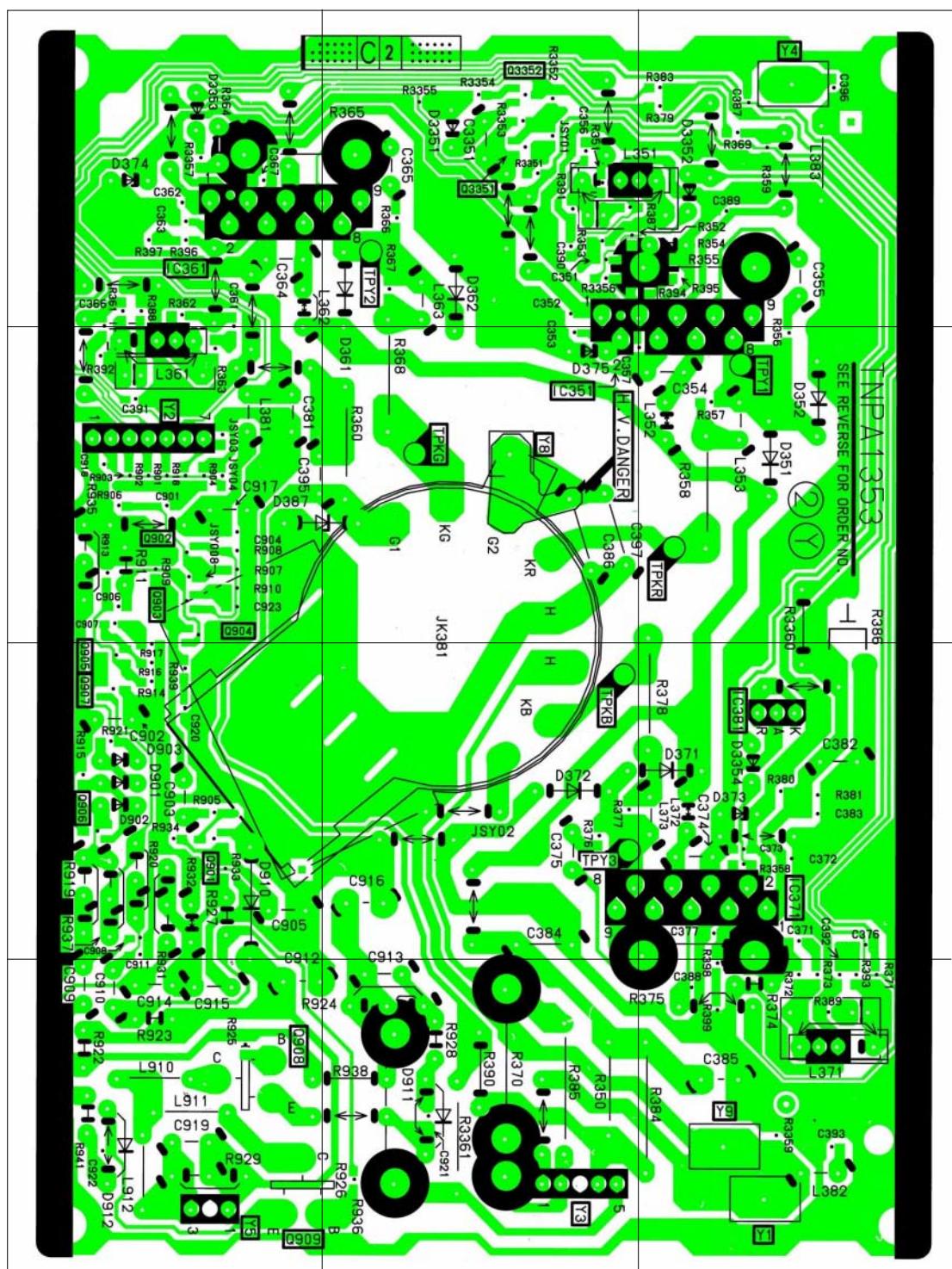
| TRAN'S  |    |
|---------|----|
| Q901    | C1 |
| Q902    | B1 |
| Q903    | B1 |
| Q904    | B1 |
| Q906    | C1 |
| Q908    | D1 |
| Q909    | D1 |
| Q3351   | A2 |
| Q3352   | A2 |
| DIODE'S |    |
| D351    | B3 |
| D352    | B3 |
| D361    | A2 |
| D362    | A2 |
| D371    | C3 |
| D372    | C2 |
| D373    | C3 |
| D374    | A1 |
| D375    | B2 |
| D387    | B1 |
| D901    | C1 |
| D902    | C1 |
| D903    | C1 |
| D910    | C1 |
| D911    | D2 |
| D3351   | A2 |
| D3352   | A3 |
| D3353   | A1 |
| D3354   | C3 |
| T.P.'S  |    |
| TPY1    | B3 |
| TPY2    | A2 |
| TPY3    | C2 |
| TPKR    | B3 |
| TPKG    | B2 |
| TPKB    | C2 |
| I.C.'S  |    |
| IC351   | B2 |
| IC361   | A1 |
| IC371   | C3 |
| IC381   | C3 |

**A**

**B**

**C**

**D**



**1**

**2**

**3**

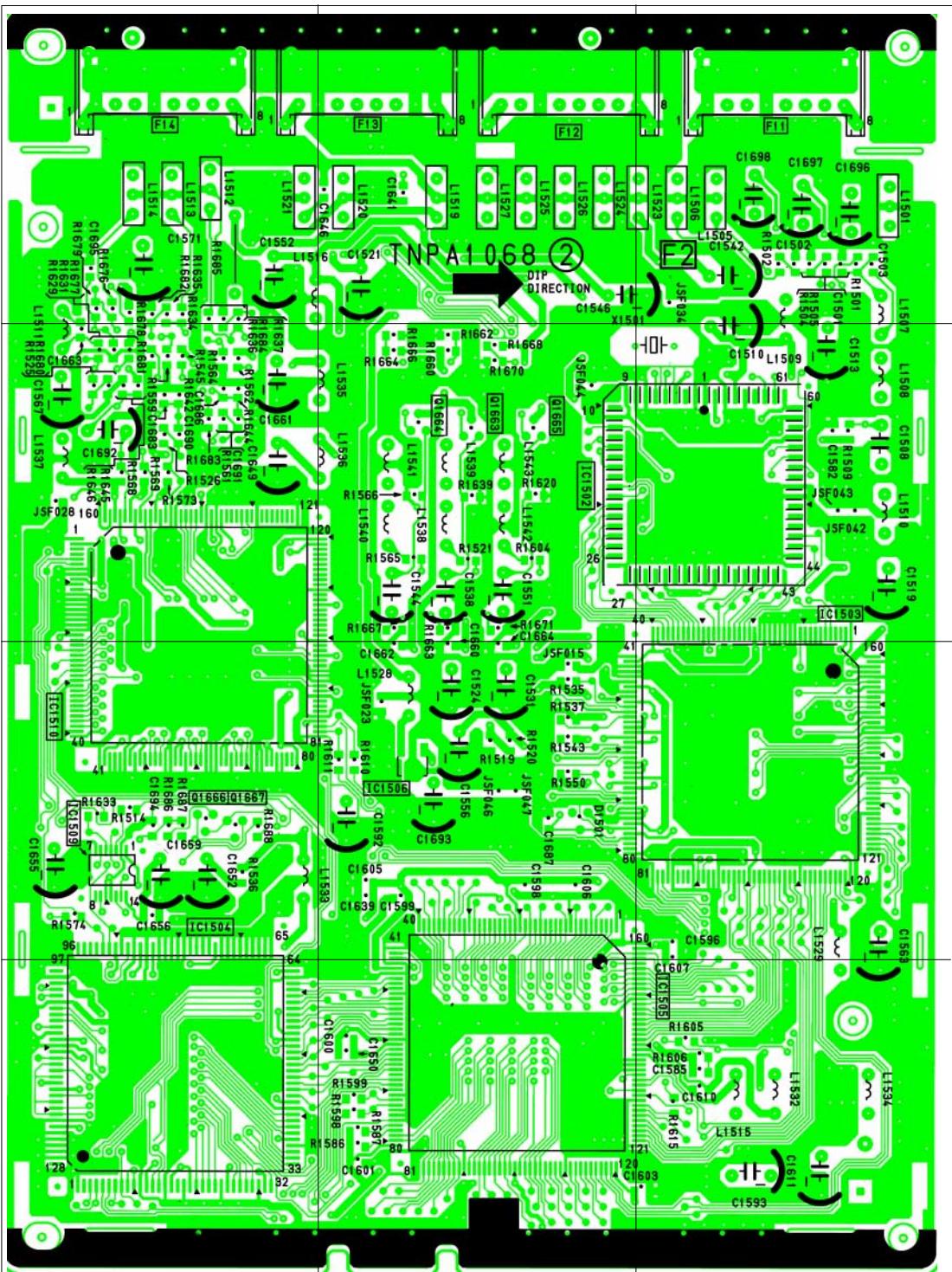
## F - BOARD TNPA1068

| TRAN'S |    |
|--------|----|
| Q1663  | B2 |
| Q1664  | B2 |
| Q1665  | B2 |
| Q1666  | C1 |
| Q1667  | C1 |

| I.C.'S |    |
|--------|----|
| IC1502 | B3 |
| IC1503 | C3 |
| IC1504 | D1 |
| IC1505 | D2 |
| IC1506 | C2 |
| IC1509 | C1 |
| IC1510 | C1 |

**A**



**1**

**2**

**3**

## F - BOARD TNPA1068

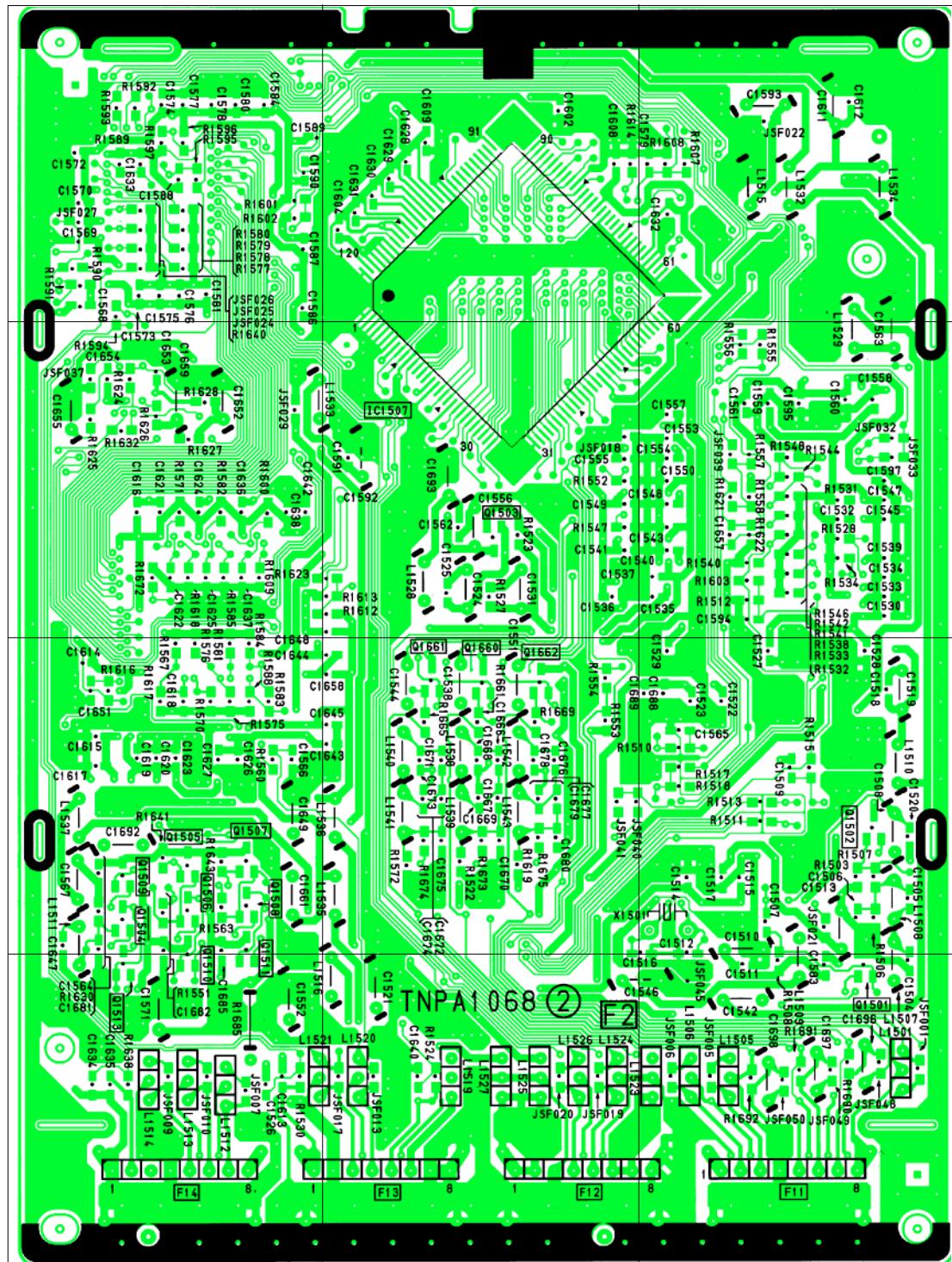
| TRAN'S |    |
|--------|----|
| Q1501  | D3 |
| Q1502  | C3 |
| Q1503  | B2 |
| Q1504  | C1 |
| Q1505  | C1 |
| Q1506  | C1 |
| Q1507  | C1 |
| Q1508  | C1 |
| Q1509  | C1 |
| Q1510  | D1 |
| Q1511  | D1 |
| Q1519  | D1 |
| Q1660  | C2 |
| Q1661  | C2 |
| Q1662  | C2 |
| <br>   |    |
| I.C.'S |    |
| IC1507 | B2 |

**A**

**B**

**C**

**D**



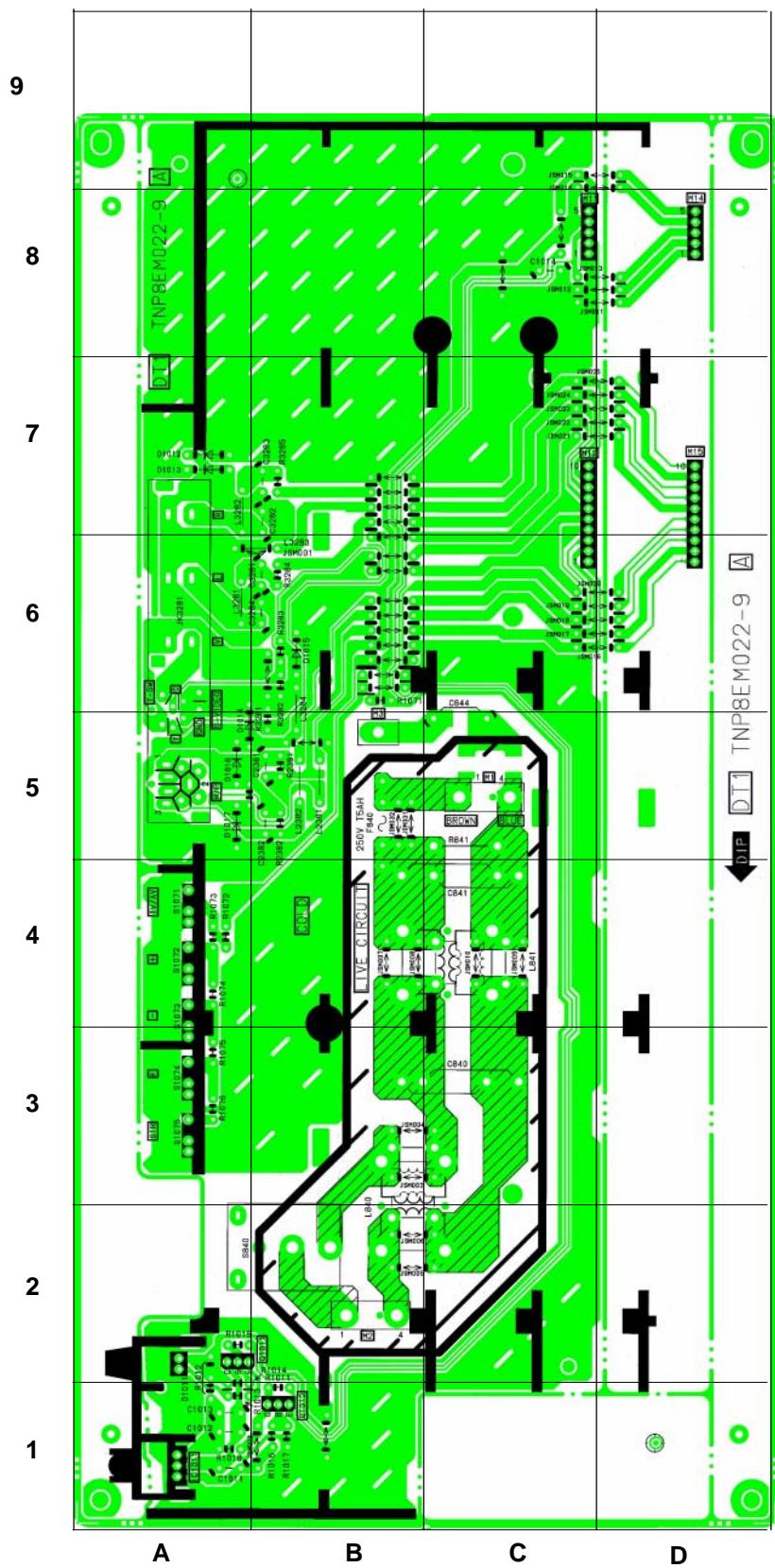
**1**

**2**

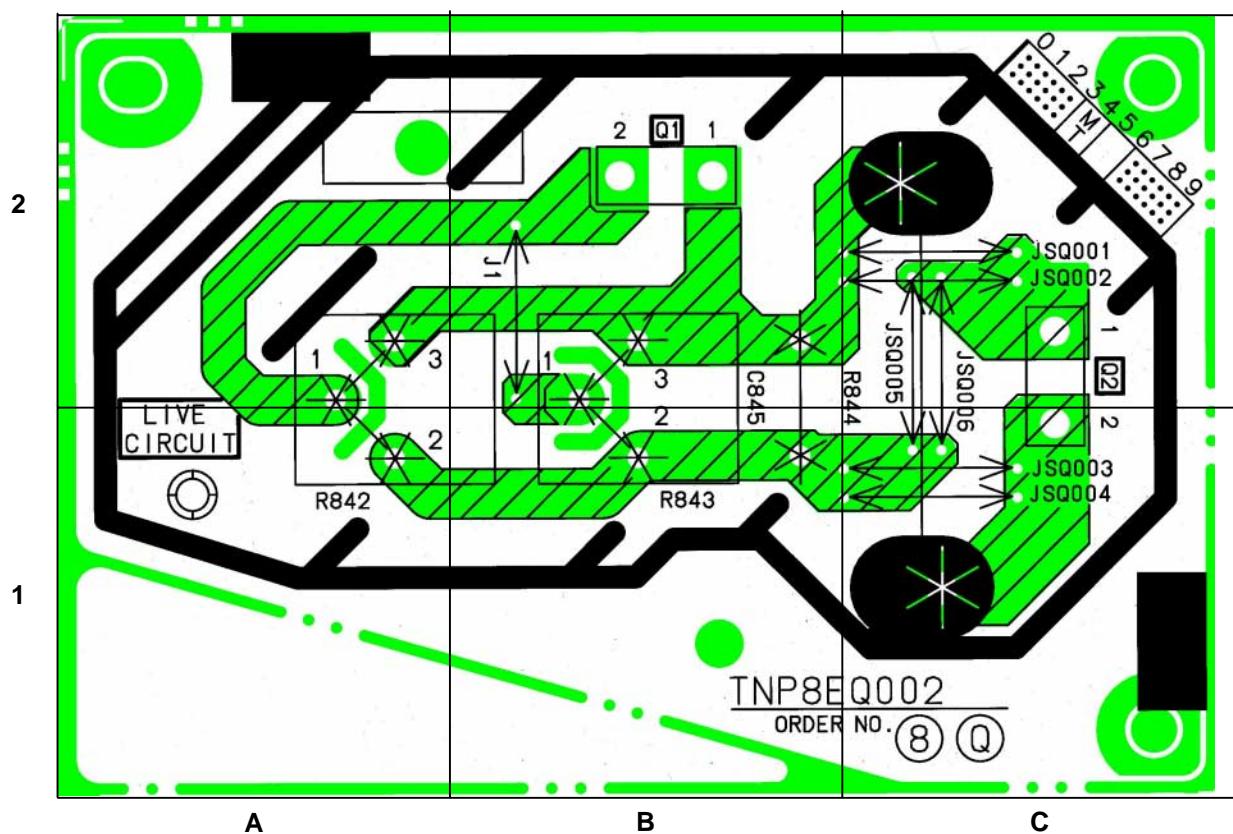
**3**

## M - BOARD TNP8EM022

| TRANSISTORS |    |
|-------------|----|
| Q1011       | A2 |
| Q1012       | B1 |
| DIODES      |    |
| D1011       | A2 |
| D1012       | A7 |
| D1013       | A7 |
| D1014       | A5 |
| D1015       | B6 |
| D1016       | A5 |
| D1017       | A5 |
| IC'S        |    |
| IC1011      | A1 |



**Q - BOARD TNP8EQ002**



## Z - BOARD TNP8EZ001

| TRAN'S |    |
|--------|----|
| Q2201  | D3 |
| Q2202  | C5 |
| Q2203  | F2 |
| Q2204  | E9 |
| DIODES |    |
| D2201  | E8 |
| TP'S   |    |
| TPZ1   | B2 |
| TPZ2   | B1 |
| IC'S   |    |
| IC2201 | C4 |
| IC2221 | C7 |

