

SAFETY PRECAUTIONS

SERVICE WARNING

Only qualified service technicians who are familiar with safety checks and guidelines should perform service work. Before replacing parts, disconnect power source to protect electrostatically sensitive parts. Do not attempt to modify any circuit unless so recommended by the manufacturer. When servicing the receiver, use an isolation transformer between the line cord and power receptacle.

SERVICING THE HIGH VOLTAGE AND CRT

Use EXTREME CAUTION when servicing the high voltage circuits. To discharge static high voltage, connect a 10K ohms resistor in series with a test lead between the receiver ground and CRT anode lead. DO NOT lift the CRT by the neck. Always wear shatterproof goggles when handling the CRT to protect eyes in case of implosion.

X-RAY RADIATION AND HIGH VOLTAGE LIMITS

Be aware of the instructions and procedures covering X-ray radiation. In solid-state receivers and monitors, the CRT is the only potential source of X-rays. Keep an accurate high voltage meter available at all times. Check meter calibration periodically. Whenever servicing a receiver, check the high voltage at various brightness levels to be sure it is regulating properly. Keep high voltage at rated value, NO HIGHER. Excessive high voltage may cause X-ray radiation or failure of associated components. DO NOT depend on protection circuits to keep voltage at rated value. When troubleshooting a receiver with excessive high voltage, avoid close contact with the CRT. DO NOT operate the receiver longer than necessary. To locate the cause of excessive high voltage, use a variable AC transformer to regulate voltage. In present receivers, many electrical and mechanical components have safety related characteristics which are not detectable by visual inspection. Such components are identified by a # on both the schematic and the parts list. For SAFETY, use only equivalent replacement parts when replacing these components.

GENERAL GUIDELINES

Perform a final SAFETY CHECK before returning receiver to customer. Check repaired area for poorly soldered connections, and check entire circuit board for solder splashes. Check board wiring for pinched wires or wires contacting any high wattage resistors. Check that all control knobs, shields, covers, grounds, and mounting hardware have been replaced. Be sure to replace all insulators and restore proper lead dress.

The listing of any available replacement part herein in no case constitutes a recommendation, warranty, or guarantee by SAMS Technical Publishing, LLC as to the quality and suitability of such replacement part. The numbers of the listed parts have been compiled from information furnished to SAMS Technical Publishing, LLC by the manufacturers of the specific type of replacement part listed.

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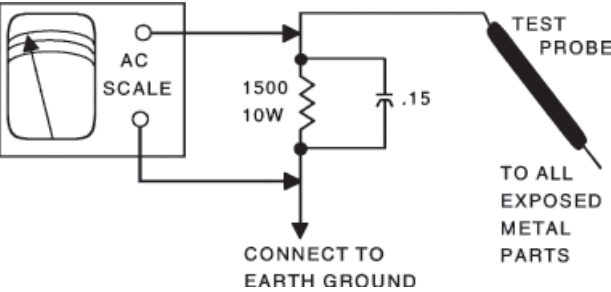
SAFETY CHECKS — FIRE AND SHOCK HAZARD

Cold Leakage Checks for Receivers with Isolated Ground

Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch on (if applicable). Use an ohmmeter to measure the resistance between the jumped AC plug and any exposed metal cabinet parts such as antenna screw heads, control shafts, or handle brackets. Exposed metal parts with a return path should measure between 1M ohms and 5.2M ohms. Parts without a return path must measure infinity.

Hot Leakage Current Check

Plug the AC cord directly into an AC outlet. DO NOT use an isolation transformer. Use a 1500 ohms, 10W resistor in parallel with a .15µF capacitor to connect between any exposed metal parts on the receiver and a good earth ground. (See figure below.) Use an AC voltmeter with at least 5000 ohms per volt sensitivity to measure the voltage across the resistor. Check all exposed metal parts and measure voltage at each point. Voltage measurements should not exceed .75VAC, 500µA. Any value exceeding this limit constitutes a potential shock hazard and must be corrected. If the AC plug is not polarized, reverse the AC plug and repeat exposed metal part voltage measurement at each point.



QUICKFACT  
FROM PHOTOFACT®  
LCD SERIES

SET 5453

MODEL 46XV540U

TOSHIBA

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Technical Service Data

TOSHIBA  
Model 46XV540U



Representative Model

Essential Coverage For Servicing An LCD Receiver...

- Power Supply Schematic
- Miscellaneous adjustments
- Placement chart
- Parts list



APRIL 2009 SET 5453

For a Complete List of Manuals,  
Visit [www.samswebsite.com](http://www.samswebsite.com)



09FP06024

PARTS LIST

| Item No.      | Type No.              | Mfr. Part No. | Notes |
|---------------|-----------------------|---------------|-------|
| # <b>D809</b> | Varistor              | 75010691      | -     |
| D810 Thru     |                       |               | -     |
| D813          | EM1C, LF-F7           | 23362221      | -     |
| D820          | D15XB60-7009F07       | 75010975      | -     |
| D821          | FMN-2206S             | 75010919      | -     |
| D822          | RM10A LF-A1           | 75010920      | -     |
| D831          | 1SS133                | 23357697      | -     |
| D832          | MTZJ13B               | 23357868      | -     |
| D840          | RB055L-40             | 75009328      | -     |
| D841          | MTZJ6.8B              | 23357842      | -     |
| D861          | MTZJ9.1B              | 23357851      | -     |
| D863          | MTZJ12B               | 23357865      | -     |
| D864          | AL01Z                 | 23357512      | -     |
| D865          | AG01A                 | 23357511      | -     |
| D866          | MTZJ12B               | 23357865      | -     |
| D867          | MTZJ27C               | 23357893      | -     |
| D868          | MTZJ9.1B              | 23357851      | -     |
| D869          | MTZJ36C               | 23357905      | -     |
| D870 Thru     |                       |               | -     |
| D873          | FMEN-220A (LF023-108) | 75002164      | -     |
| D879          | MTZJ4.7B              | 23357831      | -     |
| D880          | RU1P                  | 23357709      | -     |
| D882          | FR105-B5              | 23357366      | -     |
| D883          | MTZJ33B               | 23357900      | -     |
| D884          | MTZJ18C               | 23357878      | -     |
| D890, 95      | FMEN-220A (LF023-108) | 75002164      | -     |
| D899          | D3SB60, 7109F08       | 23362204      | -     |
| D8301         | MA8091-M              | 23357762      | -     |
| D8510, 11     | 1SS355                | 23357703      | -     |
| D8512, 13     | MA8100-M              | 23357765      | -     |
| D8701, 02     | 1SS355                | 23357703      | -     |
| D8705         | MA8270-M              | 23357796      | -     |
| D8706         | 1SS355                | 23357703      | -     |
| D8951         | MTZJ27A               | 23357891      | -     |
| DE90          | RK34                  | 23357515      | -     |
| DE93, 94      | MTZJ15B               | 23357871      | -     |
| IC820         | R2A20112SP#WO         | 75010921      | -     |
| # <b>Q813</b> | TLP421F               | 75010692      | -     |
| Q820, 21      | FCPF11N60T            | 75010917      | -     |
| Q830          | 2SC2655-Y             | 23205339      | -     |
| Q840          | MP1591DS-LF-Z         | 75005723      | -     |
| Q860          | STR-Z2589             | 75010922      | -     |
| # <b>Q862</b> | TLP421F               | 75010692      | -     |
| Q870          | TA76431S              | 23085587      | -     |
| Q880          | STR-Y6456             | 75009325      | -     |
| # <b>Q881</b> | TLP421F               | 75010692      | -     |
| Q890          | TA76431S              | 23085587      | -     |
| Q8141, 42     | 2SC4116-Y             | 23205277      | -     |
| Q8160         | RN1406 (F)            | 23205327      | -     |
| Q8161, 62     | 2SC4116-Y             | 23205277      | -     |
| Q8163         | 2SA1586Y              | 23205276      | -     |
| Q8201         | 2SA1586Y              | 23205276      | -     |
| Q8202, 203    | 2SC4116-Y             | 23205277      | -     |
| Q8220, 221    | HN4B102J              | 75011065      | -     |
| Q8301         | RN1403(F)             | 23205330      | -     |
| Q8302         | 2SA1586Y              | 23205276      | -     |
| Q8303         | 2SC4116-Y             | 23205277      | -     |
| Q8510         | 2SC3326-B             | 23205302      | -     |
| Q8511, 512    | 2SC4116-Y             | 23205277      | -     |
| Q8950         | 2SA1586Y              | 23205276      | -     |
| QE90          | SI-8001FFE            | 75006069      | -     |
| QE95          | 2SC2655-Y             | 23205339      | -     |
| QE950         | KTC4075Y/P            | 23205347      | -     |
| QE951         | RN1406 (F)            | 23205327      | -     |

Important Parts Information

- Parts not listed in the parts list are commonly available at your local electronics parts retailer.
- The parts listed here are those not usually available from a well-stocked supply cabinet or bin.
- On the parts lists, safety items are marked with a # to remind you that only exact replacements are recommended for these items.
- When ordering parts, state the model number, part number, and description.

| Item No.           | Function/Rating       | Mfr. Part No. | Notes                 |
|--------------------|-----------------------|---------------|-----------------------|
| # <b>C801</b>      | 1µF 275V              | 76168108      | -                     |
| # <b>C802</b>      | .22µF 250V            | 76503510      | -                     |
| # <b>C805 Thru</b> |                       |               |                       |
| # <b>C808</b>      | 220pF 250V            | 76092563      | -                     |
| # <b>C822</b>      | 2.2µF 450V            | 75010973      | -                     |
| C827, 28           | 470pF 2KV             | 76092341      | -                     |
| C830, 31           | .0015µF 2KV           | 76092347      | -                     |
| C863               | 150pF 2KV             | 76092335      | -                     |
| # <b>C869</b>      | 220pF 250VAC          | 76092563      | -                     |
| # <b>C870</b>      | .068µF 630V           | 76503429      | -                     |
| C881               | 470pF 10% 2KV         | 76092341      | -                     |
| C882               | .01µF 1.25KV          | 76503253      | -                     |
| C883               | 470pF 10% 2KV         | 76092341      | -                     |
| # <b>F801</b>      | Fuse                  | 75011242      | 10A 250V              |
| F801A, B           | Fuse Holder           | 23165433      | 2 used                |
| # <b>F820</b>      | Fuse                  | 75007513      | 2.5A 250V             |
| F820A, B           | Fuse Holder           | 23165433      | 2 used                |
| # <b>F840</b>      | Fuse                  | 23144710      | 2A 125V               |
| # <b>F870</b>      | Fuse                  | 75004071      | 2A 250V Radial        |
| # <b>F880</b>      | Fuse                  | 23144715      | 5A 125V               |
| # <b>F895</b>      | Fuse                  | 23144715      | 5A 125V               |
| L820, 21           | Coil                  | 23248466      | TLN3551AH             |
| L822 Thru          |                       |               |                       |
| L825               | Ferrite Bead          | 23103302      | TEM2011AH             |
| L826, 27           | Ferrite Bead          | 23103307      | TEM2014AA             |
| L841               | Coil                  | 23289040      | TRF4229AU             |
| L842               | Coil 100µH            | 75005857      | RCP1317NP-101M        |
| L860 , 62          | Coil                  | 23103320      | TEM2011               |
| L870 Thru          |                       |               |                       |
| L873               | Coil                  | 23103320      | TEM2011               |
| L878               | Coil                  | 23248489      | TLN3639AH             |
| L882               | Ferrite Bead          | 23103307      | TEM2014AA             |
| L883               | Ferrite Bead          | 23103302      | TEM2011AH             |
| L892               | Coil                  | 23248386      | TLN3481AA             |
| L895               | Ferrite Bead          | 23103302      | TEM2011AH             |
| L8201              | Ferrite Bead          | 23103828      | TEM2121M              |
| LE90               | Coil 56µH             | 75007972      | RCP1616NP-560M        |
| LE91               | Coil Peaking          | 23289979      | TRF4100AZ             |
| LE92               | Coil                  | 23248417      | TLN3481AH             |
| # <b>P801</b>      | AC Power              | 75002678      | polarized             |
| # <b>R801</b>      | 1.2M 5% 1/2W          | 76004714      | -                     |
| # <b>R809</b>      | 8.2M 5% 1/2W          | 76017012      | -                     |
| R810 Thru          |                       |               |                       |
| R817               | 56K 1% 1/4W           | 76000250      | -                     |
| R820, 21           | .027 5% 3W            | 75010906      | -                     |
| # <b>R850</b>      | 1.8 5% 2.1W           | 75007626      | -                     |
| R897, 98           | .68 5% 5W             | 75011237      | -                     |
| R8220, 21, 22      | 1M 1% 1/8W            | 75010907      | -                     |
| R8601 Thru         |                       |               |                       |
| R8604              | 470K 1% 1/8W          | 75008507      | -                     |
| RE901              | 7500 1% 1/16W         | 76000592      | -                     |
| RE902              | 470 1% 1/16W          | 76000570      | -                     |
| SP1, 2             | Speaker               | 75010928      | 8, 10W                |
| # <b>SR80</b>      | Relay, DLS5D1-0 (M)   | 23146588      |                       |
| # <b>SR81</b>      | Relay, DC12V, TV5     | 23146584      | -                     |
| # <b>T801, 02</b>  | Line Filter           | 23211920      | TRF3258AD             |
| # <b>T820, 21</b>  | Transformer PFC       | 75010913      | -                     |
| # <b>T860</b>      | Transformer Converter | 75011241      | SRW4842               |
| # <b>T880</b>      | Transformer Power     | 75011240      | SRW35EC-222HO17       |
| #                  | Panel                 | 75011752      | LCD, LTA460HE01       |
|                    | PC Board              | 75011525      | Charis, PE0578        |
|                    | PC Board              | -             | Inverter, Left        |
|                    | PC Board              | -             | Inverter, Right       |
|                    | PC Board              | -             | Control, FHD6004LV0.2 |
|                    | PC Board              | 75010926      | LED, PE0548C1         |
|                    | PC Board              | 75012468      | Main, PE0541          |
|                    | PC Board              | 75012806      | P- Power, PE0569B1    |
|                    | PC Board              | 75011751      | S- Power, PE0563B1    |
|                    | Transmitter           | 75011034      | Remote, CT-90302      |
|                    | Tuner                 | -             | -                     |

# For SAFETY use only equivalent replacement part.

TOSHIBA

MODEL 46XV540U

MISCELLANEOUS ADJUSTMENTS

ENTERING SERVICE MODE

Turn the receiver on to the TV mode.  
Set volume to minimum, press “Mute “ button twice then press “Mute” again while holding the button down on the remote control, press the “Menu” button on the TV set.  
The Service Mode window will be shown in the upper left corner of the screen.  
The letter “S” in red will be shown indicating you are in the Service Mode and located just left of the service mode window.

S  
R-CUT  
ADDR DATA  
— 00H

Select items with channel up/down buttons, change data value with volume up/down buttons.  
**Note:** Record item data values before changes are made or any boards with EEPROMS on them are changed will insure data values can be restored to original settings.  
**Tip:** If channels need to be changed while in the Service Mode, press the Exit button to close the window, but the letter “S” will remain on. Change channels in the normal manor. Press the Menu button on the remote to bring the Service Mode window back on.

**Exit Service Mode:** By turning the TV off using the power button on the remote or the TV’s power button.

Special Function Key Entries used in the Service Mode.

|                               |  |
|-------------------------------|--|
| RCUT selection                | Press the 1 on the remote.   |
| GCUT selection                | Press the 2 on the remote.   |
| BCUT selection                | Press the 3 on the remote.   |
| CNTX selection                | Press the 4 on the remote.   |
| COLC selection                | Press the 5 on the remote.   |
| UVTT selection                | Press the 6 on the remote.   |
| Self-Diagnostic display       | Press the 9 on the remote. Press “Menu” twice on the remote to turn off Self-Diagnostic. |
| Protect circuit count to “00” | Press “Recall” on remote then “Channel Down” button on the TV.                           |

Adjustment Items and Data Values List for XV540U Series.

| Item   |                   | Data            |
|--------|-------------------|-----------------|
| R-CUT  | R-CUTOFF          | 00H             |
| G-CUT  | G-CUTOFF          | 00H             |
| B-CUT  | B-CUTOFF          | 00H             |
| R-DRV  | R DRIVE           | 72H             |
| G-DRV  | G DRIVE           | 77H             |
| B-DRV  | B DRIVE           | 85H             |
| BRTC   | BRIGHTNESS CENTER | 74H             |
| COLC   | COLOR CENTER      | C2H             |
| UVTT   | BASE BAND TINT    | 7BH             |
| CNTX   | CONTRAST MAX      | 7FH             |
| SHRC   | SHARPNESS CENTER  | 18H             |
| VBIS   | VBI SETTING       | 00H             |
| CC     | CLOSED CAPTION    | 90H             |
| ID1    | VBID              | 88H             |
| GG     | GEMSTAR           | 40H             |
| OPT1   | TV SET OPTION1    | 00H             |
| OPT2   | TV SET OPTION2    | 00H             |
| OPT3   | TV SET OPTION3    | E2H             |
| OPT4   | TV SET OPTION4    | 6AH             |
| OPT5   | TV SET OPTION5    | 00H             |
| SET-ID | MODEL ID          | A2H             |
| VOLX   | VOLUME LINITER    | 64H (FOR HOTEL) |

**NOTE:** SET-ID is subject to the models. Factory preset data will be loaded after setting Model ID data.  
Refer to Setting Panel Option Data and SET-ID Data for details.

Setting Panel Option Data and SET-ID Data.

Whenever using a new MAIN board set the Options and SET-ID data according to Model option data. AC power must be cycled on the TV after Option or Set-ID data changes.

|        |      |             |      |      |      |        |
|--------|------|-------------|------|------|------|--------|
| Model  | Size | Panel Maker | OPT4 | OPT3 | OPT5 | SET-ID |
| XV540U | 46   | Samsung     | 6Ah  | E2h  | 00h  | A1h    |

Self-Diagnostic Function

To enter, press “Recall” button on remote control during display of adjustment window in the service mode, than press the “9” button. Self-Diagnosis will begin to check if interface between the IC’s are executed properly. The letter “S” will remain on in the upper left corner of the screen. Twelve status category windows will be available by moving the arrow keys up or down. Use the right & left arrows to move into sub-categories if available. To **Exit** the Self-Diagnostic Function & return to the service mode window, press the “Exit” button, then “Menu” button.

Categories

Production-Self Check

|                   | Data                    |
|-------------------|-------------------------|
| TV CPU SW Version | 10 -                    |
| EEPROM Version    | 01 -                    |
| DVD SW Version    | 21 (Not used)           |
| Eng. IMG          | 12 (LCD Model not used) |
| Power On Time     | 22 -                    |
| Lamp L            | 40 -                    |
| Lamp H            | 70 (LCD Model not used) |
| LP on             | 35 (LCD Model not used) |
| TMP 1             | 26 (LCD Model not used) |
| TMP 2             | 21 (LCD Model not used) |
| Eng. SST          | 00 (LCD Model not used) |
| TV Status         | *** (Not used)          |
| Bus Errors        | None -                  |

**Note:** When Bus Errors are abnormal in the above Production-Self Check, the block name is displayed as follows:

|   |            |
|---|------------|
| “SCL-GND” (Red indication): SCL-GND short circuit | “NG: MTS”  |
| “SDA-GND” (Red indication): SDA-GND short circuit | “NG: APRO” |

Channel Management-Tuners

|                        | -         |
|------------------------|-----------|
|                        | Data      |
| FAT Frequency          | 189000000 |
| FAT Modulation Mode    | 8VSB      |
| FAT Signal State       | Locked    |
| FAT Signal Quality     | 76        |
| FAT SNR (dB)           | 26.6      |
| FAT Signal Power (dBm) | 0.000     |
| FAT Freq. Offset (kHz) | 13.9      |
| FAT Corrected Errors   | 0         |
| FAT Uncorrected Errors | 0         |

Video Management Main

|                 | -                    |
|-----------------|----------------------|
|                 | Data                 |
| Version         | 11                   |
| Revision        | 0                    |
| Video Mode      | VMGT-Normal Viewing  |
| Video Format    | 544x480 Unknown      |
| Video State     | Connect=1, Playing=1 |
| Video Source    | MPEG2                |
| Theater Mode    | VMGT-Natural         |
| Main Socket     | (14, 12, 516, 456)   |
| Main Visible    | (240, 0, 1440, 1080) |
| VCR Socket      | (0, 0, 0, 0)         |
| VCR Visible     | (0, 0, 0, 0)         |
| Current PicSize | VMGT_Natural         |
| User PicSize    | VMGT_Natural         |

Sub-Categories

Production-Main

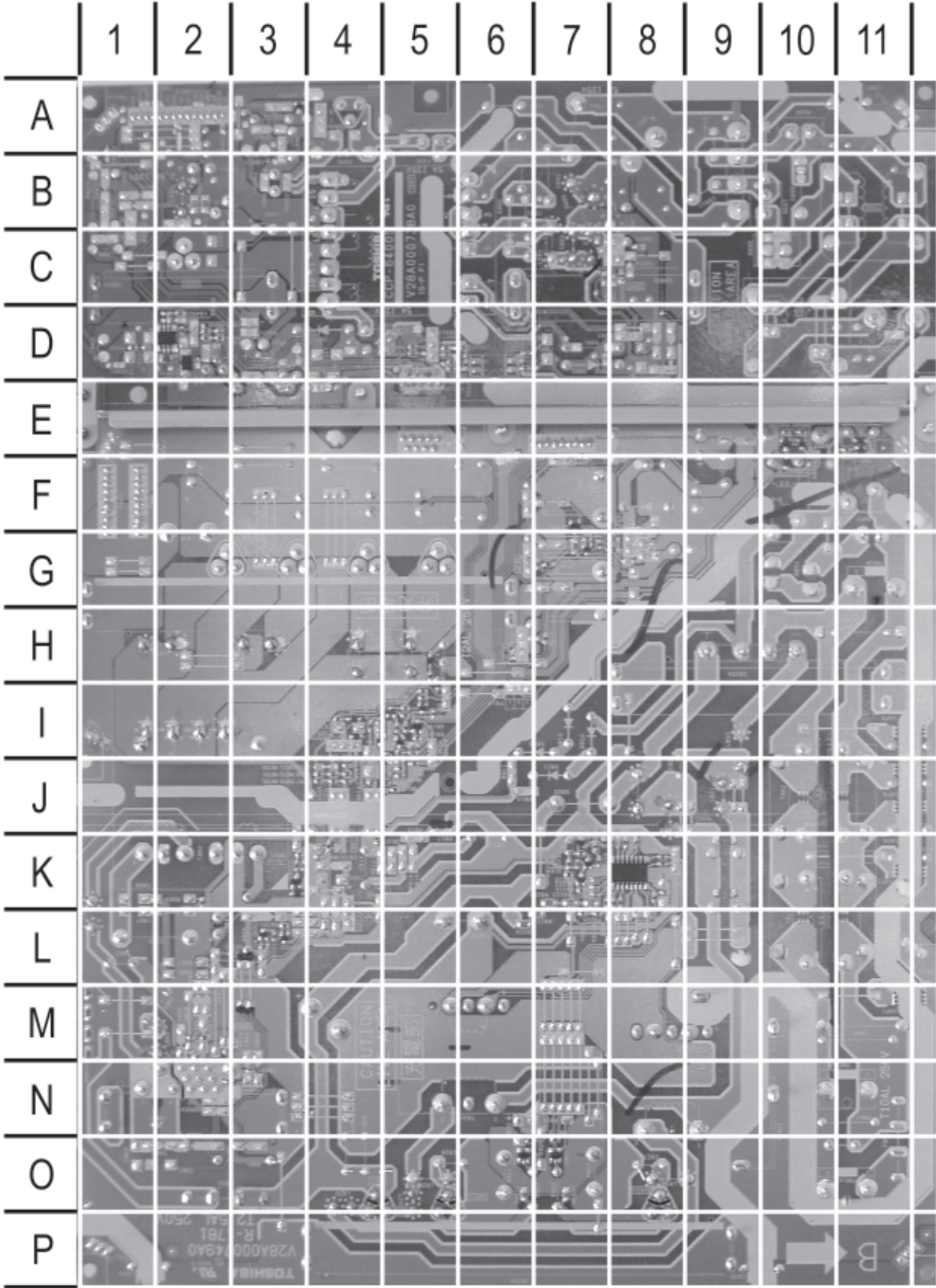
|                     | Data                |
|---------------------|---------------------|
| TV Model            | XV540U              |
| Boot Code Version   | 4.1.1.5-2007.11.27  |
| Core SW Version     | 1.1.64.0            |
| Seine SW Version    | 4.1.40.0            |
| TV Micro SW Version | 19                  |
| TV Micro EEPROM Ver | 00                  |
| EDID Checksum       | Pass Pass Pass Pass |
| Global Data Version | XV540U_VXX          |
| LCD Panel Opt       | 00                  |
| Factory Test Status | 000000000000000000  |

MISCELLANEOUS ADJUSTMENTS continued

| PSIP-Main      |      | PSIP-Table Count |                | Audio/Video Main    |      | Audio/Video-MPEG  |                      |
|----------------|------|------------------|----------------|---------------------|------|-------------------|----------------------|
|                | Data |                  | Data           |                     | Data |                   | Data                 |
| PMT PID        | 0X50 | PMT Count        | 1              | Audio Mute-Main     | 0    | Decoder Status    | Decoding, Displaying |
| Program Number | 0X05 | PMT Count        | 1              | Audio Mute-POP      | 0    | System STC        | 0E27EDC6F            |
| Audio PID      | 0X54 | MGT Count        | 1              | Audio Mute-REC Out  | 0    | Video DTS         | 0E297964             |
| Video PID      | 0X51 | DIT Count        | 0              | Audio Mute-Port Out | 0    | Video Diff        | 000000583            |
| PCR PID        | 0X51 | EIT Count        | 9              | Audio Mute-Speakers | 0    | Audio Status      | Decoding             |
| Audio ES Type  | 0X81 | RRT Count        | 64             | Video Mute- Main    | 0    | Audio Type        | AC3                  |
| Still Picture  | 0X00 | ATSC SIT Count   | 0              | Video Mute-POP      | 0    | Audio Mode        | Stereo               |
|                |      | DVB SIT Count    | 0              | Video Mute-REC Out  | 0    | Audio Sample Rate | 48KHz                |
|                |      | VCT Count        | 1              | Video Mute-Port Out | 0    |                   |                      |
|                |      | STT Count        | 3914           | Video Mute-Speakers | 0    |                   |                      |
|                |      | STT Time         | 00:00:00 M/D/Y | Super Mute-Main     | 0    |                   |                      |
|                |      |                  |                | Super Mute-POP      | 0    |                   |                      |
|                |      |                  |                | Super Mute-REC Out  | 0    |                   |                      |
|                |      |                  |                | Super Mute-Port Out | 0    |                   |                      |
|                |      |                  |                | Super Mute-Speakers | 0    |                   |                      |
|                |      |                  |                |                     |      |                   |                      |
|                |      |                  |                |                     |      |                   |                      |
|                |      |                  |                |                     |      |                   |                      |
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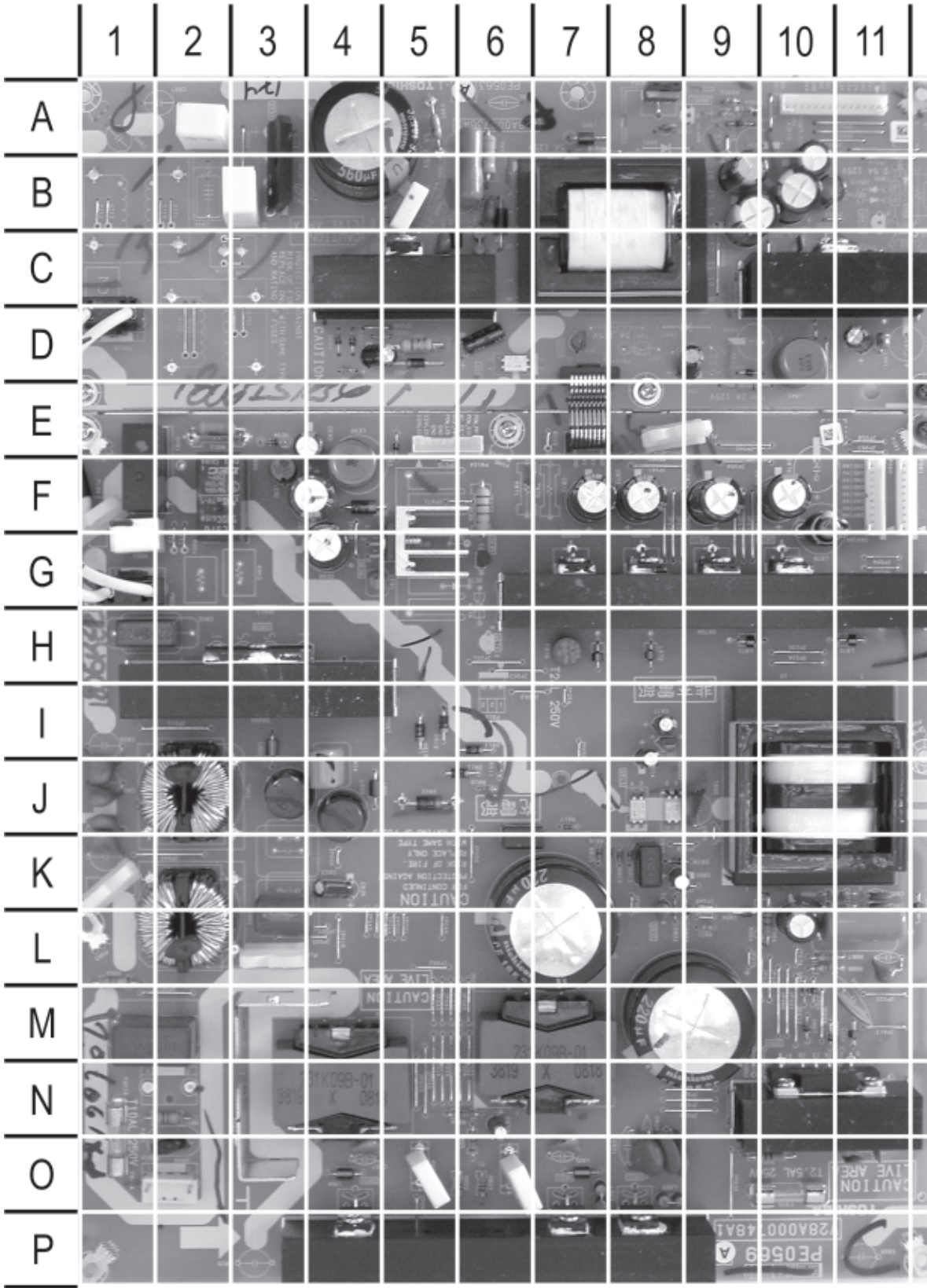
P & S POWER SUPPLY BOARDS BOTTOM



| POWER SUPPLY BOARDS BOTTOM, GRIDTRACE LOCATION GUIDE |    |       |     |       |     |       |     |       |     |
|--|----|-------|-----|-------|-----|-------|-----|-------|-----|
| C8110  | K4 | C8900 | D6  | Q8203 | K7  | R8204 | K7  | R8515 | E10 |
| C8141  | J4 | C8952 | A2  | Q8220 | O7  | R8205 | K8  | R8601 | M1  |
| C8142  | J5 | CE901 | G8  | Q8301 | K3  | R8206 | K8  | R8602 | M1  |
| C8143  | J6 | D840  | D2  | Q8302 | L3  | R8207 | K7  | R8603 | M1  |
| C8160  | I5 | D8301 | K3  | Q8303 | L3  | R8208 | K7  | R8604 | M1  |
| C8161  | I5 | D8510 | E10 | Q8510 | E10 | R8209 | K7  | R8605 | K3  |
| C8201  | K7 | D8511 | E11 | Q8511 | E10 | R8210 | K7  | R8606 | K3  |
| C8202  | K7 | D8512 | E10 | Q8512 | E11 | R8211 | K7  | R8701 | J4  |
| C8203  | K8 | D8513 | E11 | Q8950 | A3  | R8212 | K7  | R8703 | I4  |
| C8204  | K8 | D8701 | I4  | QE950 | G7  | R8220 | L6  | R8704 | I4  |
| C8205  | K8 | D8702 | I4  | QE951 | F7  | R8221 | L7  | R8705 | J4  |
| C8207  | K7 | D8705 | H5  | R863  | K4  | R8222 | K7  | R8706 | J4  |
| C8208  | K7 | D8706 | H5  | R8140 | J5  | R8225 | K8  | R8708 | J4  |
| C8209  | K8 | GAP1  | M11 | R8141 | J4  | R8226 | K8  | R8710 | I4  |
| C8210  | K7 | GAP3  | K11 | R8142 | I4  | R8229 | K8  | R8711 | H5  |
| C8402  | D2 | GAP4  | J11 | R8143 | I4  | R8230 | O7  | R8802 | D6  |
| C8403  | D2 | GAP5  | J11 | R8144 | J5  | R8231 | O6  | R8900 | D5  |
| C8404  | D2 | GAP6  | I11 | R8145 | J5  | R8232 | O7  | R8903 | D5  |
| C8405  | D1 | GAP7  | L11 | R8146 | J6  | R8233 | O6  | R8904 | D5  |
| C8406  | D2 | GAP8  | L10 | R8147 | J6  | R8301 | L3  | R8905 | D5  |
| C8601  | N2 | GAP9  | J11 | R8160 | J6  | R8302 | L3  | R8906 | D6  |
| C8602  | N3 | GAP10 | J10 | R8161 | I5  | R8303 | L3  | R8907 | D5  |
| C8603  | K3 | IC820 | K8  | R8162 | I5  | R8304 | L3  | R8911 | B2  |
| C8604  | M2 | L8201 | K8  | R8163 | I5  | R8401 | D2  | R8912 | B2  |
| C8605  | N3 | Q840  | D2  | R8164 | I5  | R8402 | D2  | RE72  | H7  |
| C8606  | M2 | Q8141 | I4  | R8165 | I5  | R8403 | D2  | RE901 | G7  |
| C8607  | K4 | Q8142 | J5  | R8166 | I5  | R8404 | D2  | RE902 | G7  |
| C8608  | M2 | Q8160 | I5  | R8167 | I5  | R8405 | D2  | RE903 | G7  |
| C8702  | J4 | Q8161 | I5  | R8168 | I5  | R8406 | D1  | RE950 | G7  |
| C8802  | C7 | Q8162 | I5  | R8169 | J5  | R8510 | E10 | RE951 | G7  |
| C8805  | C8 | Q8163 | I5  | R8201 | K8  | R8512 | E11 | RE952 | G7  |
| C8807  | D6 | Q8201 | K7  | R8202 | K8  | R8513 | E11 | RE953 | G7  |
| C8808  | C8 | Q8202 | K7  | R8203 | K8  | R8514 | E10 | RE954 | G7  |



P & S POWER SUPPLY BOARDS TOP



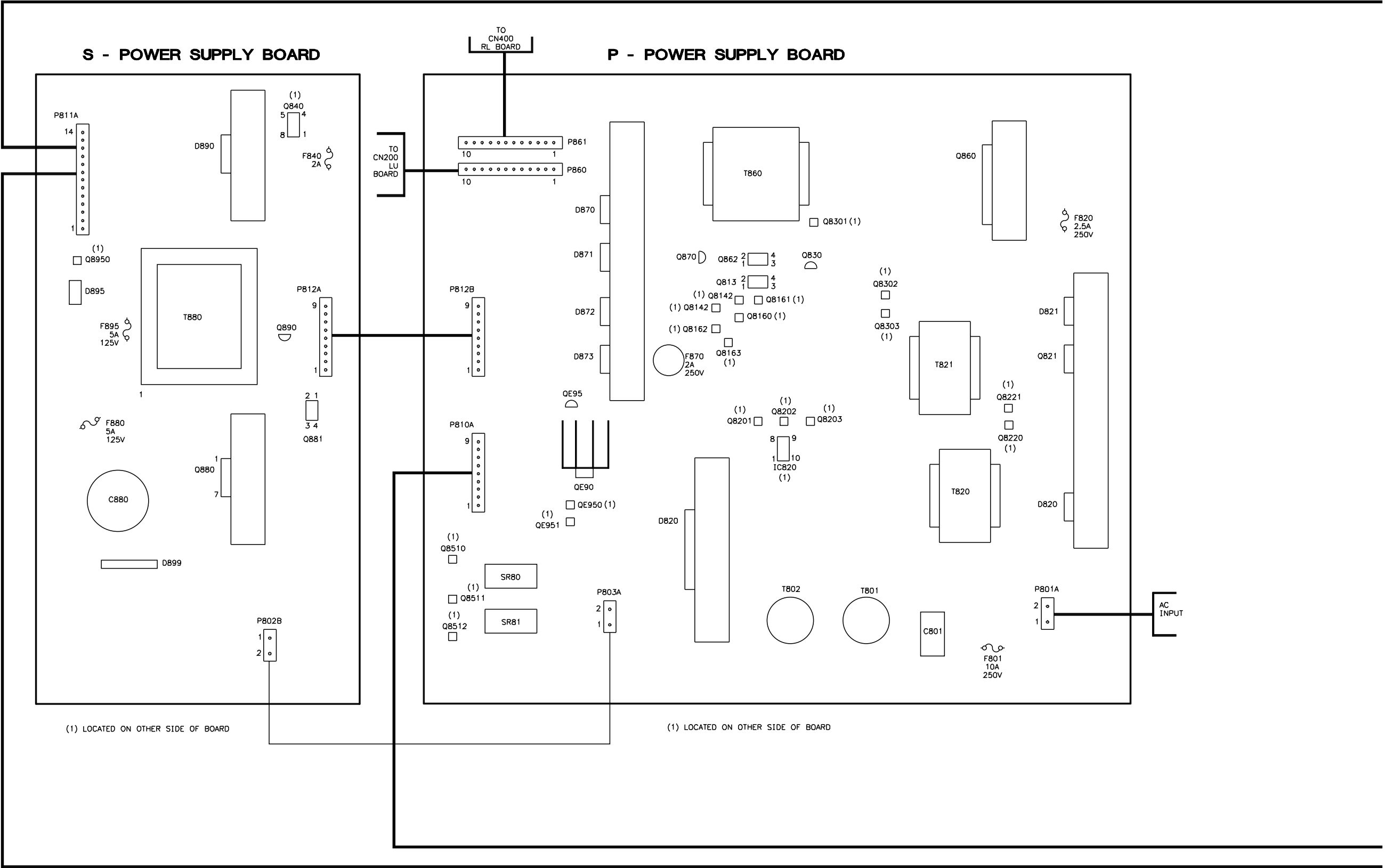
| POWER SUPPLY BOARDS TOP, GRIDTRACE LOCATION GUIDE |     |       |     |       |     |       |     |       |     |
|---|-----|-------|-----|-------|-----|-------|-----|-------|-----|
| C801  | M1  | C880  | A4  | D873  | G7  | L883  | C5  | R820  | O5  |
| C802  | H1  | C881  | B6  | D879  | K8  | L892  | B10 | R821  | O7  |
| C805  | K1  | C882  | A6  | D880  | B6  | L895  | A7  | R822  | O6  |
| C806  | J1  | C883  | C5  | D882  | D5  | LE90  | F4  | R823  | O7  |
| C807  | J1  | C884  | D4  | D883  | D4  | LE91  | G4  | R824  | N6  |
| C808  | J1  | C885  | D6  | D884  | D4  | LE92  | F3  | R825  | O6  |
| C810  | K8  | C890  | C10 | D890  | C11 | P860  | F11 | R831  | L9  |
| C811  | K6  | C891  | B10 | D895  | A8  | P861  | F11 | R850  | G1  |
| C814  | J8  | C892  | B9  | D899  | A3  | P801A | O2  | R853  | E2  |
| C820  | L7  | C895  | A8  | D8951 | A9  | P802B | D1  | R861  | O10 |
| C821  | M9  | C896  | B9  | DE90  | F4  | P803A | G1  | R864  | L10 |
| C822  | L3  | C8901 | B10 | DE93  | E6  | P810A | E5  | R866  | L10 |
| C824  | J4  | CE90  | G4  | DE94  | E3  | P811A | A10 | R867  | L10 |
| C827  | O4  | CE91  | G4  | F801  | O1  | P812A | D7  | R868  | K11 |
| C828  | O7  | CE92  | E4  | F820  | O10 | P812B | E7  | R869  | K11 |
| C829  | O8  | D809  | O2  | F840  | E9  | Q813  | J8  | R880  | A6  |
| C830  | O8  | D810  | I5  | F870  | H7  | Q820  | P4  | R881  | D5  |
| C831  | O8  | D811  | J6  | F880  | A5  | Q821  | P8  | R883  | D4  |
| C832  | N6  | D812  | I5  | F895  | A7  | Q830  | L8  | R884  | D4  |
| C835  | K4  | D813  | I6  | L820  | J5  | Q860  | N10 | R887  | B5  |
| C840  | D11 | D820  | H3  | L821  | J4  | Q870  | I8  | R897  | B3  |
| C841  | D9  | D821  | P8  | L822  | J4  | Q880  | C5  | R898  | A2  |
| C860  | M11 | D822  | J5  | L823  | I3  | Q881  | D6  | R8953 | A9  |
| C861  | O11 | D831  | K8  | L824  | O4  | Q890  | D7  | R8954 | A9  |
| C862  | O11 | D832  | K9  | L825  | O7  | Q8221 | O6  | RE95  | F6  |
| C863  | L11 | D841  | D9  | L826  | O8  | QE90  | G5  | SR80  | F2  |
| C864  | L10 | D861  | O10 | L827  | O7  | QE95  | G6  | SR81  | F1  |
| C866  | K8  | D863  | M10 | L841  | D11 | R801  | N2  | T801  | L2  |
| C867  | K11 | D864  | L9  | L842  | D10 | R809  | L1  | T802  | J2  |
| C868  | K11 | D865  | O10 | L860  | M11 | R810  | J6  | T820  | N4  |
| C869  | J9  | D866  | O11 | L862  | K11 | R811  | J6  | T821  | N7  |
| C870  | L11 | D867  | M10 | L870  | H9  | R812  | K8  | T860  | J10 |
| C872  | F7  | D868  | M10 | L871  | H11 | R813  | K8  | T880  | B8  |
| C873  | F8  | D869  | M10 | L872  | H8  | R814  | K8  |       |     |
| C874  | F9  | D870  | G10 | L873  | H7  | R815  | K7  |       |     |
| C875  | F10 | D871  | G9  | L878  | F10 | R816  | K7  |       |     |
| C877  | I8  | D872  | G8  | L882  | C6  | R817  | K7  |       |     |

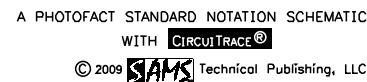
TOSHIBA

MODEL 46XV540U

PLACEMENT CHART

See Connector Resistance and Voltage Charts Page 10.

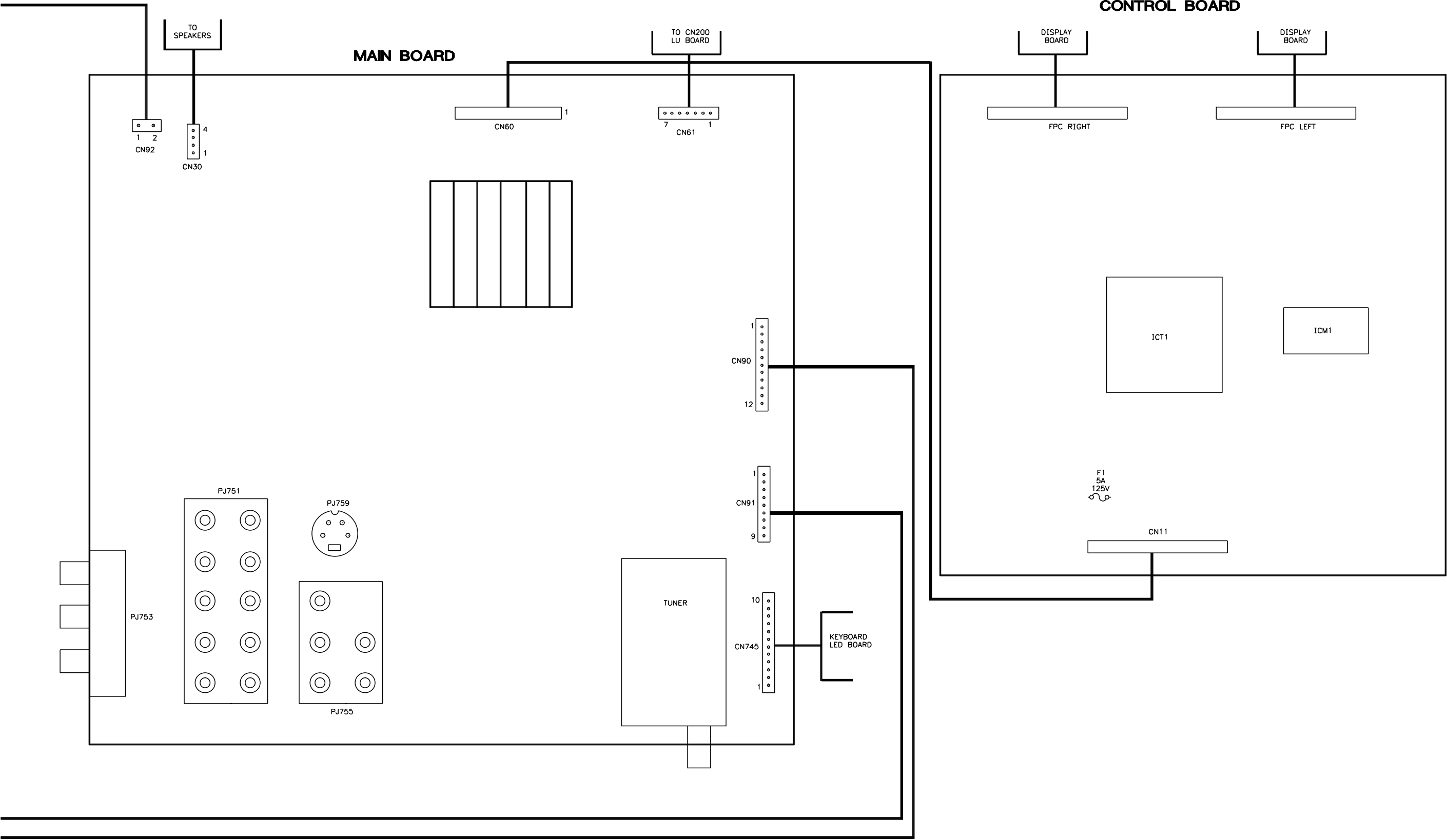






PLACEMENT CHART continued

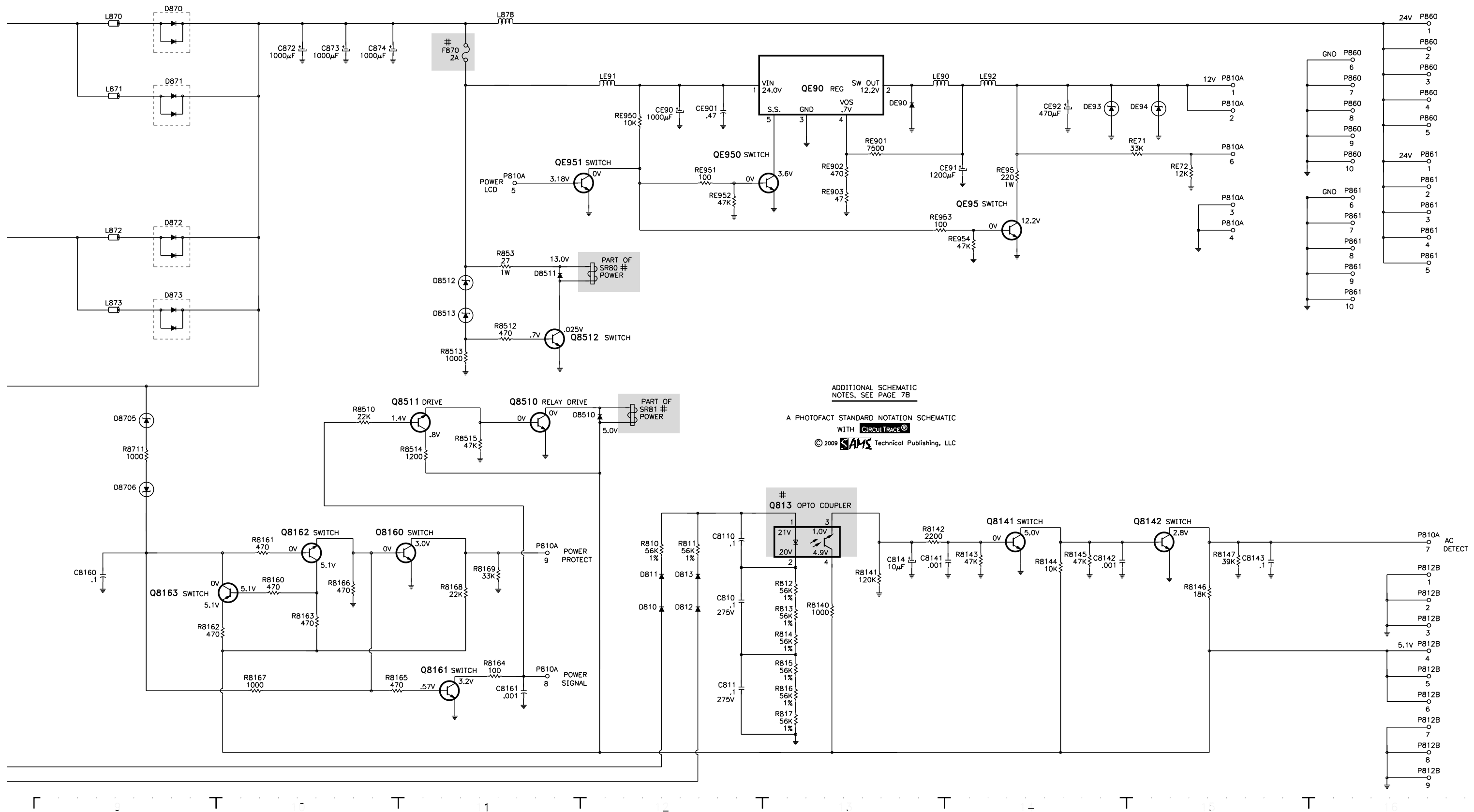
See Connector Resistance and Voltage Charts Page 10.



A

## P - POWER SUPPLY SCHEMATIC continued

B



TOSHIBA

MODEL 46XV540U

CONNECTOR RESISTANCE and VOLTAGE CHARTS

NOTE: Resistances taken with board disconnected.

See Placement Chart for board connectors.

LEFT INVERTER Board

| CN200 |         |          | CN200 |         |          |
|-------|---------|----------|-------|---------|----------|
| Pin   | VOLTAGE | RES.     | Pin   | VOLTAGE | RES.     |
| 1     | 24V     | Infinite | 8     | GND     | GND      |
| 2     | 24V     | Infinite | 9     | GND     | GND      |
| 3     | 24V     | Infinite | 10    | GND     | GND      |
| 4     | 24V     | Infinite | 11    | 0V      | Infinite |
| 5     | 24V     | Infinite | 12    | 3.3V    | 86K      |
| 6     | GND     | GND      | 13    | 2.8V    | 157K     |
| 7     | GND     | GND      | 14    | NC      | NC       |

RIGHT INVERTER Board

| CN400 |         |      | CN400 |         |      |
|-------|---------|------|-------|---------|------|
| Pin   | VOLTAGE | RES. | Pin   | VOLTAGE | RES. |
| 1     | 24V     | 1.4M | 8     | GND     | GND  |
| 2     | 24V     | 1.4M | 9     | GND     | GND  |
| 3     | 24V     | 1.4M | 10    | GND     | GND  |
| 4     | 24V     | 1.4M | 11    | NC      | NC   |
| 5     | 24V     | 1.4M | 12    | NC      | NC   |
| 6     | GND     | GND  | 13    | NC      | NC   |
| 7     | GND     | GND  | 14    | NC      | NC   |

Power Supply Board

| P810A |         |       | P811A |         |          | P812A |         |       |
|-------|---------|-------|-------|---------|----------|-------|---------|-------|
| PIN   | Voltage | RES.  | PIN   | Voltage | RES.     | PIN   | Voltage | RES.  |
| 1     | 12V     | 7.7K  | 1     | GND     | GND      | 1     | GND     | GND   |
| 2     | 12V     | 7.7K  | 2     | 5V      | 13.8K    | 2     | GND     | GND   |
| 3     | GND     | GND   | 3     | GND     | GND      | 3     | GND     | GND   |
| 4     | GND     | GND   | 4     | 12V     | 2.6K     | 4     | 5V      | 13.8K |
| 5     | 3.3V    | 44.6K | 5     | 12V     | 2.6K     | 5     | 5V      | 13.8K |
| 6     | .06V    | 12K   | 6     | 12V     | 2.6K     | 6     | 5V      | 13.8K |
| 7     | 2.9V    | 18.6K | 7     | GND     | GND      | 7     | GND     | GND   |
| 8     | 3.3V    | 5M    | 8     | NC      | NC       | 8     | GND     | GND   |
| 9     | 3.1V    | 18K   | 9     | NC      | NC       | 9     | GND     | GND   |
|       |         |       | 10    | GND     | GND      |       |         |       |
|       |         |       | 11    | 0V      | Infinite |       |         |       |
|       |         |       | 12    | 3.3V    | Infinite |       |         |       |
|       |         |       | 13    | 21.7V   | Infinite |       |         |       |
|       |         |       | 14    | .09V    | Infinite |       |         |       |
| P860  |         |       | P861  |         |          |       |         |       |
| PIN   | Voltage | RES.  | PIN   | Voltage | RES.     |       |         |       |
| 1     | 24V     | 7.5K  | 1     | 24V     | 7.5K     |       |         |       |
| 2     | 24V     | 7.5K  | 2     | 24V     | 7.5K     |       |         |       |
| 3     | 24V     | 7.5K  | 3     | 24V     | 7.5K     |       |         |       |
| 4     | 24V     | 7.5K  | 4     | 24V     | 7.5K     |       |         |       |
| 5     | 24V     | 7.5K  | 5     | 24V     | 7.5K     |       |         |       |
| 6     | GND     | GND   | 6     | GND     | GND      |       |         |       |
| 7     | GND     | GND   | 7     | GND     | GND      |       |         |       |
| 8     | GND     | GND   | 8     | GND     | GND      |       |         |       |
| 9     | GND     | GND   | 9     | GND     | GND      |       |         |       |
| 10    | GND     | GND   | 10    | GND     | GND      |       |         |       |

Main Board

| CN30      |         |          | CN61 |         |      | CN90 |         |          |
|-----------|---------|----------|------|---------|------|------|---------|----------|
| Pin       | VOLTAGE | RES.     | Pin  | VOLTAGE | RES. | Pin  | VOLTAGE | RES.     |
| 1         | .6V     | 1.1M     | 1    | 3.28V   | 5.2M | 1    | GND     | GND      |
| 2         | .6V     | 1.1M     | 2    | GND     | GND  | 2    | 5.1V    | 55.6K    |
| 3         | .6V     | 1.1M     | 3    | NC      | 5.9M | 3    | GND     | GND      |
| 4         | .6V     | 1.1M     | 4    | 3V      | 6M   | 4    | 12.2V   | 32m      |
|           |         |          | 5    | 0V      | 130K | 5    | 12.2V   | 32m      |
|           |         |          | 6    | GND     | GND  | 6    | 12.2V   | 32m      |
|           |         |          | 7    | NC      | 4.2M | 7    | GND     | GND      |
|           |         |          |      |         |      | 8    | 3.3V    | 4.1M     |
|           |         |          |      |         |      | 9    | 5.1V    | 5K       |
|           |         |          |      |         |      | 10   | GND     | GND      |
|           |         |          |      |         |      | 11   | 0V      | Infinite |
|           |         |          |      |         |      | 12   | 3.3V    | 88K      |
| CN60      |         |          |      |         |      |      |         |          |
| Pin       | VOLTAGE | RES.     |      |         |      |      |         |          |
| 1 Thur 13 | NA      | NA       |      |         |      |      |         |          |
| CN91      |         |          | CN92 |         |      |      |         |          |
| Pin       | VOLTAGE | RES.     | Pin  | VOLTAGE | RES. |      |         |          |
| 1         | 12.2V   | Infinite | 1    | 21.6V   | 197K |      |         |          |
| 2         | 12.2V   | Infinite | 2    | GND     | GND  |      |         |          |
| 3         | GND     | GND      |      |         |      |      |         |          |
| 4         | GND     | GND      |      |         |      |      |         |          |
| 5         | 3.2V    | 4.9M     |      |         |      |      |         |          |
| 6         | 0V      | 4.1M     |      |         |      |      |         |          |
| 7         | 3V      | 4.1M     |      |         |      |      |         |          |
| 8         | 3.3V    | 88K      |      |         |      |      |         |          |
| 9         | 3V      | 4M       |      |         |      |      |         |          |

CN745

| Pin | VOLTAGE | RES. | Pin | VOLTAGE | RES. |
|-----|---------|------|-----|---------|------|
| 1   | 3.3V    | 4.1M | 6   | GND     | GND  |
| 2   | 0V      | 4.1M | 7   | 3.3V    | 4.2M |
| 3   | GND     | GND  | 8   | 3.3V    | 55K  |
| 4   | 5.1V    | 1.5M | 9   | 5V      | 2.4M |
| 5   | 5.1V    | 1.6M | 10  | GND     | GND  |

SCHEMATIC COMPONENT LOCATION GUIDE

|       |     |       |     |       |     |       |     |       |     |       |     |       |     |
|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|
| C801  | A1  | C8141 | D13 | D832  | D6  | L822  | A4  | Q8510 | C11 | R8147 | D15 | R8602 | B6  |
| C802  | A3  | C8142 | D14 | D840  | D22 | L823  | B4  | Q8511 | C11 | R8160 | D10 | R8603 | B6  |
| C805  | B2  | C8143 | D15 | D841  | D23 | L824  | B5  | Q8512 | C11 | R8161 | D10 | R8604 | B6  |
| C806  | A2  | C8160 | D9  | D861  | C6  | L825  | C5  | Q8950 | A22 | R8162 | E10 | R8605 | B6  |
| C807  | A3  | C8161 | E11 | D863  | C7  | L826  | A5  | QE90  | B13 | R8163 | E10 | R8606 | C6  |
| C808  | B2  | C8201 | C3  | D864  | D7  | L827  | A5  | QE95  | B14 | R8164 | E11 | R8701 | E8  |
| C810  | D12 | C8202 | D2  | D865  | B7  | L841  | D21 | QE950 | B12 | R8165 | E10 | R8703 | E7  |
| C811  | E12 | C8203 | B1  | D866  | A7  | L842  | D22 | QE951 | B11 | R8166 | D10 | R8704 | E7  |
| C814  | D13 | C8204 | C1  | D867  | B6  | L860  | A6  | R801  | A1  | R8167 | E10 | R8705 | E6  |
| C820  | B5  | C8205 | E1  | D868  | B6  | L862  | A8  | R809  | A1  | R8168 | D11 | R8706 | E6  |
| C821  | B5  | C8207 | E1  | D869  | D7  | L870  | A9  | R810  | D12 | R8169 | D11 | R8708 | E7  |
| C822  | B4  | C8208 | E2  | D870  | A9  | L871  | B9  | R811  | D12 | R8201 | B3  | R8710 | E6  |
| C824  | A4  | C8209 | D2  | D871  | B9  | L872  | B9  | R812  | D13 | R8202 | B3  | R8711 | D9  |
| C827  | C5  | C8210 | B2  | D872  | B9  | L873  | C9  | R813  | D13 | R8203 | C1  | R8802 | D17 |
| C828  | D5  | C8402 | D21 | D873  | C9  | L878  | A11 | R814  | E13 | R8204 | E2  | R8900 | D19 |
| C829  | B5  | C8403 | E22 | D879  | E6  | L882  | A19 | R815  | E13 | R8205 | C3  | R8903 | E18 |
| C830  | B5  | C8404 | D21 | D880  | A19 | L883  | B19 | R816  | E13 | R8206 | D3  | R8904 | E18 |
| C831  | B5  | C8405 | D22 | D882  | B19 | L892  | C22 | R817  | E13 | R8207 | E2  | R8905 | D18 |
| C832  | D2  | C8406 | E22 | D883  | C18 | L895  | A21 | R820  | C5  | R8208 | E3  | R8906 | D18 |
| C835  | D2  | C8601 | A7  | D884  | C19 | L8201 | D2  | R821  | D5  | R8209 | E1  | R8907 | E18 |
| C840  | D21 | C8602 | C7  | D890  | C20 | LE90  | B13 | R822  | C3  | R8210 | E4  | R8911 | C21 |
| C841  | D23 | C8603 | B6  | D895  | A21 | LE91  | B12 | R823  | D3  | R8211 | E3  | R8912 | C21 |
| C860  | A6  | C8604 | B6  | D899  | A18 | LE92  | B14 | R824  | C2  | R8212 | E2  | R8953 | A22 |
| C861  | A7  | C8605 | B7  | D8301 | C5  | P801  | A1  | R825  | D2  | R8220 | B4  | R8954 | A22 |
| C862  | A7  | C8606 | B7  | D8510 | C12 | Q813  | D13 | R831  | D6  | R8221 | B3  | RE71  | B14 |
| C863  | A8  | C8607 | C6  | D8511 | C11 | Q820  | C4  | R850  | A3  | R8222 | B3  | RE72  | B15 |
| C864  | D7  | C8608 | D7  | D8512 | C11 | Q821  | C4  | R853  | C11 | R8225 | B3  | RE901 | B13 |
| C866  | E6  | C8702 | E7  | D8513 | C11 | Q830  | D6  | R861  | C7  | R8226 | B3  | RE902 | B13 |
| C867  | B8  | C8802 | C18 | D8701 | E6  | Q840  | D21 | R863  | D6  | R8227 | C3  | RE903 | B13 |
| C868  | B8  | C8805 | B18 | D8702 | D7  | Q860  | B7  | R864  | D8  | R8230 | C4  | RE95  | B14 |
| C869  | C7  | C8807 | D17 | D8705 | C9  | Q862  | D6  | R866  | D7  | R8231 | D4  | RE950 | B12 |
| C870  | B8  | C8808 | B18 | D8706 | D9  | Q870  | E7  | R867  | B7  | R8232 | C2  | RE951 | B12 |
| C872  | A10 | C8900 | D18 | D8951 | B22 | Q880  | B18 | R868  | B7  | R8233 | D2  | RE952 | B12 |
| C873  | A10 | C8901 | C22 | DE90  | B13 | Q881  | D18 | R869  | B7  | R8301 | D7  | RE953 | B13 |
| C874  | A10 | C8950 | A21 | DE93  | B14 | Q890  | E18 | R880  | A19 | R8302 | D7  | RE954 | B14 |
| C875  | B10 | C8952 | A22 | DE94  | B15 | Q8141 | D14 | R881  | B19 | R8303 | C7  | SR80  | A3  |
| C877  | E7  | CE90  | B12 | F801  | A1  | Q8142 | D15 | R883  | B19 | R8304 | D7  | SR80  | C12 |
| C880  | A18 | CE901 | B12 | F820  | A6  | Q8160 | D11 | R884  | B19 | R8401 | D21 | SR81  | A3  |
| C881  | A19 | CE91  | B14 | F840  | D22 | Q8161 | E11 | R885  | B18 | R8402 | E22 | SR81  | C12 |
| C882  | A19 | CE92  | B14 | F870  | A11 | Q8162 | D10 | R887  | B18 | R8403 | E22 | T801  | A2  |
| C883  | B18 | D809  | A2  | F880  | A18 | Q8163 | D10 | R897  | A17 | R8404 | E22 | T802  | A2  |
| C884  | C19 | D810  | D12 | F895  | A20 | Q8201 | E2  | R898  | B17 | R8405 | E22 | T820  | A4  |
| C885  | D17 | D811  | D12 | GAP10 | A2  | Q8202 | E3  | R8140 | D13 | R8406 | D22 | T821  | B4  |
| C890  | C20 | D812  | D12 | GAP7  | A2  | Q8203 | E3  | R8141 | D13 | R8510 | C10 | T860  | A8  |
| C891  | C21 | D813  | D12 | GAP8  | A2  | Q8220 | B3  | R8142 | D13 | R8512 | C11 | T880  | A20 |
| C892  | C21 | D820  | A4  | GAP9  | A2  | Q8221 | C3  | R8143 | D14 | R8513 | C11 |       |     |
| C895  | A21 | D821  | A5  | IC820 | B1  | Q8301 | C6  | R8144 | D14 | R8514 | D11 |       |     |
| C896  | A21 | D822  | A5  | L820  | A4  | Q8302 | D7  | R8145 | D14 | R8515 | D11 |       |     |
| C8110 | D12 | D831  | D6  | L821  | B4  | Q8303 | D7  | R8146 | D15 | R8601 | A6  |       |     |

# B

