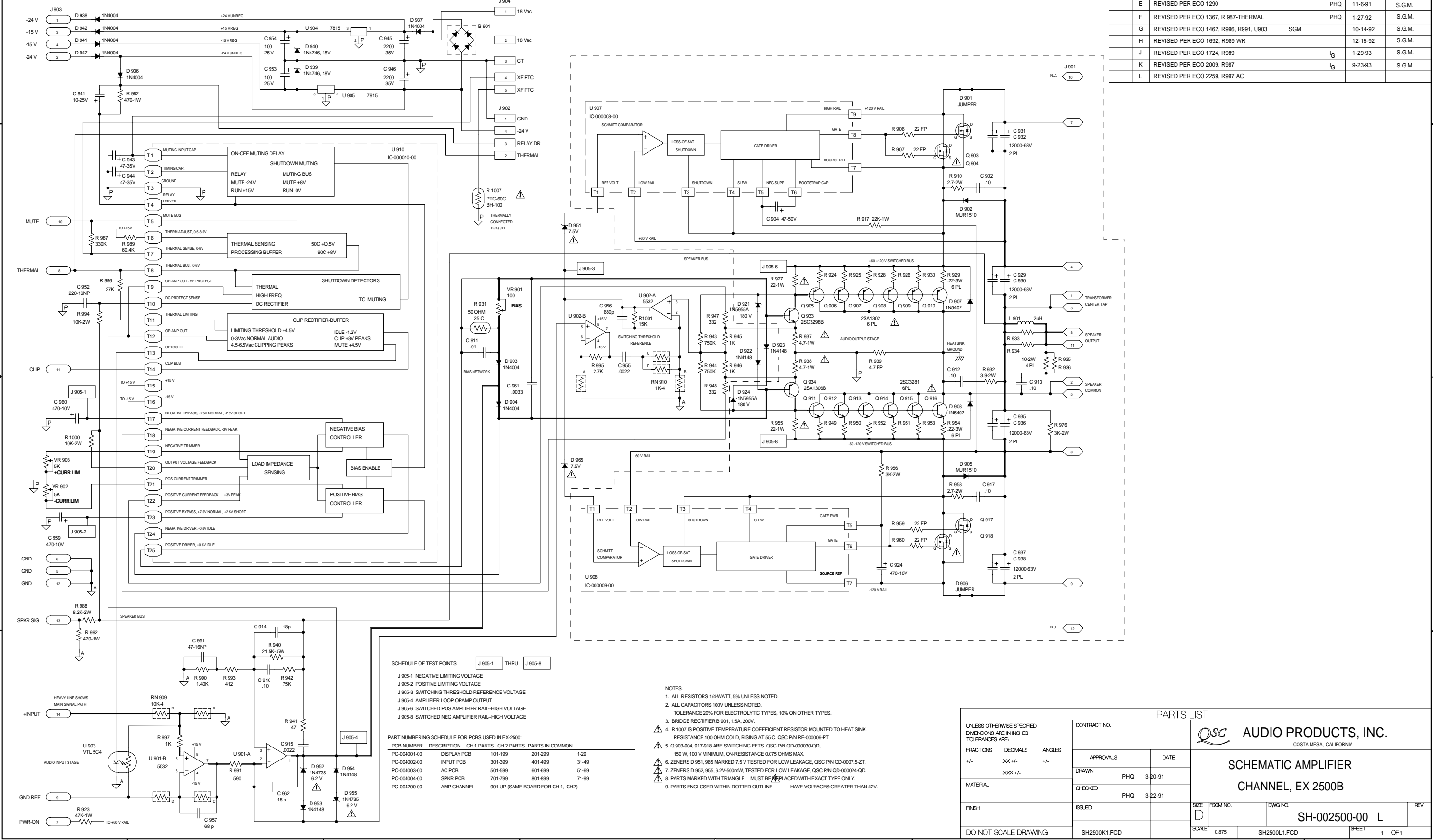


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SCHEMATIC, AMPLIFIER CHANNEL, EX 2500
REV G, 10-14-92, FOR PC-004200-00 REV E

| REVISIONS | | | | |
|-----------|--|-------------|----------|----------|
| ZONE | REV | DESCRIPTION | DATE | APPROVED |
| A | PROD RELEASE PER ECO 1040 GLF | | 3-25-91 | G.F. |
| B | PER ECO 1095 GLF | | 6-10-91 | S.G.M. |
| C | REVISED PER ECO 1219 | | 9-13-91 | S.G.M. |
| C1 | REVISED PER ECO 1194 | | 9-13-91 | S.G.M. |
| D | REVISED PER ECO 1262 | | 10-9-91 | S.G.M. |
| E | REVISED PER ECO 1290 | | 11-6-91 | S.G.M. |
| F | REVISED PER ECO 1367, R 987-THERMAL | | 1-27-92 | S.G.M. |
| G | REVISED PER ECO 1462, R996, R991, U903 | SGM | 10-14-92 | S.G.M. |
| H | REVISED PER ECO 1692, R989 WR | | 12-15-92 | S.G.M. |
| J | REVISED PER ECO 1724, R989 | | 1-29-93 | S.G.M. |
| K | REVISED PER ECO 2009, R987 | | 9-23-93 | S.G.M. |
| L | REVISED PER ECO 2259, R997 AC | | | |



SCHEDULE OF TEST POINTS J 905-1 THRU J 905-8

- J 905-1 NEGATIVE LIMITING VOLTAGE
- J 905-2 POSITIVE LIMITING VOLTAGE
- J 905-3 SWITCHING THRESHOLD REFERENCE VOLTAGE
- J 905-4 AMPLIFIER LOOP OP-AMP OUTPUT
- J 905-5 SWITCHED POS AMPLIFIER RAIL-HIGH VOLTAGE
- J 905-8 SWITCHED NEG AMPLIFIER RAIL-HIGH VOLTAGE

PART NUMBERING SCHEDULE FOR PCBs USED IN EX-2500:

| PCB NUMBER | DESCRIPTION | CH 1 PARTS | CH 2 PARTS | PARTS IN COMMON |
|--------------|-------------|-----------------------------------|------------|-----------------|
| PC-004001-00 | DISPLAY PCB | 101-199 | 201-299 | 1-29 |
| PC-004002-00 | INPUT PCB | 301-399 | 401-499 | 31-49 |
| PC-004003-00 | AC PCB | 501-599 | 601-699 | 51-69 |
| PC-004004-00 | SPKR PCB | 701-799 | 801-899 | 71-99 |
| PC-004200-00 | AMP CHANNEL | 901-UP (SAME BOARD FOR CH 1, CH2) | | |

- NOTES:**
- ALL RESISTORS 1/4-WATT, 5% UNLESS NOTED.
 - ALL CAPACITORS 100V UNLESS NOTED.
 - TOLERANCE 20% FOR ELECTROLYTIC TYPES, 10% ON OTHER TYPES.
 - BRIDGE RECTIFIER B 901, 1.5A, 200V.
 - R 1007 IS POSITIVE TEMPERATURE COEFFICIENT RESISTOR MOUNTED TO HEAT SINK. RESISTANCE 100 OHM COLD, RISING AT 55 C. QSC P/N RE-000006-PT
 - Q 903-904, 917-918 ARE SWITCHING FETS. QSC P/N QD-000030-QD, 150 W, 100 V MINIMUM, ON-RESISTANCE 0.075 OHMS MAX.
 - ZENERS D 951, 955 MARKED 7.5 V TESTED FOR LOW LEAKAGE. QSC P/N QD-0007.5-ZT.
 - ZENERS D 952, 955, 6.2V-500mW, TESTED FOR LOW LEAKAGE. QSC P/N QD-000024-QD.
 - PARTS MARKED WITH TRIANGLE MUST BE REPLACED WITH EXACT TYPE ONLY.
 - PARTS ENCLOSED WITHIN DOTTED OUTLINE HAVE VOLTAGES GREATER THAN 42V.

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:

| FRACTIONS | DECIMALS | ANGLES |
|-----------|----------|--------|
| ± | XX ± | ± |
| | XXX ± | |

| CONTRACT NO. | | APPROVALS | | DATE |
|--------------|--|-----------|-----|---------|
| | | PHQ | PHQ | 3-20-91 |
| | | CHECKED | PHQ | 3-22-91 |
| ISSUED | | | | |

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COSTA MESA, CALIFORNIA

SCHEMATIC AMPLIFIER CHANNEL, EX 2500B

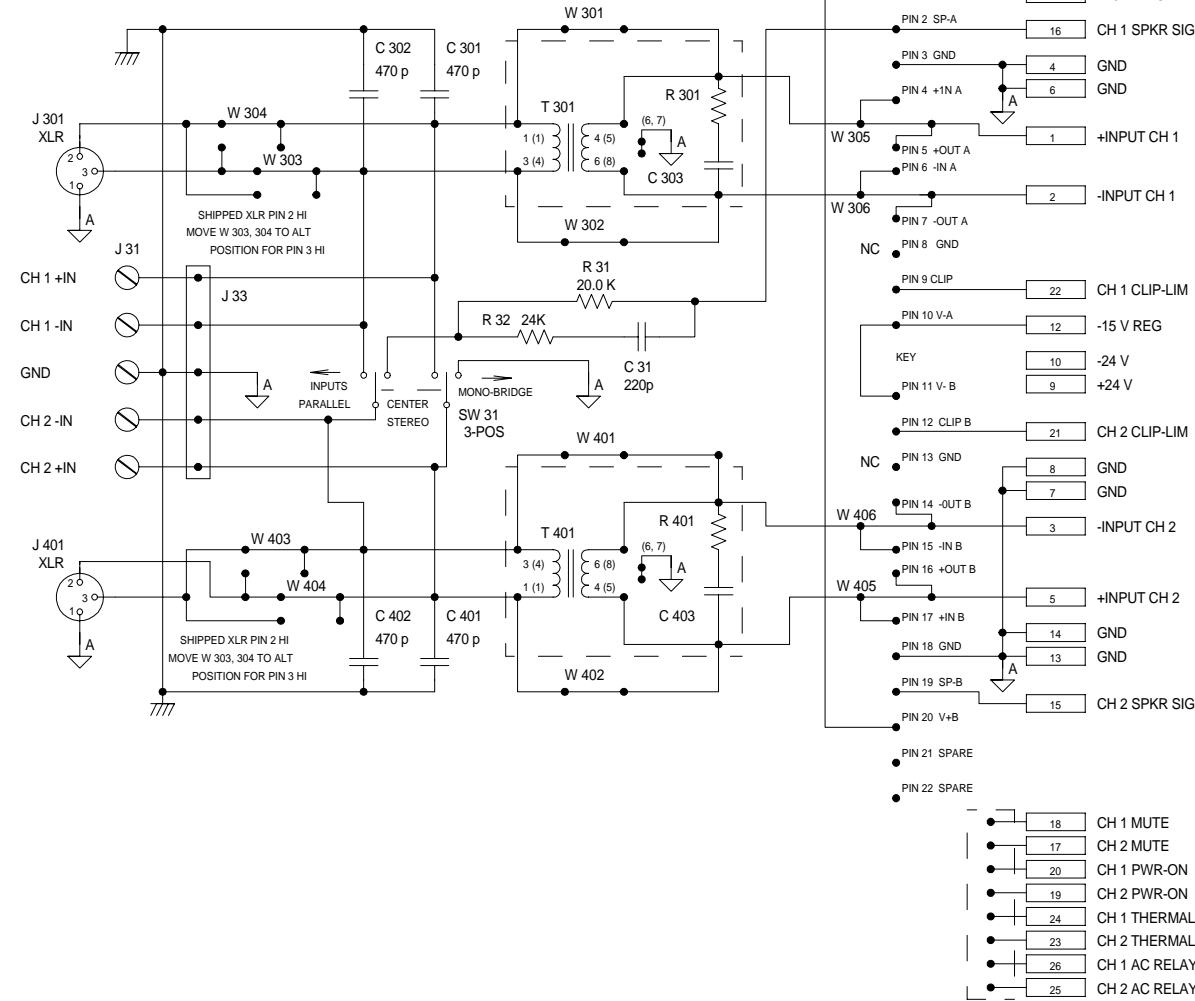
| | | | |
|-------------|--------------|------------------------|-----|
| SIZE D | FSCM NO. | DWG NO. SH-002500-00 L | REV |
| SCALE 0.875 | SH2500L1.FCD | SHEET 1 OF 1 | |

DO NOT SCALE DRAWING

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| REVISIONS | | | | |
|-----------|-----|---|---------|----------|
| ZONE | REV | DESCRIPTION | DATE | APPROVED |
| | A | PROD REL PER ECO 756 | | |
| | B | CHANGE VALUE R31, WAS 21 K SEE ECO 1097 | 6-10-91 | SGM |
| | C | REVISED FOR MIN-SLOT, BR-SW SEE ECO 1297 BY PHQ | 1-24-92 | SGM |
| | D | REVISE PER ECO 1916 | 6. | |

SCHEMATIC, EX-SERIES STANDARD INPUT BOARD.
FOR PC-004005-00 REV B 7-15-93



NOTES, ALL REV LEVELS

1. ALL RESISTORS 1/4W, 5%.
2. ALL CAPACITORS 100V
3. J 32, 26-PIN CONNECTOR, TO J 1 ON FRONT DISPLAY BOARD PC-004001-00.
4. PARTS FOR CH 1 NUMBERED 301-399.
5. PARTS FOR CH 2 NUMBERED 401-499.
6. PARTS IN COMMON TO BOTH CHANNELS NUMBERED 31-49.
7. BOARD SHIPPED WITH W 301-304, W 401-404 MOUNTED AS SHOWN.
8. PARTS WITHIN DOTTED OUTLINE FOR USER MODIFICATION. SEE MANUAL.

NOTES, REV LEVELS A-B

1. THE FIRST YEAR OF PRODUCTION EX AMPLIFIERS SHIPPED WITH PC-004002-00 REV A OR B
2. FOR PC-004005-00 REV A, ADDED PADS 1-20 FOR LEVEL 1-A, 2-A INPUT ACCESSORY PCB
3. ADDED J33, 5-PIN INPUT EXTENDER HEADER AND W305,306,405 & 406.
4. NO CHANGE IN PINOUT OF J32, PINS 1-26
5. SW-31 WAS REVISED ON PC-004005-00 REV A, BUT WILL NOT AFFECT FUNCTION OF UPPER SLOT PCB.

NOTES: UNLESS OTHERWISE SPECIFIED

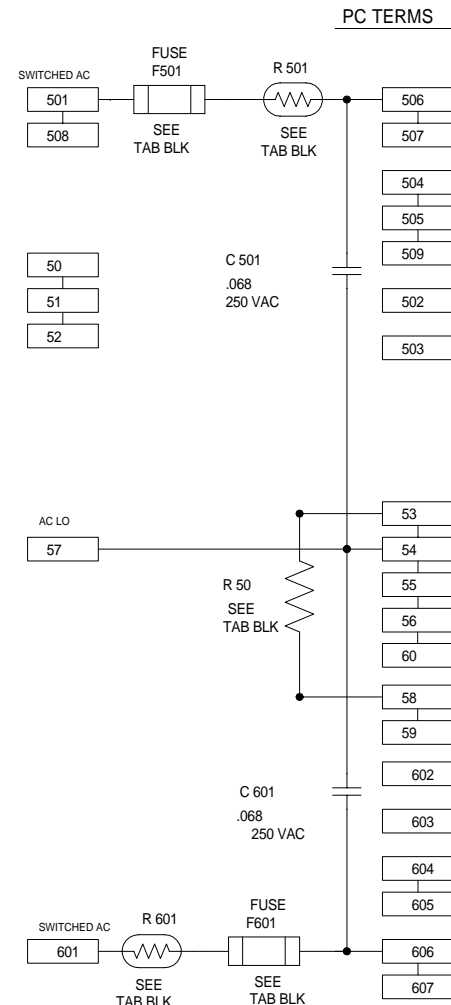
PARTS LIST

| | | | | | |
|---|---------------|--------------|----------|---------------------|--------------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 | | CONTRACT NO. | | | |
| TOLERANCES ARE: DECIMALS .XX ± DECIMALS .XXX ± ANGLES ° ± | | APPROVALS | | | |
| DEBURR EDGES .XXX R MAX | | DRAWN | | PAT QUILTER 6-18-90 | |
| MATERIAL | | CHECKED | | | |
| FINISH | | ISSUED | | | |
| CAD SEED FILE NO. | | SH4002C1.FCD | | | |
| PC-004005-00 | EX/MPA SERIES | SIZE | F30M NO. | DWG NO. | REV |
| NEXT ASSY | USED ON | C | | SH-004002-00 | D |
| APPLICATION | | SCALE | NONE | CAD FILE NO. | SH4002D1.FCD |
| DO NOT SCALE DRAWING | | SHEET | 1 OF 1 | | |

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| REVISIONS | | | | |
|-----------|-----|-----------------------------------|---------|----------|
| ZONE | REV | DESCRIPTION | DATE | APPROVED |
| | A | PROD RELEASE PER ECO 1846 | 5-18-93 | SGM |
| | B | REVISED PER ECO 2201 (EFF 8-5-94) | 6-15-94 | SGM |
| | C | REV PER ECO 2699 (EFF. 8-18-95) | | |

SCHEMATIC FOR PC-004003-00 REV B



| TABULATION BLOCK | | | |
|------------------|----------|---------|------------------|
| MODEL (V) | FUSE | R 50 | R 501 / R 601 |
| MX 2000a (100V) | 15A 250V | 330 15W | 1.0 OHM COLD 30A |
| MX 2000a (120V) | 15A 250V | 330 15W | 1.0 OHM COLD 30A |
| MX 2000a (230V) | 12A 250V | 470 15W | 2.5 OHM 15A |
| EX 2500 (100V) | 20A 250V | | 1.0 OHM COLD 30A |
| EX 2500 (120V) | 20A 250V | | 1.0 OHM COLD 30A |
| EX 2500 (230V) | 12A 250V | | 2.5 OHM 15A |
| EX 4000 (100V) | 20A 250V | | 1.0 OHM COLD 30A |
| EX 4000 (120V) | 20A 250V | | 1.0 OHM COLD 30A |

1. THIS DRAWING USED IN CONJUNCTION WITH SCHEMATIC DIAGRAMS : SH-004000-00, SH-004001-00, SH-004002-00, SH-004003-00, SH-004004-00, SH-004006-00, SH-002500-00, SH-002010-00, AND SH-002011-00

NOTES: UNLESS OTHERWISE SPECIFIED

| APPLICATION | DO NOT SCALE DRAWING |
|--------------|----------------------|
| PC-004003-00 | EX 3 SP |
| NEXT ASSY | USED ON |

| PARTS LIST | | | |
|---|--|--|--|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 | | CONTRACT NO. | |
| TOLERANCES ARE: DECIMALS DECIMALS ANGLES XX ± .XXX ± ° | | APPROVALS DATE | |
| DEBURR EDGES .XXX R MAX | | DRAWN LEORA 5-10-93 | |
| MATERIAL | | CHECKED SGM 5-17-93 | |
| FINISH | | ISSUED SG MORALES 5-18-93 | |
| CAD SEED FILE NO. | | SCALE NONE CAD FILE NO. SH4005C1.FCD SHEET 1 OF 1 | |

QSC AUDIO PRODUCTS, INC.
COSTA MESA, CALIFORNIA

**SCHEMATIC,
AC PCB EX/MXa 3 SP**

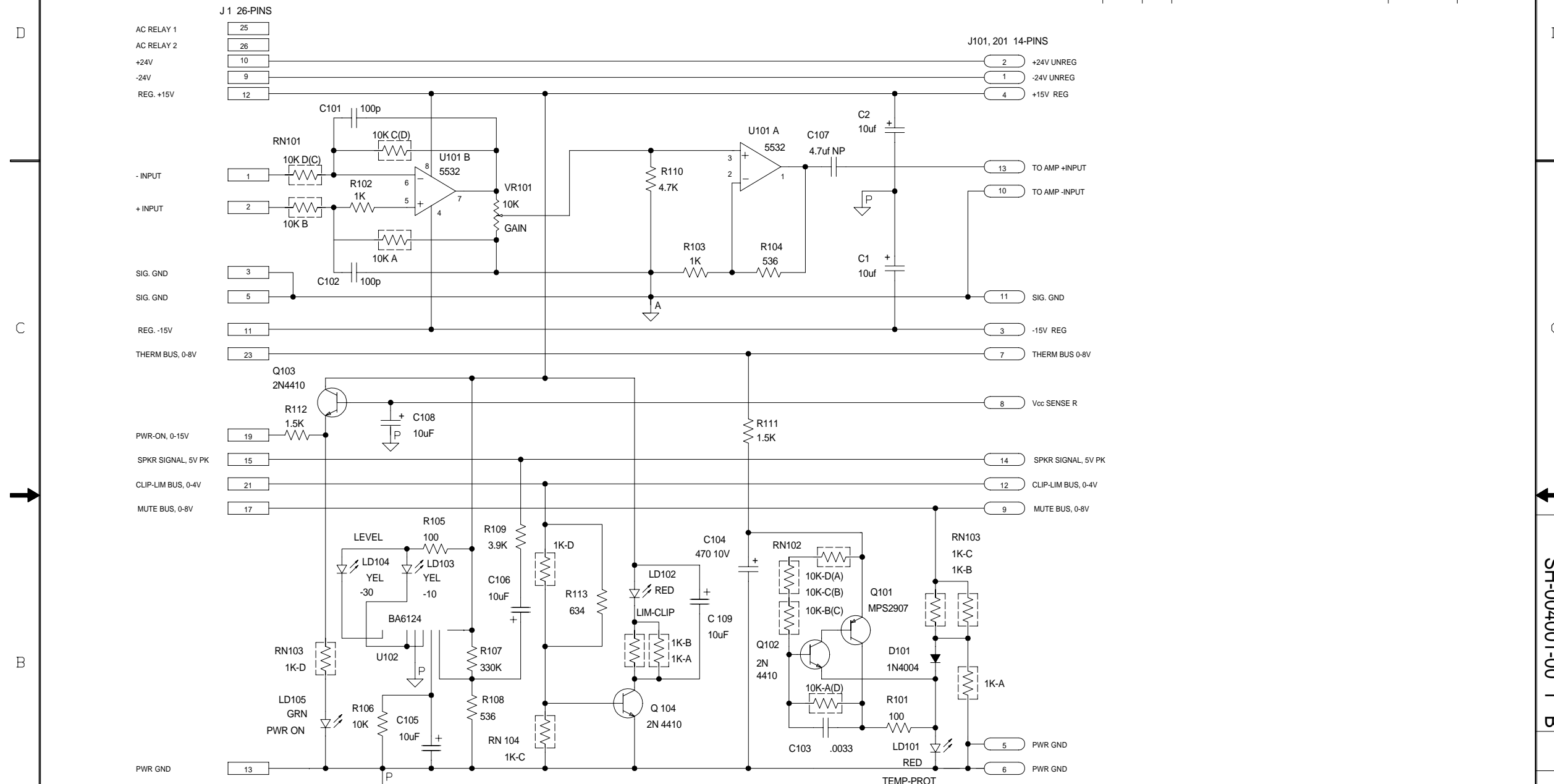
SIZE F30M NO. DWG NO. SH-004005-00 REV C

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SCHEMATIC, EX-SERIES DISPLAY BOARD.

PC-004001-00, REV A.

| REVISIONS | | | | |
|-----------|-----|-------------------------|---------|----------|
| ZONE | REV | DESCRIPTION | DATE | APPROVED |
| | A | PROD REL PER ECO 756 | 6-19-90 | |
| | B | REVISED PER ECO 1603 WR | 9-29-92 | |



CH 2 PINS

| | |
|--------------------|----|
| - INPUT | 4 |
| + INPUT | 6 |
| SIG. GND | 7 |
| SIG. GND | 8 |
| THERM BUS, 0-8V | 24 |
| PWR-ON, 0-15V | 19 |
| SPKR SIGNAL, 5V PK | 16 |
| CLIP-LIM BUS, 0-4V | 22 |
| MUTE BUS, 0-8V | 18 |
| PWR GND | 14 |

- NOTES
1. ALL RESISTORS 1/4 WATT UNLESS SPECIFIED.
 2. ALL CAPACITORS 25V UNLESS SPECIFIED.
 3. CH 2 RESISTOR NETWORK SECTIONS () WHEN DIFFERENT.
 4. CH 1 COMPONENTS NUMBERED 101-199
 5. CH 2 COMPONENTS NUMBERED 201-299.
 6. PARTS IN COMMON TO BOTH CHANNELS NUMBERED 1-99.
 7. U102, 202 ROHM BA6124 OR SAMSUNG KA2284/85
 8. LD 101, 102, HIGH-EFFICIENCY RED LED.
 9. LD 103, 104, HIGH-EFFICIENCY YELLOW LED.
 10. LD 105, HIGH-EFFICIENCY GREEN LED.

| PARTS LIST | | | |
|---|----------------|--|---------------------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CONTRACT NO. | |
| FRACTIONS | DECIMALS | ANGLES | 0 |
| +/- | .XX +/- | +/- | |
| | .XXX +/- | | |
| MATERIAL | ISSUED | APPROVALS | DATE |
| FINISH | FCAD: 004001SH | DRAWN | PAT QUILTER 6-19-90 |
| DO NOT SCALE DRAWING | SCALE | CHECKED | |
| QSC AUDIO PRODUCTS COSTA MESA, CALIFORNIA | | SCHEMATIC DIAGRAM EX-SERIES DISPLAY BOARD | |
| SIZE | FSCM NO. | DWG NO. | REV |
| C | | SH-004001-00 B | |
| SCALE | SH4001B1.FDC | SHEET | 1 OF 1 |

DWG NO. SH-004001-00 1 B