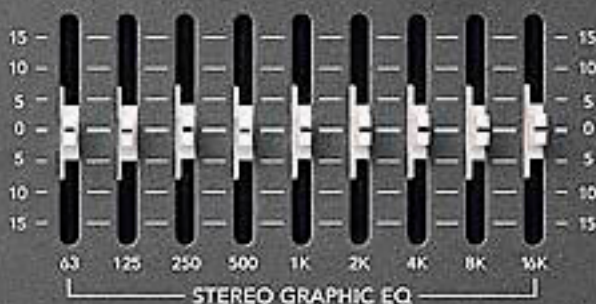




# MACKIE.

## MASTER SEND



## CFX20 MIXER

20 CHANNEL COMPACT INTEGRATED LIVE SOUND MIXER

### emac™ CUSTOM 32-BIT PRECISION DIGITAL STEREO EFFECTS PROCESSOR

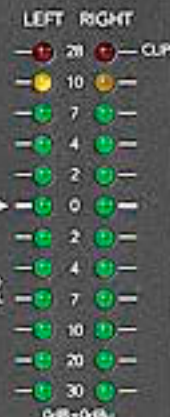
#### ZERO LEVEL EFX 2 (INT) RETURN MASTERS



#### PHANTOM POWER



#### POWER STATUS



#### BLD SOLO



**8**

**MIC GAIN**

6 -20dB +50 +25dB

**TRIM**

**LOW CUT** 100 Hz

**ZERO LEVEL**

**9**  
**10**

**U**

-20 +20

**TRIM**

**AUX**

**1**

**U**

∞ +15

**2**

**U**

∞ +15

**PRE FADER**

**EFX 1 (EXT)**

**U**

∞ +15

**EFX 2 (INT)**

**U**

∞ +15

**AUX**

**1**

**U**

∞ +15

**2**

**U**

∞ +15

**PRE FADER**

**EFX 1 (EXT)**

**U**

∞ +15

**EFX 2 (INT)**

**U**

∞ +15

**EQ**

**U**

-15 +15

**HI 12k**

**U**

-15 +15

**MID**

**600**

150 1.5k 8k **FREQ**

**U**

-15 +15

**LOW 80Hz**

**EQ**

**U**

-15 +15

**HI 12k**

**U**

-15 +15

**HI MID 3k**

**U**

-15 +15

**LOW MID 400**

**U**

-15 +15

**LOW 80Hz**

**PAN**

**U**

L R

**PAN**

**U**

L R

**8**

**ASSIGN**

**MUTE**

**1-2**

**3-4**

**dB**

10

5

U

5

10

20

30

40

50

60

**SOLO PFL**

**9-10**

**ASSIGN**

**MUTE**

**1-2**

**3-4**

**dB**

10

5

U

5

10

20

30

40

50

60

**SOLO PFL**

# CFX

## SCHEMATICS mit PCB

EFFECTS  
192

MASTER  
241

SLAVE  
242

POWER  
258

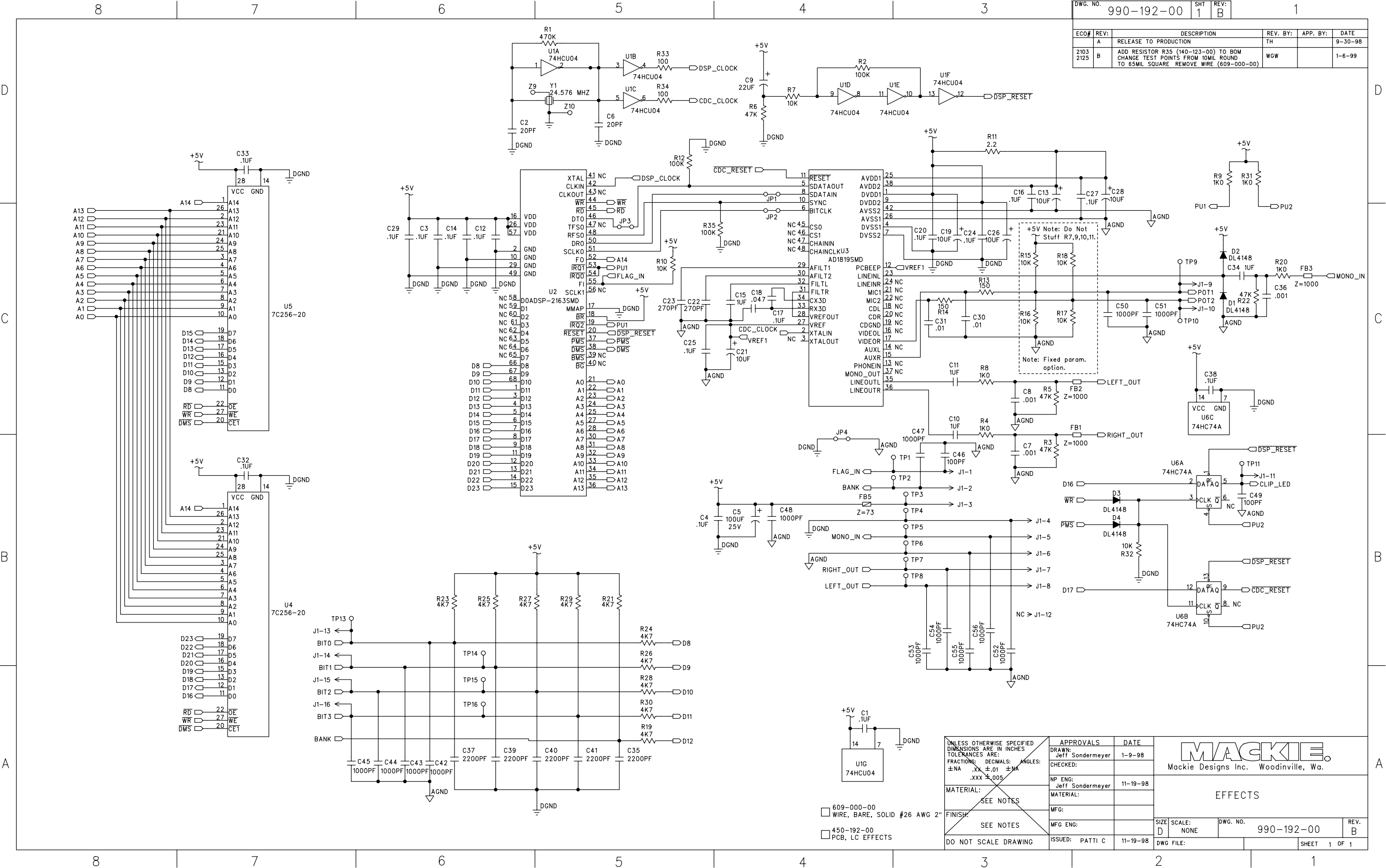
AC  
POWER  
260

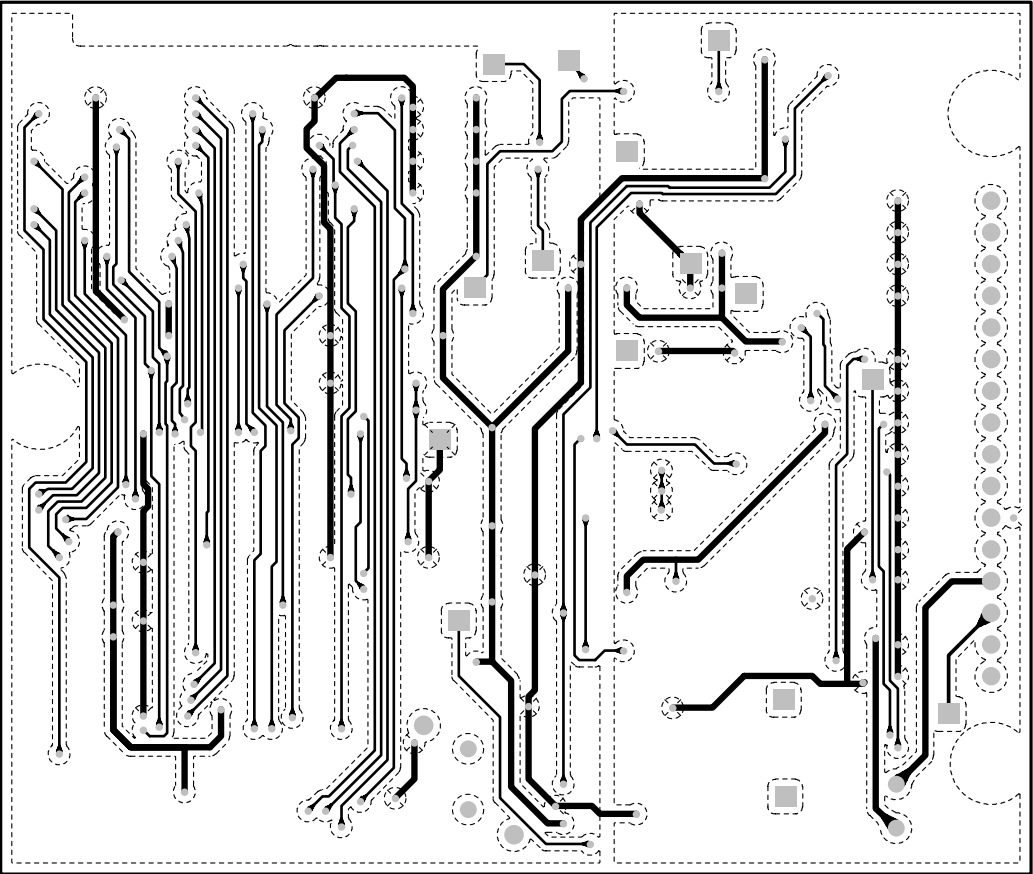
PARTS  
LIST

**Click on  
any box**

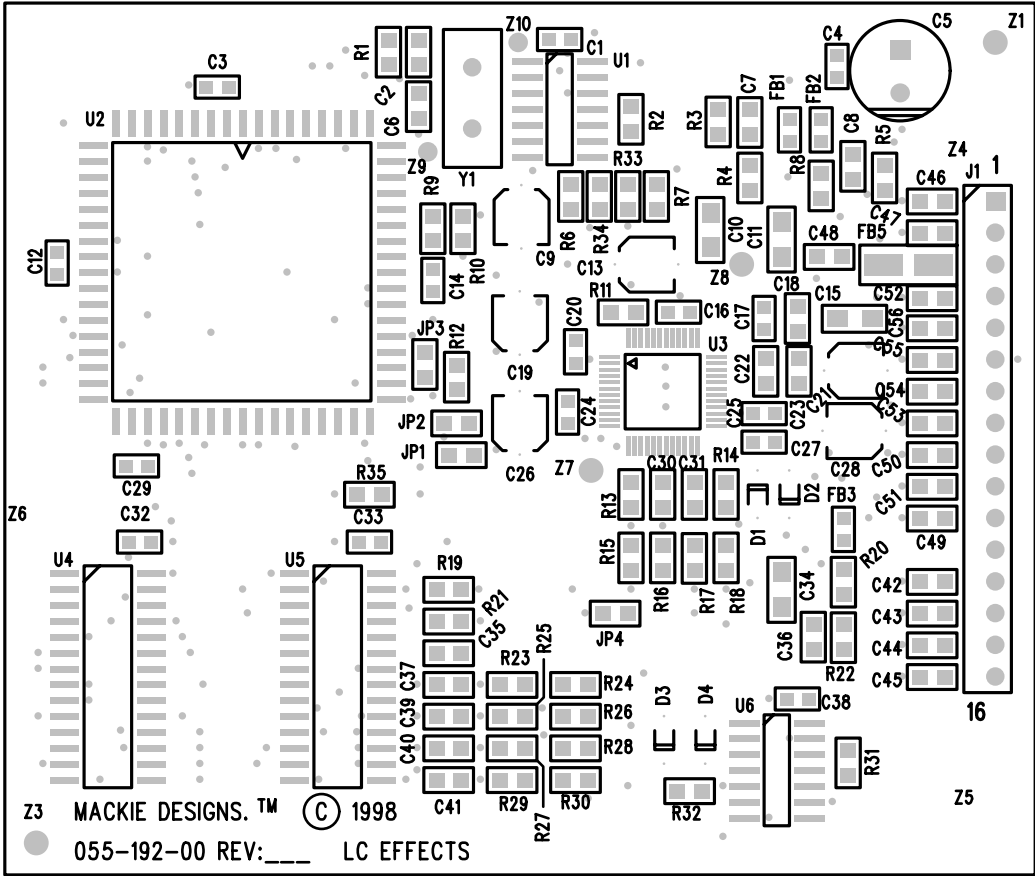
**Click on  
any box**

|          |  |            |                                                                                                                         |     |   |          |          |         |
|----------|--|------------|-------------------------------------------------------------------------------------------------------------------------|-----|---|----------|----------|---------|
| DWG. NO. |  | 990-192-00 |                                                                                                                         | SHT | 1 | REV:     | B        | 1       |
| ECO#     |  | REV:       | DESCRIPTION                                                                                                             |     |   | REV. BY: | APP. BY: | DATE    |
| 2103     |  | A          | RELEASE TO PRODUCTION                                                                                                   |     |   | TH       |          | 9-30-98 |
| 2125     |  | B          | ADD RESISTOR R35 (140-123-00) TO BOM<br>CHANGE TEST POINTS FROM 10MIL ROUND<br>TO 65MIL SQUARE REMOVE WIRE (609-000-00) |     |   | WGW      |          | 1-6-99  |



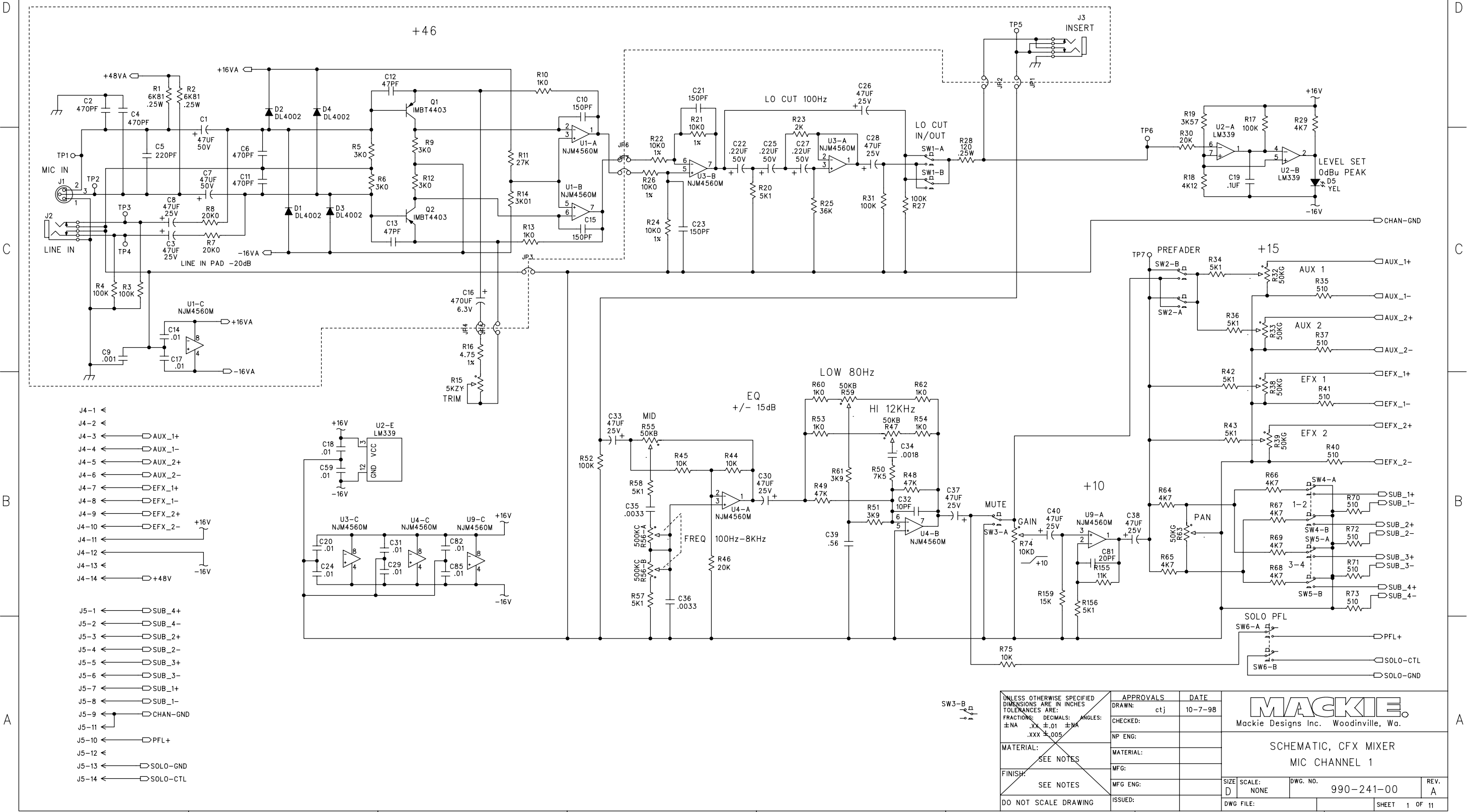


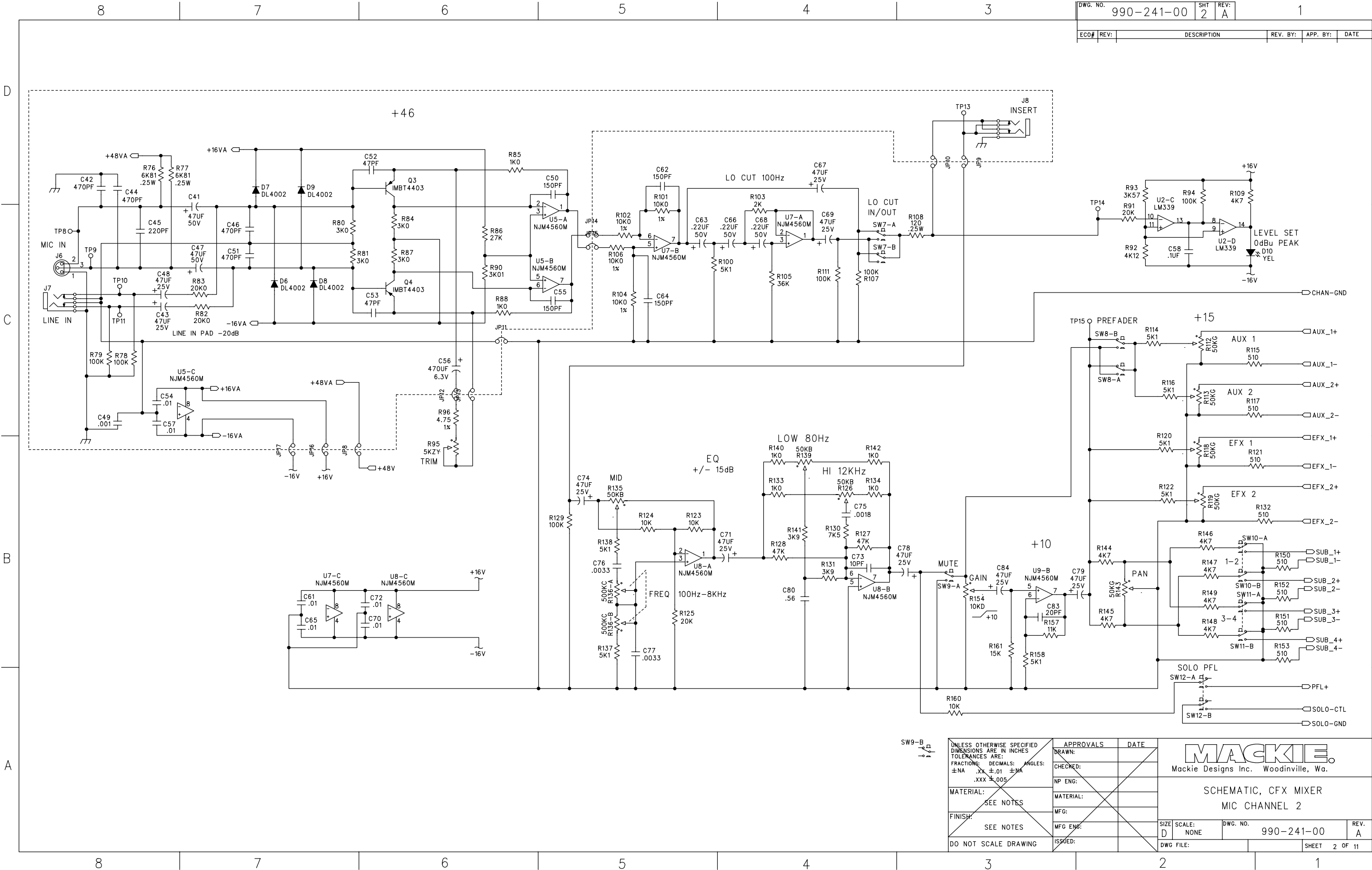
Bottom of board



Top of board

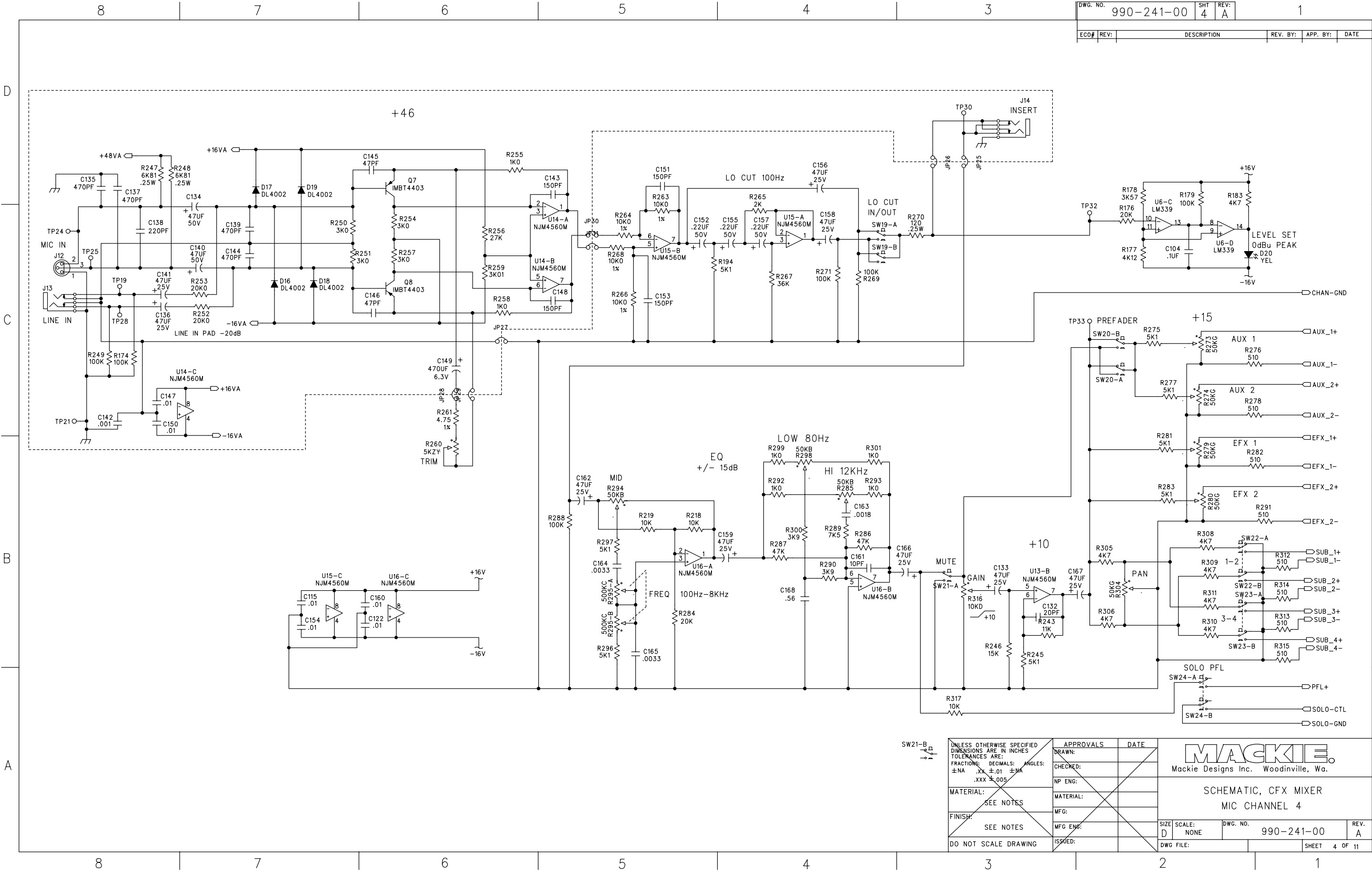
|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 1        | REV.     | A    | 1 |
| ECO#     | REV.       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |





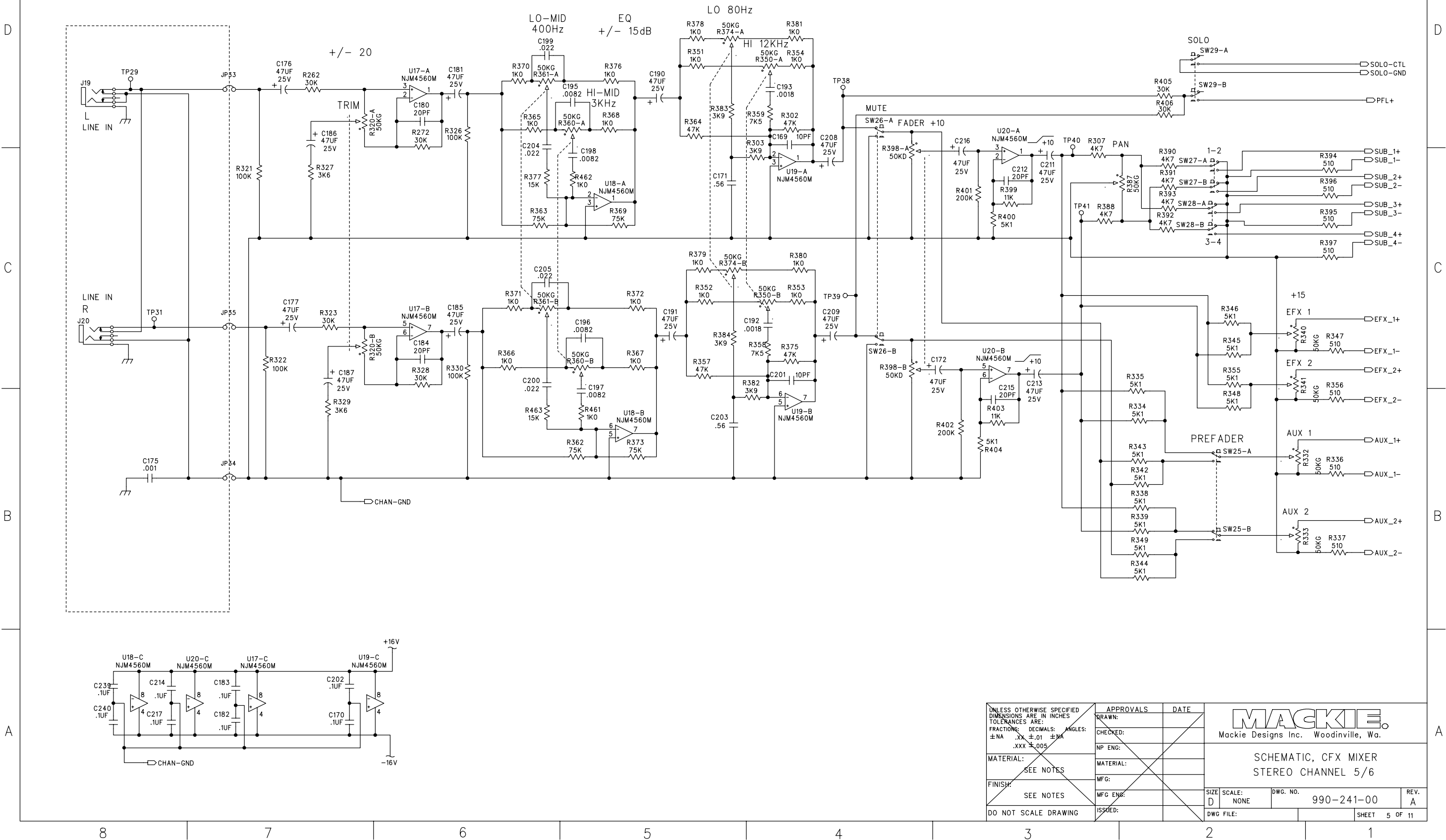
241-2 MASTER BOARD 241 REV A



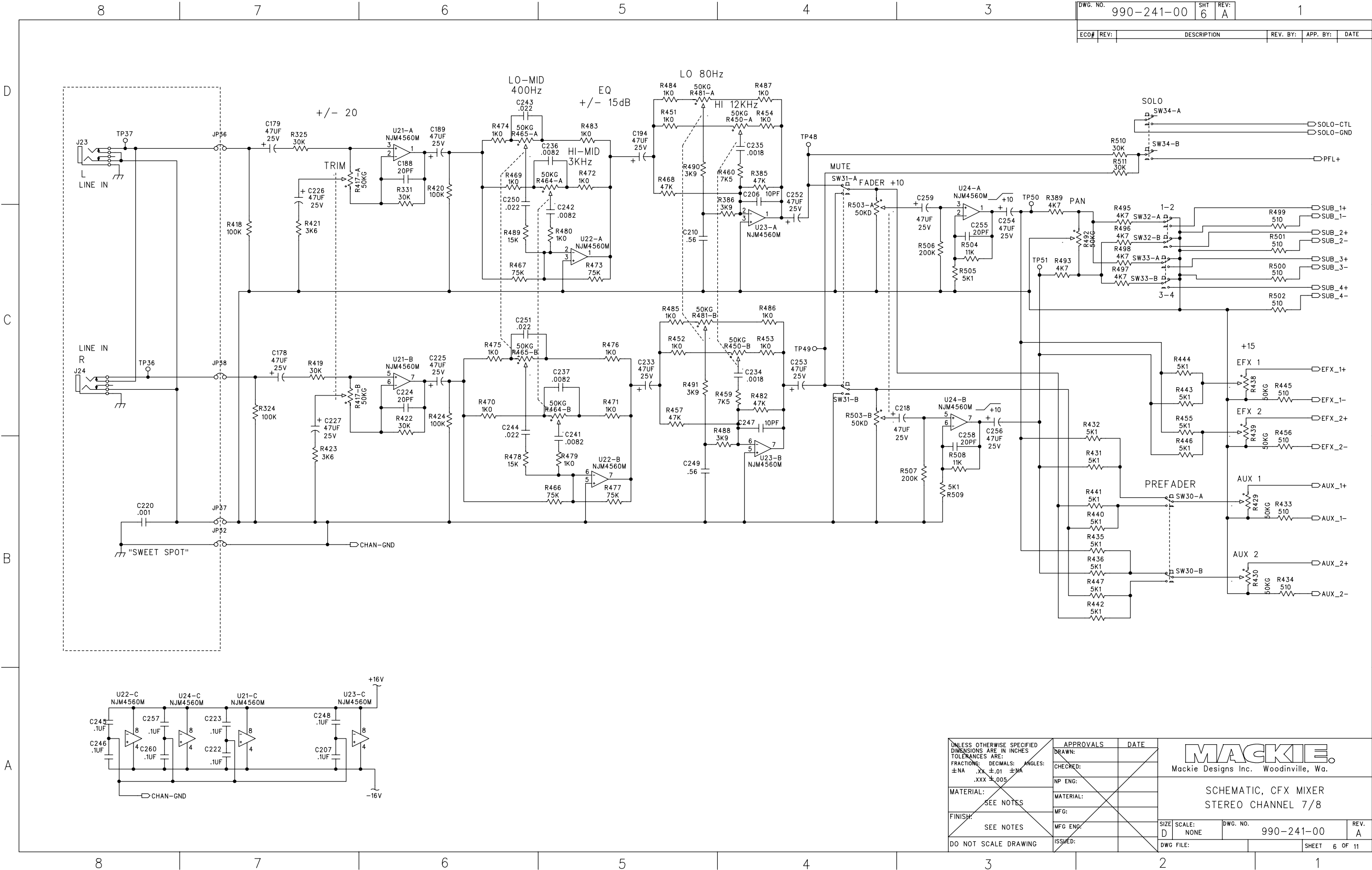


241-4 MASTER BOARD 241 REV A

|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 5        | REV:     | A    | 1 |
| ECO#     | REV:       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

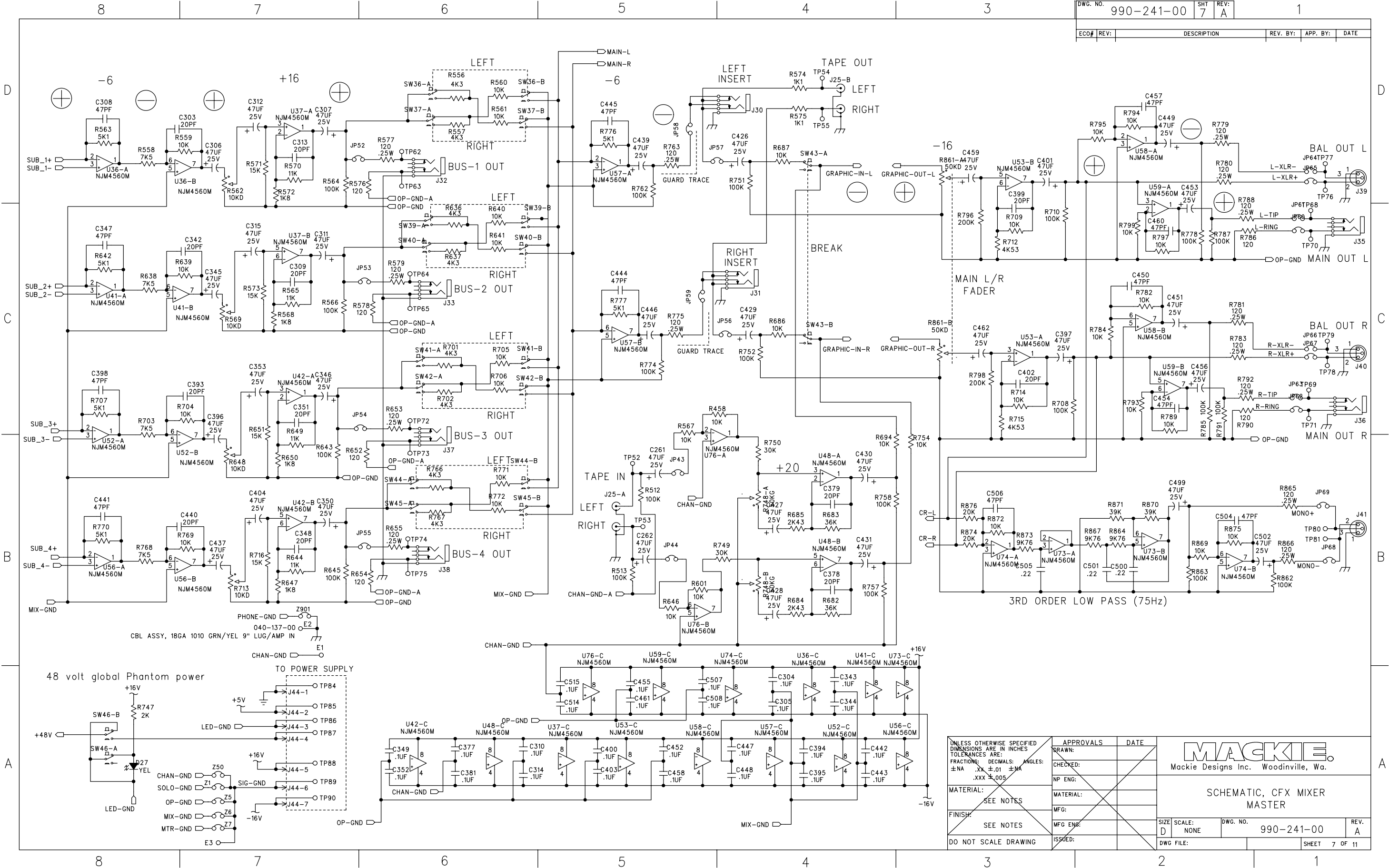


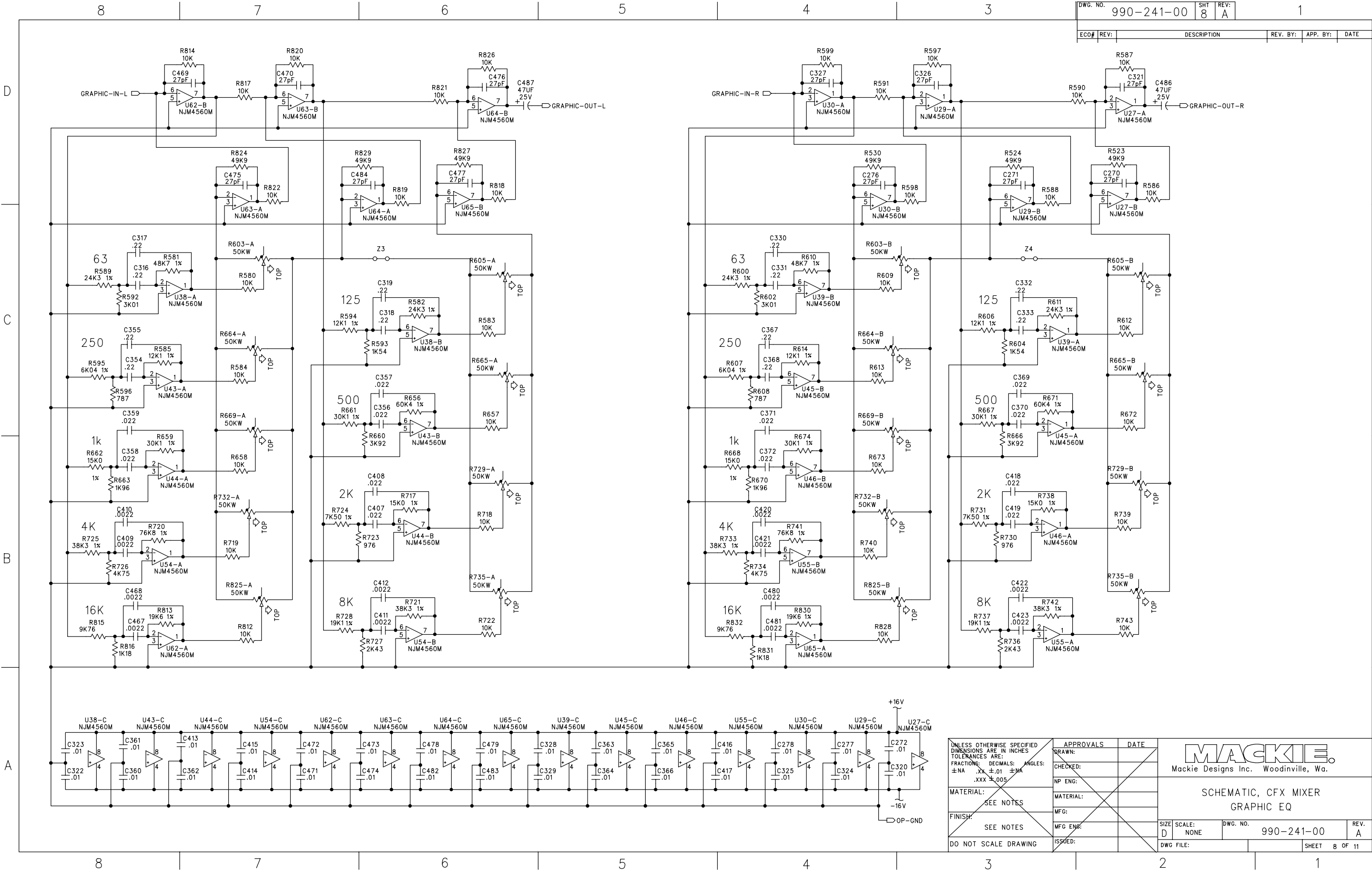
|                                                                                                                                               |           |               |      |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------|------|--|--|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>±.NA .XX ±.01 ±.NA<br>.XXX ±.005 | APPROVALS |               | DATE |  |  |
|                                                                                                                                               | DRAWN:    |               |      |  |  |
|                                                                                                                                               | CHECKED:  |               |      |  |  |
|                                                                                                                                               | NP ENG:   |               |      |  |  |
| MATERIAL:                                                                                                                                     | SEE NOTES |               |      |  |  |
| FINISH:                                                                                                                                       | SEE NOTES |               |      |  |  |
| DO NOT SCALE DRAWING                                                                                                                          | ISSUED:   |               |      |  |  |
| <b>MACKIE.</b><br>Mackie Designs Inc. Woodinville, Wa.                                                                                        |           |               |      |  |  |
| SCHEMATIC, CFX MIXER<br>STEREO CHANNEL 5/6                                                                                                    |           |               |      |  |  |
| SIZE                                                                                                                                          | SCALE:    | DWG. NO.      | REV. |  |  |
| D                                                                                                                                             | NONE      | 990-241-00    | A    |  |  |
| DWG FILE:                                                                                                                                     |           | SHEET 5 OF 11 |      |  |  |



|                                                                                                                                               |           |  |                                                 |                |                        |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------|--|-------------------------------------------------|----------------|------------------------|-----------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>±.NA .XX ±.01 ±.NA<br>.XXX ±.005 | APPROVALS |  | DATE                                            |                |                        |           |
|                                                                                                                                               | DRAWN:    |  | MACKIE.<br>Mackie Designs Inc. Woodinville, Wa. |                |                        |           |
|                                                                                                                                               | CHECKED:  |  |                                                 |                |                        |           |
|                                                                                                                                               | NP ENG:   |  |                                                 |                |                        |           |
| MATERIAL:                                                                                                                                     | MATERIAL: |  | SCHEMATIC, CFX MIXER<br>STEREO CHANNEL 7/8      |                |                        |           |
| SEE NOTES                                                                                                                                     | MFG:      |  |                                                 |                |                        |           |
| FINISH:                                                                                                                                       | MFG ENG:  |  |                                                 |                |                        |           |
| SEE NOTES                                                                                                                                     | ISSUED:   |  | SIZE<br>D                                       | SCALE:<br>NONE | DWG. NO.<br>990-241-00 | REV.<br>A |
| DO NOT SCALE DRAWING                                                                                                                          |           |  | DWG FILE:                                       |                | SHEET 6 OF 11          |           |

|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 7        | REV.     | A    | 1 |
| ECO#     | REV.       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

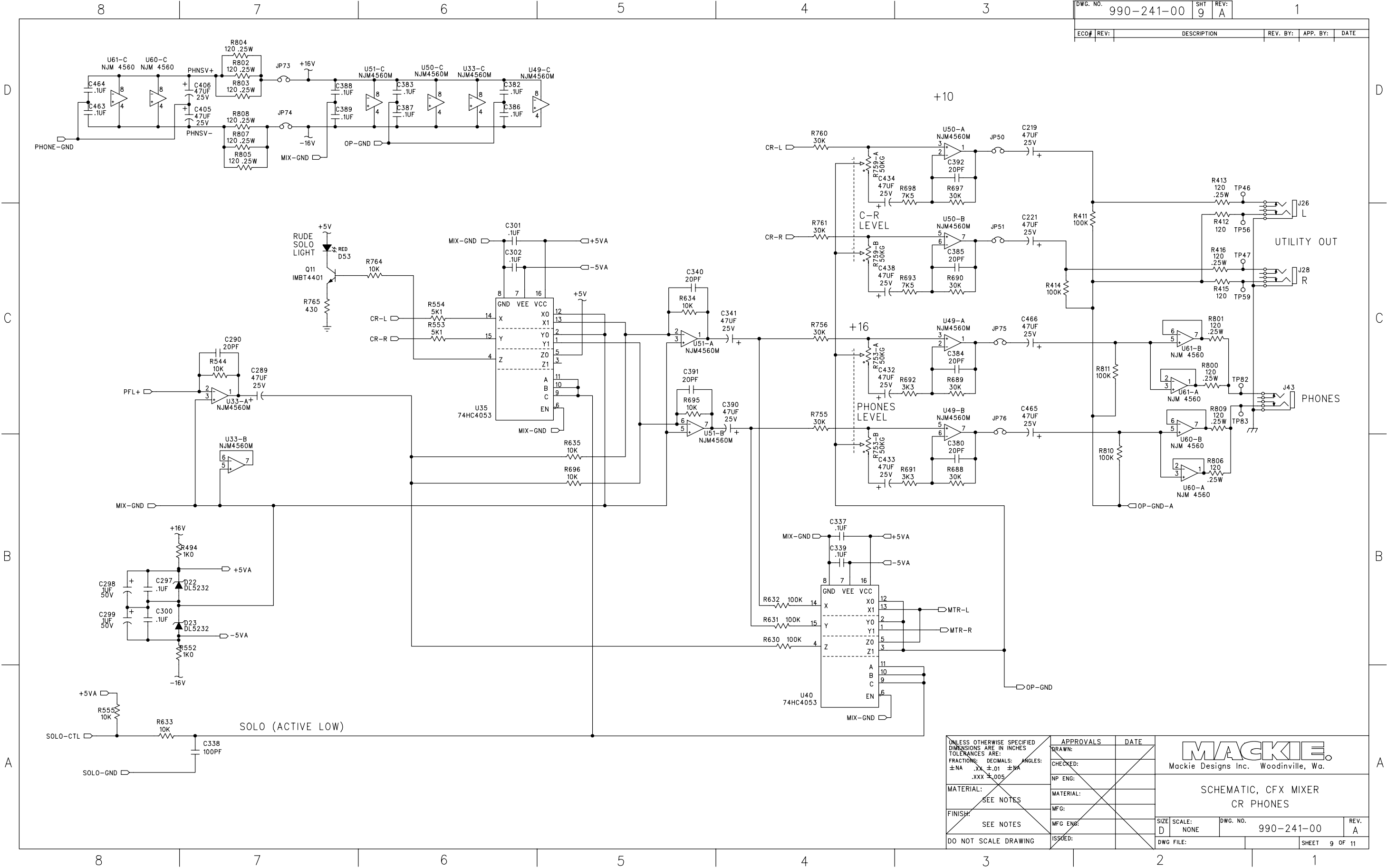




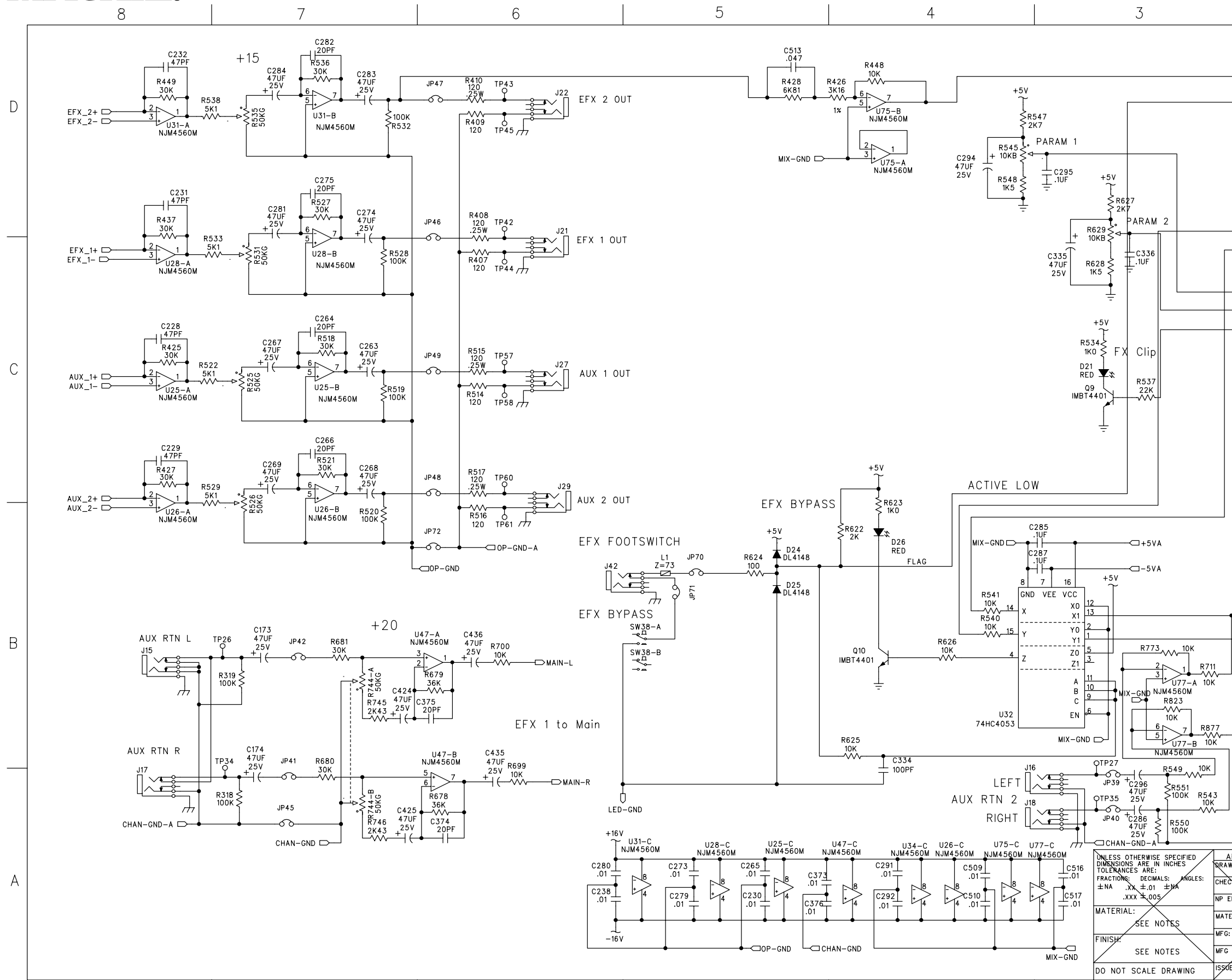
241-8

MASTER BOARD 241 REV A

|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 9        | REV:     | A    | 1 |
| ECO#     | REV:       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

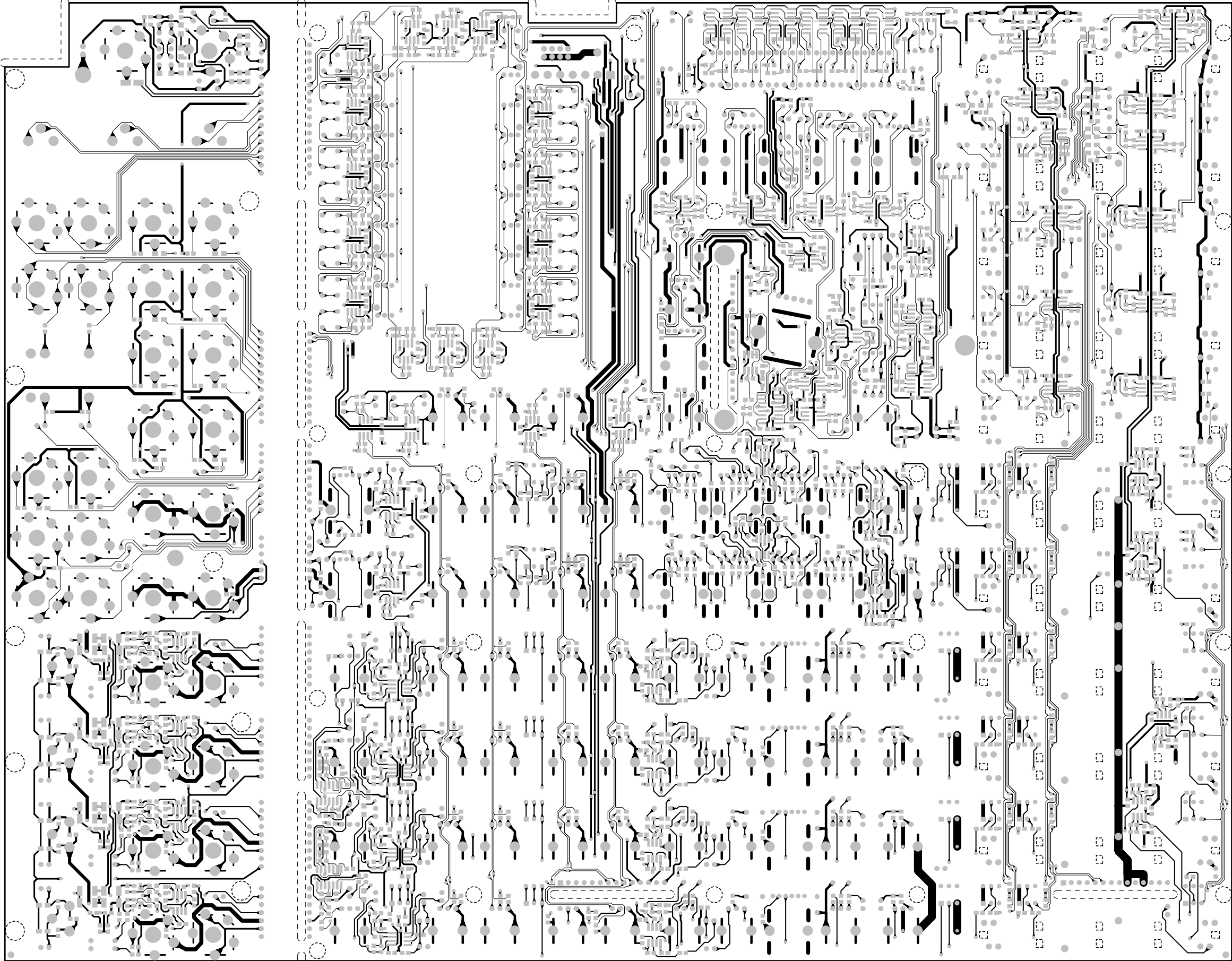


|                                                                                                                                                                                               |           |      |                                                                                                                                                                                                               |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>±.NA .XX ±.01 ±.NA<br>.XXX ±.005<br>MATERIAL:<br>FINISH:<br>DO NOT SCALE DRAWING | APPROVALS | DATE | <div><b>MACKIE.</b><br/>Mackie Designs Inc. Woodinville, Wa.</div> <div>SCHEMATIC, CFX MIXER<br/>CR PHONES</div> <div>SIZE: D SCALE: NONE DWG. NO. 990-241-00 REV. A</div> <div>DWG FILE: SHEET 9 OF 11</div> |  |  |
|                                                                                                                                                                                               | DRAWN:    |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               | CHECKED:  |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               | NP ENG:   |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               | MATERIAL: |      |                                                                                                                                                                                                               |  |  |
| SEE NOTES                                                                                                                                                                                     | MFG:      |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               | MFG ENG:  |      |                                                                                                                                                                                                               |  |  |
| SEE NOTES                                                                                                                                                                                     | ISSUED:   |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               |           |      |                                                                                                                                                                                                               |  |  |



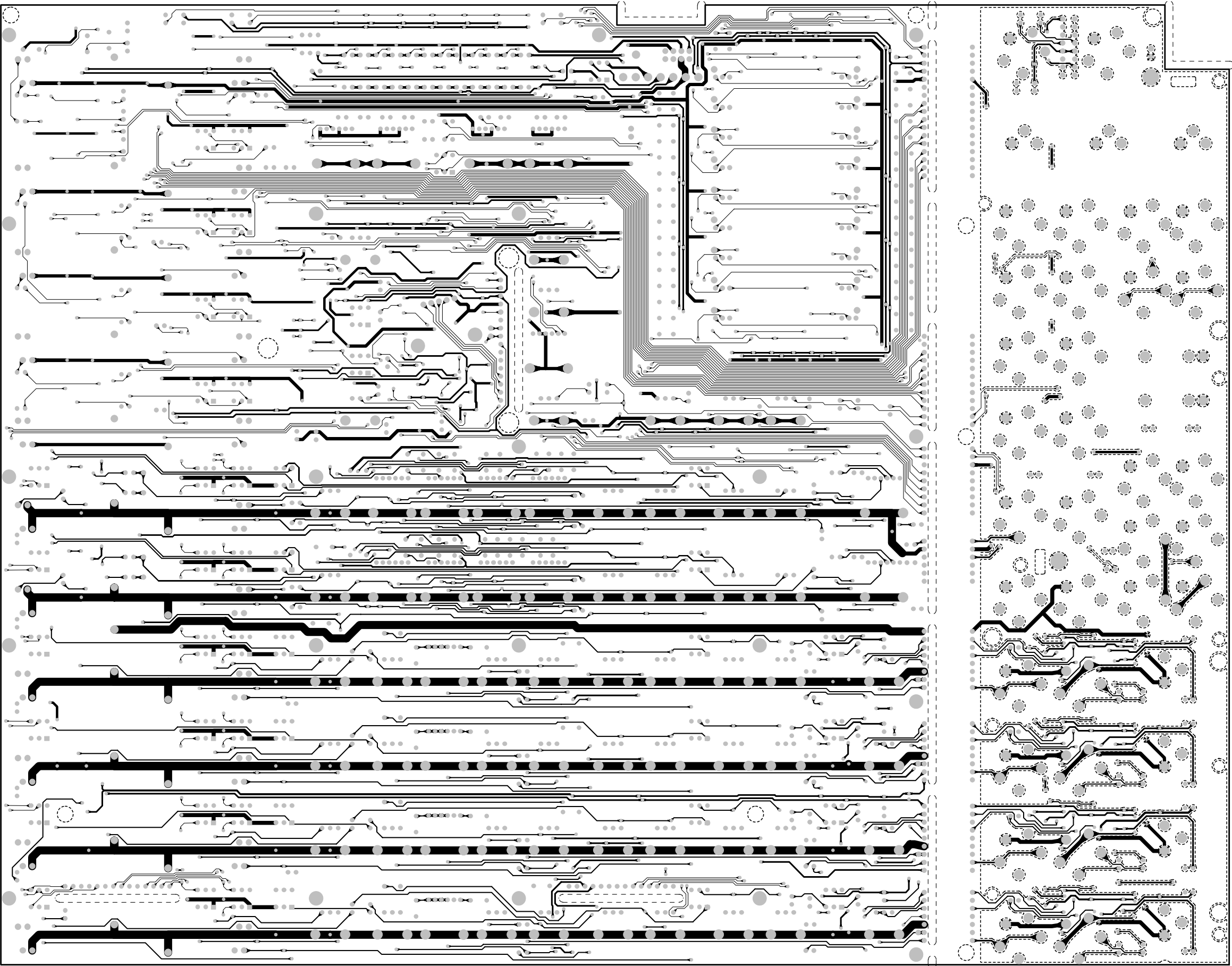




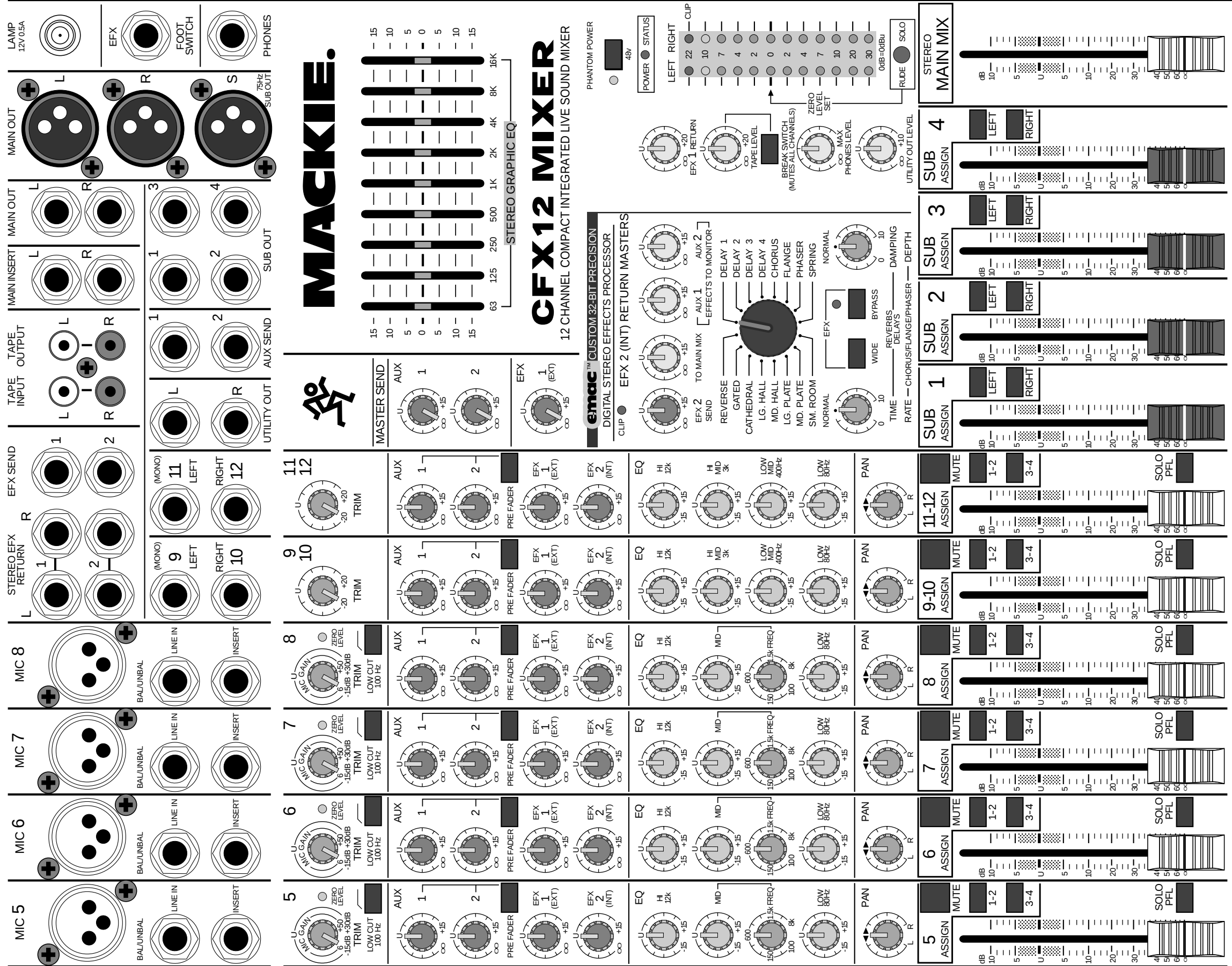


Top of Board  
(if this has been printed double-sided, and has been lined up correctly, you can shine a light through this page and see the bottom of the board's traces and pads. Sometimes this works, sometimes not.

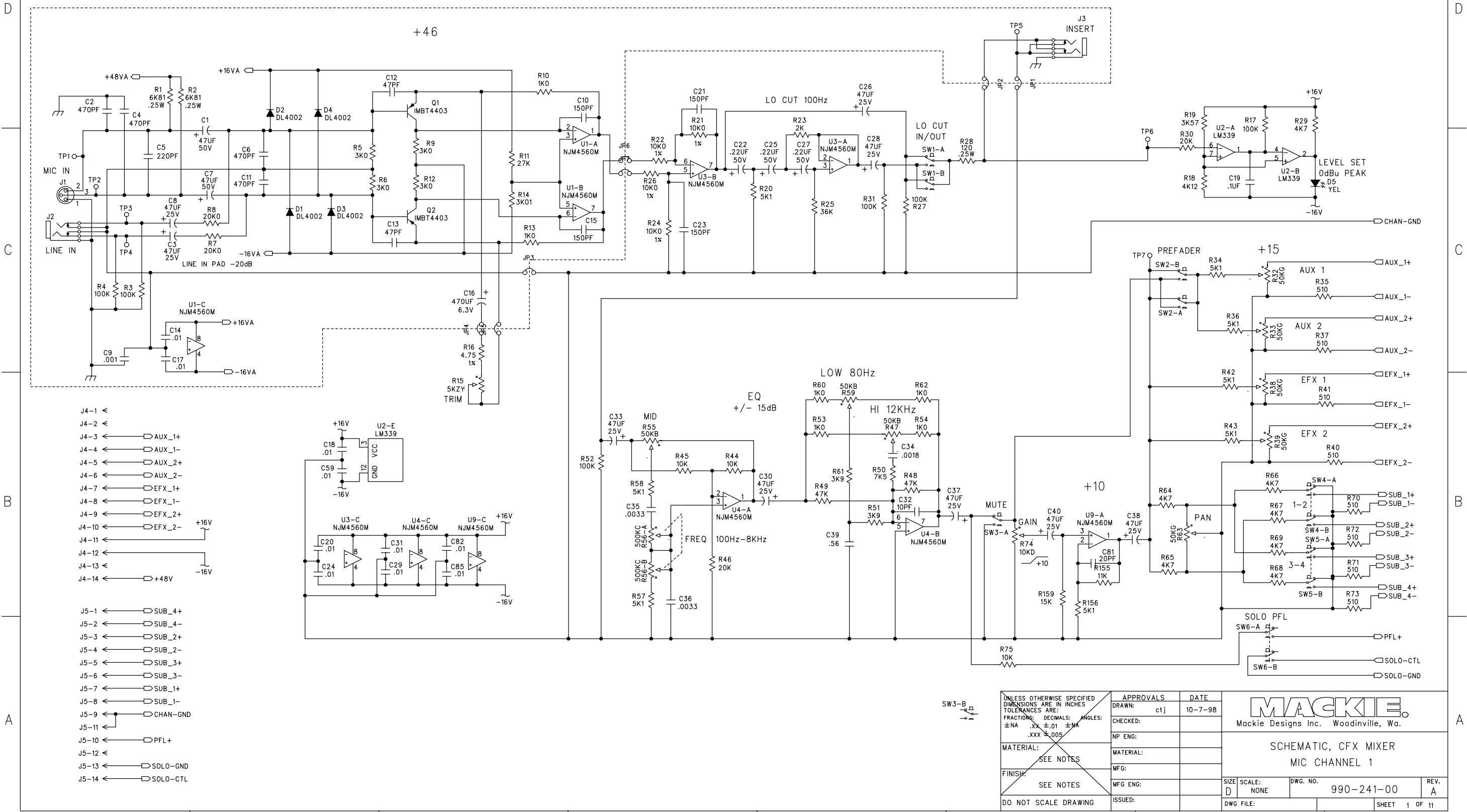
Bottom of Board

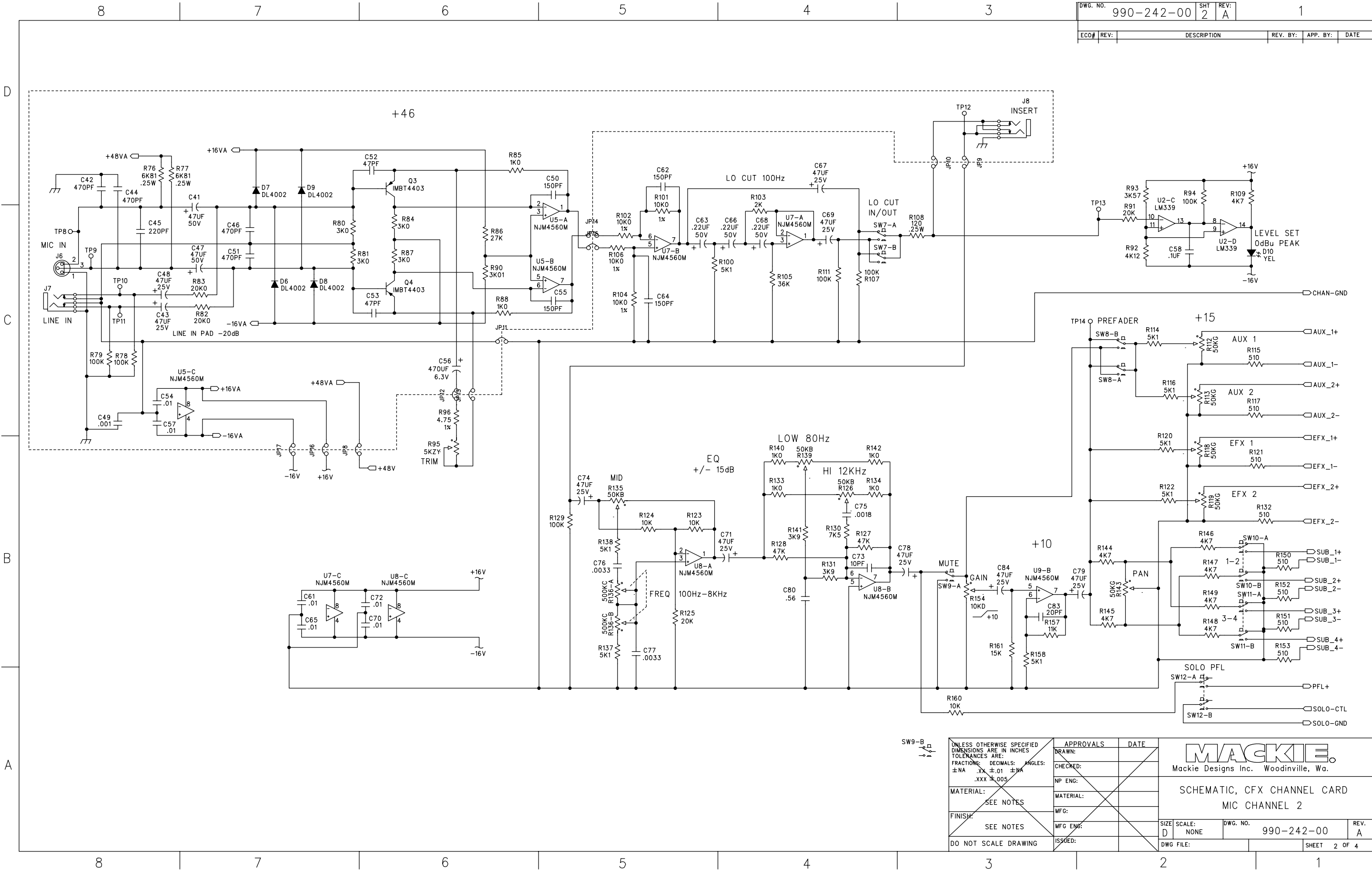


I hope that this is useful. If it helps even one technician out in the big wide world, then it will have been worthwhile.



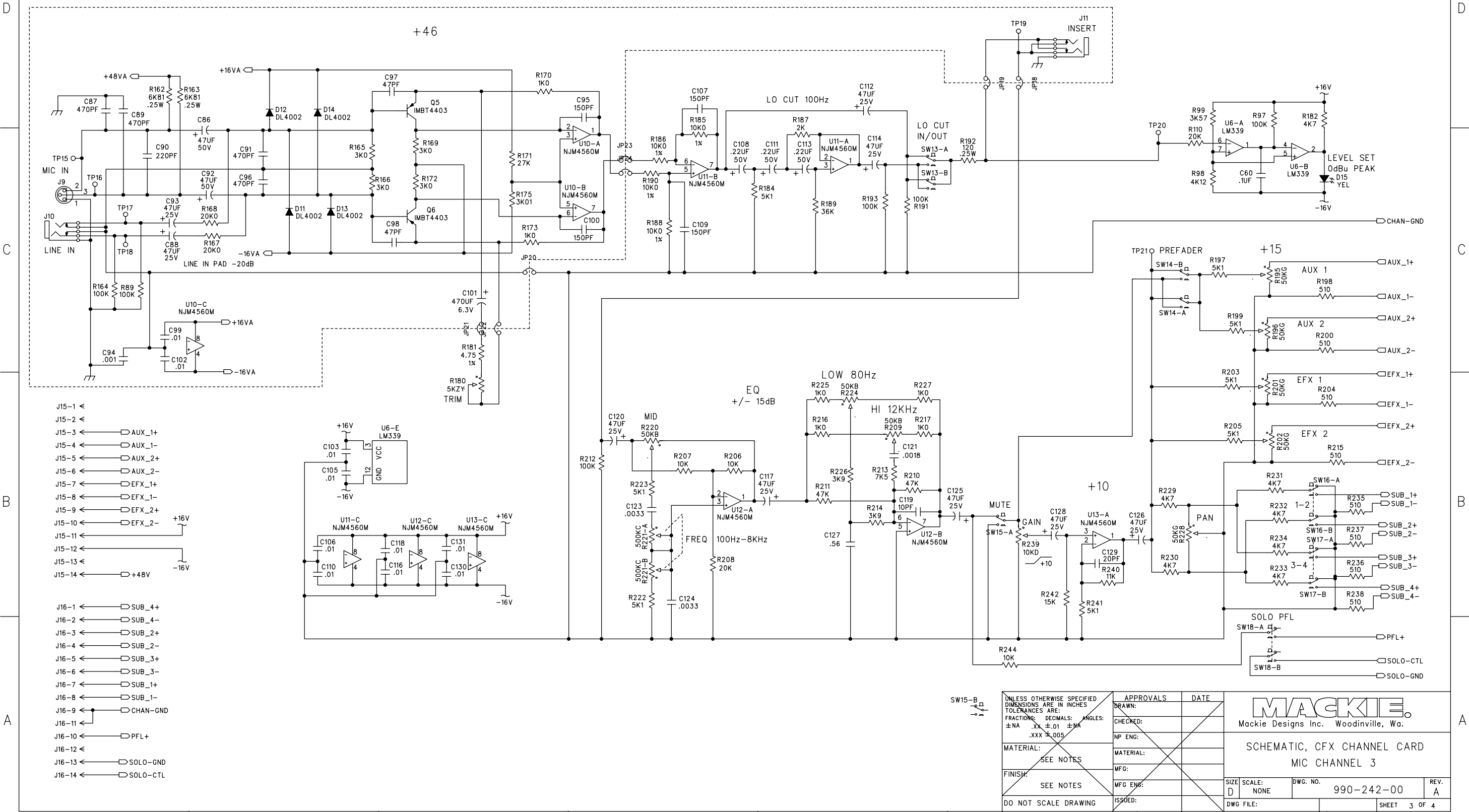
|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 1        | REV.     | A    | 1 |
| ECO#     | REV.       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

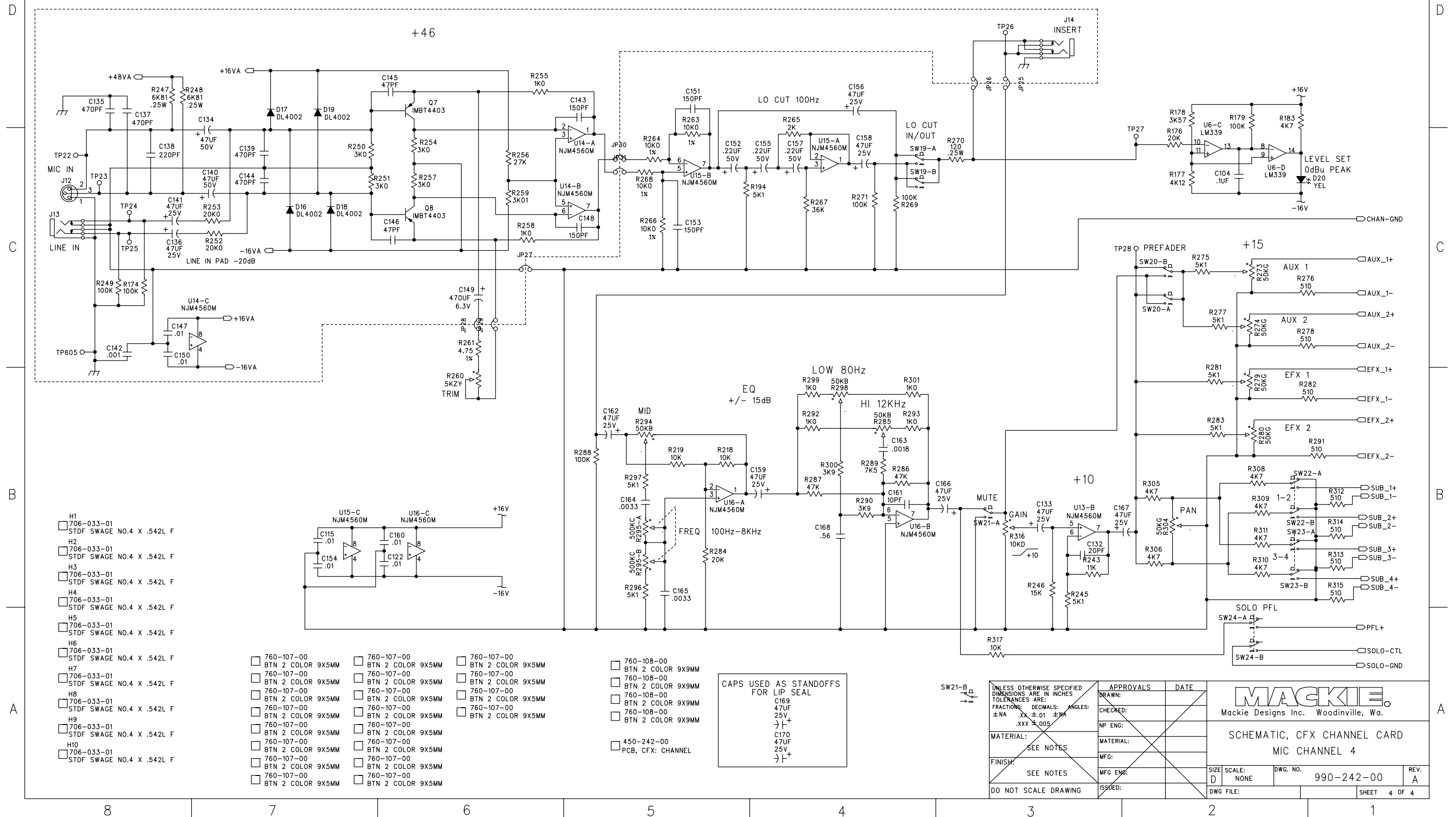


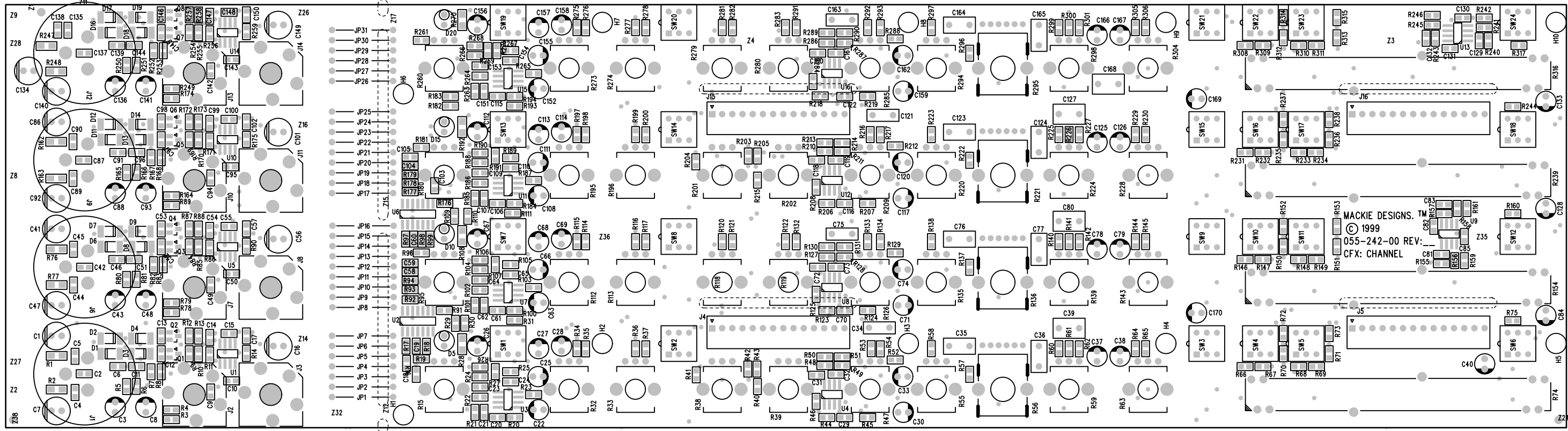
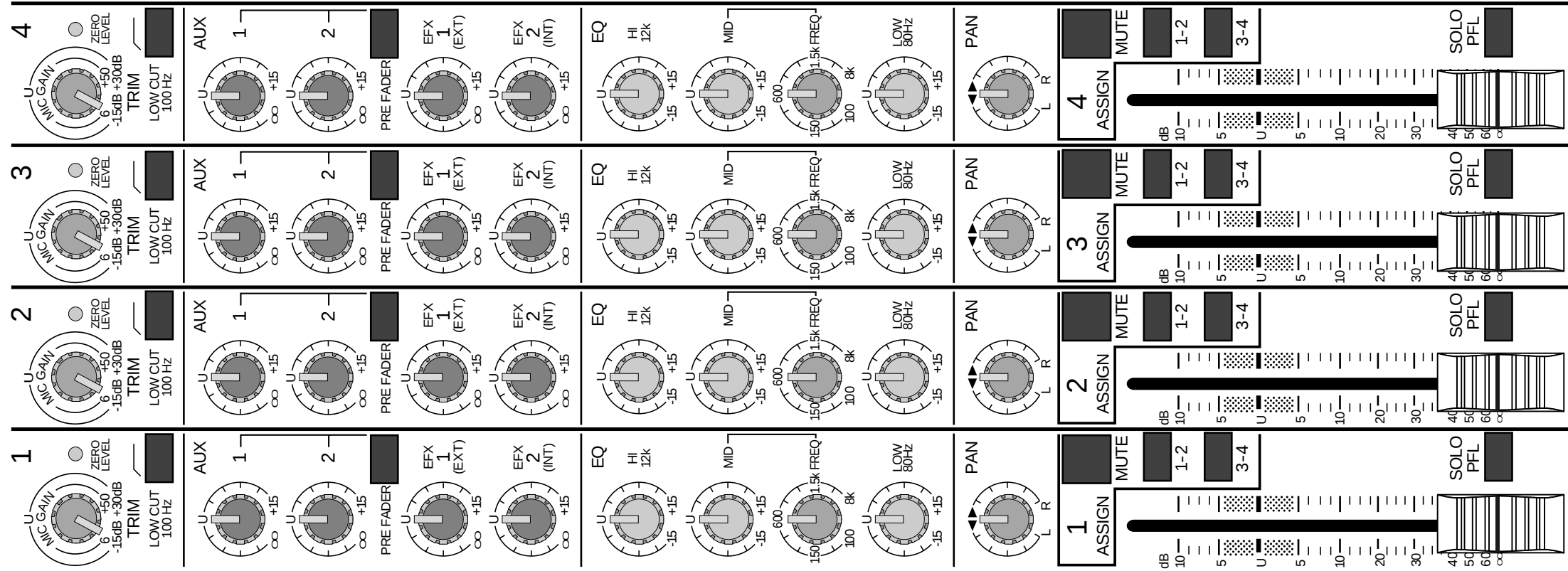
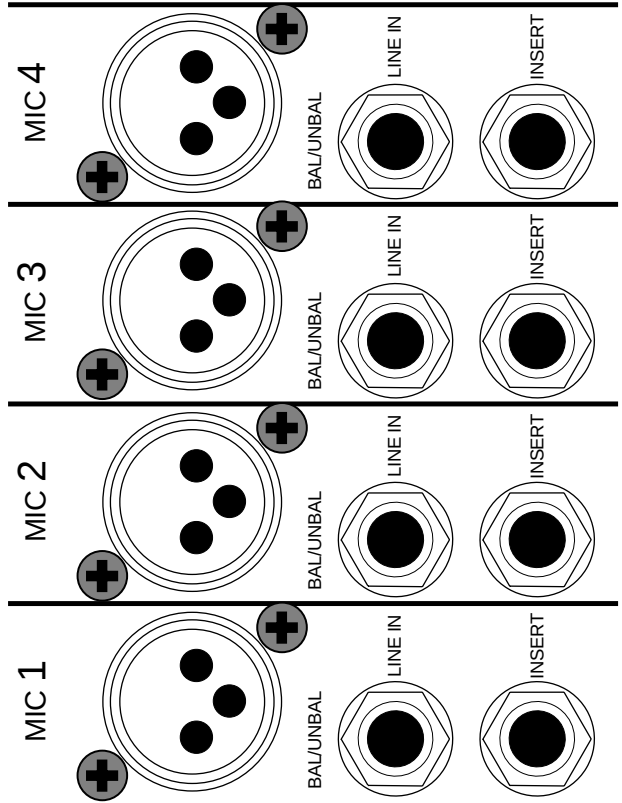


|                                                                                                                                             |             |                                                                                                                                  |        |                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>±NA .XX ±.01 ±NA<br>.XXX ±.005 |             | APPROVALS<br>DRAWN: _____<br>CHECKED: _____<br>NP ENG: _____<br>MATERIAL: _____<br>MFG: _____<br>MFG ENG: _____<br>ISSUED: _____ |        | DATE<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____ |
| MATERIAL: SEE NOTES                                                                                                                         |             | MATERIAL: _____                                                                                                                  |        | MACKIE.<br>Mackie Designs Inc. Woodinville, Wa.                              |
| FINISH: SEE NOTES                                                                                                                           |             | MFG: _____                                                                                                                       |        |                                                                              |
| DO NOT SCALE DRAWING                                                                                                                        |             | ISSUED: _____                                                                                                                    |        | SCHEMATIC, CFX CHANNEL CARD<br>MIC CHANNEL 2                                 |
|                                                                                                                                             |             |                                                                                                                                  |        |                                                                              |
| SIZE: D                                                                                                                                     | SCALE: NONE | DWG. NO. 990-242-00                                                                                                              | REV. A | SHEET 2 OF 4                                                                 |
| DWG FILE: _____                                                                                                                             |             |                                                                                                                                  |        |                                                                              |

|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-242-00 | SHT         | 3        | REV.     | A    | 1 |
| ECO#     | REV.       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

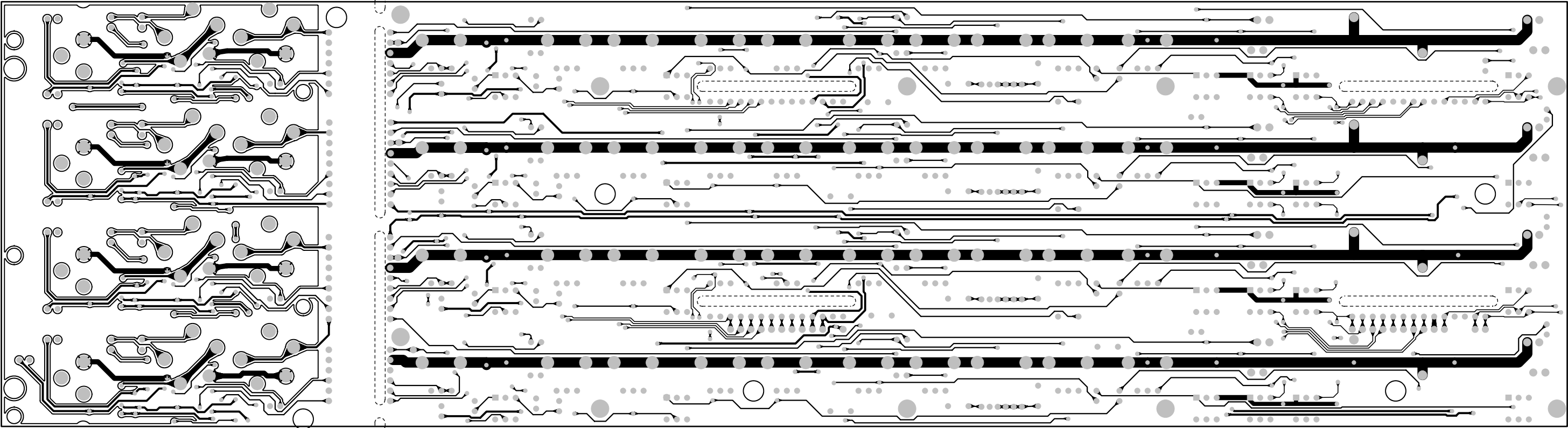




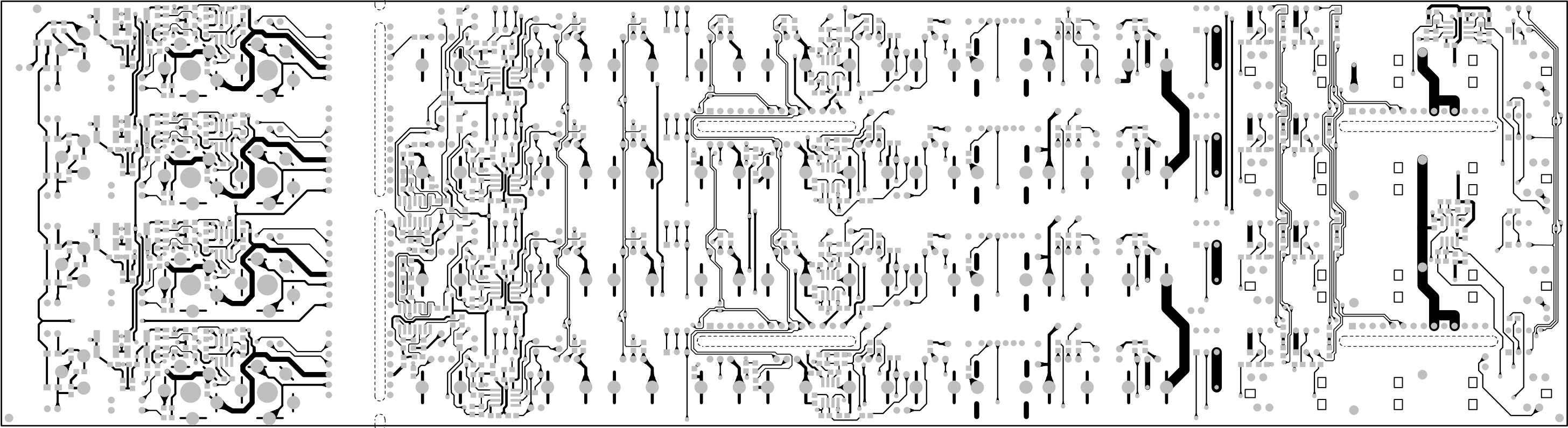


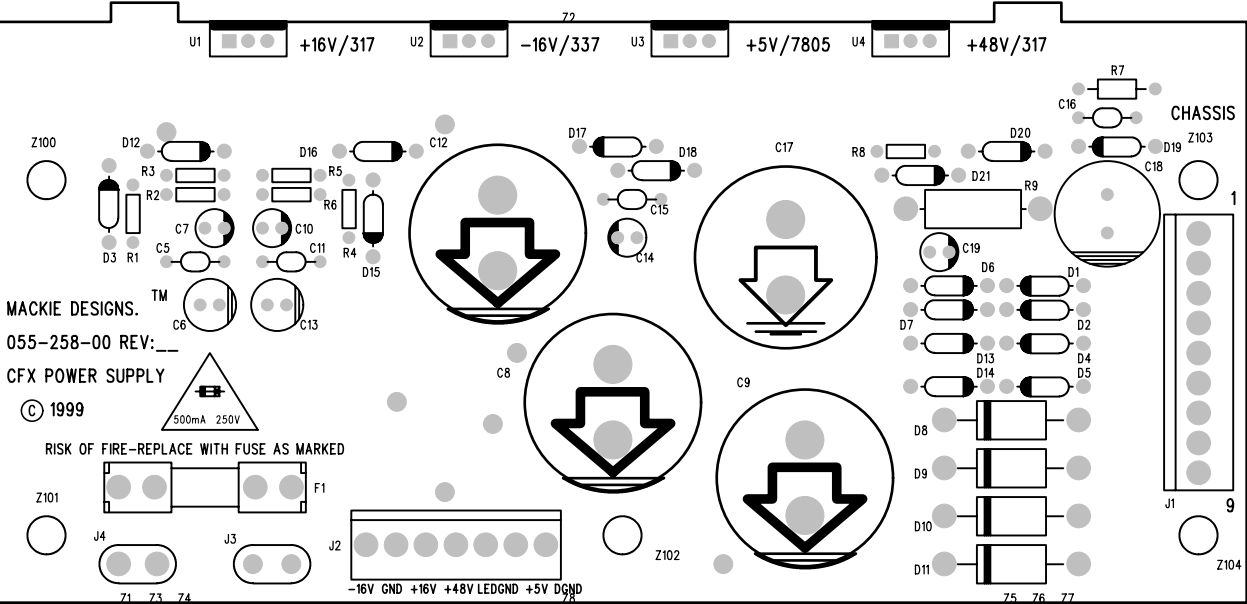
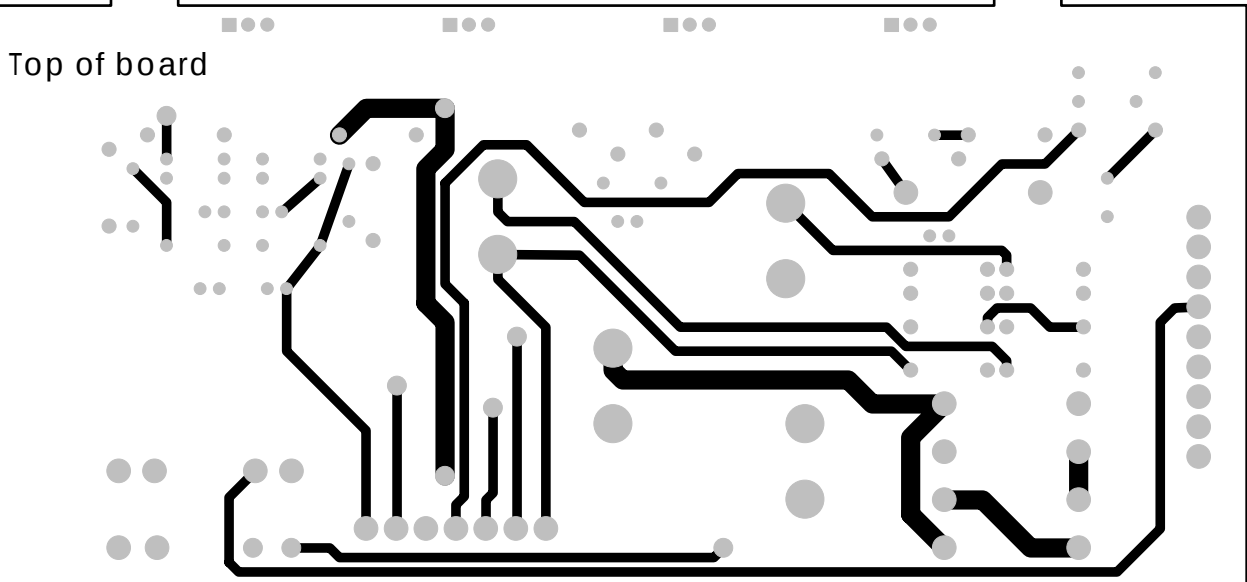
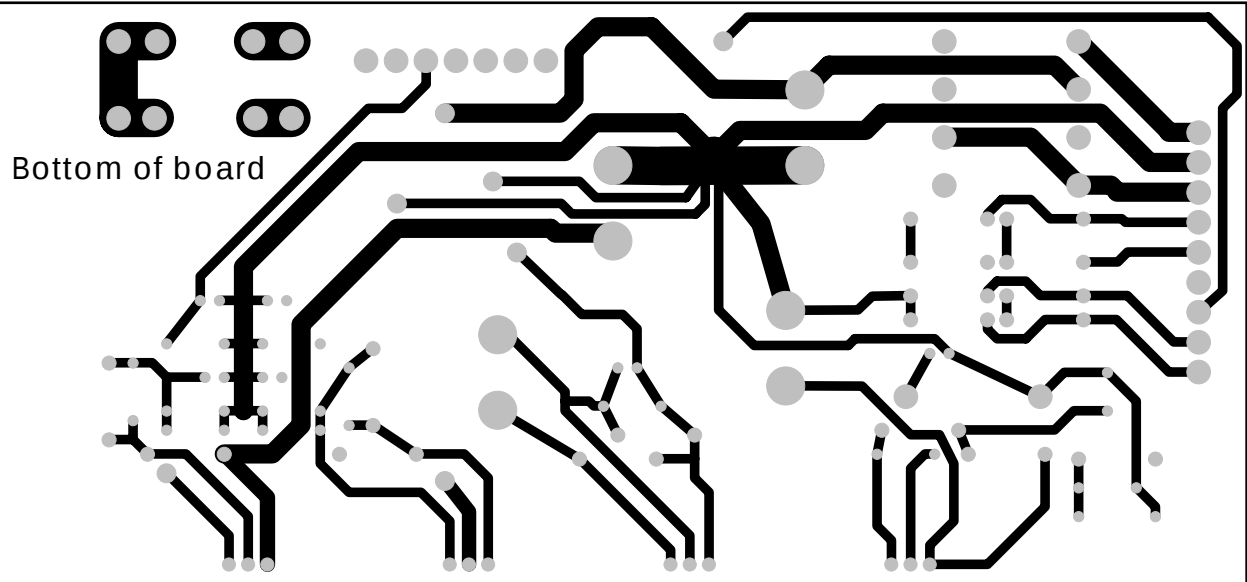
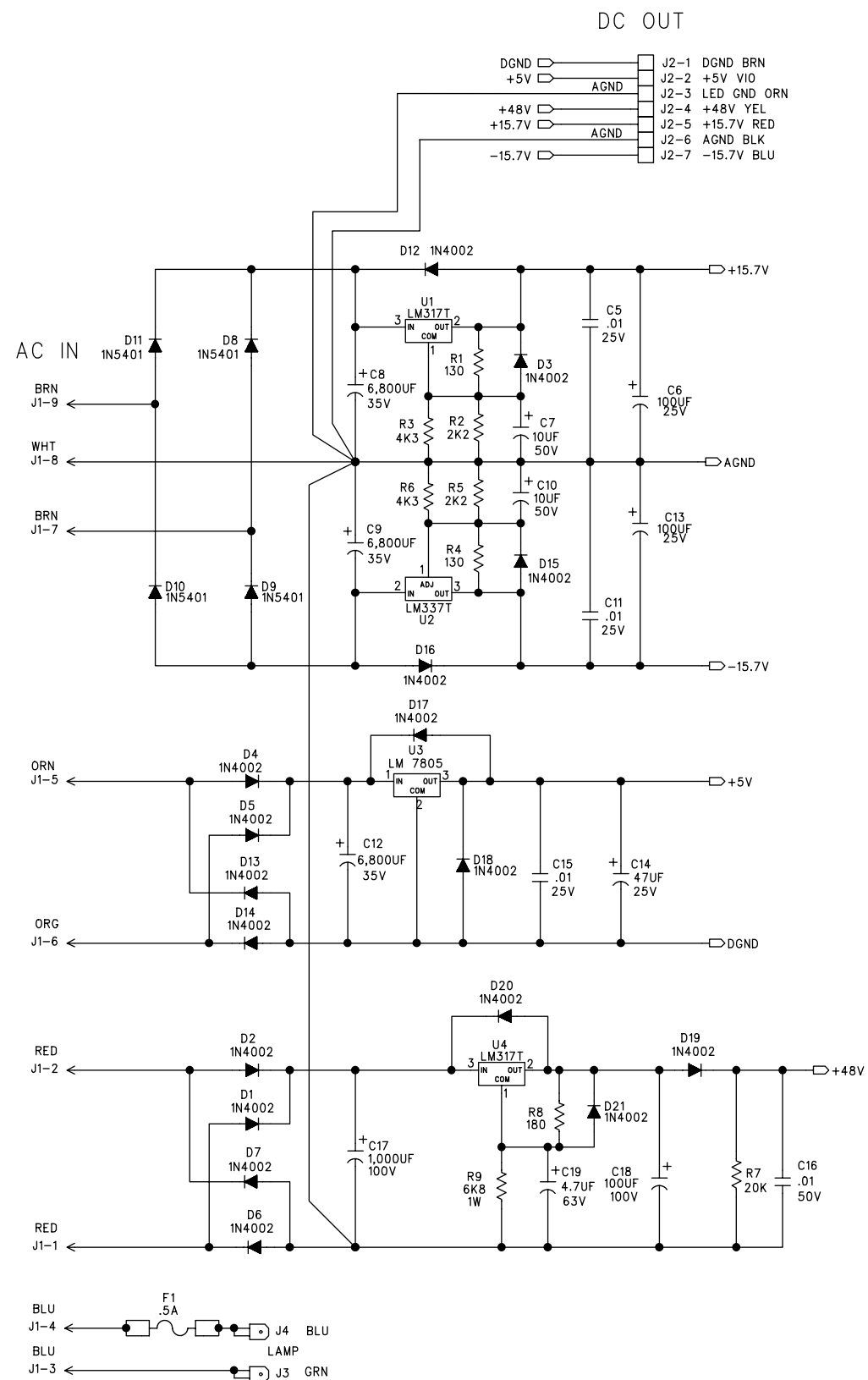
The CFX•12 has one of these boards, it adds four channels to the eight channels of the main board 241.  
 The CFX•16 has two of these boards.  
 The CFX•20 has three.

Bottom of Board

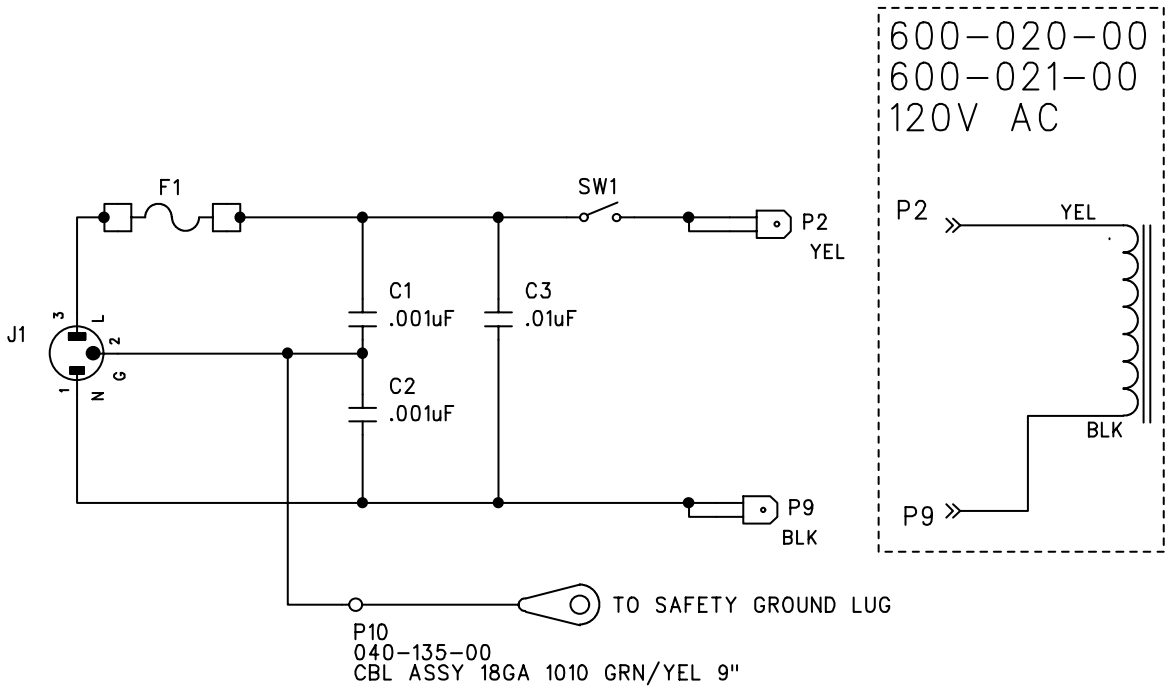


Top of Board



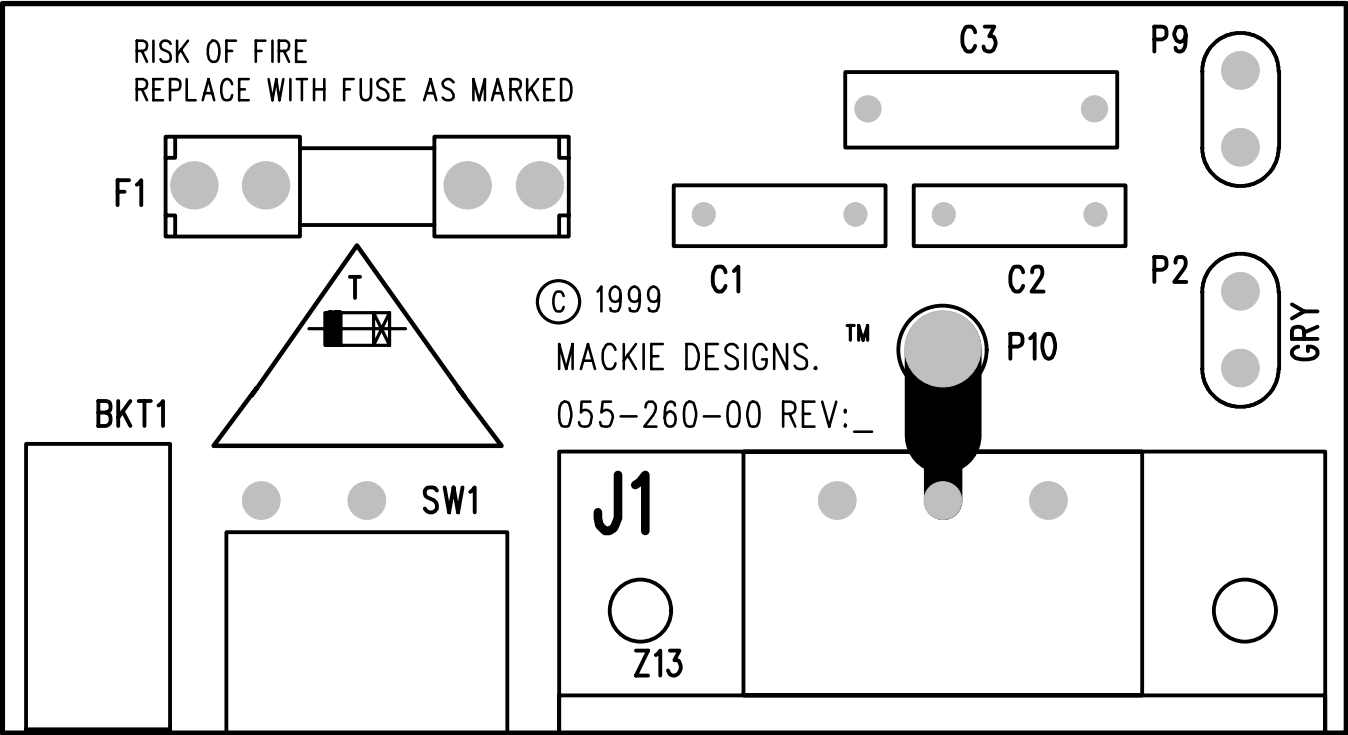
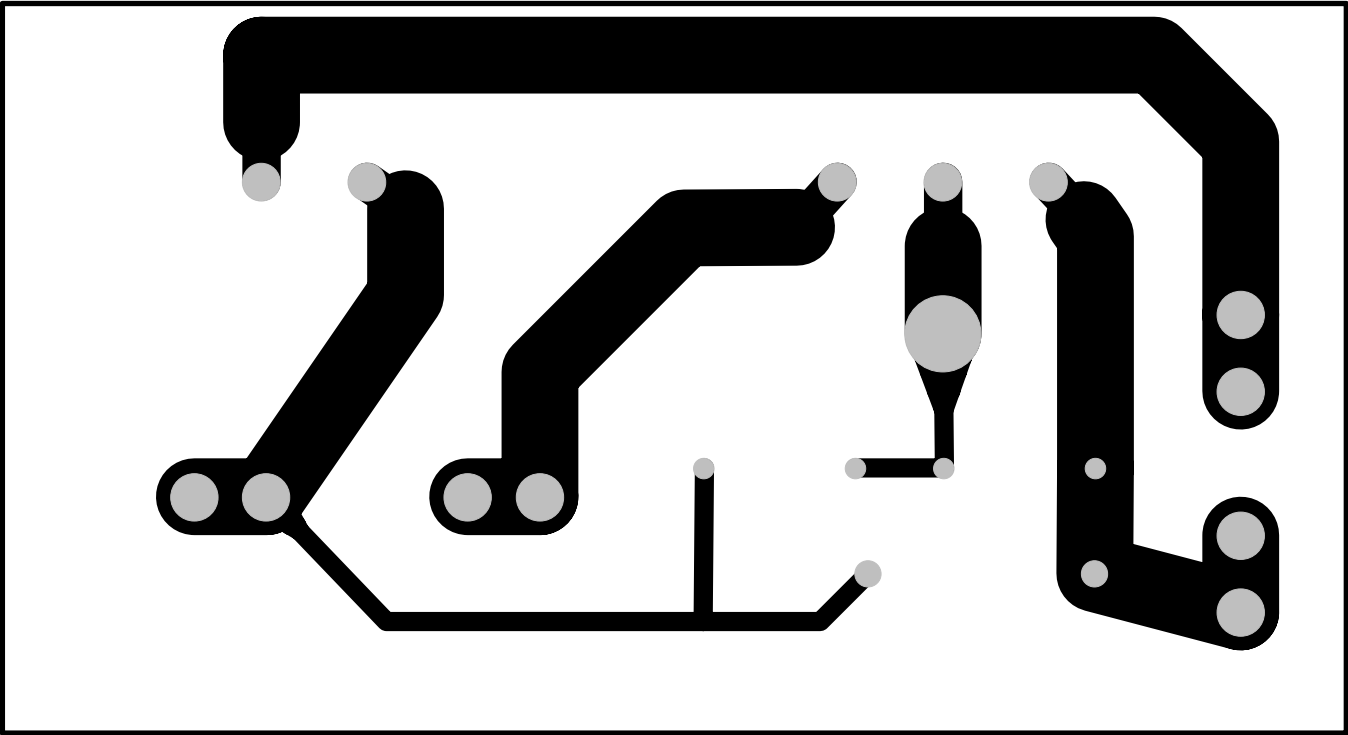


| DASH #     | VERSION    | FUSE USED                     |
|------------|------------|-------------------------------|
| 055-260-01 | CFX 100VAC | 0.5A SLO-BLO 250V 510-002-00  |
| 055-260-02 | CFX 120VAC | 1.0A SLO-BLO 250V 510-001-00  |
| 055-260-03 | CFX 230VAC | 1.25A SLO-BLO 250V 510-025-00 |



- 712-021-01 RIVET, CL END .125
- 712-020-00 BRKT ANG 6-32X.037THK STL
- 400-060-00 FUSE CLIP PCMT 5MM DIA
- 450-260-00 PCB, CFX AC POWER INPUT

Bottom of board



Top of board

## CFX•12 Parts List

| PART#         | REV | DESCRIPTION                | PAGE |
|---------------|-----|----------------------------|------|
| 090-120-00    | A3  | CFX12                      | 2    |
| 070-120-XX    | A40 | BOMSHELL CFX12             | 2    |
| 055-192-00-01 | C11 | EFFECTS PCB ASSEMBLY       | 4    |
| 055-241-00-03 | C05 | MASTER PCB ASSEMBLY        | 5    |
| 055-242-00-02 | C05 | SLAVE PCB ASSEMBLY         | 9    |
| 055-258-00-01 | A10 | POWER SUPPLY PCB ASSEMBLY  | 11   |
| 055-260-00-02 | B00 | AC INPUT PCB ASSEMBLY      | 12   |
| 080-144-00    | D   | BNC ASSEMBLY               | 12   |
| 080-142-00    | B   | TRANSFORMER ASSY -010 120V | 12   |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## 090-120-00 REV A3 CFX12 FINAL ASSEMBLY

| PART #       | REV | DESCRIPTION                    | QTY | NOTES       |
|--------------|-----|--------------------------------|-----|-------------|
| 070-120-XX   | A40 | BOMSHELL CFX12                 | 1   | SEE BELOW   |
| ⚠ 080-142-00 | B   | TRANSFORMER ASSEMBLY -010 120V | 1   | SEE PAGE 12 |
| ⚠ 510-001-00 | B   | FUSE SB 1A 5X20MM 250V UL      | 1   | FOR 120 VAC |
| 640-001-00   | D   | LC IEC SJT 10A/125V 6FT        | 1   | LINECORD    |
| 820-104-00   | C00 | OWNERS MANUAL                  | 1   |             |

## 070-120-XX REV A40 BOMSHELL CFX12

| PART #        | REV | DESCRIPTION                     | QTY | NOTES       |
|---------------|-----|---------------------------------|-----|-------------|
| 040-358-00    | B   | RIBBON CABLE 18G 7P .156 16IN   | 1   |             |
| 055-192-00-01 | C11 | EFFECTS ASSEMBLY                | 1   | SEE PAGE 4  |
| 055-241-00-03 | C05 | MASTER PCB ASSEMBLY             | 1   | SEE PAGE 5  |
| 055-242-00-02 | C05 | SLAVE PCB ASSEMBLY              | 1   | SEE PAGE 9  |
| 055-258-00-01 | A10 | POWER SUPPLY ASSEMBLY           | 1   | SEE PAGE 11 |
| 055-260-00-02 | B00 | AC INPUT ASSEMBLY               | 1   | SEE PAGE 12 |
| 080-144-00    | D   | BNC ASSEMBLY                    | 1   | SEE PAGE 12 |
| 400-365-00    | A   | QDISK TAB .250 M #6 MNT         | 1   |             |
| ⚠ 410-005-00  | A   | INSL SILPAD TO-220              | 4   |             |
| 550-442-00    | B1  | SILKSCREENED CHASSIS TOP CFX 12 | 1   |             |
| 550-445-00    | A1  | CHASSIS BOTTOM CFX 12           | 1   |             |
| 550-462-00    | A1  | CLAMP TO-220 X 4                | 1   |             |
| 550-491-00    | A1  | FAB PLT HTSK CFX PWR SPLY       | 1   |             |
| 550-551-10    | A1  | PAINTED LEFT SIDE CFX           | 1   |             |
| 550-551-20    | A1  | PAINTED RIGHT SIDE CFX          | 1   |             |
| 550-552-00    | B1  | SILKSCREENED BACK CFX 12        | 1   |             |
| 620-045-00    | A   | CBL FLT 14C W/PINS 3.5IN        | 2   |             |
| 700-010-00    | A   | TF 6-32X1/4 PHP BLKZC           | 26  |             |
| 700-011-00    | A   | MCH 4-40X1/4 BTNSKT BLKX        | 34  |             |
| 700-028-01    | B   | SEMS 6-32X5/16 PHP BLKZC        | 6   |             |
| 700-028-03    | B   | SEMS 6-32X1/2 PHP BLKZC         | 4   |             |
| 701-016-00    | A   | 5-20X5/16 PHP II TYP B BLK      | 23  |             |
| 705-001-00    | A   | KEPNUT 6-32                     | 4   |             |
| 0000223       | A   | NUT, HEX, THREADED, 1/4"        | 0   |             |
| 705-008-00    | A   | NUT LOCK 8-32                   | 2   |             |
| 0000222       | A   | WASHER                          | 0   |             |
| 750-001-00    | A   | FEET BUMPON ROUND BLK .63X.31   | 4   |             |
| 760-037-01    | C00 | KNOB SLIDE 10X25MM MLDLIN       | 11  |             |
| 760-037-03    | C00 | KNOB SLIDE 11X24 BLUE           | 4   |             |

continued



Bomshell CFX12 continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 760-048-01 | B   | KNOB 9MM LT GRY           | 17  |       |
| 760-048-02 | B   | KNOB 9MM MAGENTA          | 44  |       |
| 760-048-03 | B   | KNOB 9MM BLU/GRY          | 34  |       |
| 760-048-04 | B   | KNOB 9MM DARK GRAY        | 18  |       |
| 760-091-00 | A   | KNOB MASTER VOLUME        | 1   |       |
| 780-050-00 | A   | LIPSEAL MASTER CFX        | 1   |       |
| 780-051-00 | A   | LIPSEAL SLAVE 4 CFX       | 1   |       |
| 790-002-00 | A   | BAG POLY 12 X 18 2MIL     | 1   |       |
| 790-027-00 | A   | BAG POLY 20X7X36 4MIL GUS | 1   |       |
| 800-130-00 | B   | BOX CMPT CFX 12           | 1   |       |
| 810-083-00 | A   | FOAM FRONT CMPT CFX       | 1   |       |
| 810-084-00 | A   | FOAM REAR CMPT CFX        | 1   |       |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



**055-192-00-01 REV C11 EFFECTS ASSEMBLY (as used in PPM powered mixers)**

| PART #        | REV | DESCRIPTION             | QTY | NOTES     |
|---------------|-----|-------------------------|-----|-----------|
| 220-011-00    | A1  | LYT 100UF 20% 25V RAD   | 1   |           |
| 315-017-00    | A   | XTAL 24.576MHZ LOW PROF | 1   |           |
| 400-280-00    | A   | HDR SKT 16P .1X1 STR    | 1   |           |
| 050-192-00-01 | C11 | EFFECTS PCB ASSEMBLY    | 1   | SEE BELOW |

**050-192-00-01 REV C11 EFFECTS PCB ASSEMBLY**

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 140-009-00 | A   | RES TF SM .1W 5% 2.2 OHM  | 1   |       |
| 140-049-00 | A   | RES TF SM .1W 5% 100 OHM  | 2   |       |
| 140-053-00 | A   | RES TF SM .1W 5% 150 OHM  | 2   |       |
| 140-073-00 | A   | RES TF SM .1W 5% 1K0 OHM  | 6   |       |
| 140-089-00 | A   | RES TF SM .1W 5% 4K7 OHM  | 10  |       |
| 140-097-00 | A   | RES TF SM .1W 5% 10K OHM  | 2   |       |
| 140-114-00 | A   | RES TF SM .1W 5% 47K OHM  | 4   |       |
| 140-123-00 | A   | RES TF SM .1W 5% 100K OHM | 3   |       |
| 140-139-00 | A   | RES TF SM .1W 5% 470K OHM | 1   |       |
| 212-001-00 | B1  | CER .01UF 10% 50V X7R SM  | 2   |       |
| 212-003-00 | B1  | CER 100PF 5% 50V NPO SM   | 2   |       |
| 212-005-00 | B1  | CER 20PF 5% 50V NPO SM    | 2   |       |
| 212-007-00 | A1  | CER .047UF 20% 50V Z5U SM | 1   |       |
| 212-016-00 | A1  | CER 1000PF 5% 50V NPO SM  | 13  |       |
| 212-023-00 | B1  | CER .001UF 10% 50V NPO SM | 3   |       |
| 212-024-00 | A1  | CER 1UF 25V Y5V 1206      | 4   |       |
| 212-027-00 | A1  | CER .1UF 16V 10% X7R 0603 | 15  |       |
| 212-029-00 | A1  | CER 270PF 5% 50V NPO SM   | 2   |       |
| 212-032-00 | A1  | CER 2200PF 10% 50V X7R    | 5   |       |
| 223-003-00 | A1  | LYT 22UF 20% 6.3V SM      | 1   |       |
| 223-004-00 | B1  | LYT 10UF 20% 16V SM       | 5   |       |
| 300-003-00 | A   | DIO SW DL4148 100V SM     | 4   |       |
| 325-027-03 | A   | CMOS 74HC74A DUAL D FLPFL | 1   |       |
| 325-071-03 | A   | CMOS 74HCU04 HEX INV SM   | 1   |       |
| 329-042-03 | B   | CODEC SOUNDPORT AD1819    | 1   |       |
| 329-047-03 | B   | SRAM 32KX8 20NS SOJ SM    | 2   |       |
| 450-192-00 | C   | PCB LC EFFECTS            | 1   |       |
| 601-009-00 | A   | FERRITE SMT SIG 1K OHM    | 3   |       |
| 601-010-00 | A   | FERRITE SMT POWER         | 1   |       |
| 080-088-00 | A   | DSP PROGRAMMED ADSP-2163  | 1   |       |



055-241-00-03 REV C05 CFX MASTER PCB ASSEMBLY

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 040-357-00 | A   | DIS 22GA 1007 GRN/Y 8 QD  | 1   |       |
| 130-002-02 | A   | POT RTY 50KB 9MM MNO H TN | 12  |       |
| 130-003-02 | A   | POTRTY 50KG 9MM MN TN PAN | 36  |       |
| 130-022-02 | A   | POT RTY 10KB 9MM MONO TN  | 2   |       |
| 130-030-02 | A   | POT RTY 5KZY 9MM MNO H TN | 4   |       |
| 130-031-00 | A   | POT SLIDE 10KD 60MM MONO  | 8   |       |
| 130-032-00 | A   | POT SLIDE 50KD 60MM DUAL  | 3   |       |
| 130-061-02 | B   | POT 50KG 12MM DUAL WO SLV | 15  |       |
| 130-064-02 | A   | POT 500KC 12MM DUL WO SLV | 4   |       |
| 130-075-00 | A   | POT SLD 50KG 30MM DL PANS | 9   |       |
| 140-017-00 | A   | RES TF SM .1W 5% 4.7 OHM  | 4   |       |
| 140-032-00 | A   | RES TF SM .1W 5% 20 OHM   | 1   |       |
| 140-037-00 | A   | RES TF SM .1W 5% 33 OHM   | 1   |       |
| 140-049-00 | A   | RES TF SM .1W 5% 100 OHM  | 1   |       |
| 140-051-00 | A   | RES TF SM .1W 5% 120 OHM  | 13  |       |
| 140-057-00 | A   | RES TF SM .1W 5% 220 OHM  | 2   |       |
| 140-061-00 | A   | RES TF SM .1W 5% 330 OHM  | 2   |       |
| 140-064-00 | A   | RES TF SM .1W 5% 430 OHM  | 1   |       |
| 140-065-00 | A   | RES TF SM .1W 5% 470 OHM  | 3   |       |
| 140-066-00 | A   | RES TF SM .1W 5% 510 OHM  | 53  |       |
| 140-068-00 | A   | RES TF SM .1W 5% 620 OHM  | 1   |       |
| 140-073-00 | A   | RES TF SM .1W 5% 1K0 OHM  | 64  |       |
| 140-074-00 | A   | RES TF SM .1W 5% 1K1 OHM  | 2   |       |
| 140-076-00 | A   | RES TF SM .1W 5% 1K3 OHM  | 1   |       |
| 140-077-00 | A   | RES TF SM .1W 5% 1K5 OHM  | 2   |       |
| 140-079-00 | A   | RES TF SM .1W 5% 1K8 OHM  | 4   |       |
| 140-080-00 | A   | RES TF SM .1W 5% 2K0 OHM  | 8   |       |
| 140-083-00 | A   | RES TF SM .1W 5% 2K7 OHM  | 2   |       |
| 140-085-00 | A   | RES TF SM .1W 5% 3K3 OHM  | 2   |       |
| 140-086-00 | A   | RES TF SM .1W 5% 3K6 OHM  | 4   |       |
| 140-087-00 | A   | RES TF SM .1W 5% 3K9 OHM  | 17  |       |
| 140-088-00 | A   | RES TF SM .1W 5% 4.3K OHM | 8   |       |
| 140-089-00 | A   | RES TF SM .1W 5% 4K7 OHM  | 40  |       |
| 140-090-00 | A   | RES TF SM .1W 5% 5K1 OHM  | 72  |       |
| 140-091-00 | A   | RES TF SM .1W 5% 5K6 OHM  | 1   |       |
| 140-094-00 | A   | RES TF SM .1W 5% 7K5 OHM  | 16  |       |
| 140-097-00 | A   | RES TF SM .1W 5% 10K OHM  | 108 |       |
| 140-098-00 | A   | RES TF SM .1W 5% 11K OHM  | 12  |       |
| 140-101-00 | A   | RES TF SM .1W 5% 15K OHM  | 12  |       |
| 140-104-00 | A   | RES TF SM .1W 5% 20K OHM  | 12  |       |
| 140-105-00 | A   | RES TF SM .1W 5% 22K OHM  | 1   |       |
| 140-108-00 | A   | RES TF SM .1W 5% 27K OHM  | 4   |       |
| 140-109-00 | A   | RES TF SM .1W 5% 30K OHM  | 32  |       |
| 140-111-00 | A   | RES TF SM .1W 5% 36K OHM  | 8   |       |

continued...



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## Master PCB assembly continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 140-112-00 | A   | RES TF SM .1W 5% 39K OHM  | 2   |       |
| 140-114-00 | A   | RES TF SM .1W 5% 47K OHM  | 16  |       |
| 140-119-00 | A   | RES TF SM .1W 5% 75K OHM  | 8   |       |
| 140-123-00 | A   | RES TF SM .1W 5% 100K OHM | 69  |       |
| 140-130-00 | A   | RES TF SM .1W 5% 200K OHM | 6   |       |
| 141-051-00 | B   | RES TF SM .25W 5% 120 OHM | 34  |       |
| 145-066-00 | B   | RES MF SM .1W 1% 4.75 OHM | 4   |       |
| 145-279-00 | B   | RES MF SM .1W 1% 787 OHM  | 2   |       |
| 145-288-00 | B   | RES MF SM .1W 1% 976 OHM  | 2   |       |
| 145-296-00 | B   | RES MF SM .1W 1% 1K18 OHM | 2   |       |
| 145-307-00 | B   | RES MF SM .1W 1% 1K54 OHM | 2   |       |
| 145-317-00 | B   | RES MF SM .1W 1% 1K96 OHM | 2   |       |
| 145-330-00 | B   | RES MF SM .1W 1% 2K43 OHM | 6   |       |
| 145-339-00 | B   | RES MF SM .1W 1% 3K01 OHM | 22  |       |
| 145-341-00 | B   | RES MF SM .1W 1% 3K16 OHM | 1   |       |
| 145-346-00 | B   | RES MF SM .1W 1% 3K57 OHM | 4   |       |
| 145-350-00 | B   | RES MF SM .1W 1% 3K92 OHM | 2   |       |
| 145-352-00 | B   | RES MF SM .1W 1% 4K12 OHM | 4   |       |
| 145-356-00 | B   | RES MF SM .1W 1% 4K53 OHM | 2   |       |
| 145-358-00 | B   | RES MF SM .1W 1% 4K75 OHM | 2   |       |
| 145-368-00 | B   | RES MF SM .1W 1% 6K04 OHM | 2   |       |
| 145-373-00 | B   | RES MF SM .1W 1% 6K81 OHM | 1   |       |
| 145-377-00 | B   | RES MF SM .1W 1% 7K50 OHM | 2   |       |
| 145-388-00 | B   | RES MF SM .1W 1% 9K76 OHM | 5   |       |
| 145-389-00 | B   | RES MF SM .1W 1% 10K0 OHM | 16  |       |
| 145-397-00 | B   | RES MF SM .1W 1% 12K1 OHM | 4   |       |
| 145-406-00 | B   | RES MF SM .1W 1% 15K0 OHM | 4   |       |
| 145-416-00 | B   | RES MF SM .1W 1% 19K1 OHM | 2   |       |
| 145-417-00 | B   | RES MF SM .1W 1% 19K6 OHM | 2   |       |
| 145-418-00 | B   | RES MF SM .1W 1% 20K0 OHM | 8   |       |
| 145-426-00 | B   | RES MF SM .1W 1% 24K3 OHM | 4   |       |
| 145-435-00 | B   | RES MF SM .1W 1% 30K1 OHM | 4   |       |
| 145-445-00 | B   | RES MF SM .1W 1% 38K3 OHM | 4   |       |
| 145-455-00 | B   | RES MF SM .1W 1% 48K7 OHM | 2   |       |
| 145-456-00 | B   | RES MF SM .1W 1% 49K9 OHM | 6   |       |
| 145-464-00 | B   | RES MF SM .1W 1% 60K4 OHM | 2   |       |
| 145-474-00 | B   | RES MF SM .1W 1% 76K8 OHM | 2   |       |
| 146-373-00 | A   | RES MF SM .25W 1% 6K81 OM | 8   |       |
| 200-010-02 | B   | PLY .0018UF 10% 100V TR   | 8   |       |
| 200-011-02 | B   | PLY .0022UF 10% 100V TR   | 12  |       |
| 200-013-02 | B   | PLY .0082UF 10% 100V TR   | 8   |       |
| 200-014-02 | B   | PLY .0033UF 10% 100V TR   | 8   |       |
| 200-025-02 | A   | PLY/BX .56UF 5% 63V TR    | 8   |       |
| 200-029-02 | A   | PLY/BX .22UF 5% 50V TR    | 15  |       |

continued...



Master PCB assembly continued

| PART #       | REV | DESCRIPTION                    | QTY | NOTES |
|--------------|-----|--------------------------------|-----|-------|
| 200-031-02   | A   | PLY/BX .022UF 5% 100V TR       | 20  |       |
| 212-001-00   | B1  | CER .01UF 10% 50V X7R SM       | 83  |       |
| 212-003-00   | B1  | CER 100PF 5% 50V NPO SM        | 2   |       |
| 212-004-00   | C1  | CER 220PF 5% 50V NPO SM        | 4   |       |
| 212-005-00   | B1  | CER 20PF 5% 50V NPO SM         | 37  |       |
| 212-007-00   | A1  | CER .047UF 20% 50V Z5U SM      | 1   |       |
| 212-009-00   | A   | CER 47PF 5% 50V NPO SM         | 24  |       |
| 212-010-00   | B1  | CER .1 +80/-20 25V Z5U SM      | 72  |       |
| 212-015-00   | B1  | CER 33PF 5% 50V NPO SM         | 2   |       |
| 212-018-00   | B1  | CER 10PF 5% 50V NPO SM         | 8   |       |
| 212-019-00   | B1  | CER 150PF 5% 50V SM            | 16  |       |
| 212-021-00   | B1  | CER 27PF 5% 50V NPO SM         | 12  |       |
| 212-023-00   | B1  | CER .001UF 10% 50V NPO SM      | 6   |       |
| 212-042-00   | A1  | CER 470PF 5% 50V NPO SM        | 16  |       |
| 220-002-02   | A1  | LYT 47UF 20% 25V RAD TR        | 135 |       |
| 220-003-02   | B   | LYT 47UF 20% 50V RAD TR        | 8   |       |
| 220-004-02   | C1  | LYT 470UF 20% 6.3V RAD TR      | 4   |       |
| 220-008-02   | A1  | LYT 1UF 20% 50V RAD TR         | 2   |       |
| 220-013-02   | A1  | LYT .22UF 20% 50V RAD TR       | 12  |       |
| 220-027-02   | B1  | LYT 10UF 20% 50V RAD TR        | 6   |       |
| 300-003-00   | A   | DIO SW DL4148 100V SM          | 8   |       |
| 301-004-00   | A   | DIO PWR DL4002 SM              | 16  |       |
| 302-010-03   | B   | DIO ZEN DL5232B 5.6V SM        | 2   |       |
| ⚠ 304-002-00 | A   | LED RED T1-3/4 W FLASHER       | 1   |       |
| ⚠ 304-027-02 | C00 | LED RED W/.425 SPACER TR       | 5   |       |
| ⚠ 304-028-02 | C00 | LED YEL W/.425 SPACER TR       | 7   |       |
| ⚠ 304-029-02 | C00 | LED GRN W/.425 SPACER TR       | 20  |       |
| 310-002-02   | A1  | XSTR PNP 2N4403 T/A            | 2   |       |
| 311-001-00   | B   | XSTR NPN IMBT4401 SMT          | 3   |       |
| 311-002-00   | A   | XSTR PNP MMST4403 SMT          | 8   |       |
| 320-011-00   | A   | OPAMP 4560 8P SIP              | 2   |       |
| 320-020-00   | A   | IC, DUAL OP AMP NJM4565G       | 64  |       |
| 323-002-00   | C   | LM339D QUAD COMP SM            | 8   |       |
| 325-086-03   | A   | IC 74HC4053 ANA MUX/DEMUX      | 3   |       |
| 400-022-00   | A   | RCA QUAD PCMNT                 | 1   |       |
| 400-041-00   | A   | XLR VERT MALE PCMNT            | 3   |       |
| 400-048-00   | A   | HDR 7P .156X1 RTA              | 1   |       |
| 400-464-00   | AO1 | JACK 1/4 V PCMNT 1MM WASH      | 32  |       |
| 400-223-00   | A   | XLR PCMNT NEUTRIK-AP SER       | 4   |       |
| 400-349-00   | A   | HDR SKT BTM ENTRY 14P .1       | 2   |       |
| 450-241-00   | C   | PCB CFX MASTER                 | 1   |       |
| 0000162      | A   | SWITCH 2PDT PUSH V SNAPIN      | 46  |       |
| 500-045-00   | A   | SW ROTARY ENCODER GRYCD 15.5MM | 1   |       |
| 601-010-00   | A   | FERRITE SMT POWER              | 1   |       |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## Master PCB assembly continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 620-042-00 | A   | CBL FLT 16C W/TABS .1 4.0 | 1   |       |
| 660-002-00 | A   | 24GA JUMPER WIRE TR       | 82  |       |
| 706-009-00 | C   | SPCR PLASTIC .385 LED     | 1   |       |
| 706-033-01 | D   | STDF SWAGE NO.4 X .542L F | 21  |       |
| 706-038-00 | A   | STDF SWAGE 4-40X.25L.25OD | 3   |       |
| 760-107-00 | B   | BUTTON 2 COLOR 9X5MM      | 40  |       |
| 760-108-00 | A   | BUTTON 2 COLOR 9X9MM      | 6   |       |



055-242-00-02 REV C05 CFX SLAVE PCB ASSEMBLY

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 130-002-02 | A   | POT RTY 50KB 9MM MNO H TN | 12  |       |
| 130-003-02 | A   | POTRTY 50KG 9MM MN TN PAN | 20  |       |
| 130-030-02 | A   | POT RTY 5KZY 9MM MNO H TN | 4   |       |
| 130-031-00 | A   | POT SLD 10KD 60MM MONO    | 4   |       |
| 130-064-02 | A   | POT 500KC 12MM DUL WO SLV | 4   |       |
| 140-066-00 | A   | RES TF SM .1W 5% 510 OHM  | 32  |       |
| 140-073-00 | A   | RES TF SM .1W 5% 1K0 OHM  | 24  |       |
| 140-080-00 | A   | RES TF SM .1W 5% 2K0 OHM  | 4   |       |
| 140-087-00 | A   | RES TF SM .1W 5% 3K9 OHM  | 8   |       |
| 140-089-00 | A   | RES TF SM .1W 5% 4K7 OHM  | 28  |       |
| 140-090-00 | A   | RES TF SM .1W 5% 5K1 OHM  | 32  |       |
| 140-094-00 | A   | RES TF SM .1W 5% 7K5 OHM  | 4   |       |
| 140-097-00 | A   | RES TF SM .1W 5% 10K OHM  | 12  |       |
| 140-098-00 | A   | RES TF SM .1W 5% 11K OHM  | 4   |       |
| 140-101-00 | A   | RES TF SM .1W 5% 15K OHM  | 4   |       |
| 140-104-00 | A   | RES TF SM .1W 5% 20K OHM  | 8   |       |
| 140-108-00 | A   | RES TF SM .1W 5% 27K OHM  | 4   |       |
| 140-111-00 | A   | RES TF SM .1W 5% 36K OHM  | 4   |       |
| 140-114-00 | A   | RES TF SM .1W 5% 47K OHM  | 8   |       |
| 140-123-00 | A   | RES TF SM .1W 5% 100K OHM | 24  |       |
| 141-051-00 | B   | RES TF SM .25W 5% 120 OHM | 4   |       |
| 145-066-00 | B   | RES MF SM .1W 1% 4.75 OHM | 4   |       |
| 145-339-00 | B   | RES MF SM .1W 1% 3K01 OHM | 20  |       |
| 145-346-00 | B   | RES MF SM .1W 1% 3K57 OHM | 4   |       |
| 145-352-00 | B   | RES MF SM .1W 1% 4K12 OHM | 4   |       |
| 145-389-00 | B   | RES MF SM .1W 1% 10K0 OHM | 16  |       |
| 145-418-00 | B   | RES MF SM .1W 1% 20K0 OHM | 8   |       |
| 146-373-00 | A   | RES MF SM .25W 1% 6K81 OM | 8   |       |
| 200-010-02 | B   | PLY .0018UF 10% 100V TR   | 4   |       |
| 200-014-02 | B   | PLY .0033UF 10% 100V TR   | 8   |       |
| 200-025-02 | A   | PLY/BX .56UF 5% 63V TR    | 4   |       |
| 212-001-00 | B1  | CER .01UF 10% 50V X7R SM  | 34  |       |
| 212-004-00 | C1  | CER 220PF 5% 50V NPO SM   | 4   |       |
| 212-005-00 | B1  | CER 20PF 5% 50V NPO SM    | 4   |       |
| 212-009-00 | A   | CER 47PF 5% 50V NPO SM    | 8   |       |
| 212-010-00 | B1  | CER .1 +80/-20 25V Z5U SM | 4   |       |
| 212-018-00 | B1  | CER 10PF 5% 50V NPO SM    | 4   |       |
| 212-019-00 | B1  | CER 150PF 5% 50V SM       | 16  |       |
| 212-023-00 | B1  | CER .001UF 10% 50V NPO SM | 4   |       |
| 212-042-00 | A1  | CER 470PF 5% 50V NPO SM   | 16  |       |
| 220-002-02 | A1  | LYT 47UF 20% 25V RAD TR   | 38  |       |
| 220-003-02 | B   | LYT 47UF 20% 50V RAD TR   | 8   |       |
| 220-004-02 | C1  | LYT 470UF 20% 6.3V RAD TR | 4   |       |
| 220-013-02 | A1  | LYT .22UF 20% 50V RAD TR  | 12  |       |

continued...



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



Slave PCB assembly continued

| PART #                                                                                       | REV | DESCRIPTION               | QTY | NOTES |
|----------------------------------------------------------------------------------------------|-----|---------------------------|-----|-------|
| 220-027-02                                                                                   | B1  | LYT 10UF 20% 50V RAD TR   | 2   |       |
| 301-004-00                                                                                   | A   | DIO PWR DL4002 SM         | 16  |       |
|  304-028-02 | C00 | LED YEL W/.425 SPACER TR  | 4   |       |
| 311-002-00                                                                                   | A   | XSTR PNP MMST4403 SMT     | 8   |       |
| 320-020-00                                                                                   | A   | IC, DUAL OP AMP NJM4565G  | 14  |       |
| 323-002-00                                                                                   | C   | LM339D QUAD COMP SM       | 2   |       |
| 400-464-00                                                                                   | AO1 | JACK 1/4 V PCMNT 1MM WASH | 8   |       |
| 400-223-00                                                                                   | A   | XLR PCMNT NEUTRIK-AP SER  | 4   |       |
| 400-349-00                                                                                   | A   | HDR SKT BTTM ENTRY 14P .1 | 4   |       |
| 450-242-00                                                                                   | C   | PCB, CFX SLAVE 4          | 1   |       |
| 0000162                                                                                      | A   | SWITCH 2PDT PUSH V SNAPIN | 24  |       |
| 660-002-00                                                                                   | A   | 24GA JUMPER WIRE TR       | 31  |       |
| 706-033-01                                                                                   | D   | STDF SWAGE NO.4 X .542L F | 10  |       |
| 760-107-00                                                                                   | B   | BUTTON 2 COLOR 9X5MM      | 20  |       |
| 760-108-00                                                                                   | A   | BUTTON 2 COLOR 9X9MM      | 4   |       |



055-258-00-01 REV A10 POWER SUPPLY PCB ASSEMBLY

| PART #       | REV | DESCRIPTION               | QTY | NOTES |
|--------------|-----|---------------------------|-----|-------|
| 100-028-00   | A   | RES CF .125W 5% 130 OHM   | 2   |       |
| 100-031-00   | A   | RES CF .125W 5% 180 OHM   | 1   |       |
| 100-058-00   | A   | RES CF .125W 5% 2K4 OHM   | 2   |       |
| 100-063-00   | A   | RES CF .125W 5% 3K9 OHM   | 2   |       |
| 110-080-00   | A   | RES CF .25W 5% 20K OHM    | 1   |       |
| 121-093-00   | A   | RES MO 1W 5% 6K8 OHM      | 1   |       |
| 211-001-00   | D1  | CER .01UF +80/-20% 25V AX | 3   |       |
| 211-010-00   | A1  | CER .01UF +80/-20% 50V AX | 1   |       |
| 220-002-02   | A1  | LYT 47UF 20% 25V RAD TR   | 1   |       |
| 220-007-00   | B1  | LYT 100UF 20% 100V RAD    | 1   |       |
| 220-011-02   | A1  | LYT 100UF 20% 25V RAD     | 2   |       |
| 220-012-02   | B1  | LYT 4.7UF 20% 63V RAD TR  | 1   |       |
| 220-023-00   | C1  | LYT 6800UF 20% 35V RAD    | 3   |       |
| 220-026-00   | B1  | LYT 1000UF 20% 100V RAD   | 1   |       |
| 220-027-02   | B1  | LYT 10UF 20% 50V RAD TR   | 2   |       |
| 301-001-00   | A   | DIO PWR 1N4002            | 17  |       |
| 301-003-00   | B   | DIO PWR 1N5401 3A 100V    | 4   |       |
| ⚠ 321-003-00 | B   | REG 7805 +5V              | 1   |       |
| ⚠ 321-008-00 | B   | REG LM317T ADJ            | 2   |       |
| ⚠ 321-009-00 | A   | REG LM337T ADJ            | 1   |       |
| ⚠ 400-060-00 | A   | FUSE CLIP PCMT 5MM DIA    | 2   |       |
| 400-093-00   | A   | HDR 7P .156X1 LOCKING     | 1   |       |
| 400-173-00   | A   | TERM .25 QKDS PCMT STABLE | 1   |       |
| 400-348-00   | A   | TERM .187 QDISC STBL PCMT | 1   |       |
| 400-350-00   | A   | HDR 9P .156X1 STR         | 1   |       |
| 450-258-00   | B   | PCB POWER SUPPLY          | 1   |       |
| ⚠ 510-002-00 | C   | FUSE SB .5A 5X20 250V IEC | 1   |       |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## 055-260-00-02 REV B00 AC INPUT PCB ASSEMBLY

|   | PART #     | REV | DESCRIPTION                  | QTY | NOTES |
|---|------------|-----|------------------------------|-----|-------|
|   | 040-135-00 | A   | DIS 18G 1010 GRNYL 4 LGTM    | 1   |       |
| ⚠ | 200-023-00 | B   | PLY/BX .001UF 20% 250V Y2    | 2   |       |
| ⚠ | 200-024-00 | B   | PLY/BX .01UF 20% 250V Y2     | 1   |       |
| ⚠ | 400-060-00 | A   | FUSE CLIP PCMT 5MM DIA       | 2   |       |
| ⚠ | 400-132-00 | A   | IEC MALE RTA PCMT            | 1   |       |
|   | 400-173-00 | A   | TERM .25 QKDS PCMT STABLE    | 2   |       |
|   | 450-260-00 | B   | PCB AC INPUT CFX             | 1   |       |
| ⚠ | 500-052-00 | A   | SW SPST POWER ROCKER RTA BLK | 1   |       |
|   | 700-012-00 | A00 | MCH 4-40X3/8 PHP CLRZC       | 2   |       |
|   | 705-005-00 | A   | NUT LOCK 4-40                | 2   |       |
|   | 712-020-00 | A   | BRKT ANG 6-32X.037THK STL    | 1   |       |
|   | 712-021-01 | B   | RVT CL END .125X.062-.125    | 2   |       |

## 080-144-00 REV D BNC ASSEMBLY

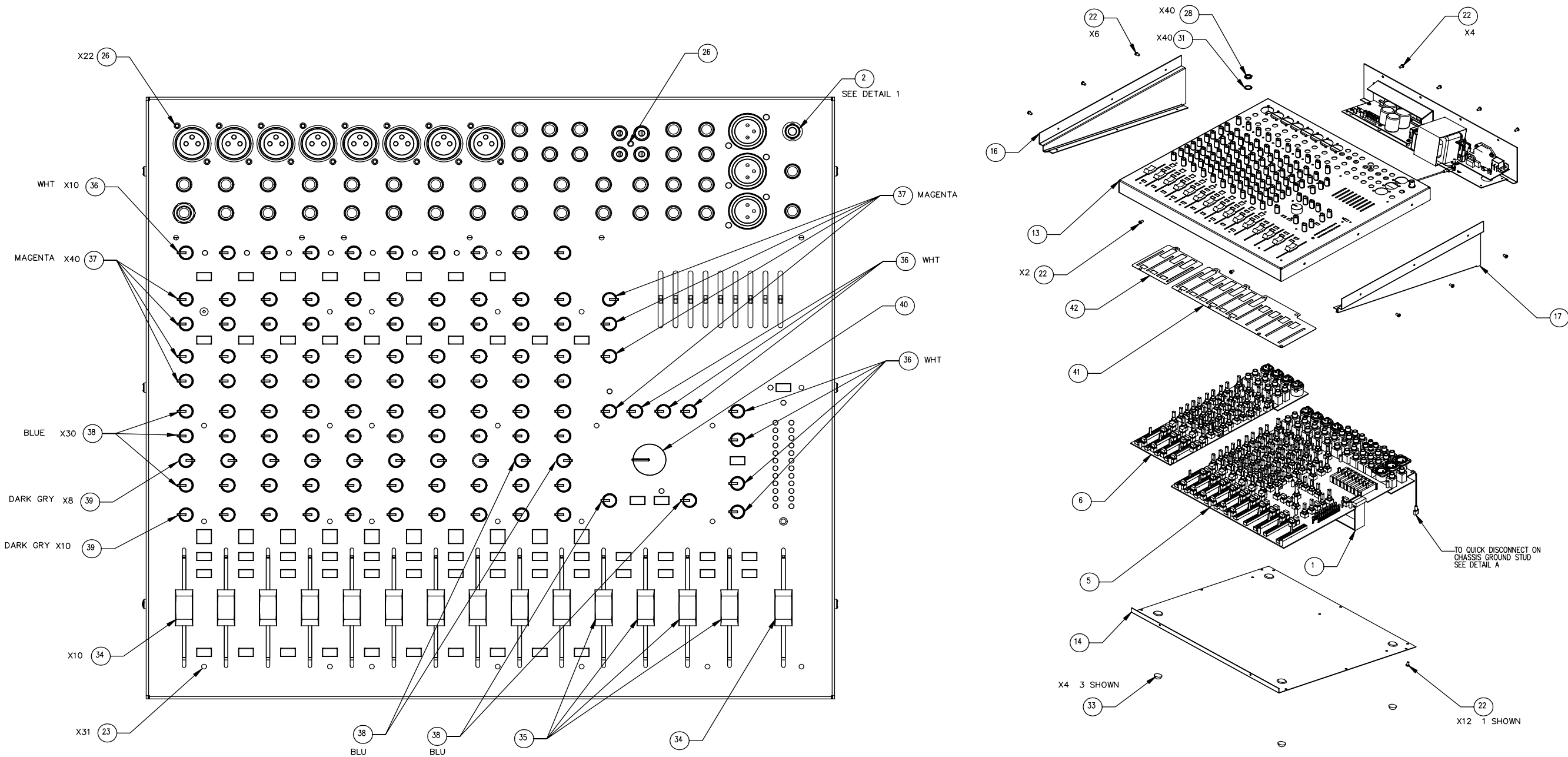
|  | PART #     | REV | DESCRIPTION                 | QTY | NOTES |
|--|------------|-----|-----------------------------|-----|-------|
|  | 400-010-00 | B   | BNC PANEL MOUNT             | 1   |       |
|  | 400-065-00 | A   | TERM QDISC .250 F 18-22GA   | 1   |       |
|  | 400-091-00 | A   | TERM QDISC .187 F 18-22GA   | 1   |       |
|  | 610-027-00 | B   | WIR 22G 1007 BLU 17IN ST2   | 1   |       |
|  | 610-028-00 | B   | WIR 22G 1007 GRN 17IN ST2   | 1   |       |
|  | 705-030-00 | 1   | NUT 3/8 W/400-010-00        | 1   |       |
|  | 710-047-00 | 1   | WASH FLT W/400-010-00       | 1   |       |
|  | 711-016-00 | 1   | LUG SOLDER 3/8 W/400-010-00 | 1   |       |

## 080-142-00 REV B TRANSFORMER ASSEMBLY -010 120V

|   | PART #     | REV | DESCRIPTION               | QTY | NOTES |
|---|------------|-----|---------------------------|-----|-------|
|   | 400-210-00 | B   | TERM QDISC .250 F 18-22GA | 2   |       |
|   | 400-351-00 | A   | IDC 9P .156X1 22GA END    | 1   |       |
| ⚠ | 600-010-00 | B00 | XFMR SR24.4 120V          | 1   |       |
| ⚠ | 550-490-00 | B1  | XFMR SHLD 600-010-XX M6X  | 1   |       |
|   | 720-007-00 | A   | TAPE DS 30MIL X 1.0W URTH |     |       |



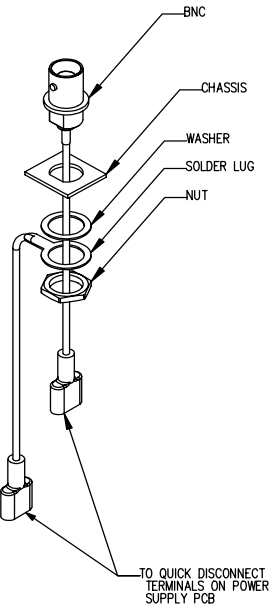
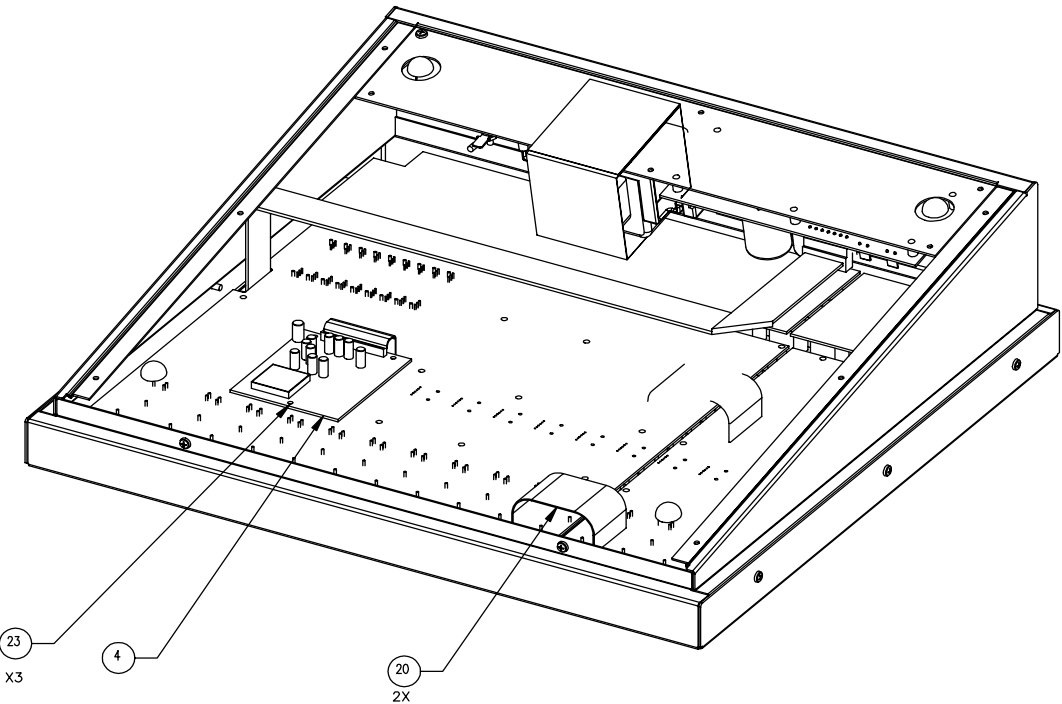
|           |            |                        |   |      |          |          |         |
|-----------|------------|------------------------|---|------|----------|----------|---------|
| DWG. NO.  | 090-120-00 | SHT                    | 1 | REV. | A        | 1        |         |
| REVISIONS |            |                        |   |      |          |          |         |
| ECO#      | REV.       | DESCRIPTION            |   |      | REV. BY: | APP. BY: | DATE    |
|           | A          | RELEASED TO PRODUCTION |   |      |          |          | 4-29-99 |



| Item# | Part #        |    |            |    |            |
|-------|---------------|----|------------|----|------------|
| 1     | 040-358-00    | 12 | 510-001-00 | 23 | 700-011-00 |
| 4     | 055-192-00-01 | 13 | 550-442-00 | 24 | 700-028-01 |
|       | 055-241-00-02 | 14 | 550-445-00 | 25 | 700-028-03 |
| 6     | 055-242-00-01 | 15 | 550-462-00 | 26 | 701-016-00 |
| 7     | 055-258-00-01 | 43 | 550-491-00 | 27 | 705-001-00 |
| 8     | 055-260-00-01 | 16 | 550-551-10 | 28 | 705-003-00 |
| 9     | 080-142-00    | 17 | 550-551-20 | 29 | 705-008-00 |
| 2     | 080-144-00    | 18 | 550-552-00 | 31 | 710-002-00 |
| 44    | 400-365-00    | 20 | 620-045-00 | 33 | 750-001-00 |
| 11    | 410-005-00    | 22 | 700-010-00 | 34 | 760-037-01 |
|       |               |    |            | 35 | 760-037-03 |
|       |               |    |            | 36 | 760-048-01 |
|       |               |    |            | 37 | 760-048-02 |
|       |               |    |            | 38 | 760-048-03 |
|       |               |    |            | 39 | 760-048-04 |
|       |               |    |            | 40 | 760-091-00 |
|       |               |    |            | 41 | 780-050-00 |
|       |               |    |            | 42 | 780-051-00 |

|                                                                                                                                                                               |  |              |  |                  |  |                                                                    |  |                                                   |  |              |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------|--|------------------|--|--------------------------------------------------------------------|--|---------------------------------------------------|--|--------------|--|
| <div>UNLESS OTHERWISE SPECIFIED<br/>DIMENSIONS ARE IN INCHES<br/>ALL ANGLES ARE 90°<br/>TOLERANCES ARE:<br/>FRACTIONS:    DECIMALS:    ANGLES:<br/>±    /    .XXX±    ±</div> |  | APPROVALS    |  | DATE             |  | <div>MACKIE.™</div> <div>Mackie Designs Inc. Woodinville, Wa</div> |  |                                                   |  |              |  |
|                                                                                                                                                                               |  | DRAWN: Chuck |  | 3-22-99          |  |                                                                    |  |                                                   |  |              |  |
|                                                                                                                                                                               |  | MATERIAL:    |  | CHECKED:         |  |                                                                    |  | FINAL ASSEMBLY<br>CFX 12                          |  |              |  |
|                                                                                                                                                                               |  |              |  | NP ENGINEERING:  |  |                                                                    |  |                                                   |  |              |  |
| DIMENSION AND TOLERANCES ARE<br>IN ACCORDANCE WITH ASME Y14.5-1994                                                                                                            |  | FINISH:      |  | MATERIAL:        |  |                                                                    |  | SIZE D    SCALE:    DWG. NO. 090-120-00    REV. A |  |              |  |
| THE INFORMATION CONTAINED HEREIN IS<br>PROPRIETARY AND CONFIDENTIAL PROPERTY<br>OF MACKIE DESIGNS INC.                                                                        |  |              |  | MANUFACTURING:   |  |                                                                    |  |                                                   |  |              |  |
| DO NOT SCALE DRAWING                                                                                                                                                          |  |              |  | MFG ENGINEERING: |  |                                                                    |  | DWG FILE: 09012000-A.DWG                          |  | SHEET 1 OF 3 |  |
|                                                                                                                                                                               |  |              |  | ISSUED:          |  |                                                                    |  |                                                   |  |              |  |

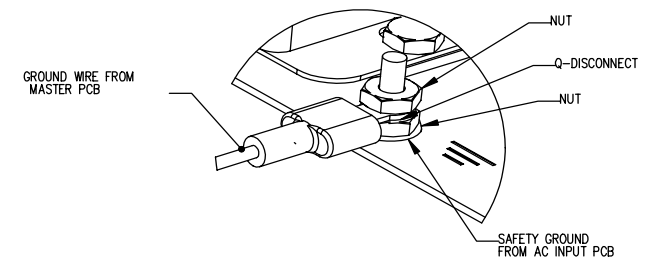
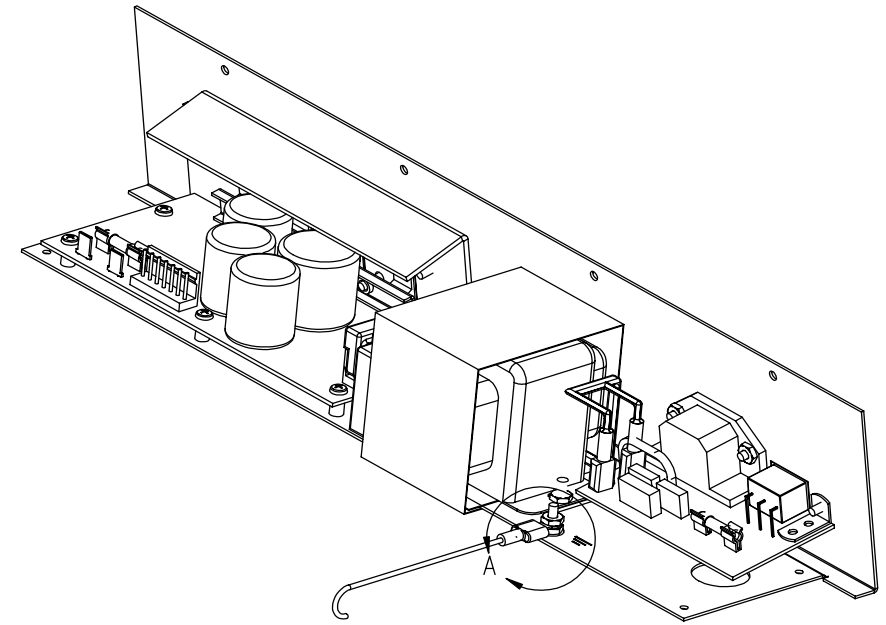
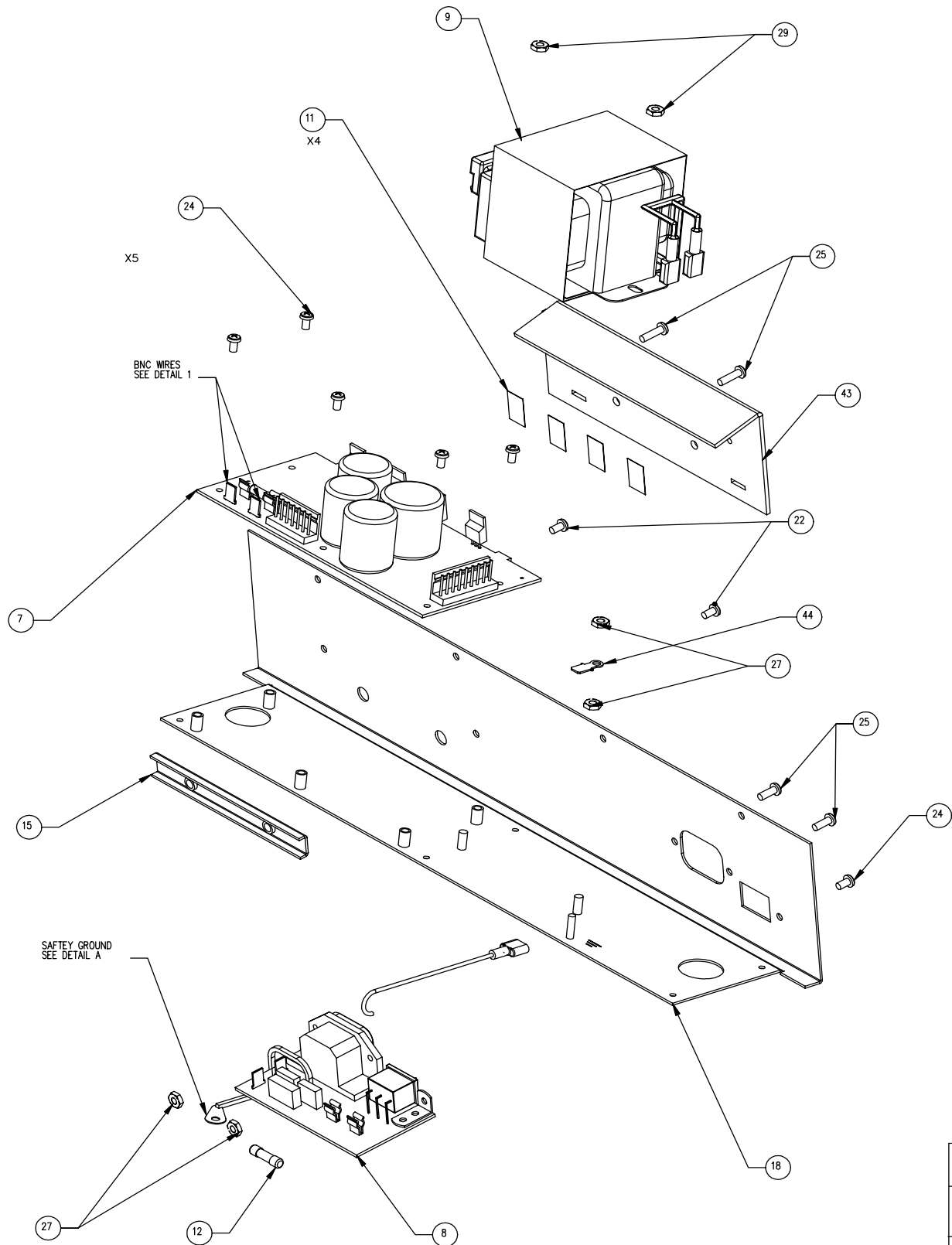
|           |      |             |  |     |   |          |          |      |  |
|-----------|------|-------------|--|-----|---|----------|----------|------|--|
| DWG. NO.  |      | 090-120-00  |  | SHT | 2 | REV:     | A        | 1    |  |
| REVISIONS |      |             |  |     |   |          |          |      |  |
| ECO#      | REV: | DESCRIPTION |  |     |   | REV. BY: | APP. BY: | DATE |  |
|           |      |             |  |     |   |          |          |      |  |



DETAIL 1

|                                                                                                                                                                                                                             |  |                  |  |           |  |                                                                               |  |                     |  |              |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------|--|-----------|--|-------------------------------------------------------------------------------|--|---------------------|--|--------------|--|
| <div>UNLESS OTHERWISE SPECIFIED<br/>DIMENSIONS ARE IN INCHES<br/>ALL ANGLES ARE 90°<br/>TOLERANCES ARE:<br/>FRACTIONS:    DECIMALS:    ANGLES:<br/>±                .XX±                ±<br/>                  .XXX±</div> |  | APPROVALS        |  | DATE      |  | <div>MACKIE<sup>TM</sup></div> <div>Mackie Designs Inc. Woodinville, Wa</div> |  |                     |  |              |  |
|                                                                                                                                                                                                                             |  | DRAWN: Chuck     |  | 3-22-99   |  |                                                                               |  |                     |  |              |  |
|                                                                                                                                                                                                                             |  | CHECKED:         |  |           |  |                                                                               |  |                     |  |              |  |
|                                                                                                                                                                                                                             |  | NP ENGINEERING:  |  |           |  |                                                                               |  |                     |  |              |  |
| MATERIAL:                                                                                                                                                                                                                   |  | MATERIAL:        |  |           |  | <div>FINAL ASSEMBLY</div> <div>CFX 12</div>                                   |  |                     |  |              |  |
| FINISH:                                                                                                                                                                                                                     |  | MANUFACTURING:   |  |           |  |                                                                               |  |                     |  |              |  |
| DO NOT SCALE DRAWING                                                                                                                                                                                                        |  | MFG ENGINEERING: |  |           |  |                                                                               |  |                     |  |              |  |
|                                                                                                                                                                                                                             |  | ISSUED:          |  |           |  |                                                                               |  |                     |  |              |  |
| DIMENSION AND TOLERANCES ARE<br>IN ACCORDANCE WITH ASME Y14.5-1994                                                                                                                                                          |  |                  |  | SIZE<br>D |  | SCALE:                                                                        |  | DWG. NO. 090-120-00 |  | REV.<br>A    |  |
| THE INFORMATION CONTAINED HEREIN IS<br>PROPRIETARY AND CONFIDENTIAL PROPERTY<br>OF MACKIE DESIGNS INC.                                                                                                                      |  |                  |  |           |  |                                                                               |  |                     |  |              |  |
|                                                                                                                                                                                                                             |  |                  |  |           |  | DWG FILE:                                                                     |  |                     |  | SHEET 2 OF 3 |  |

| REVISIONS |      |             |          |          |      |
|-----------|------|-------------|----------|----------|------|
| ECO#      | REV: | DESCRIPTION | REV. BY: | APP. BY: | DATE |
|           |      |             |          |          |      |



DETAIL A  
SCALE 2 : 1

|                                                                                                                                                                              |  |                  |  |           |  |                                                                               |        |          |              |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------|--|-----------|--|-------------------------------------------------------------------------------|--------|----------|--------------|-----------|
| <div>UNLESS OTHERWISE SPECIFIED<br/>DIMENSIONS ARE IN INCHES<br/>ALL ANGLES ARE 90°<br/>TOLERANCES ARE:<br/>FRACTIONS: DECIMALS: ANGLES:<br/>± .XXX ± .XX ± .XXX<br/>/</div> |  | APPROVALS        |  | DATE      |  | <div>MACKIE<sup>TM</sup></div> <div>Mackie Designs Inc. Woodinville, Wa</div> |        |          |              |           |
|                                                                                                                                                                              |  | DRAWN: Chuck     |  | 3-22-99   |  |                                                                               |        |          |              |           |
|                                                                                                                                                                              |  | CHECKED:         |  |           |  |                                                                               |        |          |              |           |
|                                                                                                                                                                              |  | NP ENGINEERING:  |  |           |  |                                                                               |        |          |              |           |
| DIMENSION AND TOLERANCES ARE<br>IN ACCORDANCE WITH ASME Y14.5-1994                                                                                                           |  | MATERIAL:        |  | MATERIAL: |  | FINAL ASSEMBLY<br>CFX 12                                                      |        |          |              |           |
| THE INFORMATION CONTAINED HEREIN IS<br>PROPRIETARY AND CONFIDENTIAL PROPERTY<br>OF MACKIE DESIGNS INC.                                                                       |  | MANUFACTURING:   |  |           |  |                                                                               |        |          |              |           |
|                                                                                                                                                                              |  | MFG ENGINEERING: |  |           |  |                                                                               |        |          |              |           |
| FINISH:                                                                                                                                                                      |  | ISSUED:          |  |           |  | SIZE<br>D                                                                     | SCALE: | DWG. NO. | 090-120-00   | REV.<br>A |
| DO NOT SCALE DRAWING                                                                                                                                                         |  |                  |  |           |  | DWG FILE:                                                                     |        |          | SHEET 3 OF 3 |           |

## CFX•16 Parts List

| PART #        | DESCRIPTION                | PAGE |
|---------------|----------------------------|------|
| 090-121-0     | CFX16                      | 2    |
| 070-121-XX    | BOMSHELL CFX16             | 2    |
| 055-192-00-01 | EFFECTS PCB ASSEMBLY       | 4    |
| 055-241-00-03 | MASTER PCB ASSEMBLY        | 5    |
| 055-242-00-02 | SLAVE PCB ASSEMBLY         | 9    |
| 055-258-00-01 | POWER SUPPLY PCB ASSEMBLY  | 11   |
| 080-144-00    | BNC ASSEMBLY               | 12   |
| 055-260-00-02 | AC INPUT PCB ASSEMBLY      | 12   |
| 080-142-00    | TRANSFORMER ASSY -010 120V | 12   |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## 090-121-00 REV A3 CFX16 FINAL ASSEMBLY

| PART #       | REV | DESCRIPTION                    | QTY | NOTES       |
|--------------|-----|--------------------------------|-----|-------------|
| 070-121-XX   | A40 | BOMSHELL CFX16                 | 1   | SEE BELOW   |
| ⚠ 080-142-00 | B   | TRANSFORMER ASSEMBLY -010 120V | 1   | SEE PAGE 12 |
| ⚠ 510-001-00 | B   | FUSE SB 1A 5X20MM 250V UL      | 1   |             |
| ⚠ 640-001-00 | D   | LC IEC SJT 10A/125V 6FT        | 1   | LINECORD    |
| 820-104-00   | C00 | OWNERS MANUAL                  | 1   |             |

## 070-121-XX REV A40 BOMSHELL CFX16

| PART #        | REV | DESCRIPTION                   | QTY | NOTES       |
|---------------|-----|-------------------------------|-----|-------------|
| 040-358-00    | B   | RIBBON CABLE 18G 7P .156 16IN | 1   |             |
| 055-192-00-01 | C11 | EFFECTS PCB ASSEMBLY          | 1   | SEE PAGE 4  |
| 055-241-00-03 | C05 | MASTER PCB ASSEMBLY           | 1   | SEE PAGE 5  |
| 055-242-00-02 | C05 | SLAVE PCB ASSEMBLY 4          | 2   | SEE PAGE 9  |
| 055-258-00-02 | A11 | POWER SUPPLY PCB ASSEMBLY     | 1   | SEE PAGE 11 |
| 055-260-00-02 | B00 | AC INPUT PCB ASSEMBLY         | 1   | SEE PAGE 12 |
| 080-144-00    | D   | BNC ASSEMBLY                  | 1   | SEE PAGE 12 |
| 400-365-00    | A   | QDISK TAB .250 M #6 MNT       | 1   |             |
| ⚠ 410-005-00  | A   | INSL SILPAD TO-220            | 4   |             |
| 550-443-00    | B1  | SCR CHASSIS TOP CXF 16        | 1   |             |
| 550-446-00    | A1  | CHASSIS BOTTOM CXF 16         | 1   |             |
| 550-462-00    | A1  | CLAMP TO-220 X 4              | 1   |             |
| 550-491-00    | A1  | FAB PLT HTSK CFX PWR SPLY     | 1   |             |
| 550-551-10    | A1  | PNT LEFT SIDE CFX             | 1   |             |
| 550-551-20    | A1  | PNT RIGHT SIDE CFX            | 1   |             |
| 550-553-00    | B1  | SCR BACK CFX-16               | 1   |             |
| 620-045-00    | A   | CBL FLT 14C W/PINS 3.5IN      | 4   |             |
| 700-010-00    | A   | TF 6-32X1/4 PHP BLKZC         | 26  |             |
| 700-011-00    | A   | MCH 4-40X1/4 BTNSKT BLKOX     | 44  |             |
| 700-028-01    | B   | SEMS 6-32X5/16 PHP BLKZC      | 6   |             |
| 700-028-03    | B   | SEMS 6-32X1/2 PHP BLKZC       | 4   |             |
| 701-016-00    | A   | 5-20X5/16 PHPII TYP B BLK     | 31  |             |
| 705-001-00    | A   | KEPNUT 6-32                   | 4   |             |
| 0000223       | A   | NUT, HEX, THREADED, 1/4"      | 0   |             |
| 705-008-00    | A   | NUT LOCK 8-32                 | 2   |             |
| 0000222       | A   | WASHER                        | 0   |             |
| 750-001-00    | A   | BUMPON ROUND BLK .63X.31      | 4   |             |
| 760-037-01    | C00 | KNOB SLIDE 10X25MM MLDLIN     | 15  |             |



Bomshell CFX16 continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 760-037-03 | C00 | KNOB SLIDE 11X24 BLUE     | 4   |       |
| 760-048-01 | B   | KNOB 9MM LT GRY           | 21  |       |
| 760-048-02 | B   | KNOB 9MM MAGENTA          | 60  |       |
| 760-048-03 | B   | KNOB 9MM BLU/GRY          | 46  |       |
| 760-048-04 | B   | KNOB 9MM DARK GRAY        | 26  |       |
| 760-091-00 | A   | KNOB MASTER VOLUME        | 1   |       |
| 780-050-00 | A   | LIPSEAL MASTER CFX        | 1   |       |
| 780-051-00 | A   | LIPSEAL SLAVE 4 CFX       | 2   |       |
| 790-002-00 | A   | BAG POLY 12 X 18 2MIL     | 1   |       |
| 790-027-00 | A   | BAG POLY 20X7X36 4MIL GUS | 1   |       |
| 800-131-00 | B   | BOX CMPT CFX 16           | 1   |       |
| 810-083-00 | A   | FOAM FRONT CMPT CFX       | 1   |       |
| 810-084-00 | A   | FOAM REAR CMPT CFX        | 1   |       |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## 055-192-00-01 REV C11 EFFECTS ASSEMBLY

| PART #        | REV | DESCRIPTION             | QTY | NOTES     |
|---------------|-----|-------------------------|-----|-----------|
| 220-011-00    | A1  | LYT 100UF 20% 25V RAD   | 1   |           |
| 315-017-00    | A   | XTAL 24.576MHZ LOW PROF | 1   |           |
| 400-280-00    | A   | HDR SKT 16P .1X1 STR    | 1   |           |
| 050-192-00-01 | C11 | EFFECTS PCB ASSEMBLY    | 1   | SEE BELOW |

## 050-192-00-01 REV C11 EFFECTS PCB ASSEMBLY

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 140-009-00 | A   | RES TF SM .1W 5% 2.2 OHM  | 1   |       |
| 140-049-00 | A   | RES TF SM .1W 5% 100 OHM  | 2   |       |
| 140-053-00 | A   | RES TF SM .1W 5% 150 OHM  | 2   |       |
| 140-073-00 | A   | RES TF SM .1W 5% 1K0 OHM  | 6   |       |
| 140-089-00 | A   | RES TF SM .1W 5% 4K7 OHM  | 10  |       |
| 140-097-00 | A   | RES TF SM .1W 5% 10K OHM  | 2   |       |
| 140-114-00 | A   | RES TF SM .1W 5% 47K OHM  | 4   |       |
| 140-123-00 | A   | RES TF SM .1W 5% 100K OHM | 3   |       |
| 140-139-00 | A   | RES TF SM .1W 5% 470K OHM | 1   |       |
| 212-001-00 | B1  | CER .01UF 10% 50V X7R SM  | 2   |       |
| 212-003-00 | B1  | CER 100PF 5% 50V NPO SM   | 2   |       |
| 212-005-00 | B1  | CER 20PF 5% 50V NPO SM    | 2   |       |
| 212-007-00 | A1  | CER .047UF 20% 50V Z5U SM | 1   |       |
| 212-016-00 | A1  | CER 1000PF 5% 50V NPO SM  | 13  |       |
| 212-023-00 | B1  | CER .001UF 10% 50V NPO SM | 3   |       |
| 212-024-00 | A1  | CER 1UF 25V Y5V 1206      | 4   |       |
| 212-027-00 | A1  | CER .1UF 16V 10% X7R 0603 | 15  |       |
| 212-029-00 | A1  | CER 270PF 5% 50V NPO SM   | 2   |       |
| 212-032-00 | A1  | CER 2200PF 10% 50V X7R    | 5   |       |
| 223-003-00 | A1  | LYT 22UF 20% 6.3V SM      | 1   |       |
| 223-004-00 | B1  | LYT 10UF 20% 16V SM       | 5   |       |
| 300-003-00 | A   | DIO SW DL4148 100V SM     | 4   |       |
| 325-027-03 | A   | CMOS 74HC74A DUAL D FLPFL | 1   |       |
| 325-071-03 | A   | CMOS 74HCU04 HEX INV SM   | 1   |       |
| 329-042-03 | B   | CODEC SOUNDPORT AD1819    | 1   |       |
| 329-047-03 | B   | SRAM 32KX8 20NS SOJ SM    | 2   |       |
| 450-192-00 | C   | PCB LC EFTS PWR MIXER     | 1   |       |
| 601-009-00 | A   | FERRITE SMT SIG 1K OHM    | 3   |       |
| 601-010-00 | A   | FERRITE SMT POWER         | 1   |       |
| 080-088-00 | A   | DSP PROGRAMMED ADSP-2163  | 1   |       |



055-241-00-03 REV C05 MASTER PCB ASSEMBLY

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 040-357-00 | A   | DIS 22GA 1007 GRN/Y 8 QD  | 1   |       |
| 130-002-02 | A   | POT RTY 50KB 9MM MNO H TN | 12  |       |
| 130-003-02 | A   | POTRTY 50KG 9MM MN TN PAN | 36  |       |
| 130-022-02 | A   | POT RTY 10KB 9MM MONO TN  | 2   |       |
| 130-030-02 | A   | POT RTY 5KZY 9MM MNO H TN | 4   |       |
| 130-031-00 | A   | POT SLD 10KD 60MM MONO    | 8   |       |
| 130-032-00 | A   | POT SLD 50KD 60MM DUAL    | 3   |       |
| 130-061-02 | B   | POT 50KG 12MM DUAL WO SLV | 15  |       |
| 130-064-02 | A   | POT 500KC 12MM DUL WO SLV | 4   |       |
| 130-075-00 | A   | POT SLD 50KG 30MM DL PANS | 9   |       |
| 140-017-00 | A   | RES TF SM .1W 5% 4.7 OHM  | 4   |       |
| 140-032-00 | A   | RES TF SM .1W 5% 20 OHM   | 1   |       |
| 140-037-00 | A   | RES TF SM .1W 5% 33 OHM   | 1   |       |
| 140-049-00 | A   | RES TF SM .1W 5% 100 OHM  | 1   |       |
| 140-051-00 | A   | RES TF SM .1W 5% 120 OHM  | 13  |       |
| 140-057-00 | A   | RES TF SM .1W 5% 220 OHM  | 2   |       |
| 140-061-00 | A   | RES TF SM .1W 5% 330 OHM  | 2   |       |
| 140-064-00 | A   | RES TF SM .1W 5% 430 OHM  | 1   |       |
| 140-065-00 | A   | RES TF SM .1W 5% 470 OHM  | 3   |       |
| 140-066-00 | A   | RES TF SM .1W 5% 510 OHM  | 53  |       |
| 140-068-00 | A   | RES TF SM .1W 5% 620 OHM  | 1   |       |
| 140-073-00 | A   | RES TF SM .1W 5% 1K0 OHM  | 64  |       |
| 140-074-00 | A   | RES TF SM .1W 5% 1K1 OHM  | 2   |       |
| 140-076-00 | A   | RES TF SM .1W 5% 1K3 OHM  | 1   |       |
| 140-077-00 | A   | RES TF SM .1W 5% 1K5 OHM  | 2   |       |
| 140-079-00 | A   | RES TF SM .1W 5% 1K8 OHM  | 4   |       |
| 140-080-00 | A   | RES TF SM .1W 5% 2K0 OHM  | 8   |       |
| 140-083-00 | A   | RES TF SM .1W 5% 2K7 OHM  | 2   |       |
| 140-085-00 | A   | RES TF SM .1W 5% 3K3 OHM  | 2   |       |
| 140-086-00 | A   | RES TF SM .1W 5% 3K6 OHM  | 4   |       |
| 140-087-00 | A   | RES TF SM .1W 5% 3K9 OHM  | 17  |       |
| 140-088-00 | A   | RES TF SM .1W 5% 4.3K OHM | 8   |       |
| 140-089-00 | A   | RES TF SM .1W 5% 4K7 OHM  | 40  |       |
| 140-090-00 | A   | RES TF SM .1W 5% 5K1 OHM  | 72  |       |
| 140-091-00 | A   | RES TF SM .1W 5% 5K6 OHM  | 1   |       |
| 140-094-00 | A   | RES TF SM .1W 5% 7K5 OHM  | 16  |       |
| 140-097-00 | A   | RES TF SM .1W 5% 10K OHM  | 108 |       |
| 140-098-00 | A   | RES TF SM .1W 5% 11K OHM  | 12  |       |
| 140-101-00 | A   | RES TF SM .1W 5% 15K OHM  | 12  |       |
| 140-104-00 | A   | RES TF SM .1W 5% 20K OHM  | 12  |       |
| 140-105-00 | A   | RES TF SM .1W 5% 22K OHM  | 1   |       |
| 140-108-00 | A   | RES TF SM .1W 5% 27K OHM  | 4   |       |
| 140-109-00 | A   | RES TF SM .1W 5% 30K OHM  | 32  |       |
| 140-111-00 | A   | RES TF SM .1W 5% 36K OHM  | 8   |       |

continued...



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



Master PCB assembly continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 140-112-00 | A   | RES TF SM .1W 5% 39K OHM  | 2   |       |
| 140-114-00 | A   | RES TF SM .1W 5% 47K OHM  | 16  |       |
| 140-119-00 | A   | RES TF SM .1W 5% 75K OHM  | 8   |       |
| 140-123-00 | A   | RES TF SM .1W 5% 100K OHM | 69  |       |
| 140-130-00 | A   | RES TF SM .1W 5% 200K OHM | 6   |       |
| 141-051-00 | B   | RES TF SM .25W 5% 120 OHM | 34  |       |
| 145-066-00 | B   | RES MF SM .1W 1% 4.75 OHM | 4   |       |
| 145-279-00 | B   | RES MF SM .1W 1% 787 OHM  | 2   |       |
| 145-288-00 | B   | RES MF SM .1W 1% 976 OHM  | 2   |       |
| 145-296-00 | B   | RES MF SM .1W 1% 1K18 OHM | 2   |       |
| 145-307-00 | B   | RES MF SM .1W 1% 1K54 OHM | 2   |       |
| 145-317-00 | B   | RES MF SM .1W 1% 1K96 OHM | 2   |       |
| 145-330-00 | B   | RES MF SM .1W 1% 2K43 OHM | 6   |       |
| 145-339-00 | B   | RES MF SM .1W 1% 3K01 OHM | 22  |       |
| 145-341-00 | B   | RES MF SM .1W 1% 3K16 OHM | 1   |       |
| 145-346-00 | B   | RES MF SM .1W 1% 3K57 OHM | 4   |       |
| 145-350-00 | B   | RES MF SM .1W 1% 3K92 OHM | 2   |       |
| 145-352-00 | B   | RES MF SM .1W 1% 4K12 OHM | 4   |       |
| 145-356-00 | B   | RES MF SM .1W 1% 4K53 OHM | 2   |       |
| 145-358-00 | B   | RES MF SM .1W 1% 4K75 OHM | 2   |       |
| 145-368-00 | B   | RES MF SM .1W 1% 6K04 OHM | 2   |       |
| 145-373-00 | B   | RES MF SM .1W 1% 6K81 OHM | 1   |       |
| 145-377-00 | B   | RES MF SM .1W 1% 7K50 OHM | 2   |       |
| 145-388-00 | B   | RES MF SM .1W 1% 9K76 OHM | 5   |       |
| 145-389-00 | B   | RES MF SM .1W 1% 10K0 OHM | 16  |       |
| 145-397-00 | B   | RES MF SM .1W 1% 12K1 OHM | 4   |       |
| 145-406-00 | B   | RES MF SM .1W 1% 15K0 OHM | 4   |       |
| 145-416-00 | B   | RES MF SM .1W 1% 19K1 OHM | 2   |       |
| 145-417-00 | B   | RES MF SM .1W 1% 19K6 OHM | 2   |       |
| 145-418-00 | B   | RES MF SM .1W 1% 20K0 OHM | 8   |       |
| 145-426-00 | B   | RES MF SM .1W 1% 24K3 OHM | 4   |       |
| 145-435-00 | B   | RES MF SM .1W 1% 30K1 OHM | 4   |       |
| 145-445-00 | B   | RES MF SM .1W 1% 38K3 OHM | 4   |       |
| 145-455-00 | B   | RES MF SM .1W 1% 48K7 OHM | 2   |       |
| 145-456-00 | B   | RES MF SM .1W 1% 49K9 OHM | 6   |       |
| 145-464-00 | B   | RES MF SM .1W 1% 60K4 OHM | 2   |       |
| 145-474-00 | B   | RES MF SM .1W 1% 76K8 OHM | 2   |       |
| 146-373-00 | A   | RES MF SM .25W 1% 6K81 OM | 8   |       |
| 200-010-02 | B   | PLY .0018UF 10% 100V TR   | 8   |       |
| 200-011-02 | B   | PLY .0022UF 10% 100V TR   | 12  |       |
| 200-013-02 | B   | PLY .0082UF 10% 100V TR   | 8   |       |
| 200-014-02 | B   | PLY .0033UF 10% 100V TR   | 8   |       |
| 200-025-02 | A   | PLY/BX .56UF 5% 63V TR    | 8   |       |
| 200-029-02 | A   | PLY/BX .22UF 5% 50V TR    | 15  |       |

continued...



Master PCB assembly continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 200-031-02 | A   | PLY/BX .022UF 5% 100V TR  | 20  |       |
| 212-001-00 | B1  | CER .01UF 10% 50V X7R SM  | 83  |       |
| 212-003-00 | B1  | CER 100PF 5% 50V NPO SM   | 2   |       |
| 212-004-00 | C1  | CER 220PF 5% 50V NPO SM   | 4   |       |
| 212-005-00 | B1  | CER 20PF 5% 50V NPO SM    | 37  |       |
| 212-007-00 | A1  | CER .047UF 20% 50V Z5U SM | 1   |       |
| 212-009-00 | A   | CER 47PF 5% 50V NPO SM    | 24  |       |
| 212-010-00 | B1  | CER .1 +80/-20 25V Z5U SM | 72  |       |
| 212-015-00 | B1  | CER 33PF 5% 50V NPO SM    | 2   |       |
| 212-018-00 | B1  | CER 10PF 5% 50V NPO SM    | 8   |       |
| 212-019-00 | B1  | CER 150PF 5% 50V SM       | 16  |       |
| 212-021-00 | B1  | CER 27PF 5% 50V NPO SM    | 12  |       |
| 212-023-00 | B1  | CER .001UF 10% 50V NPO SM | 6   |       |
| 212-042-00 | A1  | CER 470PF 5% 50V NPO SM   | 16  |       |
| 220-002-02 | A1  | LYT 47UF 20% 25V RAD TR   | 135 |       |
| 220-003-02 | B   | LYT 47UF 20% 50V RAD TR   | 8   |       |
| 220-004-02 | C1  | LYT 470UF 20% 6.3V RAD TR | 4   |       |
| 220-008-02 | A1  | LYT 1UF 20% 50V RAD TR    | 2   |       |
| 220-013-02 | A1  | LYT .22UF 20% 50V RAD TR  | 12  |       |
| 220-027-02 | B1  | LYT 10UF 20% 50V RAD TR   | 6   |       |
| 300-003-00 | A   | DIO SW DL4148 100V SM     | 8   |       |
| 301-004-00 | A   | DIO PWR DL4002 SM         | 16  |       |
| 302-010-03 | B   | DIO ZEN DL5232B 5.6V SM   | 2   |       |
| 304-002-00 | A   | LED RED T1-3/4 W FLASHER  | 1   |       |
| 304-027-02 | C00 | LED RED W/.425 SPACER TR  | 5   |       |
| 304-028-02 | C00 | LED YEL W/.425 SPACER TR  | 7   |       |
| 304-029-02 | C00 | LED GRN W/.425 SPACER TR  | 20  |       |
| 310-002-02 | A1  | XSTR PNP 2N4403 T/A       | 2   |       |
| 311-001-00 | B   | XSTR NPN IMBT4401 SMT     | 3   |       |
| 311-002-00 | A   | XSTR PNP MMST4403 SMT     | 8   |       |
| 320-011-00 | A   | OPAMP 4560 8P SIP         | 2   |       |
| 320-020-00 | A   | IC, DUAL OP AMP NJM4565G  | 64  |       |
| 323-002-00 | C   | LM339D QUAD COMP SM       | 8   |       |
| 325-086-03 | A   | IC 74HC4053 ANA MUX/DEMUX | 3   |       |
| 400-022-00 | A   | RCA QUAD PCMNT            | 1   |       |
| 400-041-00 | A   | XLR VERT MALE PCMNT       | 3   |       |
| 400-048-00 | A   | HDR 7P .156X1 RTA         | 1   |       |
| 400-464-00 | AO1 | JACK 1/4 V PCMNT 1MM WASH | 32  |       |
| 400-223-00 | A   | XLR PCMNT NEUTRIK-AP SER  | 4   |       |
| 400-349-00 | A   | HDR SKT BTM ENTRY 14P .1  | 2   |       |
| 450-241-00 | C   | PCB CFX MASTER            | 1   |       |
| 0000162    | A   | SWITCH 2PDT PUSH V SNAPIN | 46  |       |
| 500-045-00 | A   | SW RTY ENCDR GRYCD 15.5MM | 1   |       |
| 601-010-00 | A   | FERRITE SMT POWER         | 1   |       |
| 620-042-00 | A   | CBL FLT 16C W/TABS .1 4.0 | 1   |       |

continued...



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## Master PCB assembly continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 660-002-00 | A   | 24GA JUMPER WIRE TR       | 82  |       |
| 706-009-00 | C   | SPCR PLASTIC .385 LED     | 1   |       |
| 706-033-01 | D   | STDF SWAGE NO.4 X .542L F | 21  |       |
| 706-038-00 | A   | STDF SWAGE 4-40X.25L.25OD | 3   |       |
| 760-107-00 | B   | BTN 2 COLOR 9X5MM         | 40  |       |
| 760-108-00 | A   | BTN 2 COLOR 9X9MM         | 6   |       |



055-242-00-02 REV C05 SLAVE PCB ASSEMBLY

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 130-002-02 | A   | POT RTY 50KB 9MM MNO H TN | 12  |       |
| 130-003-02 | A   | POTRTY 50KG 9MM MN TN PAN | 20  |       |
| 130-030-02 | A   | POT RTY 5KZY 9MM MNO H TN | 4   |       |
| 130-031-00 | A   | POT SLD 10KD 60MM MONO    | 4   |       |
| 130-064-02 | A   | POT 500KC 12MM DUL WO SLV | 4   |       |
| 140-066-00 | A   | RES TF SM .1W 5% 510 OHM  | 32  |       |
| 140-073-00 | A   | RES TF SM .1W 5% 1K0 OHM  | 24  |       |
| 140-080-00 | A   | RES TF SM .1W 5% 2K0 OHM  | 4   |       |
| 140-087-00 | A   | RES TF SM .1W 5% 3K9 OHM  | 8   |       |
| 140-089-00 | A   | RES TF SM .1W 5% 4K7 OHM  | 28  |       |
| 140-090-00 | A   | RES TF SM .1W 5% 5K1 OHM  | 32  |       |
| 140-094-00 | A   | RES TF SM .1W 5% 7K5 OHM  | 4   |       |
| 140-097-00 | A   | RES TF SM .1W 5% 10K OHM  | 12  |       |
| 140-098-00 | A   | RES TF SM .1W 5% 11K OHM  | 4   |       |
| 140-101-00 | A   | RES TF SM .1W 5% 15K OHM  | 4   |       |
| 140-104-00 | A   | RES TF SM .1W 5% 20K OHM  | 8   |       |
| 140-108-00 | A   | RES TF SM .1W 5% 27K OHM  | 4   |       |
| 140-111-00 | A   | RES TF SM .1W 5% 36K OHM  | 4   |       |
| 140-114-00 | A   | RES TF SM .1W 5% 47K OHM  | 8   |       |
| 140-123-00 | A   | RES TF SM .1W 5% 100K OHM | 24  |       |
| 141-051-00 | B   | RES TF SM .25W 5% 120 OHM | 4   |       |
| 145-066-00 | B   | RES MF SM .1W 1% 4.75 OHM | 4   |       |
| 145-339-00 | B   | RES MF SM .1W 1% 3K01 OHM | 20  |       |
| 145-346-00 | B   | RES MF SM .1W 1% 3K57 OHM | 4   |       |
| 145-352-00 | B   | RES MF SM .1W 1% 4K12 OHM | 4   |       |
| 145-389-00 | B   | RES MF SM .1W 1% 10K0 OHM | 16  |       |
| 145-418-00 | B   | RES MF SM .1W 1% 20K0 OHM | 8   |       |
| 146-373-00 | A   | RES MF SM .25W 1% 6K81 OM | 8   |       |
| 200-010-02 | B   | PLY .0018UF 10% 100V TR   | 4   |       |
| 200-014-02 | B   | PLY .0033UF 10% 100V TR   | 8   |       |
| 200-025-02 | A   | PLY/BX .56UF 5% 63V TR    | 4   |       |
| 212-001-00 | B1  | CER .01UF 10% 50V X7R SM  | 34  |       |
| 212-004-00 | C1  | CER 220PF 5% 50V NPO SM   | 4   |       |
| 212-005-00 | B1  | CER 20PF 5% 50V NPO SM    | 4   |       |
| 212-009-00 | A   | CER 47PF 5% 50V NPO SM    | 8   |       |
| 212-010-00 | B1  | CER .1 +80/-20 25V Z5U SM | 4   |       |
| 212-018-00 | B1  | CER 10PF 5% 50V NPO SM    | 4   |       |
| 212-019-00 | B1  | CER 150PF 5% 50V SM       | 16  |       |
| 212-023-00 | B1  | CER .001UF 10% 50V NPO SM | 4   |       |
| 212-042-00 | A1  | CER 470PF 5% 50V NPO SM   | 16  |       |
| 220-002-02 | A1  | LYT 47UF 20% 25V RAD TR   | 38  |       |
| 220-003-02 | B   | LYT 47UF 20% 50V RAD TR   | 8   |       |
| 220-004-02 | C1  | LYT 470UF 20% 6.3V RAD TR | 4   |       |
| 220-013-02 | A1  | LYT .22UF 20% 50V RAD TR  | 12  |       |

continued...



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## Slave PCB assembly continued

| PART #                                                                                       | REV | DESCRIPTION               | QTY | NOTES |
|----------------------------------------------------------------------------------------------|-----|---------------------------|-----|-------|
| 220-027-02                                                                                   | B1  | LYT 10UF 20% 50V RAD TR   | 2   |       |
| 301-004-00                                                                                   | A   | DIO PWR DL4002 SM         | 16  |       |
|  304-028-02 | C00 | LED YEL W/.425 SPACER TR  | 4   |       |
| 311-002-00                                                                                   | A   | XSTR PNP MMST4403 SMT     | 8   |       |
| 320-020-00                                                                                   | A   | IC, DUAL OP AMP NJM4565G  | 14  |       |
| 323-002-00                                                                                   | C   | LM339D QUAD COMP SM       | 2   |       |
| 400-464-00                                                                                   | AO1 | JACK 1/4 V PCMNT 1MM WASH | 8   |       |
| 400-223-00                                                                                   | A   | XLR PCMNT NEUTRIK-AP SER  | 4   |       |
| 400-349-00                                                                                   | A   | HDR SKT BTTM ENTRY 14P .1 | 4   |       |
| 450-242-00                                                                                   | C   | PCB, CFX SLAVE 4          | 1   |       |
| 0000162                                                                                      | A   | SWITCH 2PDT PUSH V SNAPIN | 24  |       |
| 660-002-00                                                                                   | A   | 24GA JUMPER WIRE TR       | 31  |       |
| 706-033-01                                                                                   | D   | STDF SWAGE NO.4 X .542L F | 10  |       |
| 760-107-00                                                                                   | B   | BTN 2 COLOR 9X5MM         | 20  |       |
| 760-108-00                                                                                   | A   | BTN 2 COLOR 9X9MM         | 4   |       |



055-258-00-01 REV A10 POWER SUPPLY PCB ASSEMBLY

| PART #                                                                                         | REV | DESCRIPTION               | QTY | NOTES |
|------------------------------------------------------------------------------------------------|-----|---------------------------|-----|-------|
| 100-028-00                                                                                     | A   | RES CF .125W 5% 130 OHM   | 2   |       |
| 100-031-00                                                                                     | A   | RES CF .125W 5% 180 OHM   | 1   |       |
| 100-058-00                                                                                     | A   | RES CF .125W 5% 2K4 OHM   | 2   |       |
| 100-063-00                                                                                     | A   | RES CF .125W 5% 3K9 OHM   | 2   |       |
| 110-080-00                                                                                     | A   | RES CF .25W 5% 20K OHM    | 1   |       |
| 121-093-00                                                                                     | A   | RES MO 1W 5% 6K8 OHM      | 1   |       |
| 211-001-00                                                                                     | D1  | CER .01UF +80/-20% 25V AX | 3   |       |
| 211-010-00                                                                                     | A1  | CER .01UF +80/-20% 50V AX | 1   |       |
| 220-002-02                                                                                     | A1  | LYT 47UF 20% 25V RAD TR   | 1   |       |
| 220-007-00                                                                                     | B1  | LYT 100UF 20% 100V RAD    | 1   |       |
| 220-011-02                                                                                     | A1  | LYT 100UF 20% 25V RAD     | 2   |       |
| 220-012-02                                                                                     | B1  | LYT 4.7UF 20% 63V RAD TR  | 1   |       |
| 220-023-00                                                                                     | C1  | LYT 6800UF 20% 35V RAD    | 3   |       |
| 220-026-00                                                                                     | B1  | LYT 1000UF 20% 100V RAD   | 1   |       |
| 220-027-02                                                                                     | B1  | LYT 10UF 20% 50V RAD TR   | 2   |       |
| 301-001-00                                                                                     | A   | DIO PWR 1N4002            | 17  |       |
| 301-003-00                                                                                     | B   | DIO PWR 1N5401 3A 100V    | 4   |       |
|  321-003-00   | B   | REG 7805 +5V              | 1   |       |
|  321-008-00   | B   | REG LM317T ADJ            | 2   |       |
|  321-009-00  | A   | REG LM337T ADJ            | 1   |       |
|  400-060-00 | A   | FUSE CLIP PCMT 5MM DIA    | 2   |       |
| 400-093-00                                                                                     | A   | HDR 7P .156X1 LOCKING     | 1   |       |
| 400-173-00                                                                                     | A   | TERM .25 QKDS PCMT STABLE | 1   |       |
| 400-348-00                                                                                     | A   | TERM .187 QDISC STBL PCMT | 1   |       |
| 400-350-00                                                                                     | A   | HDR 9P .156X1 STR         | 1   |       |
| 450-258-00                                                                                     | B   | PCB PWR SPLY CMPT CFX     | 1   |       |
|  510-002-00 | C   | FUSE SB .5A 5X20 250V IEC | 1   |       |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## 055-260-00-02 REV B00 AC INPUT PCB ASSEMBLY

|                                                                                   | PART #     | REV | DESCRIPTION               | QTY | NOTES |
|-----------------------------------------------------------------------------------|------------|-----|---------------------------|-----|-------|
|                                                                                   | 040-135-00 | A   | DIS 18G 1010 GRNYL 4 LGTM | 1   |       |
|  | 200-023-00 | B   | PLY/BX .001UF 20% 250V Y2 | 2   |       |
|  | 200-024-00 | B   | PLY/BX .01UF 20% 250V Y2  | 1   |       |
|  | 400-060-00 | A   | FUSE CLIP PCMT 5MM DIA    | 2   |       |
|  | 400-132-00 | A   | IEC MALE RTA PCMT         | 1   |       |
|                                                                                   | 400-173-00 | A   | TERM .25 QKDS PCMT STABLE | 2   |       |
|                                                                                   | 450-260-00 | B   | PCB AC INPUT CFX          | 1   |       |
|  | 500-052-00 | A   | SW SPST PWR RCKR RTA BLK  | 1   |       |
|                                                                                   | 700-012-00 | A00 | MCH 4-40X3/8 PHP CLRZC    | 2   |       |
|                                                                                   | 705-005-00 | A   | NUT LOCK 4-40             | 2   |       |
|                                                                                   | 712-020-00 | A   | BRKT ANG 6-32X.037THK STL | 1   |       |
|                                                                                   | 712-021-01 | B   | RVT CL END .125X.062-.125 | 2   |       |

## 080-144-00 REV D BNC ASSEMBLY

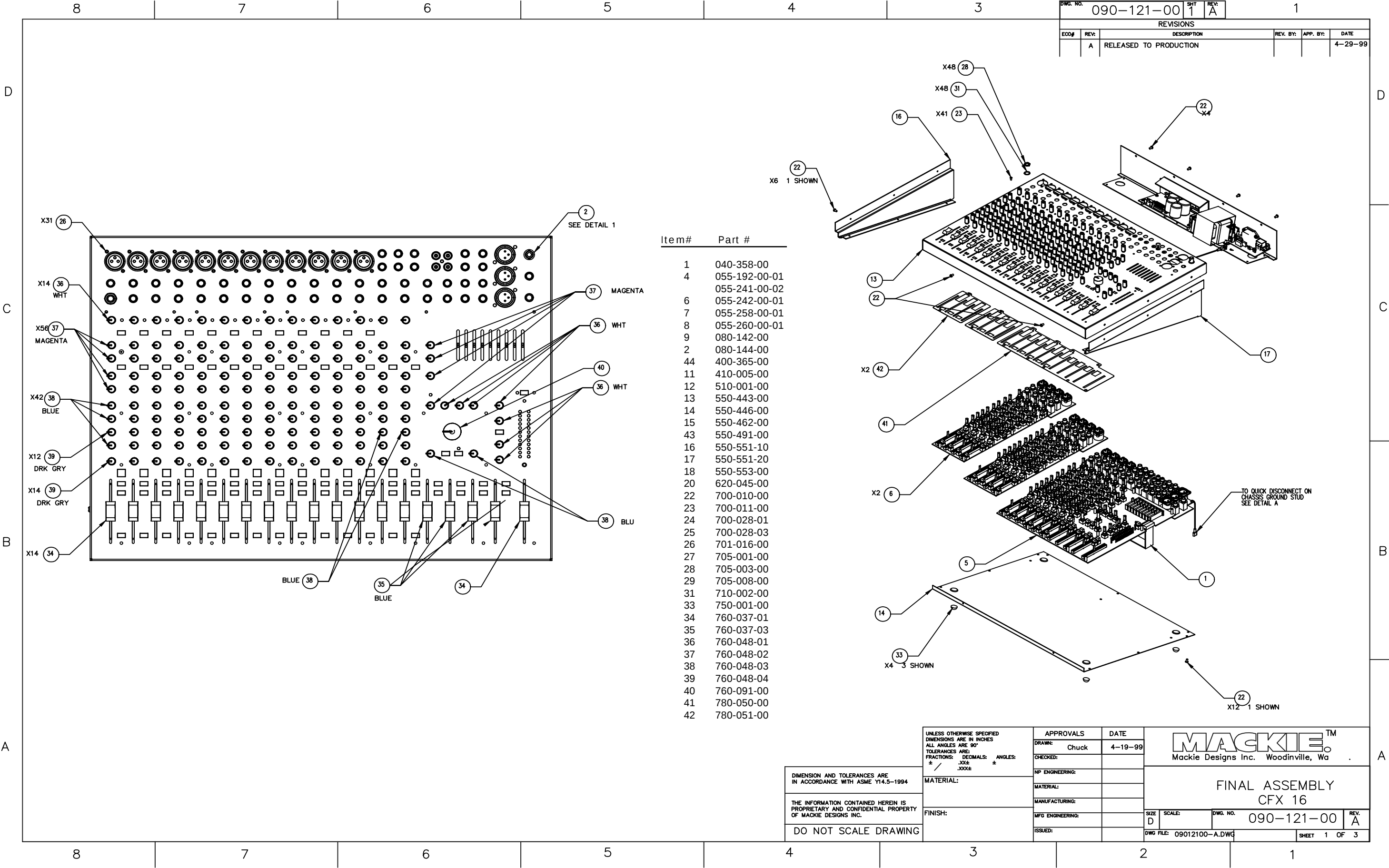
|  | PART #     | REV | DESCRIPTION               | QTY | NOTES |
|--|------------|-----|---------------------------|-----|-------|
|  | 400-010-00 | D   | BNC PANEL MOUNT           | 1   |       |
|  | 400-065-00 | A   | TERM QDISC .250 F 18-22GA | 1   |       |
|  | 400-091-00 | A   | TERM QDISC .187 F 18-22GA | 1   |       |
|  | 610-027-00 | B   | WIR 22G 1007 BLU 17IN ST2 | 1   |       |
|  | 610-028-00 | B   | WIR 22G 1007 GRN 17IN ST2 | 1   |       |
|  | 705-030-00 | 1   | NUT 3/8 W/400-010-00      | 1   |       |
|  | 710-047-00 | 1   | WASH FLT W/400-010-00     | 1   |       |
|  | 711-016-00 | 1   | LUG SLDR 3/8 W/400-010-00 | 1   |       |

## 080-142-00 REV B TRANSFORMER ASSEMBLY -010 120V

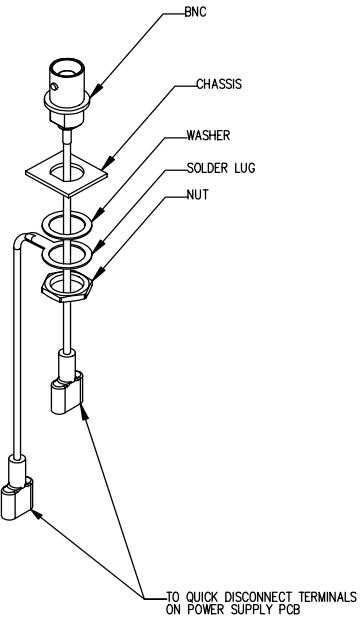
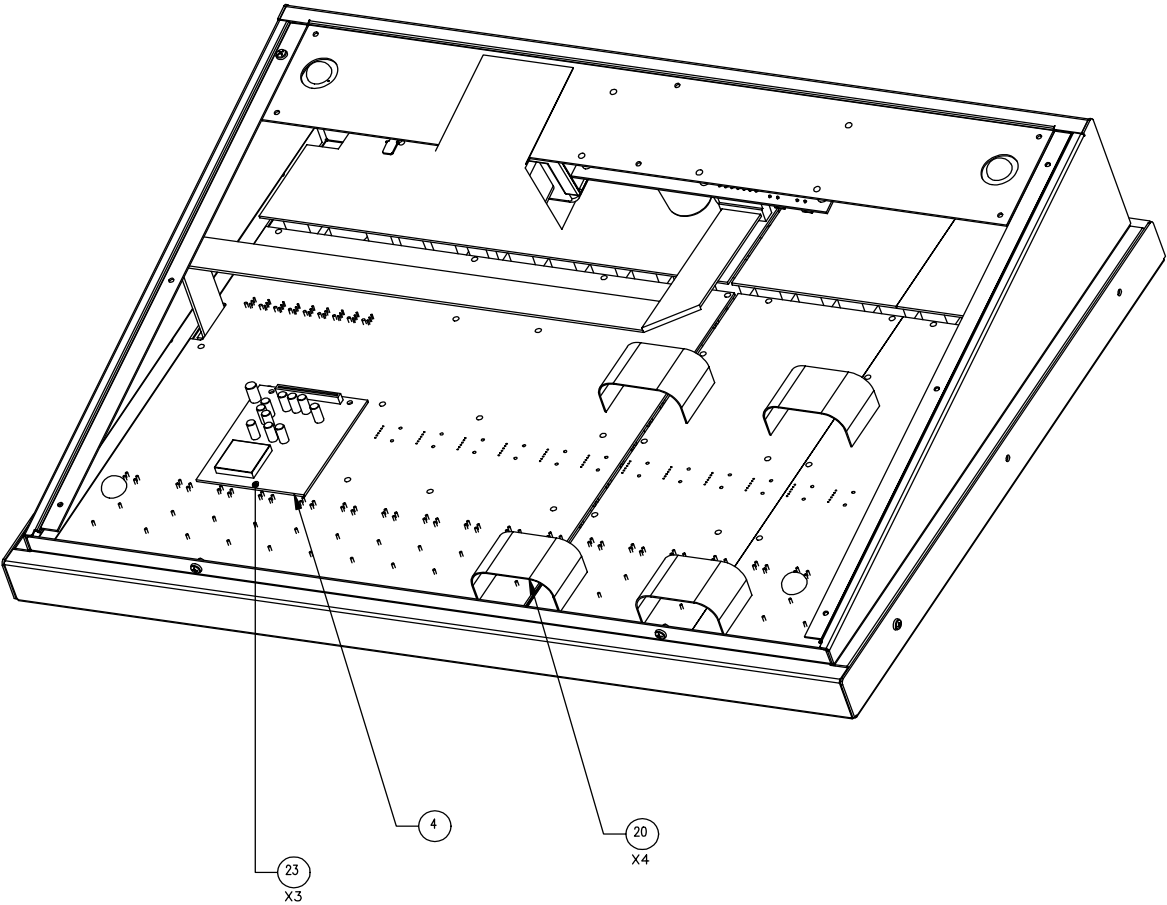
|                                                                                     | PART #     | REV | DESCRIPTION               | QTY | NOTES |
|-------------------------------------------------------------------------------------|------------|-----|---------------------------|-----|-------|
|                                                                                     | 400-210-00 | B   | TERM QDISC .250 F 18-22GA | 2   |       |
|                                                                                     | 400-351-00 | A   | IDC 9P .156X1 22GA END    | 1   |       |
|  | 600-010-00 | B00 | XFMR SR24.4 120V          | 1   |       |
|  | 550-490-00 | B1  | XFMR SHLD 600-010-XX M6X  | 1   |       |
|                                                                                     | 720-007-00 | A   | TAPE DS 30MIL X 1.0W URTH |     |       |



|           |      |                        |     |   |          |          |         |
|-----------|------|------------------------|-----|---|----------|----------|---------|
| DWG. NO.  |      | 090-121-00             | SHT | 1 | REV.     | A        | 1       |
| REVISIONS |      |                        |     |   |          |          |         |
| ECO#      | REV. | DESCRIPTION            |     |   | REV. BY: | APP. BY: | DATE    |
|           | A    | RELEASED TO PRODUCTION |     |   |          |          | 4-29-99 |



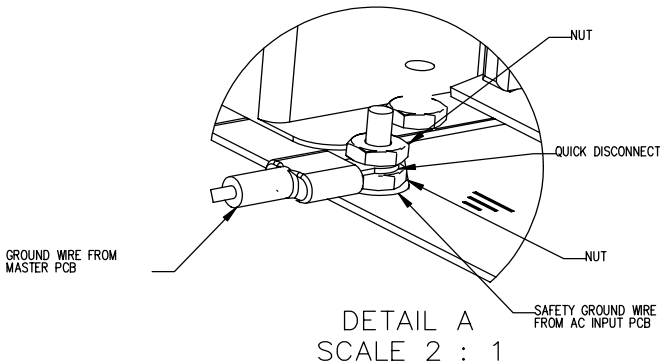
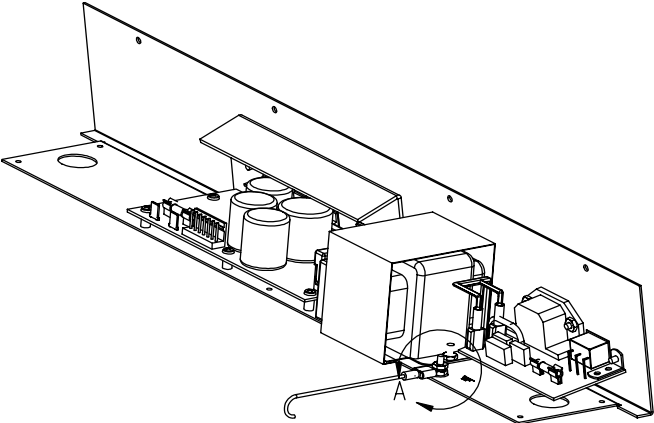
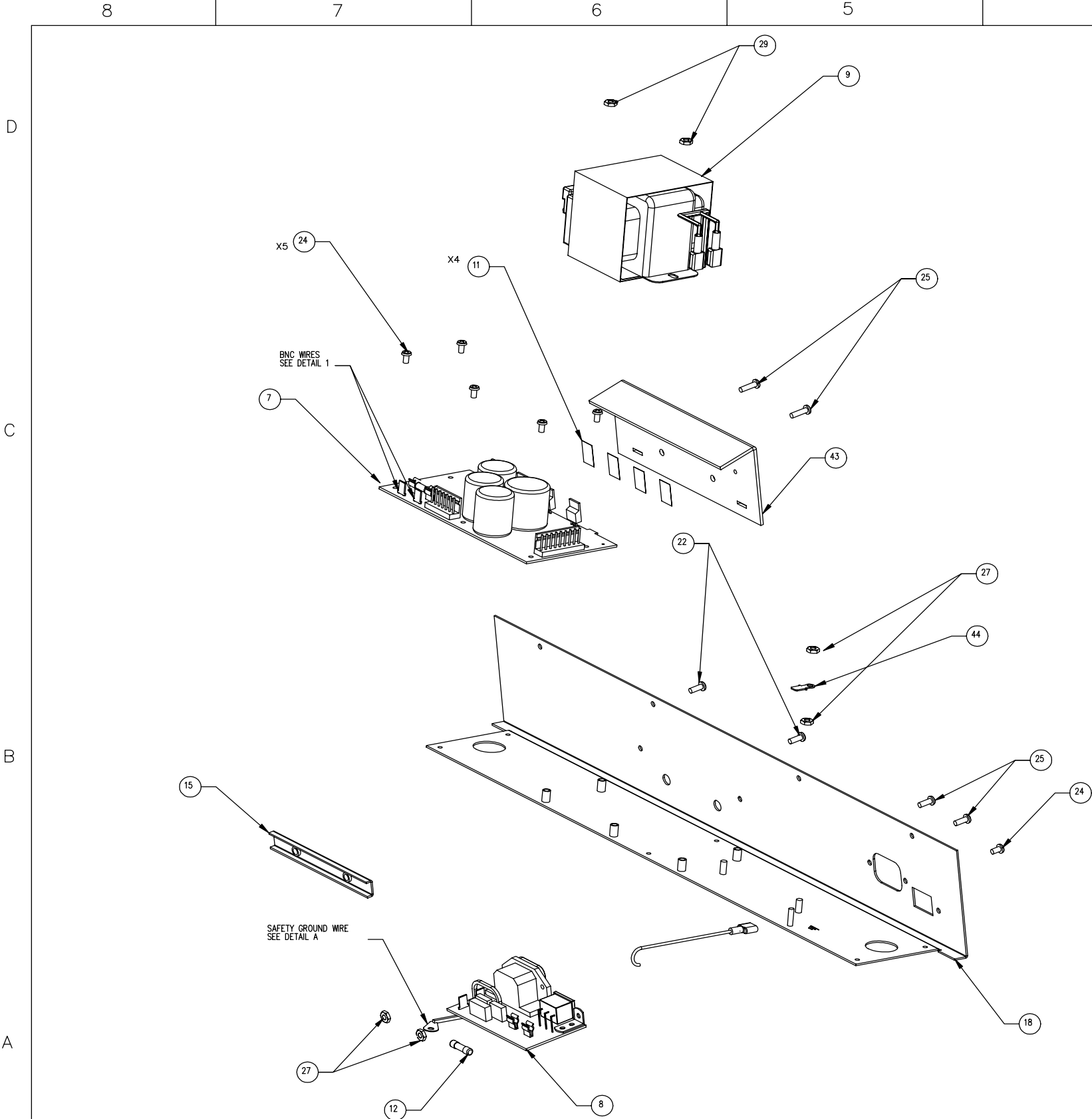
|           |      |             |     |   |          |          |      |
|-----------|------|-------------|-----|---|----------|----------|------|
| DWG. NO.  |      | 090-121-00  | SHT | 2 | REV.     | A        | 1    |
| REVISIONS |      |             |     |   |          |          |      |
| ECO#      | REV. | DESCRIPTION |     |   | REV. BY: | APP. BY: | DATE |
|           |      |             |     |   |          |          |      |



DETAIL 1

|                                                                                                                                                       |                                                                                                        |  |         |                                                        |           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--|---------|--------------------------------------------------------|-----------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>ALL ANGLES ARE 90°<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>± / .XX± ±<br>XXX± | APPROVALS                                                                                              |  | DATE    | <b>MACKIE.™</b><br>Mackie Designs Inc. Woodinville, Wa |           |
|                                                                                                                                                       | DRAWN: Chuck                                                                                           |  | 4-19-99 |                                                        |           |
|                                                                                                                                                       | CHECKED:                                                                                               |  |         |                                                        |           |
|                                                                                                                                                       | NP ENGINEERING:                                                                                        |  |         |                                                        |           |
| DIMENSION AND TOLERANCES ARE<br>IN ACCORDANCE WITH ASME Y14.5-1994                                                                                    | MATERIAL:                                                                                              |  |         | FINAL ASSEMBLY<br>CFX 16                               |           |
|                                                                                                                                                       | FINISH:                                                                                                |  |         |                                                        |           |
|                                                                                                                                                       | THE INFORMATION CONTAINED HEREIN IS<br>PROPRIETARY AND CONFIDENTIAL PROPERTY<br>OF MACKIE DESIGNS INC. |  |         |                                                        |           |
|                                                                                                                                                       | DO NOT SCALE DRAWING                                                                                   |  |         |                                                        |           |
| MFG ENGINEERING:                                                                                                                                      |                                                                                                        |  |         | SIZE<br>D                                              | SCALE:    |
| ISSUED:                                                                                                                                               |                                                                                                        |  |         | DWG. NO.<br>090-121-00                                 | REV.<br>A |
| DWG FILE: 09012100-A.DWG                                                                                                                              |                                                                                                        |  |         | SHEET 2 OF 3                                           |           |

| REVISIONS |      |             |          |          |
|-----------|------|-------------|----------|----------|
| ECO#      | REV. | DESCRIPTION | REV. BY: | APP. BY: |
|           |      |             |          |          |
|           |      |             |          |          |
|           |      |             |          |          |



|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| DIMENSION AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5-1994                                  |
| THE INFORMATION CONTAINED HEREIN IS PROPRIETARY AND CONFIDENTIAL PROPERTY OF MACKIE DESIGNS INC. |
| DO NOT SCALE DRAWING                                                                             |

|                                                                                                                                  |                  |         |
|----------------------------------------------------------------------------------------------------------------------------------|------------------|---------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ALL ANGLES ARE 90° TOLERANCES ARE: FRACTIONS: .XX± DECIMALS: .XXX± ANGLES: ± | APPROVALS        | DATE    |
| MATERIAL:                                                                                                                        | DRAWN: Chuck     | 4-19-99 |
| FINISH:                                                                                                                          | CHECKED:         |         |
| ISSUED:                                                                                                                          | MP ENGINEERING:  |         |
|                                                                                                                                  | MATERIAL:        |         |
|                                                                                                                                  | MANUFACTURING:   |         |
|                                                                                                                                  | MFG ENGINEERING: |         |
|                                                                                                                                  |                  |         |

|                                                                                       |        |                        |              |
|---------------------------------------------------------------------------------------|--------|------------------------|--------------|
|  |        |                        |              |
| Mackie Designs Inc. Woodinville, Wa                                                   |        |                        |              |
| FINAL ASSEMBLY<br>CFX 16                                                              |        |                        |              |
| SIZE<br>D                                                                             | SCALE: | DWG. NO.<br>090-121-00 | REV.<br>A    |
| DWG FILE:                                                                             |        |                        | SHEET 3 OF 3 |

## CFX•20 Parts List

| PART #        | DESCRIPTION                | PAGE |
|---------------|----------------------------|------|
| 090-122-00    | CFX20                      | 1    |
| 070-122-XX    | BOMSHELL CFX20             | 2    |
| 055-192-00-01 | EFFECTS PCB ASSEMBLY       | 4    |
| 055-241-00-03 | MASTER PCB ASSEMBLY        | 5    |
| 055-242-00-02 | SLAVE PCB ASSEMBLY         | 9    |
| 055-258-00-01 | POWER SUPPLY PCB ASSEMBLY  | 11   |
| 055-260-00-02 | AC INPUT PCB ASSEMBLY      | 12   |
| 080-144-00    | BNC ASSEMBLY               | 12   |
| 080-142-00    | TRANSFORMER ASSY -010 120V | 12   |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## 090-122-00 REV A3 CFX20

| PART #       | REV | DESCRIPTION               | QTY | NOTES       |
|--------------|-----|---------------------------|-----|-------------|
| 070-122-XX   | A40 | BOMSHELL CFX20            | 1   | SEE BELOW   |
| ⚠ 080-142-00 | B   | SA XFMR -010 120V CFX12   | 1   | SEE PAGE 12 |
| ⚠ 510-001-00 | B   | FUSE SB 1A 5X20MM 250V UL | 1   |             |
| ⚠ 640-001-00 | D   | LC IEC SGT 10A/125V 6FT   | 1   | LINECORD    |
| 820-104-00   | C00 | OWNERS MANUAL             | 1   |             |

## 070-122-XX REV A40 BOMSHELL CFX20

| PART #        | REV | DESCRIPTION                   | QTY | NOTES       |
|---------------|-----|-------------------------------|-----|-------------|
| 040-358-00    | B   | RIBBON CABLE 18G 7P .156 16IN | 1   |             |
| 055-192-00-01 | C11 | EFFECTS PCB ASSEMBLY          | 1   | SEE PAGE 4  |
| 055-241-00-03 | C05 | MASTER PCB ASSEMBLY           | 1   | SEE PAGE 5  |
| 055-242-00-02 | C05 | SLAVE 4 PCB ASSEMBLY          | 3   | SEE PAGE 9  |
| 055-258-00-01 | A10 | POWER SUPPLY PCB ASSEMBLY     | 1   | SEE PAGE 11 |
| 055-260-00-02 | B00 | AC INPUT PCB ASSEMBLY         | 1   | SEE PAGE 12 |
| 080-144-00    | D   | BNC ASSEMBLY                  | 1   | SEE PAGE 12 |
| 400-365-00    | A   | QDISK TAB .250 M #6 MNT       | 1   |             |
| ⚠ 410-005-00  | A   | INSL SILPAD TO-220            | 4   |             |
| 550-444-00    | B1  | SCR CHASSIS TOP CFX 20        | 1   |             |
| 550-447-00    | A1  | CHASSIS BOTTOM CFX 20         | 1   |             |
| 550-462-00    | A1  | CLAMP TO-220 X 4              | 1   |             |
| 550-491-00    | A1  | FAB PLT HTSK CFX PWR SPLY     | 1   |             |
| 550-551-10    | A1  | PNT LEFT SIDE CFX             | 1   |             |
| 550-551-20    | A1  | PNT RIGHT SIDE CFX            | 1   |             |
| 550-554-00    | B1  | SCR BACK CFX-20               | 1   |             |
| 620-045-00    | A   | CBL FLT 14C W/PINS 3.5IN      | 6   |             |
| 700-010-00    | A   | TF 6-32X1/4 PHP BLKZC         | 31  |             |
| 700-011-00    | A   | MCH 4-40X1/4 BTNSKT BLKOX     | 54  |             |
| 700-028-01    | B   | SEMS 6-32X5/16 PHP BLKZC      | 6   |             |
| 700-028-03    | B   | SEMS 6-32X1/2 PHP BLKZC       | 4   |             |
| 701-016-00    | A   | 5-20X5/16 PHPII TYP B BLK     | 39  |             |
| 705-001-00    | A   | KEPNUT 6-32                   | 4   |             |
| 0000223       | A   | NUT, HEX, THREADED, 1/4"      | 0   |             |
| 705-008-00    | A   | NUT LOCK 8-32                 | 2   |             |
| 0000222       | A   | WASHER                        | 0   |             |
| 750-001-00    | A   | BUMPON ROUND BLK .63X.31      | 4   |             |
| 760-037-01    | C00 | KNOB SLIDE 10X25MM MLDLIN     | 19  |             |
| 760-037-03    | C00 | KNOB SLIDE 11X24 BLUE         | 4   |             |
| 760-048-01    | B   | KNOB 9MM LT GRY               | 25  |             |
| 760-048-02    | B   | KNOB 9MM MAGENTA              | 76  |             |
| 760-048-03    | B   | KNOB 9MM BLU/GRY              | 58  |             |
| 760-048-04    | B   | KNOB 9MM DARK GRAY            | 34  |             |
| 760-091-00    | A   | KNOB MASTER VOLUME            | 1   |             |
| 780-050-00    | A   | LIPSEAL MASTER CFX            | 1   |             |

continued...



Bomshell CFX20 continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 780-051-00 | A   | LIPSEAL SLAVE 4 CFX       | 3   |       |
| 790-002-00 | A   | BAG POLY 12 X 18 2MIL     | 1   |       |
| 790-027-00 | A   | BAG POLY 20X7X36 4MIL GUS | 1   |       |
| 800-132-00 | B   | BOX CMPT CFX 20           | 1   |       |
| 810-083-00 | A   | FOAM FRONT CMPT CFX       | 1   |       |
| 810-084-00 | A   | FOAM REAR CMPT CFX        | 1   |       |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



**055-192-00-01 REV C11 EFFECTS ASSEMBLY (also used in PPM Powered Mixers)**

| PART #        | REV | DESCRIPTION             | QTY | NOTES     |
|---------------|-----|-------------------------|-----|-----------|
| 220-011-00    | A1  | LYT 100UF 20% 25V RAD   | 1   |           |
| 315-017-00    | A   | XTAL 24.576MHZ LOW PROF | 1   |           |
| 400-280-00    | A   | HDR SKT 16P .1X1 STR    | 1   |           |
| 050-192-00-01 | C11 | EFFECTS PCB ASSEMBLY    | 1   | SEE BELOW |

**050-192-00-01 REV C11 EFFECTS PCB ASSEMBLY**

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 140-009-00 | A   | RES TF SM .1W 5% 2.2 OHM  | 1   |       |
| 140-049-00 | A   | RES TF SM .1W 5% 100 OHM  | 2   |       |
| 140-053-00 | A   | RES TF SM .1W 5% 150 OHM  | 2   |       |
| 140-073-00 | A   | RES TF SM .1W 5% 1K0 OHM  | 6   |       |
| 140-089-00 | A   | RES TF SM .1W 5% 4K7 OHM  | 10  |       |
| 140-097-00 | A   | RES TF SM .1W 5% 10K OHM  | 2   |       |
| 140-114-00 | A   | RES TF SM .1W 5% 47K OHM  | 4   |       |
| 140-123-00 | A   | RES TF SM .1W 5% 100K OHM | 3   |       |
| 140-139-00 | A   | RES TF SM .1W 5% 470K OHM | 1   |       |
| 212-001-00 | B1  | CER .01UF 10% 50V X7R SM  | 2   |       |
| 212-003-00 | B1  | CER 100PF 5% 50V NPO SM   | 2   |       |
| 212-005-00 | B1  | CER 20PF 5% 50V NPO SM    | 2   |       |
| 212-007-00 | A1  | CER .047UF 20% 50V Z5U SM | 1   |       |
| 212-016-00 | A1  | CER 1000PF 5% 50V NPO SM  | 13  |       |
| 212-023-00 | B1  | CER .001UF 10% 50V NPO SM | 3   |       |
| 212-024-00 | A1  | CER 1UF 25V Y5V 1206      | 4   |       |
| 212-027-00 | A1  | CER .1UF 16V 10% X7R 0603 | 15  |       |
| 212-029-00 | A1  | CER 270PF 5% 50V NPO SM   | 2   |       |
| 212-032-00 | A1  | CER 2200PF 10% 50V X7R    | 5   |       |
| 223-003-00 | A1  | LYT 22UF 20% 6.3V SM      | 1   |       |
| 223-004-00 | B1  | LYT 10UF 20% 16V SM       | 5   |       |
| 300-003-00 | A   | DIO SW DL4148 100V SM     | 4   |       |
| 325-027-03 | A   | CMOS 74HC74A DUAL D FLPL  | 1   |       |
| 325-071-03 | A   | CMOS 74HCU04 HEX INV SM   | 1   |       |
| 329-042-03 | B   | CODEC SOUNDPORT AD1819    | 1   |       |
| 329-047-03 | B   | SRAM 32KX8 20NS SOJ SM    | 2   |       |
| 450-192-00 | C   | PCB EFFECTS               | 1   |       |
| 601-009-00 | A   | FERRITE SMT SIG 1K OHM    | 3   |       |
| 601-010-00 | A   | FERRITE SMT POWER         | 1   |       |
| 080-088-00 | A   | DSP PROGRAMMED ADSP-2163  | 1   |       |



055-241-00-03 REV C05 MASTER PCB ASSEMBLY

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 040-357-00 | A   | DIS 22GA 1007 GRN/Y 8 QD  | 1   |       |
| 130-002-02 | A   | POT RTY 50KB 9MM MNO H TN | 12  |       |
| 130-003-02 | A   | POTRTY 50KG 9MM MN TN PAN | 36  |       |
| 130-022-02 | A   | POT RTY 10KB 9MM MONO TN  | 2   |       |
| 130-030-02 | A   | POT RTY 5KZY 9MM MNO H TN | 4   |       |
| 130-031-00 | A   | POT SLIDE 10KD 60MM MONO  | 8   |       |
| 130-032-00 | A   | POT SLIDE 50KD 60MM DUAL  | 3   |       |
| 130-061-02 | B   | POT 50KG 12MM DUAL WO SLV | 15  |       |
| 130-064-02 | A   | POT 500KC 12MM DUL WO SLV | 4   |       |
| 130-075-00 | A   | POT SLD 50KG 30MM DL PANS | 9   |       |
| 140-017-00 | A   | RES TF SM .1W 5% 4.7 OHM  | 4   |       |
| 140-032-00 | A   | RES TF SM .1W 5% 20 OHM   | 1   |       |
| 140-037-00 | A   | RES TF SM .1W 5% 33 OHM   | 1   |       |
| 140-049-00 | A   | RES TF SM .1W 5% 100 OHM  | 1   |       |
| 140-051-00 | A   | RES TF SM .1W 5% 120 OHM  | 13  |       |
| 140-057-00 | A   | RES TF SM .1W 5% 220 OHM  | 2   |       |
| 140-061-00 | A   | RES TF SM .1W 5% 330 OHM  | 2   |       |
| 140-064-00 | A   | RES TF SM .1W 5% 430 OHM  | 1   |       |
| 140-065-00 | A   | RES TF SM .1W 5% 470 OHM  | 3   |       |
| 140-066-00 | A   | RES TF SM .1W 5% 510 OHM  | 53  |       |
| 140-068-00 | A   | RES TF SM .1W 5% 620 OHM  | 1   |       |
| 140-073-00 | A   | RES TF SM .1W 5% 1K0 OHM  | 64  |       |
| 140-074-00 | A   | RES TF SM .1W 5% 1K1 OHM  | 2   |       |
| 140-076-00 | A   | RES TF SM .1W 5% 1K3 OHM  | 1   |       |
| 140-077-00 | A   | RES TF SM .1W 5% 1K5 OHM  | 2   |       |
| 140-079-00 | A   | RES TF SM .1W 5% 1K8 OHM  | 4   |       |
| 140-080-00 | A   | RES TF SM .1W 5% 2K0 OHM  | 8   |       |
| 140-083-00 | A   | RES TF SM .1W 5% 2K7 OHM  | 2   |       |
| 140-085-00 | A   | RES TF SM .1W 5% 3K3 OHM  | 2   |       |
| 140-086-00 | A   | RES TF SM .1W 5% 3K6 OHM  | 4   |       |
| 140-087-00 | A   | RES TF SM .1W 5% 3K9 OHM  | 17  |       |
| 140-088-00 | A   | RES TF SM .1W 5% 4.3K OHM | 8   |       |
| 140-089-00 | A   | RES TF SM .1W 5% 4K7 OHM  | 40  |       |
| 140-090-00 | A   | RES TF SM .1W 5% 5K1 OHM  | 72  |       |
| 140-091-00 | A   | RES TF SM .1W 5% 5K6 OHM  | 1   |       |
| 140-094-00 | A   | RES TF SM .1W 5% 7K5 OHM  | 16  |       |
| 140-097-00 | A   | RES TF SM .1W 5% 10K OHM  | 108 |       |
| 140-098-00 | A   | RES TF SM .1W 5% 11K OHM  | 12  |       |
| 140-101-00 | A   | RES TF SM .1W 5% 15K OHM  | 12  |       |
| 140-104-00 | A   | RES TF SM .1W 5% 20K OHM  | 12  |       |
| 140-105-00 | A   | RES TF SM .1W 5% 22K OHM  | 1   |       |
| 140-108-00 | A   | RES TF SM .1W 5% 27K OHM  | 4   |       |
| 140-109-00 | A   | RES TF SM .1W 5% 30K OHM  | 32  |       |
| 140-111-00 | A   | RES TF SM .1W 5% 36K OHM  | 8   |       |

continued...



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## Master PCB assembly continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 140-112-00 | A   | RES TF SM .1W 5% 39K OHM  | 2   |       |
| 140-114-00 | A   | RES TF SM .1W 5% 47K OHM  | 16  |       |
| 140-119-00 | A   | RES TF SM .1W 5% 75K OHM  | 8   |       |
| 140-123-00 | A   | RES TF SM .1W 5% 100K OHM | 69  |       |
| 140-130-00 | A   | RES TF SM .1W 5% 200K OHM | 6   |       |
| 141-051-00 | B   | RES TF SM .25W 5% 120 OHM | 34  |       |
| 145-066-00 | B   | RES MF SM .1W 1% 4.75 OHM | 4   |       |
| 145-279-00 | B   | RES MF SM .1W 1% 787 OHM  | 2   |       |
| 145-288-00 | B   | RES MF SM .1W 1% 976 OHM  | 2   |       |
| 145-296-00 | B   | RES MF SM .1W 1% 1K18 OHM | 2   |       |
| 145-307-00 | B   | RES MF SM .1W 1% 1K54 OHM | 2   |       |
| 145-317-00 | B   | RES MF SM .1W 1% 1K96 OHM | 2   |       |
| 145-330-00 | B   | RES MF SM .1W 1% 2K43 OHM | 6   |       |
| 145-339-00 | B   | RES MF SM .1W 1% 3K01 OHM | 22  |       |
| 145-341-00 | B   | RES MF SM .1W 1% 3K16 OHM | 1   |       |
| 145-346-00 | B   | RES MF SM .1W 1% 3K57 OHM | 4   |       |
| 145-350-00 | B   | RES MF SM .1W 1% 3K92 OHM | 2   |       |
| 145-352-00 | B   | RES MF SM .1W 1% 4K12 OHM | 4   |       |
| 145-356-00 | B   | RES MF SM .1W 1% 4K53 OHM | 2   |       |
| 145-358-00 | B   | RES MF SM .1W 1% 4K75 OHM | 2   |       |
| 145-368-00 | B   | RES MF SM .1W 1% 6K04 OHM | 2   |       |
| 145-373-00 | B   | RES MF SM .1W 1% 6K81 OHM | 1   |       |
| 145-377-00 | B   | RES MF SM .1W 1% 7K50 OHM | 2   |       |
| 145-388-00 | B   | RES MF SM .1W 1% 9K76 OHM | 5   |       |
| 145-389-00 | B   | RES MF SM .1W 1% 10K0 OHM | 16  |       |
| 145-397-00 | B   | RES MF SM .1W 1% 12K1 OHM | 4   |       |
| 145-406-00 | B   | RES MF SM .1W 1% 15K0 OHM | 4   |       |
| 145-416-00 | B   | RES MF SM .1W 1% 19K1 OHM | 2   |       |
| 145-417-00 | B   | RES MF SM .1W 1% 19K6 OHM | 2   |       |
| 145-418-00 | B   | RES MF SM .1W 1% 20K0 OHM | 8   |       |
| 145-426-00 | B   | RES MF SM .1W 1% 24K3 OHM | 4   |       |
| 145-435-00 | B   | RES MF SM .1W 1% 30K1 OHM | 4   |       |
| 145-445-00 | B   | RES MF SM .1W 1% 38K3 OHM | 4   |       |
| 145-455-00 | B   | RES MF SM .1W 1% 48K7 OHM | 2   |       |
| 145-456-00 | B   | RES MF SM .1W 1% 49K9 OHM | 6   |       |
| 145-464-00 | B   | RES MF SM .1W 1% 60K4 OHM | 2   |       |
| 145-474-00 | B   | RES MF SM .1W 1% 76K8 OHM | 2   |       |
| 146-373-00 | A   | RES MF SM .25W 1% 6K81 OM | 8   |       |
| 200-010-02 | B   | PLY .0018UF 10% 100V TR   | 8   |       |
| 200-011-02 | B   | PLY .0022UF 10% 100V TR   | 12  |       |
| 200-013-02 | B   | PLY .0082UF 10% 100V TR   | 8   |       |
| 200-014-02 | B   | PLY .0033UF 10% 100V TR   | 8   |       |
| 200-025-02 | A   | PLY/BX .56UF 5% 63V TR    | 8   |       |
| 200-029-02 | A   | PLY/BX .22UF 5% 50V TR    | 15  |       |

continued...



Master PCB assembly continued

| PART #       | REV | DESCRIPTION                       | QTY | NOTES |
|--------------|-----|-----------------------------------|-----|-------|
| 200-031-02   | A   | PLY/BX .022UF 5% 100V TR          | 20  |       |
| 212-001-00   | B1  | CER .01UF 10% 50V X7R SM          | 83  |       |
| 212-003-00   | B1  | CER 100PF 5% 50V NPO SM           | 2   |       |
| 212-004-00   | C1  | CER 220PF 5% 50V NPO SM           | 4   |       |
| 212-005-00   | B1  | CER 20PF 5% 50V NPO SM            | 37  |       |
| 212-007-00   | A1  | CER .047UF 20% 50V Z5U SM         | 1   |       |
| 212-009-00   | A   | CER 47PF 5% 50V NPO SM            | 24  |       |
| 212-010-00   | B1  | CER .1 +80/-20 25V Z5U SM         | 72  |       |
| 212-015-00   | B1  | CER 33PF 5% 50V NPO SM            | 2   |       |
| 212-018-00   | B1  | CER 10PF 5% 50V NPO SM            | 8   |       |
| 212-019-00   | B1  | CER 150PF 5% 50V SM               | 16  |       |
| 212-021-00   | B1  | CER 27PF 5% 50V NPO SM            | 12  |       |
| 212-023-00   | B1  | CER .001UF 10% 50V NPO SM         | 6   |       |
| 212-042-00   | A1  | CER 470PF 5% 50V NPO SM           | 16  |       |
| 220-002-02   | A1  | LYT 47UF 20% 25V RAD TR           | 135 |       |
| 220-003-02   | B   | LYT 47UF 20% 50V RAD TR           | 8   |       |
| 220-004-02   | C1  | LYT 470UF 20% 6.3V RAD TR         | 4   |       |
| 220-008-02   | A1  | LYT 1UF 20% 50V RAD TR            | 2   |       |
| 220-013-02   | A1  | LYT .22UF 20% 50V RAD TR          | 12  |       |
| 220-027-02   | B1  | LYT 10UF 20% 50V RAD TR           | 6   |       |
| 300-003-00   | A   | DIO SW DL4148 100V SM             | 8   |       |
| 301-004-00   | A   | DIO PWR DL4002 SM                 | 16  |       |
| 302-010-03   | B   | DIO ZEN DL5232B 5.6V SM           | 2   |       |
| ⚠ 304-002-00 | A   | LED RED T1-3/4 W FLASHER          | 1   |       |
| ⚠ 304-027-02 | C00 | LED RED W/.425 SPACER TR          | 5   |       |
| ⚠ 304-028-02 | C00 | LED YEL W/.425 SPACER TR          | 7   |       |
| ⚠ 304-029-02 | C00 | LED GRN W/.425 SPACER TR          | 20  |       |
| 310-002-02   | A1  | XSTR PNP 2N4403 T/A               | 2   |       |
| 311-001-00   | B   | XSTR NPN IMBT4401 SMT             | 3   |       |
| 311-002-00   | A   | XSTR PNP MMST4403 SMT             | 8   |       |
| 320-011-00   | A   | OPAMP 4560 8P SIP                 | 2   |       |
| 320-020-00   | A   | IC, DUAL OP AMP NJM4565G          | 64  |       |
| 323-002-00   | C   | LM339D QUAD COMP SM               | 8   |       |
| 325-086-03   | A   | IC 74HC4053 ANA MUX/DEMUX         | 3   |       |
| 400-022-00   | A   | RCA QUAD PCMNT                    | 1   |       |
| 400-041-00   | A   | XLR VERT MALE PCMNT               | 3   |       |
| 400-048-00   | A   | HDR 7P .156X1 RTA                 | 1   |       |
| 400-464-00   | AO1 | JACK 1/4 V PCMNT 1MM WASH         | 32  |       |
| 400-223-00   | A   | XLR PCMNT NEUTRIK-AP SER          | 4   |       |
| 400-349-00   | A   | HDR SKT BTM ENTRY 14P .1          | 2   |       |
| 450-241-00   | C   | PCB CFX MASTER                    | 1   |       |
| 0000162      | A   | SWITCH 2PDT PUSH V SNAPIN         | 46  |       |
| 500-045-00   | A   | SW ROTARY ENCODER GREYCODE 15.5MM | 1   |       |
| 601-010-00   | A   | FERRITE SMT POWER                 | 1   |       |

continued...



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## Master PCB assembly continued

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 620-042-00 | A   | CBL FLT 16C W/TABS .1 4.0 | 1   |       |
| 660-002-00 | A   | 24GA JUMPER WIRE TR       | 82  |       |
| 706-009-00 | C   | SPCR PLASTIC .385 LED     | 1   |       |
| 706-033-01 | D   | STDF SWAGE NO.4 X .542L F | 21  |       |
| 706-038-00 | A   | STDF SWAGE 4-40X.25L.25OD | 3   |       |
| 760-107-00 | B   | BUTTON 2 COLOR 9X5MM      | 40  |       |
| 760-108-00 | A   | BUTTON 2 COLOR 9X9MM      | 6   |       |



055-242-00-02 REV C05 SLAVE PCB ASSEMBLY

| PART #     | REV | DESCRIPTION               | QTY | NOTES |
|------------|-----|---------------------------|-----|-------|
| 130-002-02 | A   | POT RTY 50KB 9MM MNO H TN | 12  |       |
| 130-003-02 | A   | POTRTY 50KG 9MM MN TN PAN | 20  |       |
| 130-030-02 | A   | POT RTY 5KZY 9MM MNO H TN | 4   |       |
| 130-031-00 | A   | POT SLD 10KD 60MM MONO    | 4   |       |
| 130-064-02 | A   | POT 500KC 12MM DUL WO SLV | 4   |       |
| 140-066-00 | A   | RES TF SM .1W 5% 510 OHM  | 32  |       |
| 140-073-00 | A   | RES TF SM .1W 5% 1K0 OHM  | 24  |       |
| 140-080-00 | A   | RES TF SM .1W 5% 2K0 OHM  | 4   |       |
| 140-087-00 | A   | RES TF SM .1W 5% 3K9 OHM  | 8   |       |
| 140-089-00 | A   | RES TF SM .1W 5% 4K7 OHM  | 28  |       |
| 140-090-00 | A   | RES TF SM .1W 5% 5K1 OHM  | 32  |       |
| 140-094-00 | A   | RES TF SM .1W 5% 7K5 OHM  | 4   |       |
| 140-097-00 | A   | RES TF SM .1W 5% 10K OHM  | 12  |       |
| 140-098-00 | A   | RES TF SM .1W 5% 11K OHM  | 4   |       |
| 140-101-00 | A   | RES TF SM .1W 5% 15K OHM  | 4   |       |
| 140-104-00 | A   | RES TF SM .1W 5% 20K OHM  | 8   |       |
| 140-108-00 | A   | RES TF SM .1W 5% 27K OHM  | 4   |       |
| 140-111-00 | A   | RES TF SM .1W 5% 36K OHM  | 4   |       |
| 140-114-00 | A   | RES TF SM .1W 5% 47K OHM  | 8   |       |
| 140-123-00 | A   | RES TF SM .1W 5% 100K OHM | 24  |       |
| 141-051-00 | B   | RES TF SM .25W 5% 120 OHM | 4   |       |
| 145-066-00 | B   | RES MF SM .1W 1% 4.75 OHM | 4   |       |
| 145-339-00 | B   | RES MF SM .1W 1% 3K01 OHM | 20  |       |
| 145-346-00 | B   | RES MF SM .1W 1% 3K57 OHM | 4   |       |
| 145-352-00 | B   | RES MF SM .1W 1% 4K12 OHM | 4   |       |
| 145-389-00 | B   | RES MF SM .1W 1% 10K0 OHM | 16  |       |
| 145-418-00 | B   | RES MF SM .1W 1% 20K0 OHM | 8   |       |
| 146-373-00 | A   | RES MF SM .25W 1% 6K81 OM | 8   |       |
| 200-010-02 | B   | PLY .0018UF 10% 100V TR   | 4   |       |
| 200-014-02 | B   | PLY .0033UF 10% 100V TR   | 8   |       |
| 200-025-02 | A   | PLY/BX .56UF 5% 63V TR    | 4   |       |
| 212-001-00 | B1  | CER .01UF 10% 50V X7R SM  | 34  |       |
| 212-004-00 | C1  | CER 220PF 5% 50V NPO SM   | 4   |       |
| 212-005-00 | B1  | CER 20PF 5% 50V NPO SM    | 4   |       |
| 212-009-00 | A   | CER 47PF 5% 50V NPO SM    | 8   |       |
| 212-010-00 | B1  | CER .1 +80/-20 25V Z5U SM | 4   |       |
| 212-018-00 | B1  | CER 10PF 5% 50V NPO SM    | 4   |       |
| 212-019-00 | B1  | CER 150PF 5% 50V SM       | 16  |       |
| 212-023-00 | B1  | CER .001UF 10% 50V NPO SM | 4   |       |
| 212-042-00 | A1  | CER 470PF 5% 50V NPO SM   | 16  |       |
| 220-002-02 | A1  | LYT 47UF 20% 25V RAD TR   | 38  |       |
| 220-003-02 | B   | LYT 47UF 20% 50V RAD TR   | 8   |       |
| 220-004-02 | C1  | LYT 470UF 20% 6.3V RAD TR | 4   |       |
| 220-013-02 | A1  | LYT .22UF 20% 50V RAD TR  | 12  |       |

continued...



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



Slave PCB assembly continued

| PART #                                                                                       | REV | DESCRIPTION               | QTY | NOTES |
|----------------------------------------------------------------------------------------------|-----|---------------------------|-----|-------|
| 220-027-02                                                                                   | B1  | LYT 10UF 20% 50V RAD TR   | 2   |       |
| 301-004-00                                                                                   | A   | DIO PWR DL4002 SM         | 16  |       |
|  304-028-02 | C00 | LED YEL W/.425 SPACER TR  | 4   |       |
| 311-002-00                                                                                   | A   | XSTR PNP MMST4403 SMT     | 8   |       |
| 320-020-00                                                                                   | A   | IC, DUAL OP AMP NJM4565G  | 14  |       |
| 323-002-00                                                                                   | C   | LM339D QUAD COMP SM       | 2   |       |
| 400-464-00                                                                                   | AO1 | JACK 1/4 V PCMNT 1MM WASH | 8   |       |
| 400-223-00                                                                                   | A   | XLR PCMNT NEUTRIK-AP SER  | 4   |       |
| 400-349-00                                                                                   | A   | HDR SKT BTTM ENTRY 14P .1 | 4   |       |
| 450-242-00                                                                                   | C   | PCB, CFX SLAVE 4          | 1   |       |
| 0000162                                                                                      | A   | SWITCH 2PDT PUSH V SNAPIN | 24  |       |
| 660-002-00                                                                                   | A   | 24GA JUMPER WIRE TR       | 31  |       |
| 706-033-01                                                                                   | D   | STDF SWAGE NO.4 X .542L F | 10  |       |
| 760-107-00                                                                                   | B   | BTN 2 COLOR 9X5MM         | 20  |       |
| 760-108-00                                                                                   | A   | BTN 2 COLOR 9X9MM         | 4   |       |
| 840-154-00                                                                                   | B   | LBL BLANK 1.5X.25 BD P/N  | 1   |       |



055-258-00-01 REV A10 POWER SUPPLY PCB ASSEMBLY

| PART #       | REV | DESCRIPTION               | QTY | NOTES |
|--------------|-----|---------------------------|-----|-------|
| 100-028-00   | A   | RES CF .125W 5% 130 OHM   | 2   |       |
| 100-031-00   | A   | RES CF .125W 5% 180 OHM   | 1   |       |
| 100-058-00   | A   | RES CF .125W 5% 2K4 OHM   | 2   |       |
| 100-063-00   | A   | RES CF .125W 5% 3K9 OHM   | 2   |       |
| 110-080-00   | A   | RES CF .25W 5% 20K OHM    | 1   |       |
| ! 121-093-00 | A   | RES MO 1W 5% 6K8 OHM      | 1   |       |
| 211-001-00   | D1  | CER .01UF +80/-20% 25V AX | 3   |       |
| 211-010-00   | A1  | CER .01UF +80/-20% 50V AX | 1   |       |
| 220-002-02   | A1  | LYT 47UF 20% 25V RAD TR   | 1   |       |
| 220-007-00   | B1  | LYT 100UF 20% 100V RAD    | 1   |       |
| 220-011-02   | A1  | LYT 100UF 20% 25V RAD     | 2   |       |
| 220-012-02   | B1  | LYT 4.7UF 20% 63V RAD TR  | 1   |       |
| 220-023-00   | C1  | LYT 6800UF 20% 35V RAD    | 3   |       |
| 220-026-00   | B1  | LYT 1000UF 20% 100V RAD   | 1   |       |
| 220-027-02   | B1  | LYT 10UF 20% 50V RAD TR   | 2   |       |
| 301-001-00   | A   | DIO PWR 1N4002            | 17  |       |
| 301-003-00   | B   | DIO PWR 1N5401 3A 100V    | 4   |       |
| ! 321-003-00 | B   | REG 7805 +5V              | 1   |       |
| ! 321-008-00 | B   | REG LM317T ADJ            | 2   |       |
| ! 321-009-00 | A   | REG LM337T ADJ            | 1   |       |
| ! 400-060-00 | A   | FUSE CLIP PCMT 5MM DIA    | 2   |       |
| 400-093-00   | A   | HDR 7P .156X1 LOCKING     | 1   |       |
| 400-173-00   | A   | TERM .25 QKDS PCMT STABLE | 1   |       |
| 400-348-00   | A   | TERM .187 QDISC STBL PCMT | 1   |       |
| 400-350-00   | A   | HDR 9P .156X1 STR         | 1   |       |
| 450-258-00   | B   | PCB PWR SPLY CMPT CFX     | 1   |       |
| ! 510-002-00 | C   | FUSE SB .5A 5X20 250V IEC | 1   |       |



Components noted with this symbol shall be replaced only by the component specified. This is required to maintain product safety.



## 055-260-00-02 REV B00 AC INPUT PCB ASSEMBLY

|   | PART #     | REV | DESCRIPTION                 | QTY | NOTES |
|---|------------|-----|-----------------------------|-----|-------|
|   | 040-135-00 | A   | DIS 18G 1010 GRNYL 4 LGTM   | 1   |       |
| ⚠ | 200-023-00 | B   | PLY/BX .001UF 20% 250V Y2   | 2   |       |
| ⚠ | 200-024-00 | B   | PLY/BX .01UF 20% 250V Y2    | 1   |       |
| ⚠ | 400-060-00 | A   | FUSE CLIP PCMT 5MM DIA      | 2   |       |
| ⚠ | 400-132-00 | A   | IEC MALE RTA PCMT           | 1   |       |
|   | 400-173-00 | A   | TERM .25 QKDS PCMT STABLE   | 2   |       |
|   | 450-260-00 | B   | PCB AC INPUT CFX            | 1   |       |
| ⚠ | 500-052-00 | A   | SW SPST PWR RCKR RTA BLK    | 1   |       |
|   | 700-012-00 | A00 | MCH 4-40X3/8 PHP CLRZC      | 2   |       |
|   | 705-005-00 | A   | NUT LOCK 4-40               | 2   |       |
|   | 712-020-00 | A   | BRKT ANG 6-32X.037THK STL   | 1   |       |
|   | 712-021-01 | B   | RIVET CL END .125X.062-.125 | 2   |       |

## 080-144-00 REV D BNC ASSEMBLY

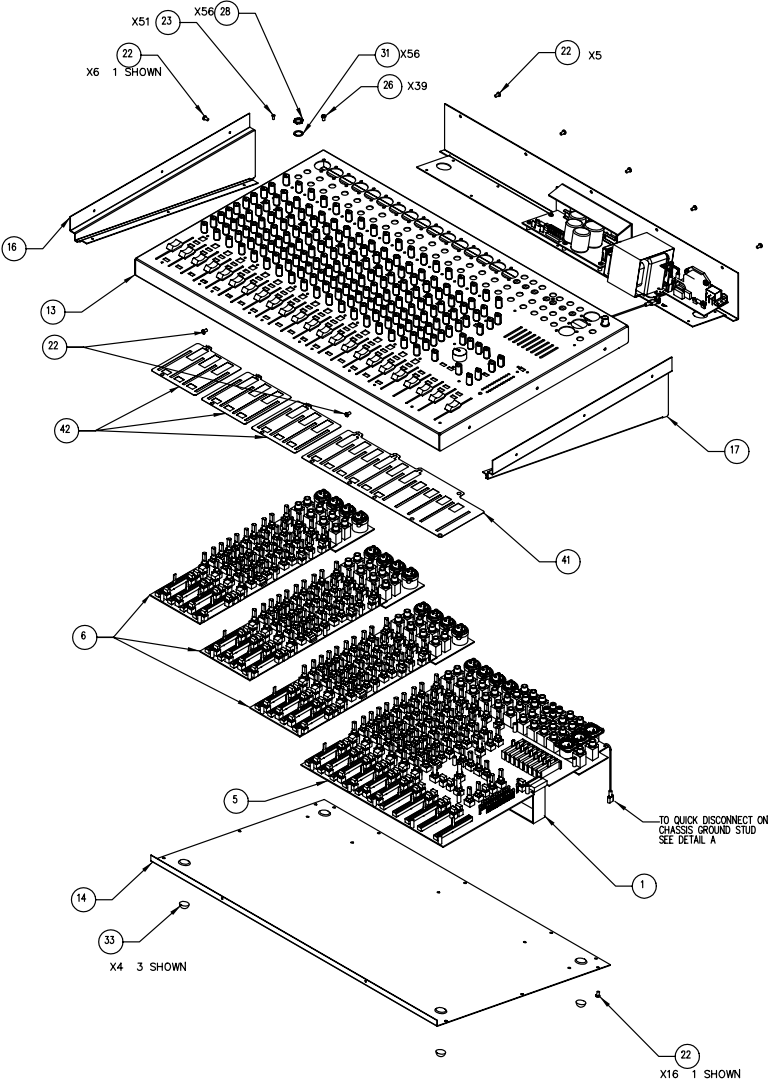
|  | PART #     | REV | DESCRIPTION               | QTY | NOTES |
|--|------------|-----|---------------------------|-----|-------|
|  | 400-010-00 | B   | BNC PANEL MOUNT           | 1   |       |
|  | 400-065-00 | A   | TERM QDISC .250 F 18-22GA | 1   |       |
|  | 400-091-00 | A   | TERM QDISC .187 F 18-22GA | 1   |       |
|  | 610-027-00 | B   | WIR 22G 1007 BLU 17IN ST2 | 1   |       |
|  | 610-028-00 | B   | WIR 22G 1007 GRN 17IN ST2 | 1   |       |
|  | 705-030-00 | 1   | NUT 3/8 W/400-010-00      | 1   |       |
|  | 710-047-00 | 1   | WASH FLT W/400-010-00     | 1   |       |
|  | 711-016-00 | 1   | LUG SLDR 3/8 W/400-010-00 | 1   |       |

## 080-142-00 REV B TRANSFORMER ASSEMBLY -010 120V

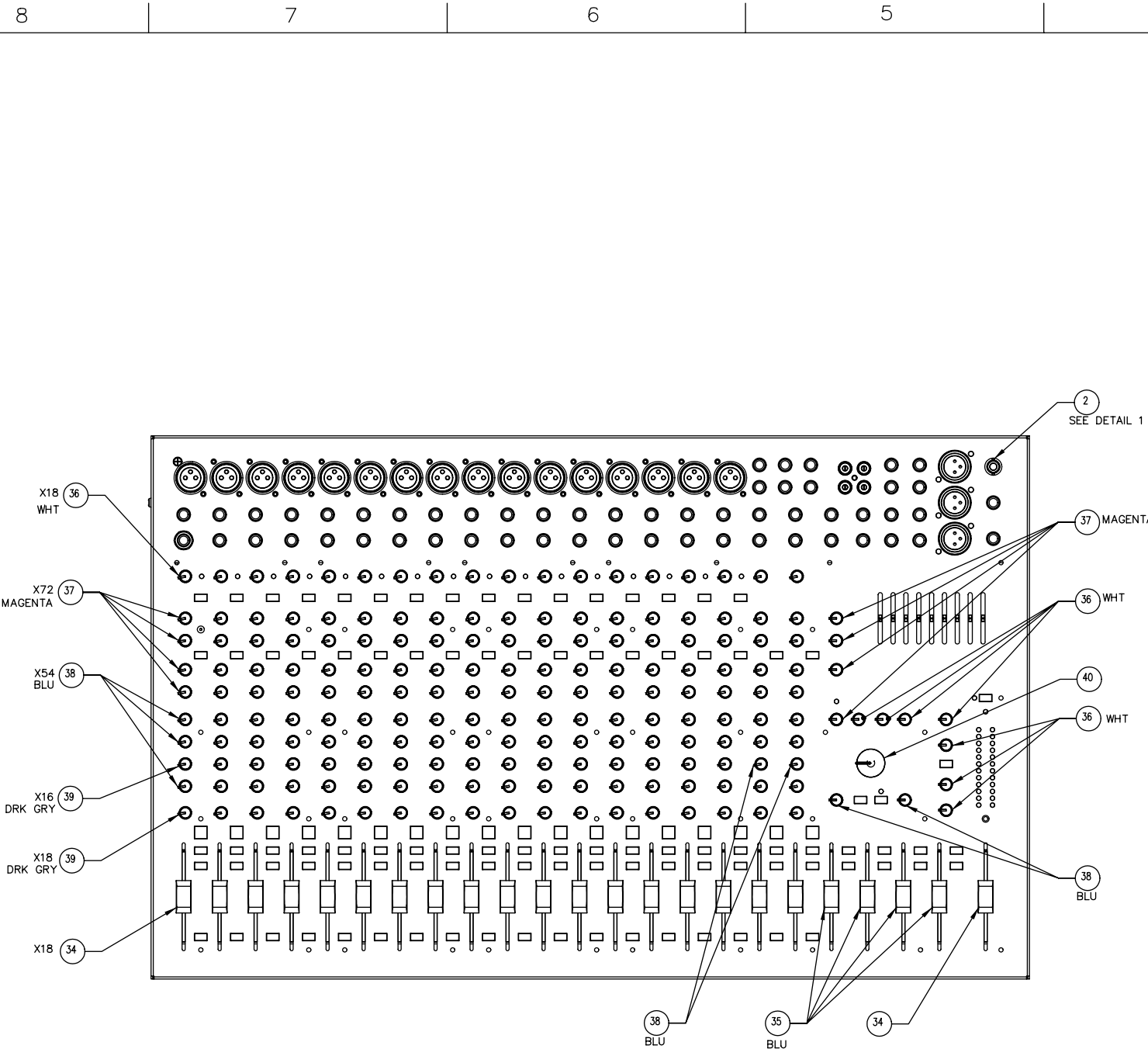
|   | PART #     | REV | DESCRIPTION               | QTY | NOTES |
|---|------------|-----|---------------------------|-----|-------|
|   | 400-210-00 | B   | TERM QDISC .250 F 18-22GA | 2   |       |
|   | 400-351-00 | A   | IDC 9P .156X1 22GA END    | 1   |       |
| ⚠ | 600-010-00 | B00 | XFMR SR24.4 120V          | 1   |       |
| ⚠ | 550-490-00 | B1  | XFMR SHLD 600-010-XX M6X  | 1   |       |
|   | 720-007-00 | A   | TAPE DS 30MIL X 1.0W URTH |     |       |



|                     |      |             |          |               |
|---------------------|------|-------------|----------|---------------|
| DWG. NO. 090-122-00 |      | SHEET 2     | REV. A   | 1             |
| REVISIONS           |      |             |          |               |
| ECO#                | REV. | DESCRIPTION | REV. BY: | APP. BY: DATE |
|                     |      |             |          |               |



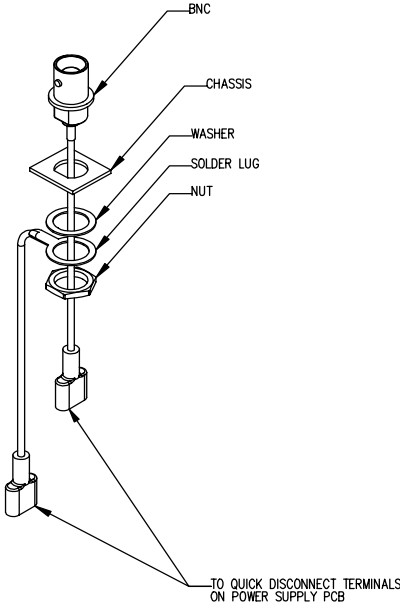
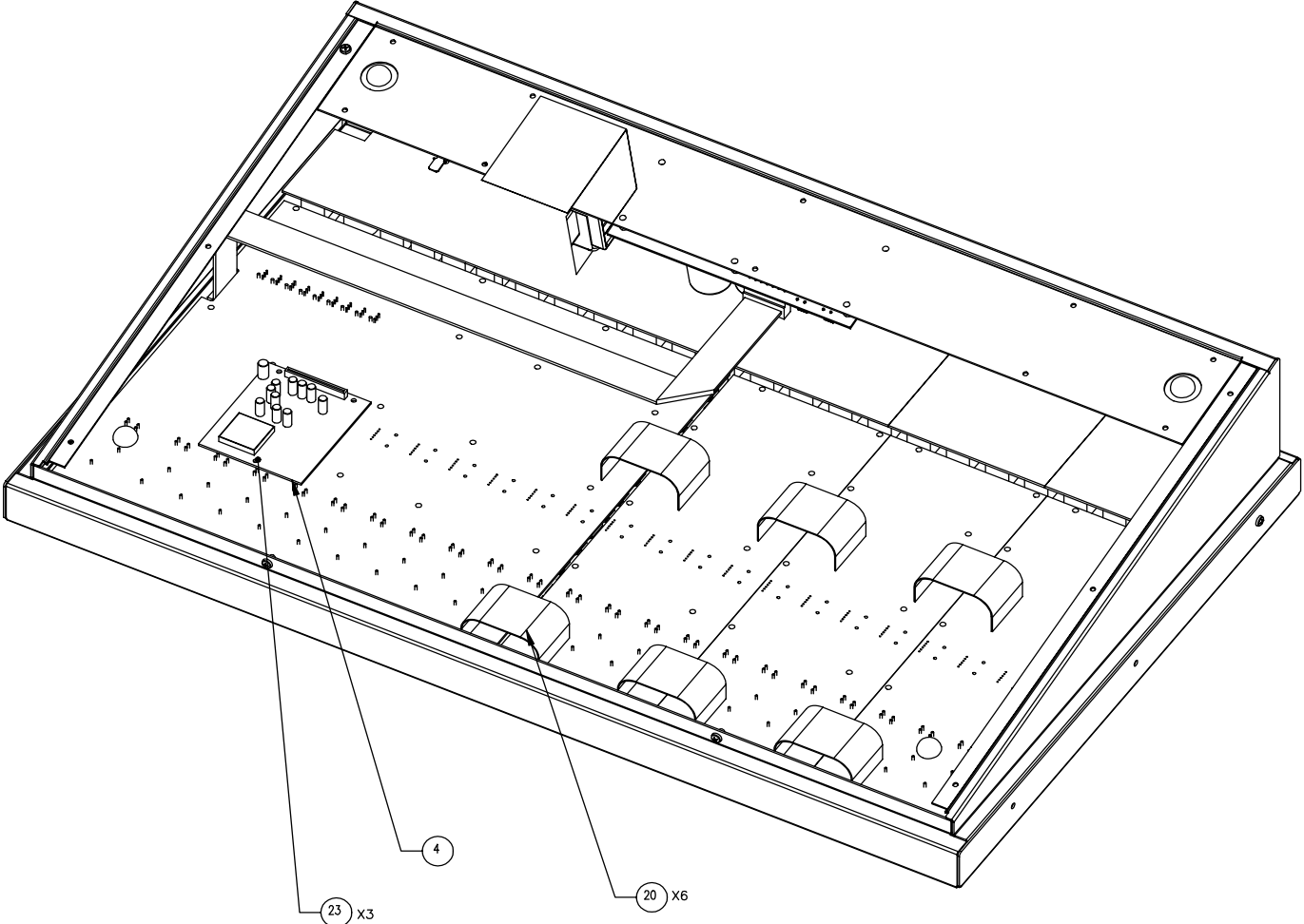
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| 1     | 040-358-00    |
| 4     | 055-192-00-01 |
|       | 055-241-00-02 |
| 6     | 055-242-00-01 |
| 7     | 055-258-00-01 |
| 8     | 055-260-00-01 |
| 9     | 080-142-00    |
| 2     | 080-144-00    |
| 44    | 400-365-00    |
| 11    | 410-005-00    |
| 12    | 510-001-00    |
| 13    | 550-444-00    |
| 14    | 550-447-00    |
| 15    | 550-462-00    |
| 43    | 550-491-00    |
| 16    | 550-551-10    |
| 17    | 550-551-20    |
| 18    | 550-554-00    |
| 20    | 620-045-00    |
| 22    | 700-010-00    |
| 23    | 700-011-00    |
| 24    | 700-028-01    |
| 25    | 700-028-03    |
| 26    | 701-016-00    |
| 27    | 705-001-00    |
| 28    | 705-003-00    |
| 29    | 705-008-00    |
| 31    | 710-002-00    |
| 33    | 750-001-00    |
| 34    | 760-037-01    |
| 35    | 760-037-03    |
| 36    | 760-048-01    |
| 37    | 760-048-02    |
| 38    | 760-048-03    |
| 39    | 760-048-04    |
| 40    | 760-091-00    |
| 41    | 780-050-00    |
| 42    | 780-051-00    |



|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
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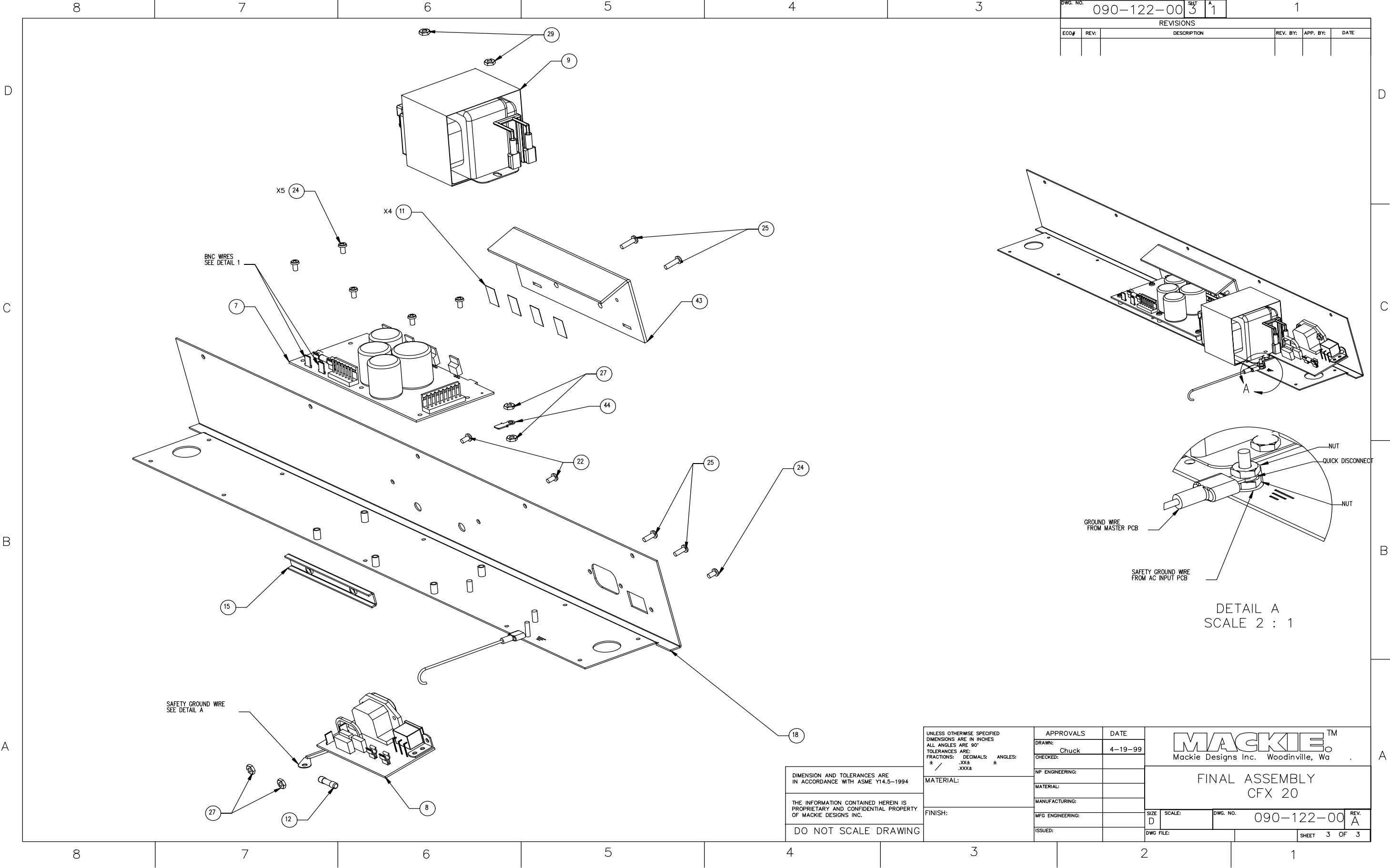
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|------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------|--------------------------------------------------------------------|--------|------------------------|-----------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>ALL ANGLES ARE 90°<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>± / .XXX± ± | APPROVALS        | DATE    | <div>MACKIE.™</div> <div>Mackie Designs Inc. Woodinville, Wa</div> |        |                        |           |
|                                                                                                                                                | DRAWN: Chuck     | 4-19-99 | FINAL ASSEMBLY<br>CFX 20                                           |        |                        |           |
|                                                                                                                                                | CHECKED:         |         |                                                                    |        |                        |           |
|                                                                                                                                                | NP ENGINEERING:  |         |                                                                    |        |                        |           |
| MATERIAL:                                                                                                                                      | MATERIAL:        |         | SIZE<br>D                                                          | SCALE: | DWG. NO.<br>090-122-00 | REV.<br>A |
|                                                                                                                                                | MANUFACTURING:   |         |                                                                    |        |                        |           |
| FINISH:                                                                                                                                        | MFG ENGINEERING: |         | DWG FILE:                                                          |        | SHEET                  | 3 OF 3    |
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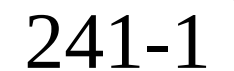
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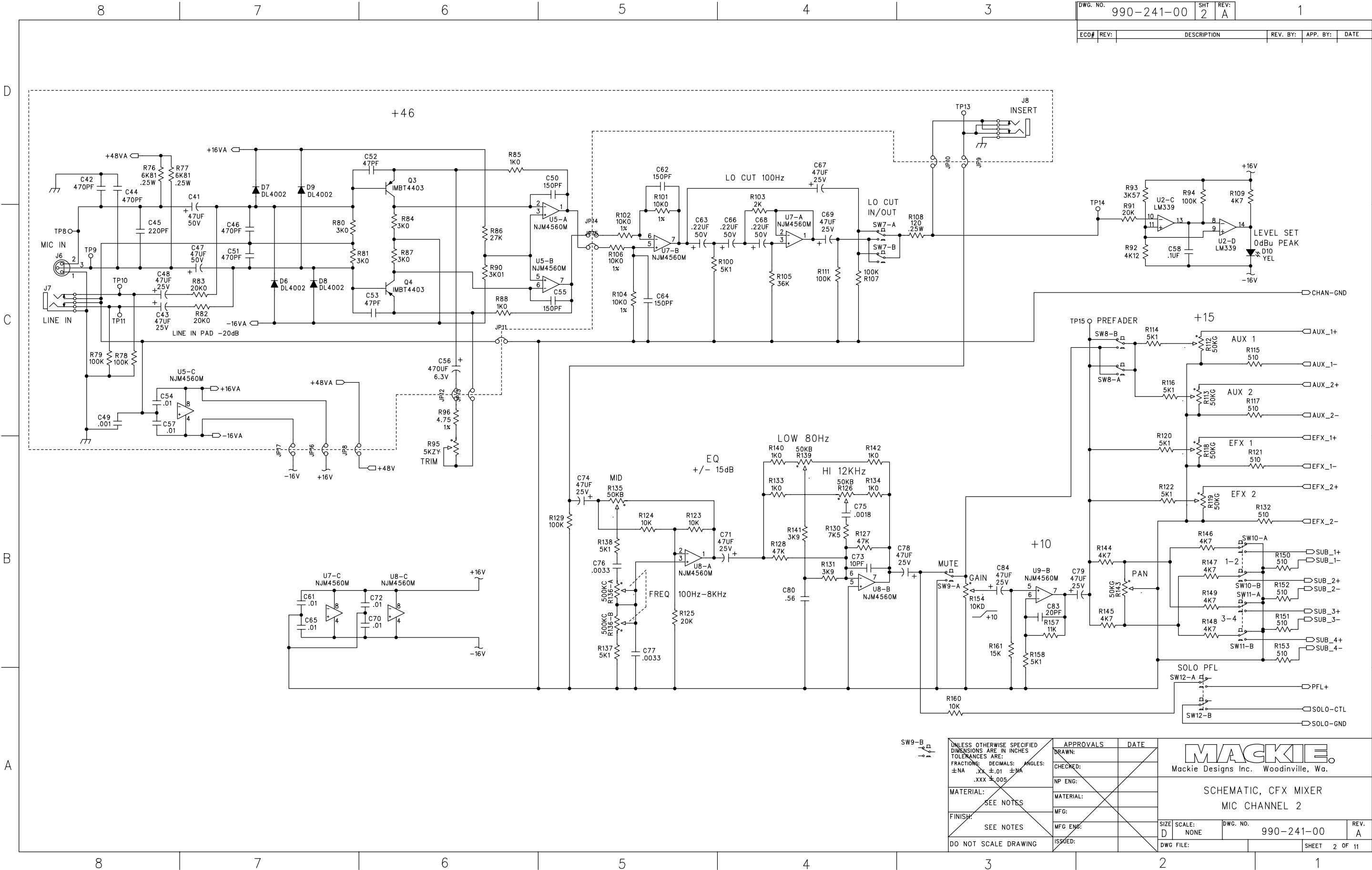


DETAIL 1

|                                                                                                                                                                     |  |              |  |                  |  |                                                             |  |                                          |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------|--|------------------|--|-------------------------------------------------------------|--|------------------------------------------|--|--|--|
| <div>UNLESS OTHERWISE SPECIFIED<br/>DIMENSIONS ARE IN INCHES<br/>ALL ANGLES ARE 90°<br/>TOLERANCES ARE:<br/>FRACTIONS: DECIMALS: ANGLES:<br/>± / .XX± .XXX± ±</div> |  | APPROVALS    |  | DATE             |  | <div>MACKIE.™<br/>Mackie Designs Inc. Woodinville, Wa</div> |  |                                          |  |  |  |
|                                                                                                                                                                     |  | DRAWN: Chuck |  | 4-19-99          |  |                                                             |  |                                          |  |  |  |
|                                                                                                                                                                     |  | MATERIAL:    |  | CHECKED:         |  |                                                             |  | FINAL ASSEMBLY<br>CFX 20                 |  |  |  |
|                                                                                                                                                                     |  |              |  | NP ENGINEERING:  |  |                                                             |  |                                          |  |  |  |
| DIMENSION AND TOLERANCES ARE<br>IN ACCORDANCE WITH ASME Y14.5-1994                                                                                                  |  | FINISH:      |  | MATERIAL:        |  |                                                             |  | SIZE D SCALE: DWG. NO. 090-122-00 REV. A |  |  |  |
| MANUFACTURING:                                                                                                                                                      |  |              |  |                  |  |                                                             |  |                                          |  |  |  |
| THE INFORMATION CONTAINED HEREIN IS<br>PROPRIETARY AND CONFIDENTIAL PROPERTY<br>OF MACKIE DESIGNS INC.                                                              |  |              |  | MFG ENGINEERING: |  |                                                             |  | DWG FILE: SHEET 2 OF 3                   |  |  |  |
| DO NOT SCALE DRAWING                                                                                                                                                |  |              |  | ISSUED:          |  |                                                             |  |                                          |  |  |  |



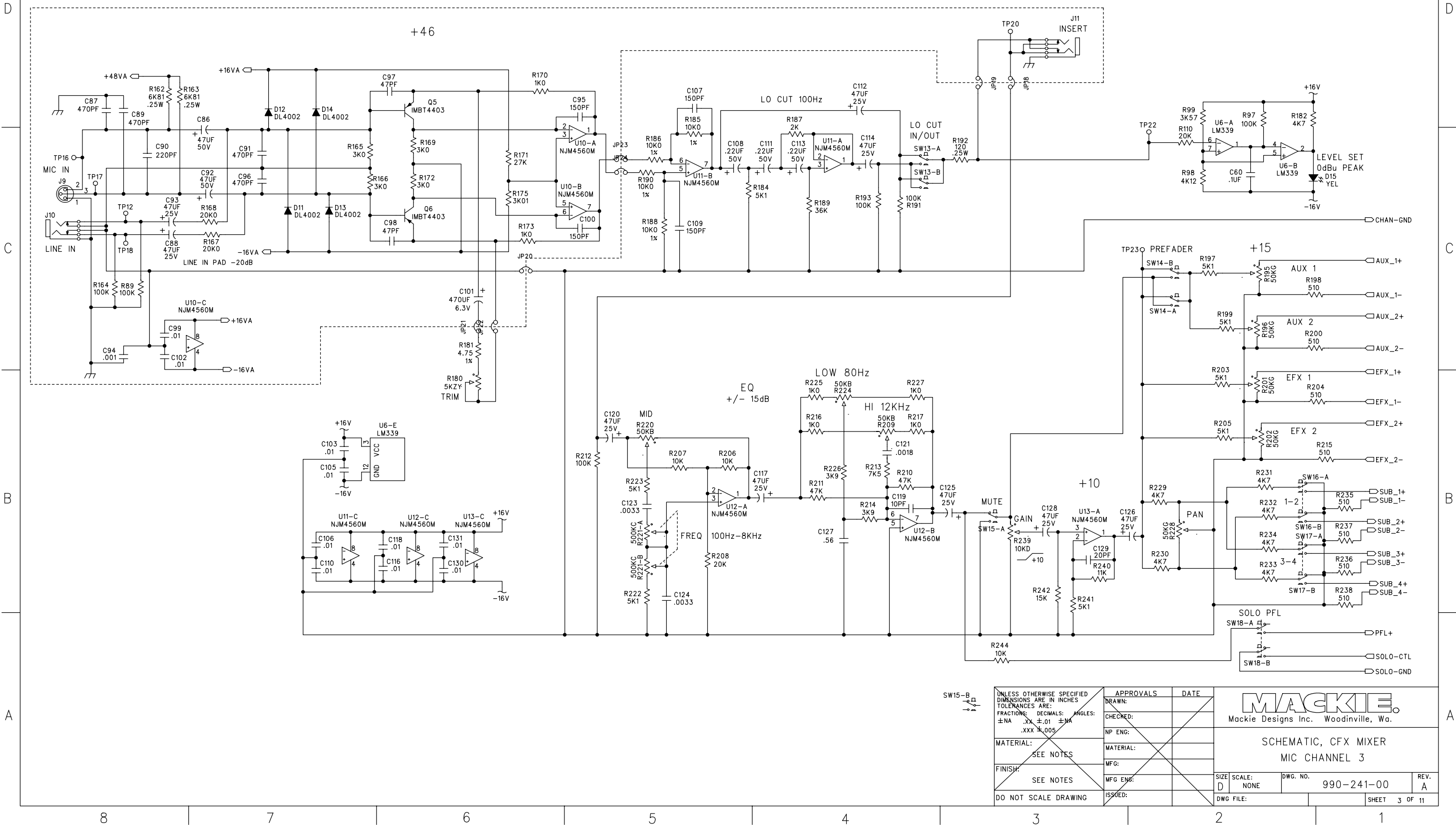




|                                                                                                                                               |  |           |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--|-----------|------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>±.NA .XX ±.01 ±.NA<br>.XXX ±.005 |  | APPROVALS | DATE |
| MATERIAL:                                                                                                                                     |  | DRAWN:    |      |
| FINISH:                                                                                                                                       |  | CHECKED:  |      |
| DO NOT SCALE DRAWING                                                                                                                          |  | MP ENG:   |      |
|                                                                                                                                               |  | MATERIAL: |      |
|                                                                                                                                               |  | MFG:      |      |
|                                                                                                                                               |  | MFG ENG:  |      |
|                                                                                                                                               |  | ISSUED:   |      |

|                                                 |             |
|-------------------------------------------------|-------------|
| MACKIE.<br>Mackie Designs Inc. Woodinville, Wa. |             |
| SCHEMATIC, CFX MIXER<br>MIC CHANNEL 2           |             |
| SIZE: D                                         | SCALE: NONE |
| DWG. NO. 990-241-00                             | REV. A      |
| SHEET 2 OF 11                                   |             |

|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 3        | REV:     | A    | 1 |
| ECO#     | REV:       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

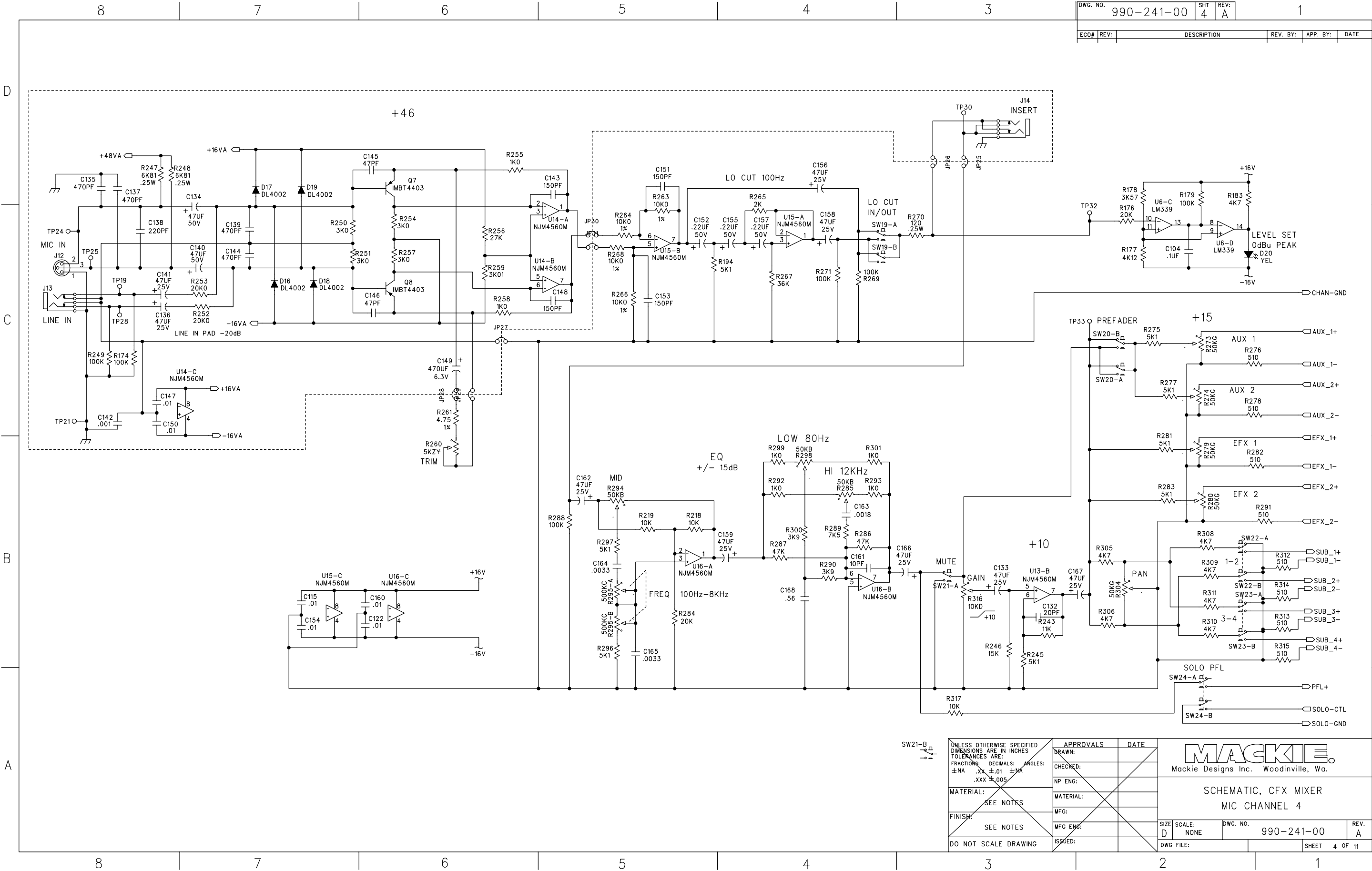


|                                                                                                                                               |                                            |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>±.NA .XX ±.01 ±.NA<br>.XXX ±.005 | APPROVALS<br>DRAWN:<br>CHECKED:<br>NP ENG: | DATE |
| MATERIAL:<br>FINISH:<br>DO NOT SCALE DRAWING                                                                                                  | MATERIAL:<br>MFG:<br>MFG ENG:<br>ISSUED:   |      |

**MACKIE**  
Mackie Designs Inc. Woodinville, Wa.

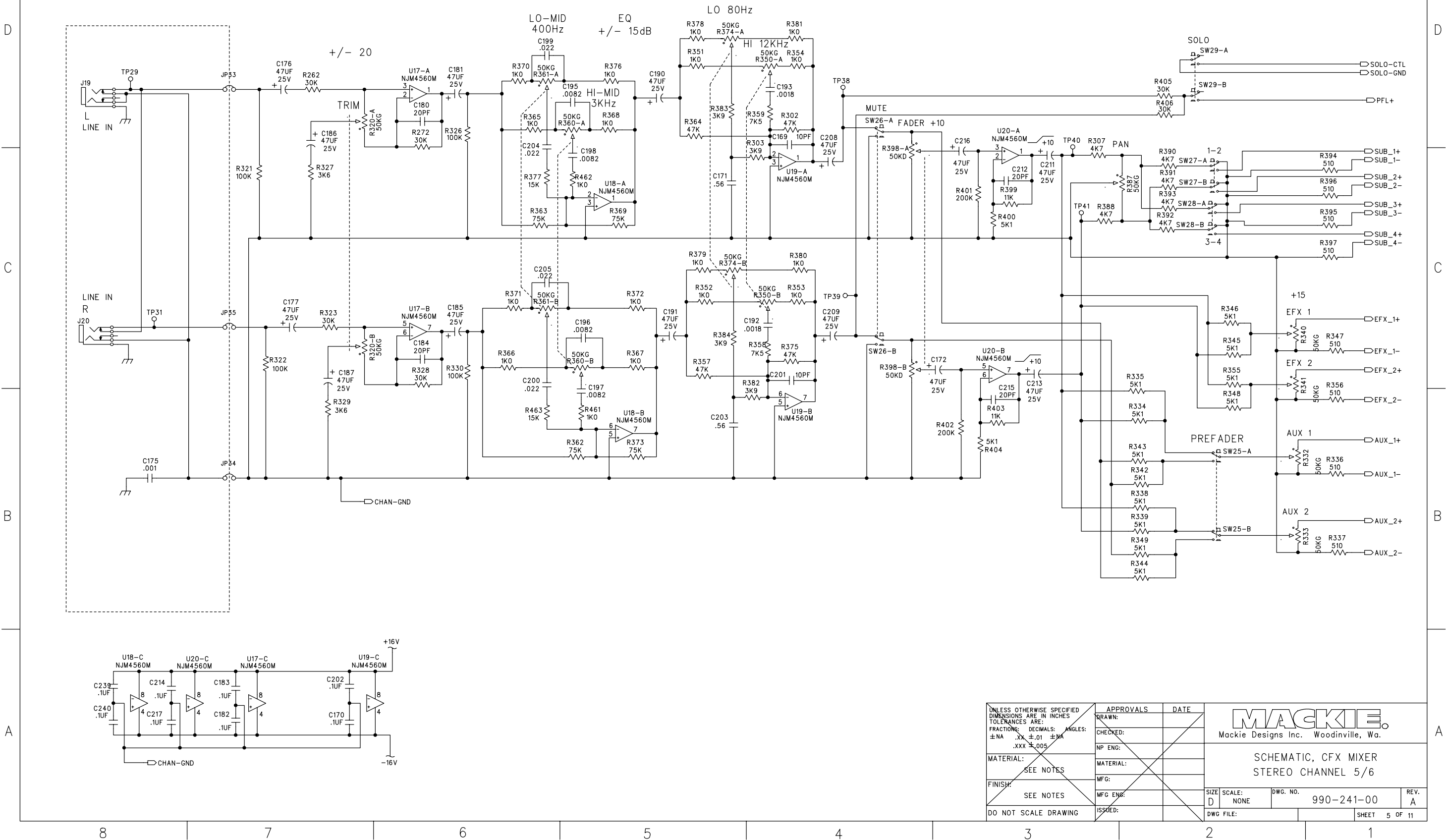
SCHEMATIC, CFX MIXER  
MIC CHANNEL 3

|           |        |            |         |
|-----------|--------|------------|---------|
| SIZE      | SCALE: | DWG. NO.   | REV.    |
| D         | NONE   | 990-241-00 | A       |
| DWG FILE: |        | SHEET      | 3 OF 11 |

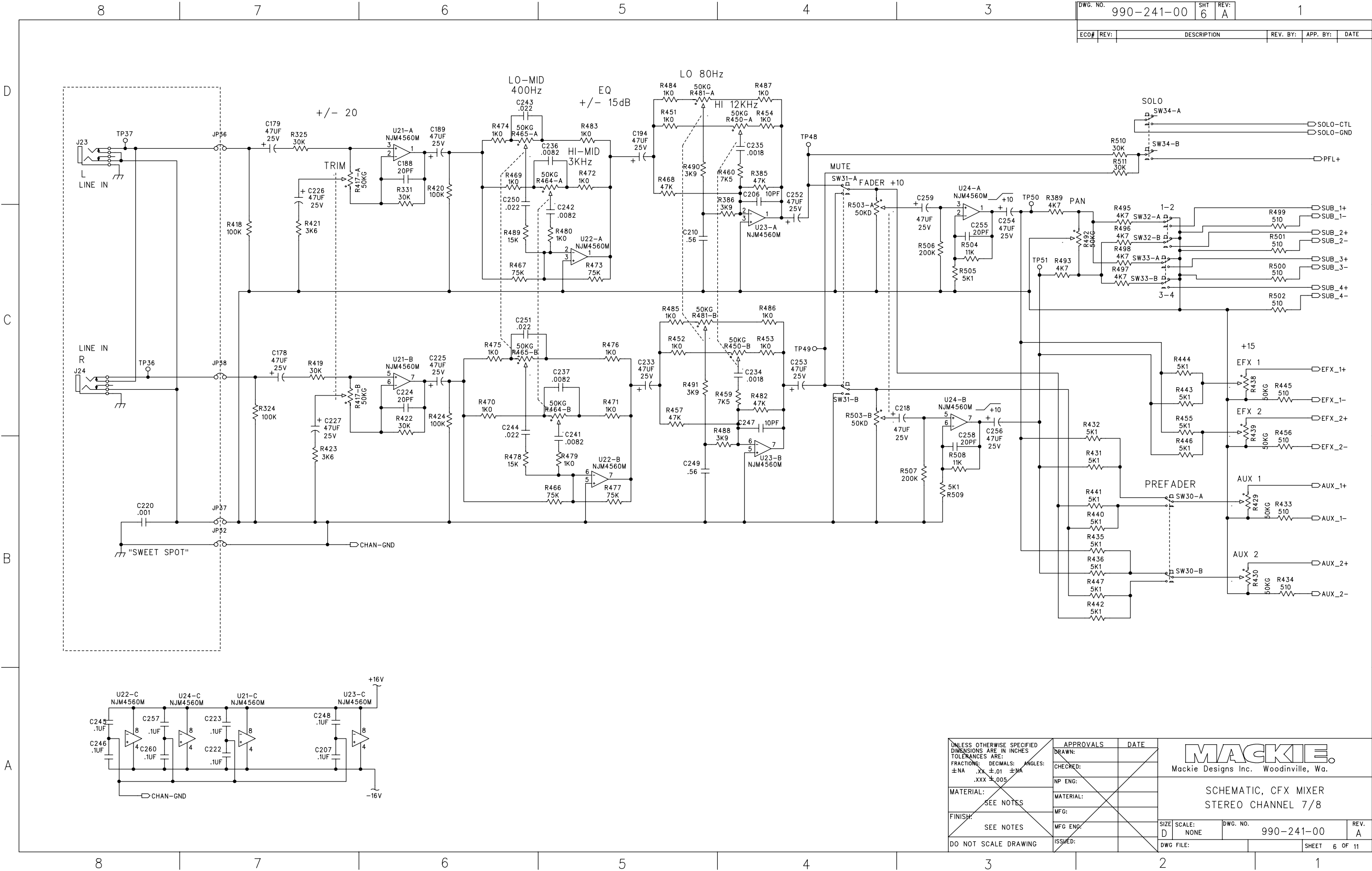


241-4 MASTER BOARD 241 REV A

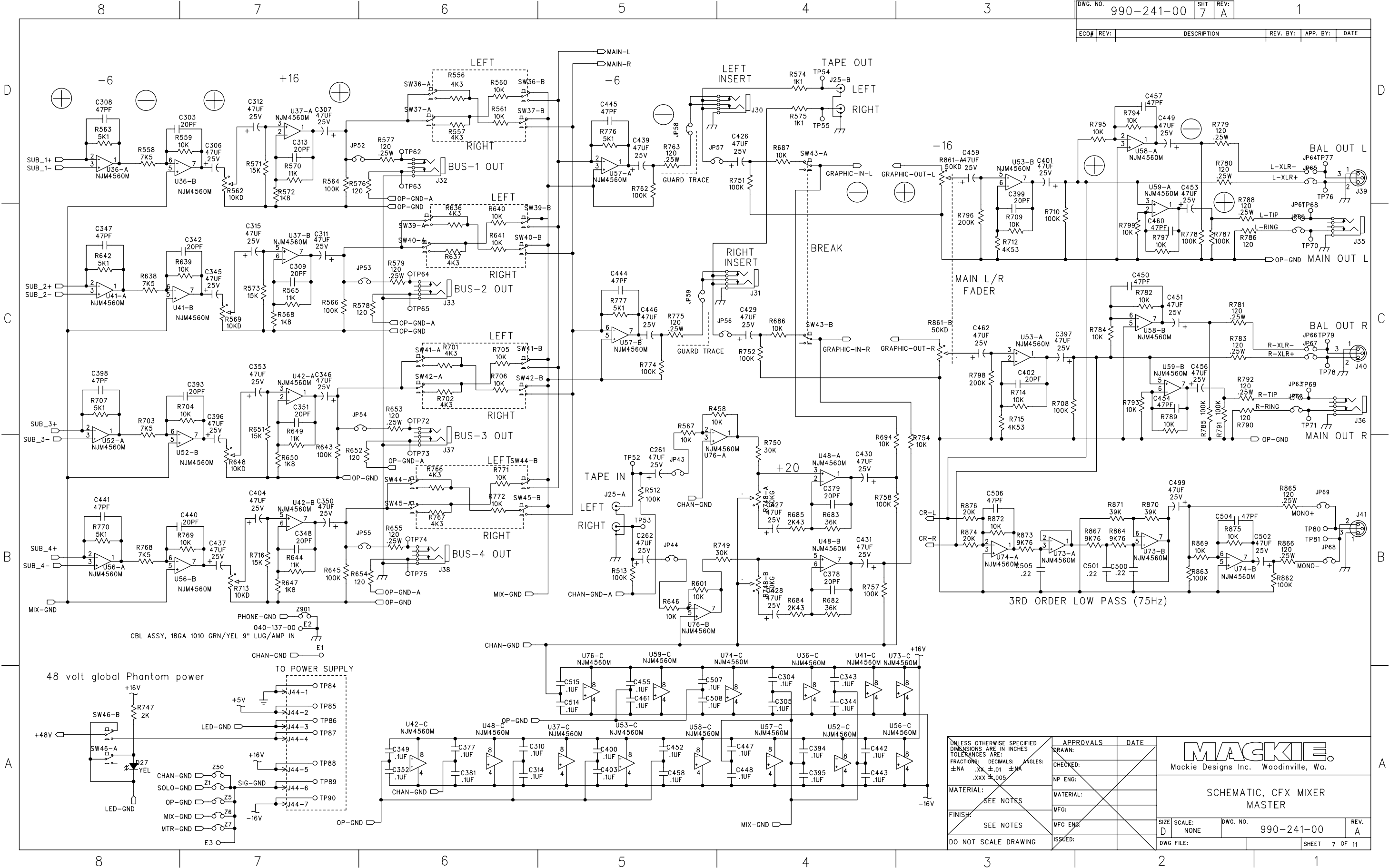
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|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 5        | REV:     | A    | 1 |
| ECO#     | REV:       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

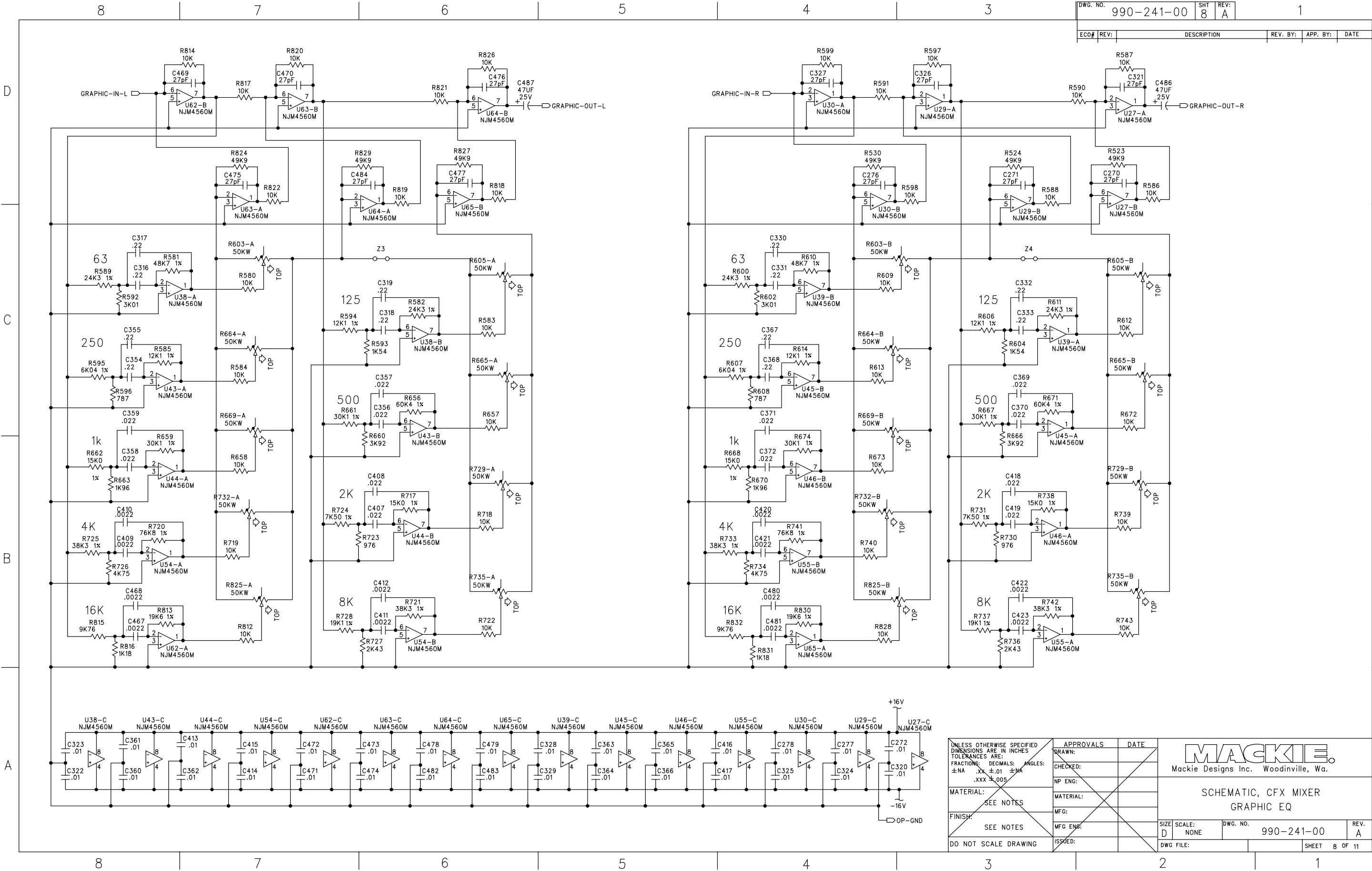


|                                                                                                                                               |           |           |                                                 |                        |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-------------------------------------------------|------------------------|---------------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>±.NA .XX ±.01 ±.NA<br>.XXX ±.005 | APPROVALS |           | DATE                                            |                        |               |
|                                                                                                                                               | DRAWN:    |           |                                                 |                        |               |
|                                                                                                                                               | CHECKED:  |           |                                                 |                        |               |
|                                                                                                                                               | NP ENG:   |           |                                                 |                        |               |
| MATERIAL:                                                                                                                                     | MATERIAL: |           | MACKIE.<br>Mackie Designs Inc. Woodinville, Wa. |                        |               |
| FINISH:                                                                                                                                       | MFG:      |           |                                                 |                        |               |
| DO NOT SCALE DRAWING                                                                                                                          | MFG ENG:  |           |                                                 |                        |               |
|                                                                                                                                               | ISSUED:   |           |                                                 |                        |               |
| SEE NOTES                                                                                                                                     |           | SIZE<br>D | SCALE:<br>NONE                                  | DWG. NO.<br>990-241-00 | REV.<br>A     |
|                                                                                                                                               |           | DWG FILE: |                                                 |                        | SHEET 5 OF 11 |



|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 7        | REV.     | A    | 1 |
| ECO#     | REV.       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

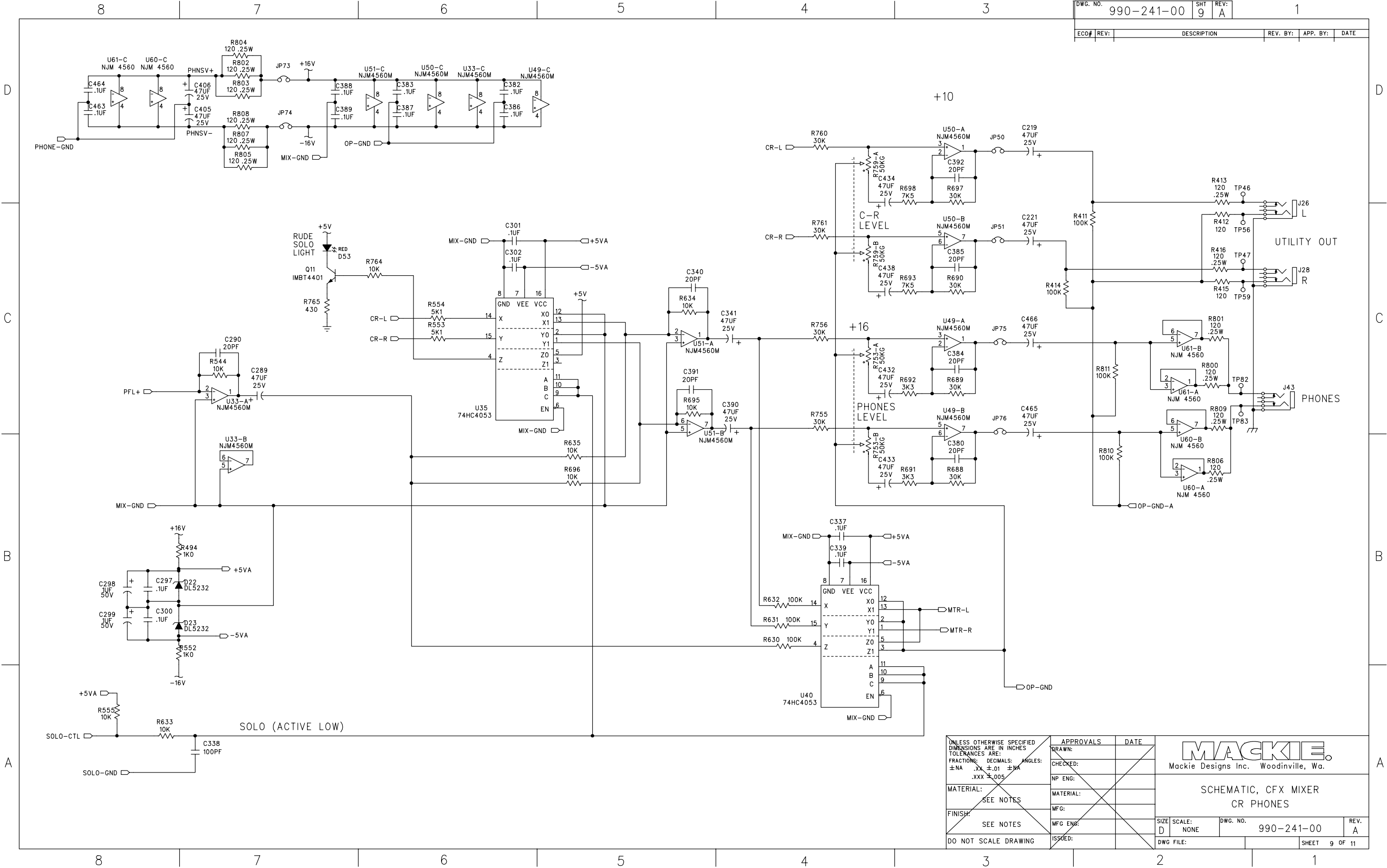




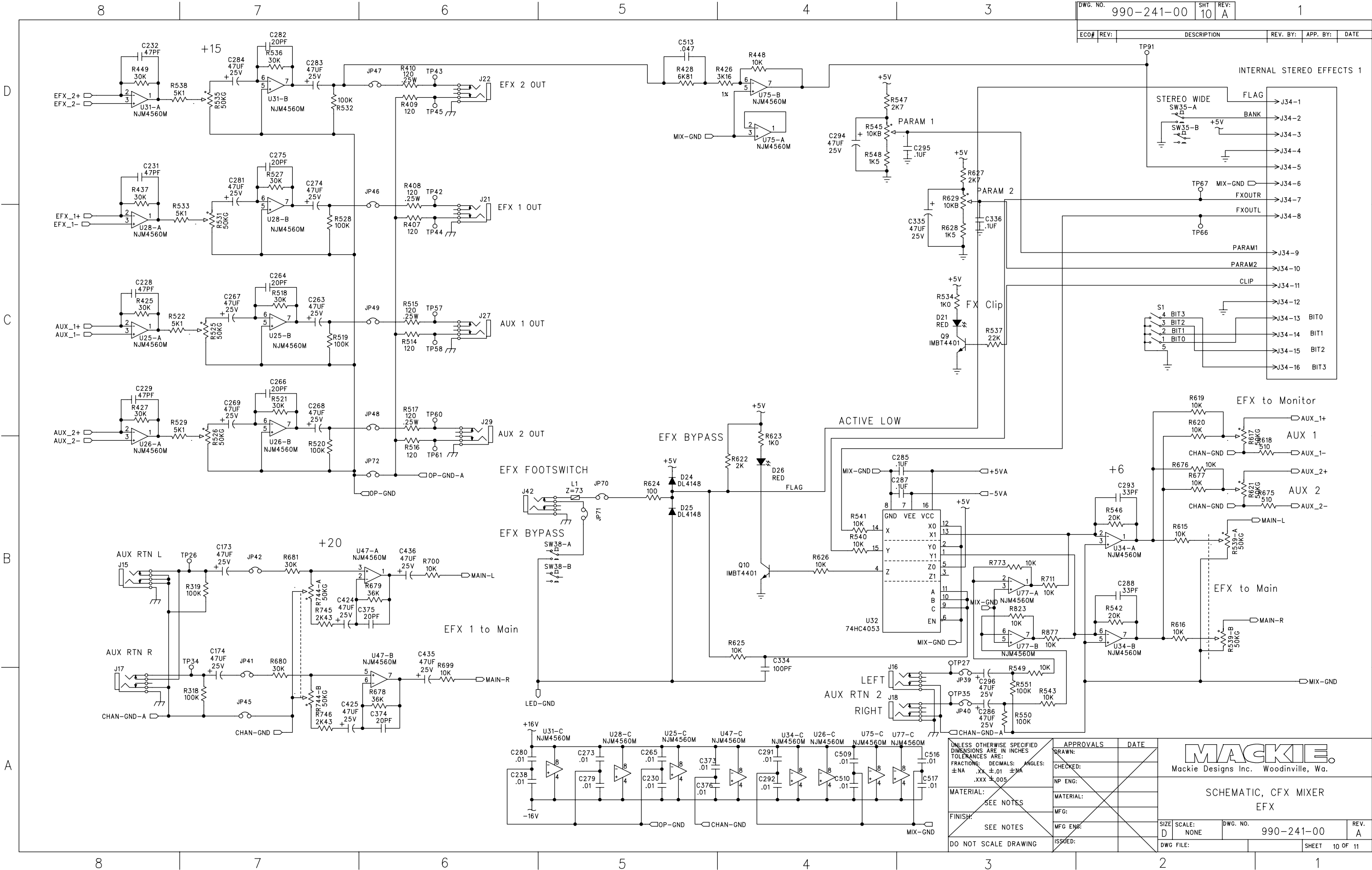
241-8

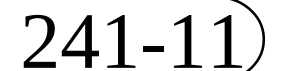
MASTER BOARD 241 REV A

|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 9        | REV:     | A    | 1 |
| ECO#     | REV:       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

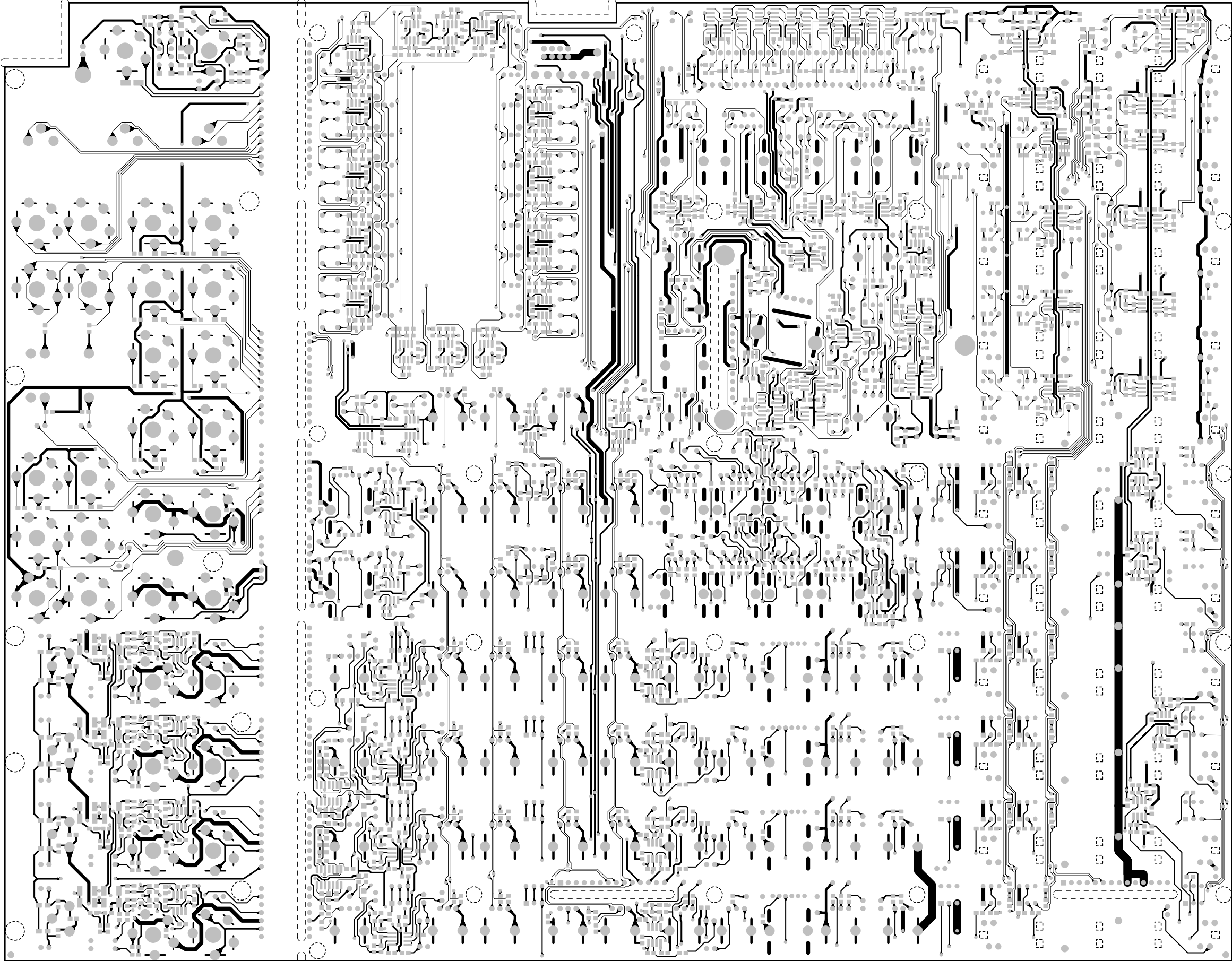


|                                                                                                                                                                                               |           |      |                                                                                                                                                                                                               |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>FRACTIONS: DECIMALS: ANGLES:<br>±.NA .XX ±.01 ±.NA<br>.XXX ±.005<br>MATERIAL:<br>FINISH:<br>DO NOT SCALE DRAWING | APPROVALS | DATE | <div><b>MACKIE.</b><br/>Mackie Designs Inc. Woodinville, Wa.</div> <div>SCHEMATIC, CFX MIXER<br/>CR PHONES</div> <div>SIZE: D SCALE: NONE DWG. NO. 990-241-00 REV. A</div> <div>DWG FILE: SHEET 9 OF 11</div> |  |  |
|                                                                                                                                                                                               | DRAWN:    |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               | CHECKED:  |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               | NP ENG:   |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               | MATERIAL: |      |                                                                                                                                                                                                               |  |  |
| SEE NOTES                                                                                                                                                                                     | MFG:      |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               | MFG ENG:  |      |                                                                                                                                                                                                               |  |  |
| SEE NOTES                                                                                                                                                                                     | ISSUED:   |      |                                                                                                                                                                                                               |  |  |
|                                                                                                                                                                                               |           |      |                                                                                                                                                                                                               |  |  |



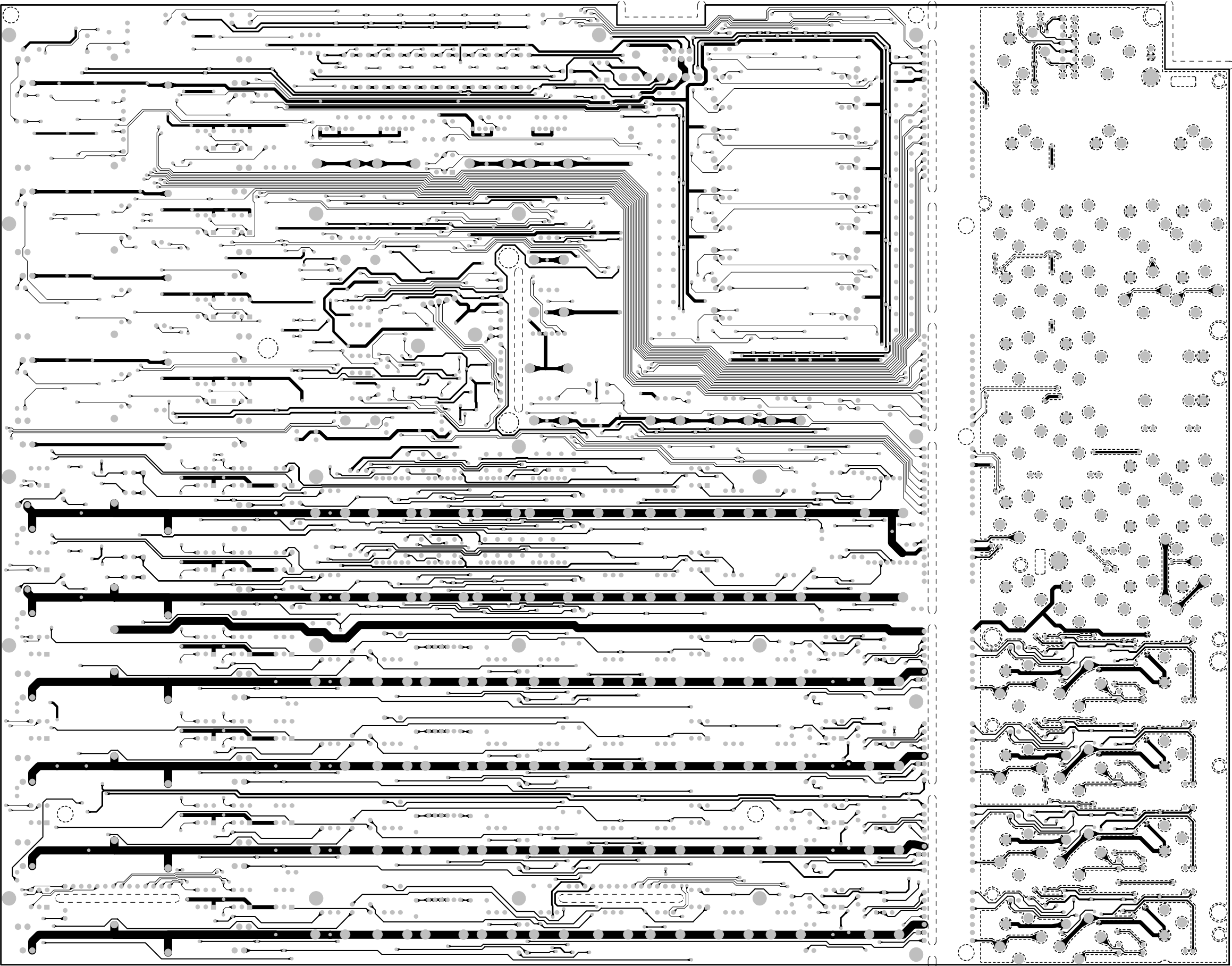




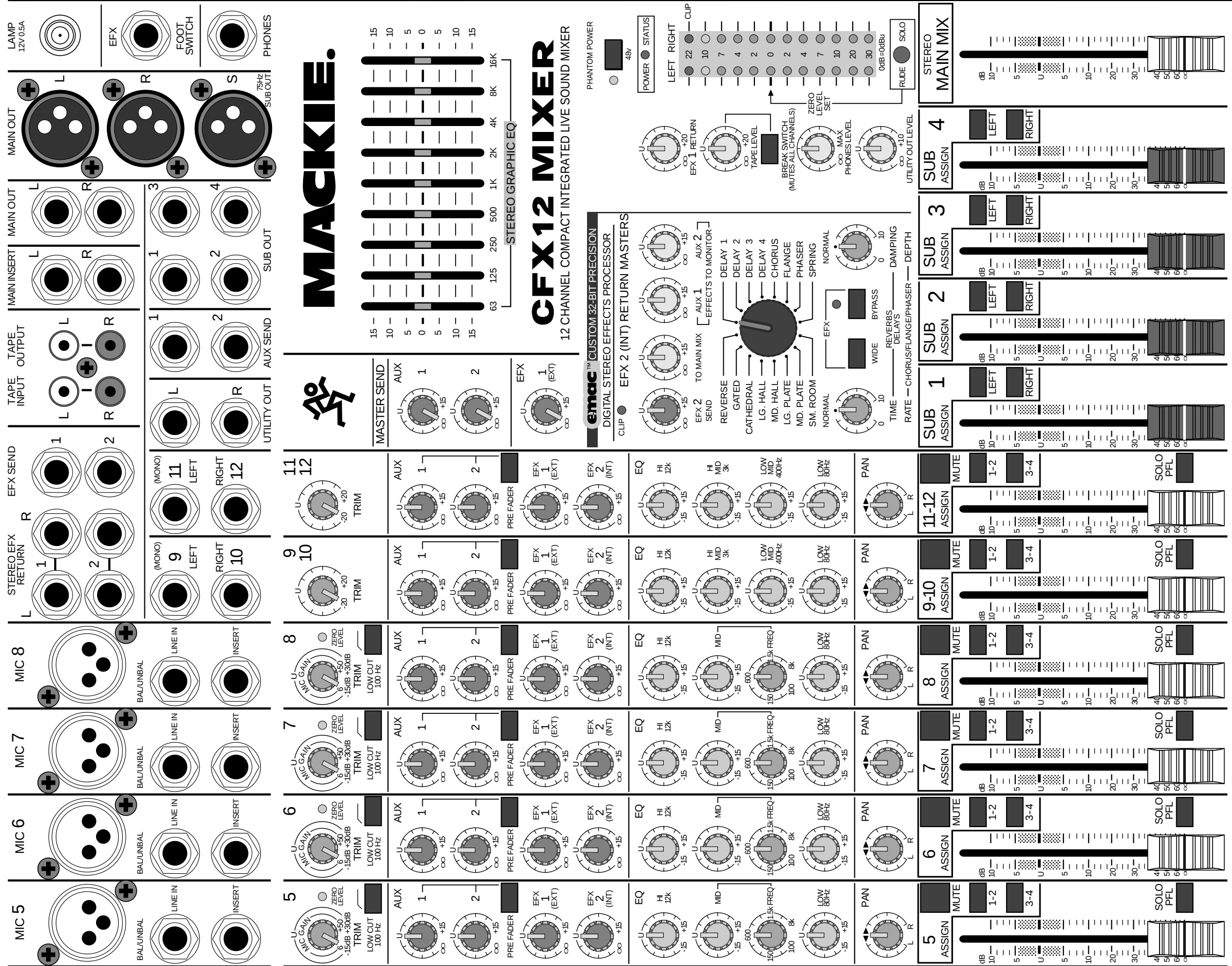


Top of Board  
(if this has been printed double-sided, and has been lined up correctly, you can shine a light through this page and see the bottom of the board's traces and pads. Sometimes this works, sometimes not.

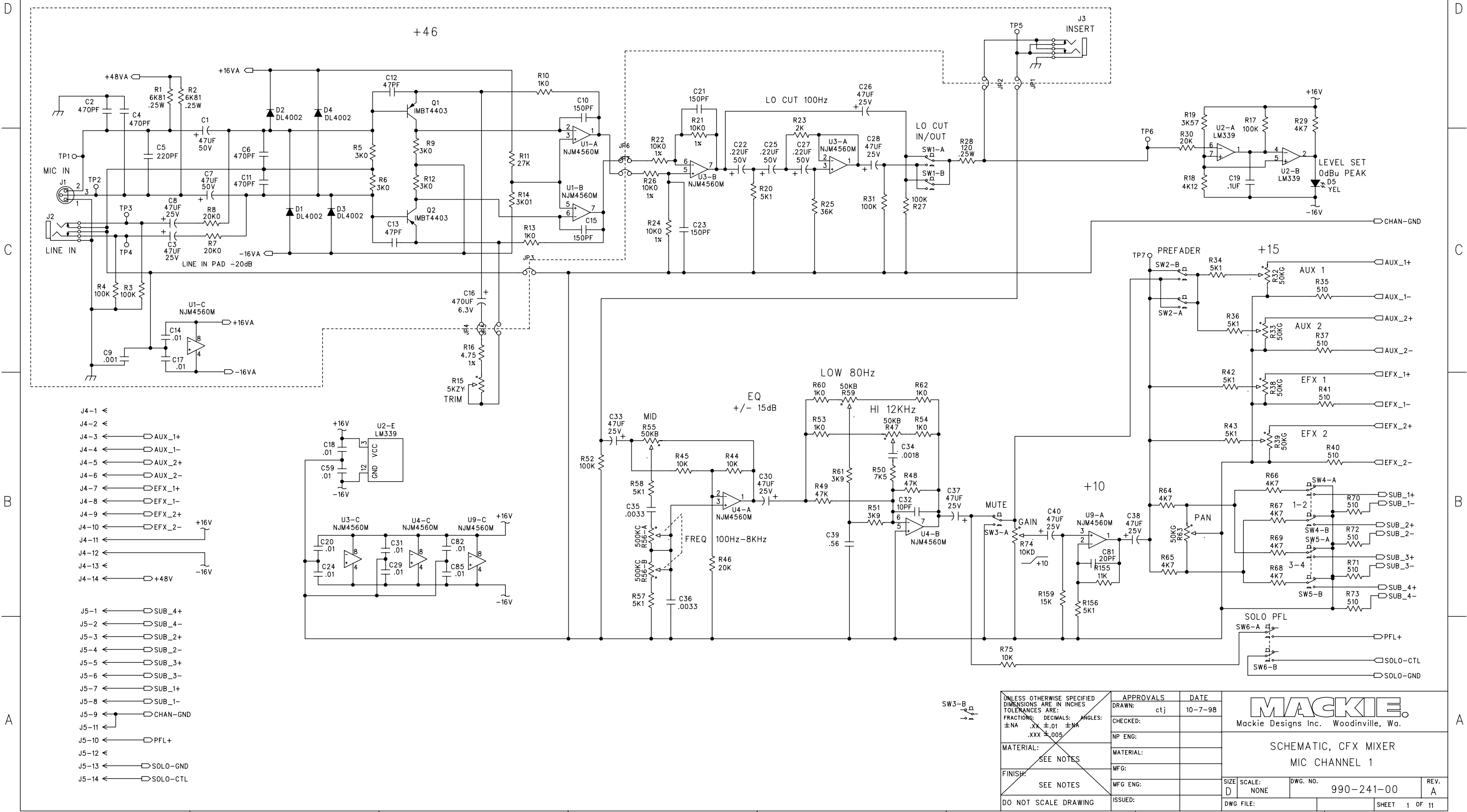
Bottom of Board

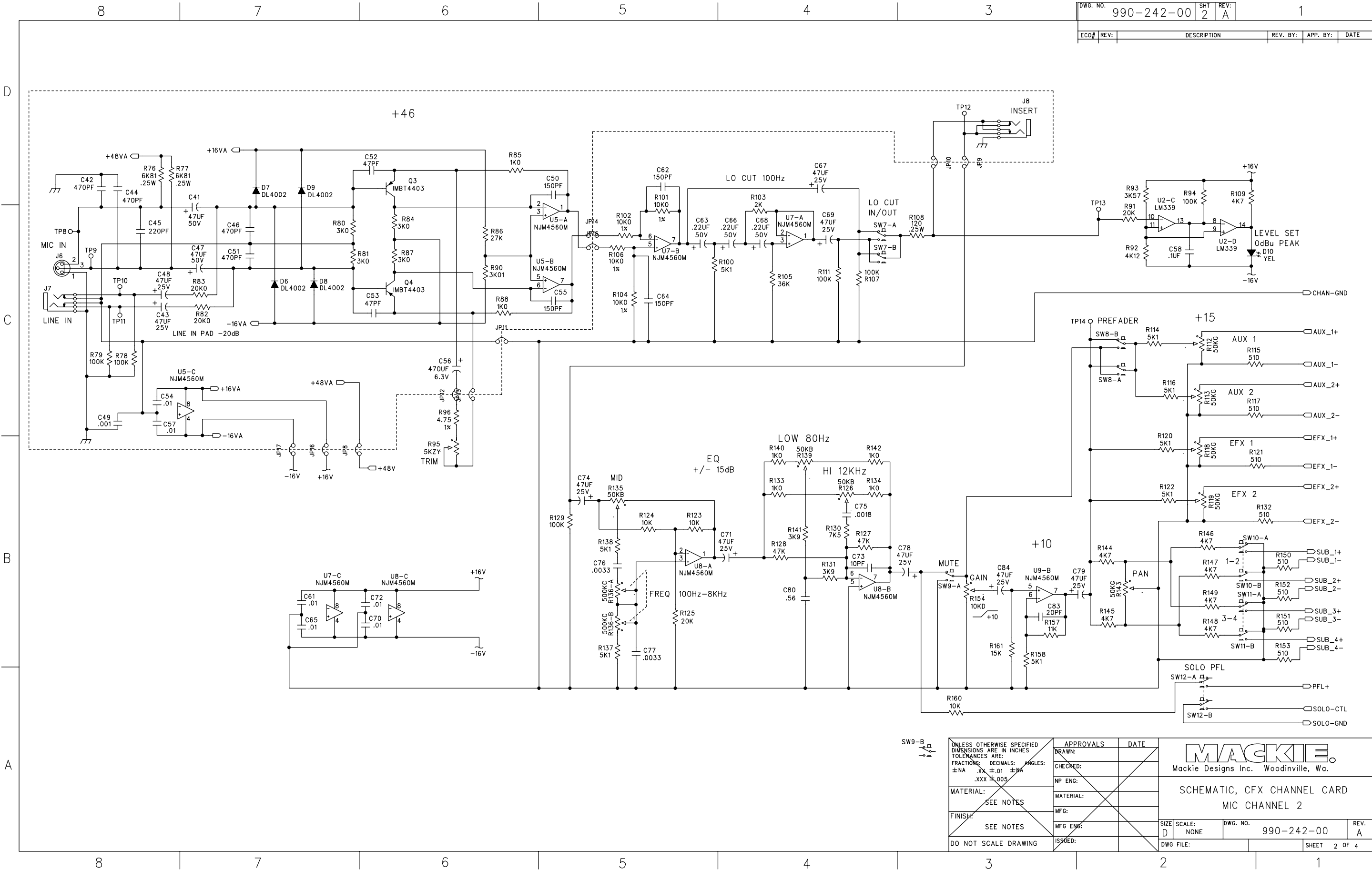


I hope that this is useful. If it helps even one technician out in the big wide world, then it will have been worthwhile.

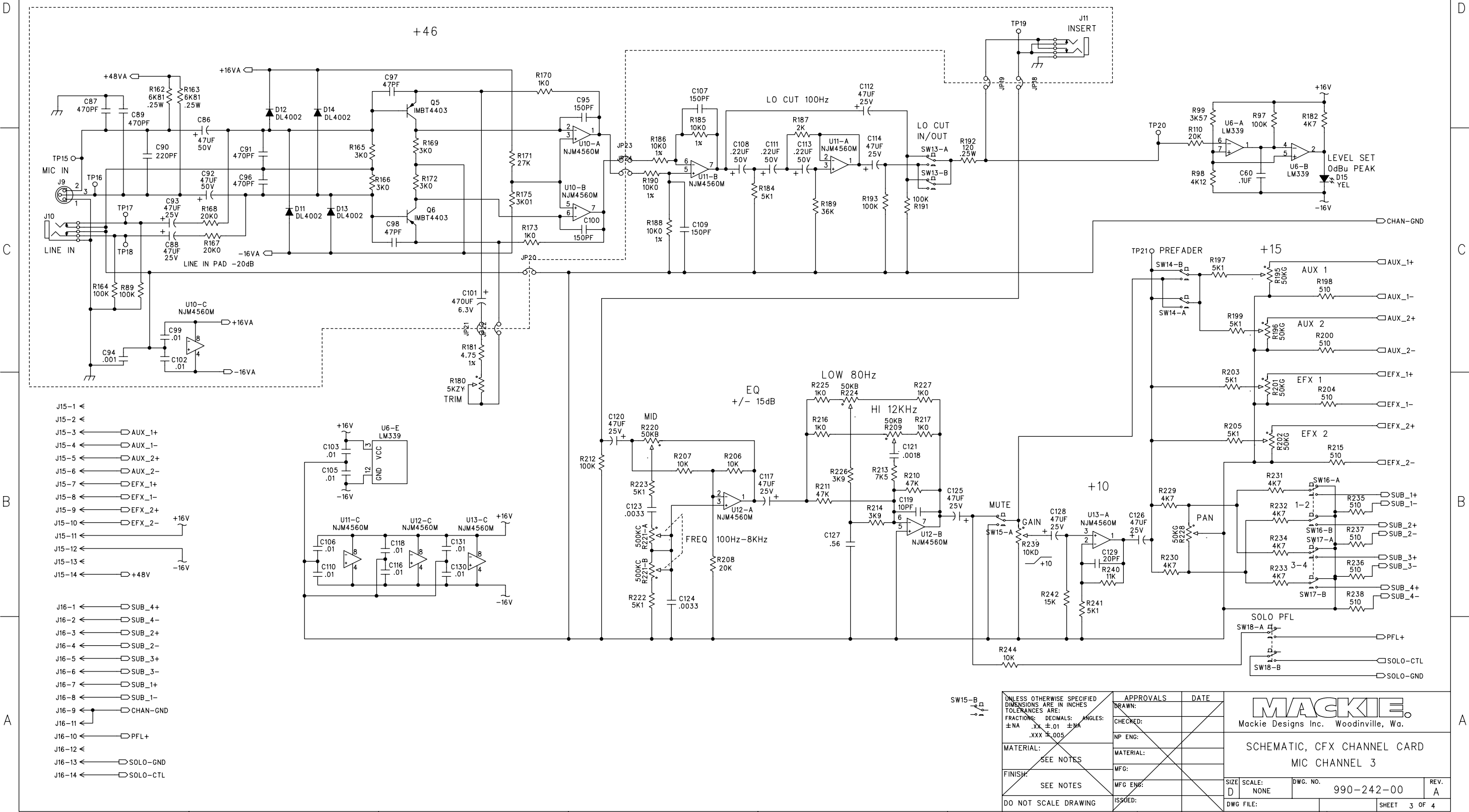


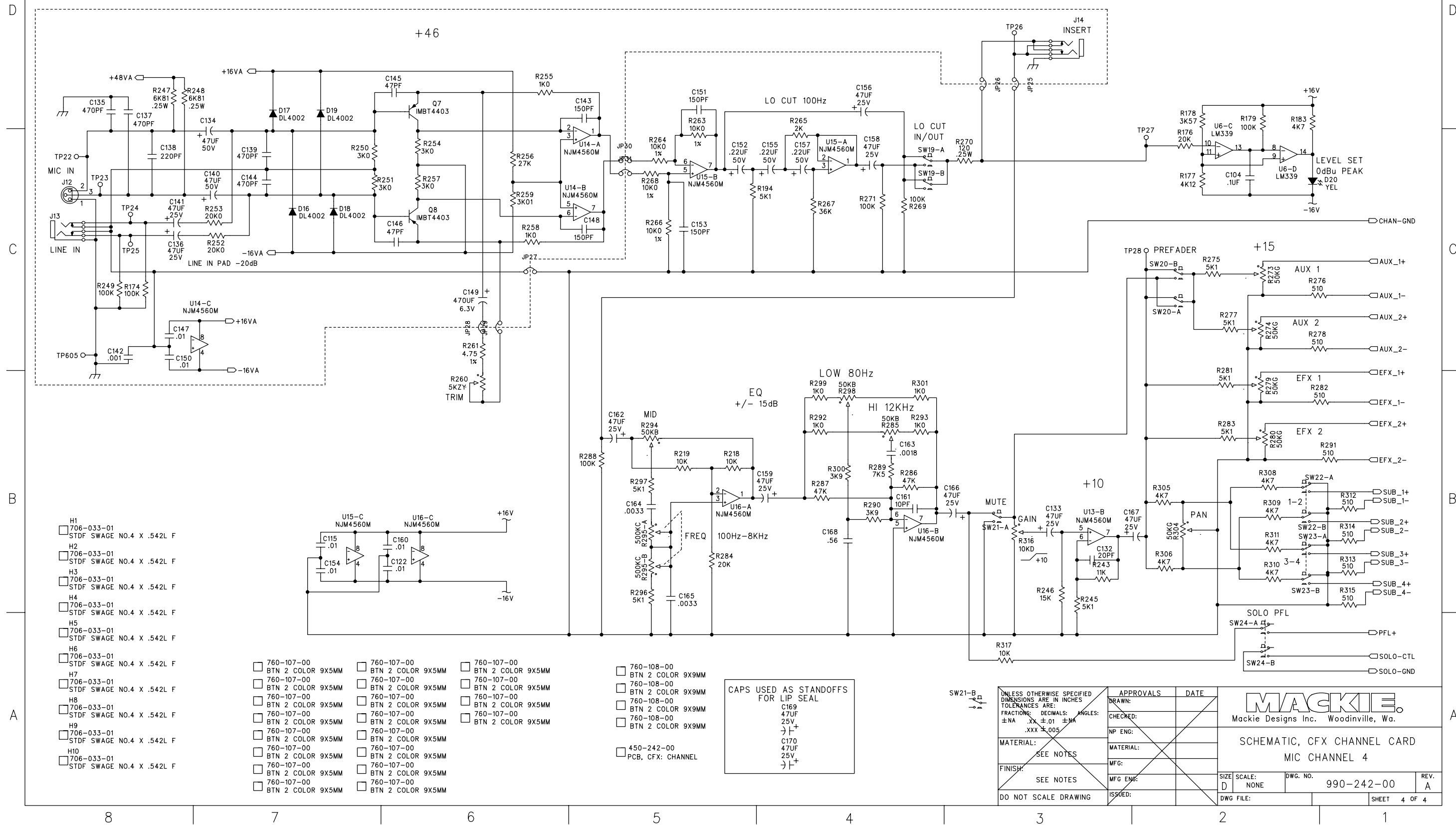
|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-241-00 | SHT         | 1        | REV.     | A    | 1 |
| ECO#     | REV.       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

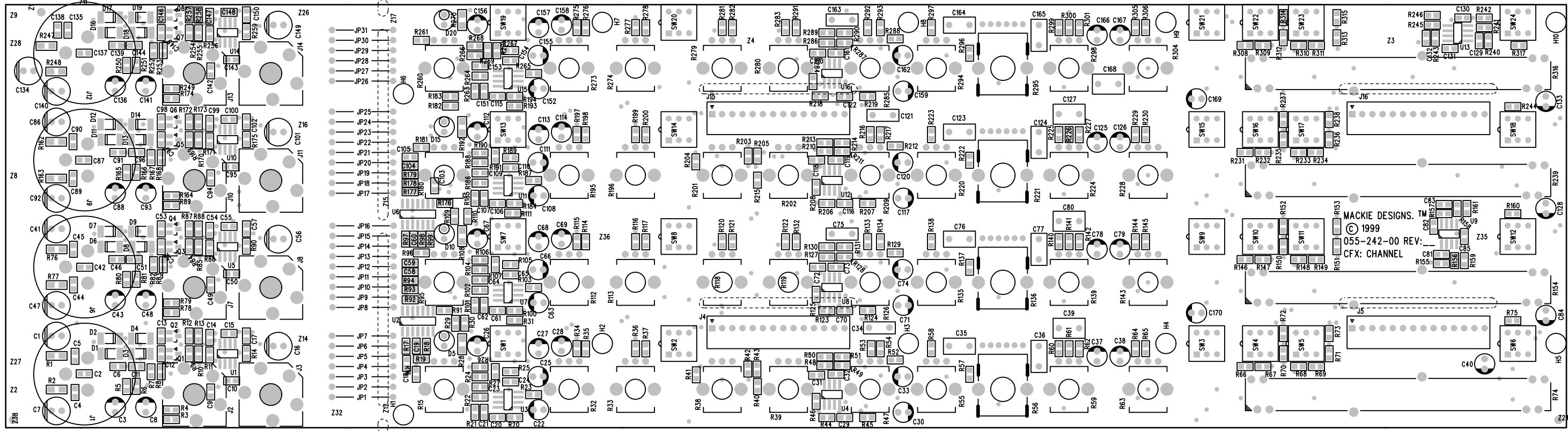
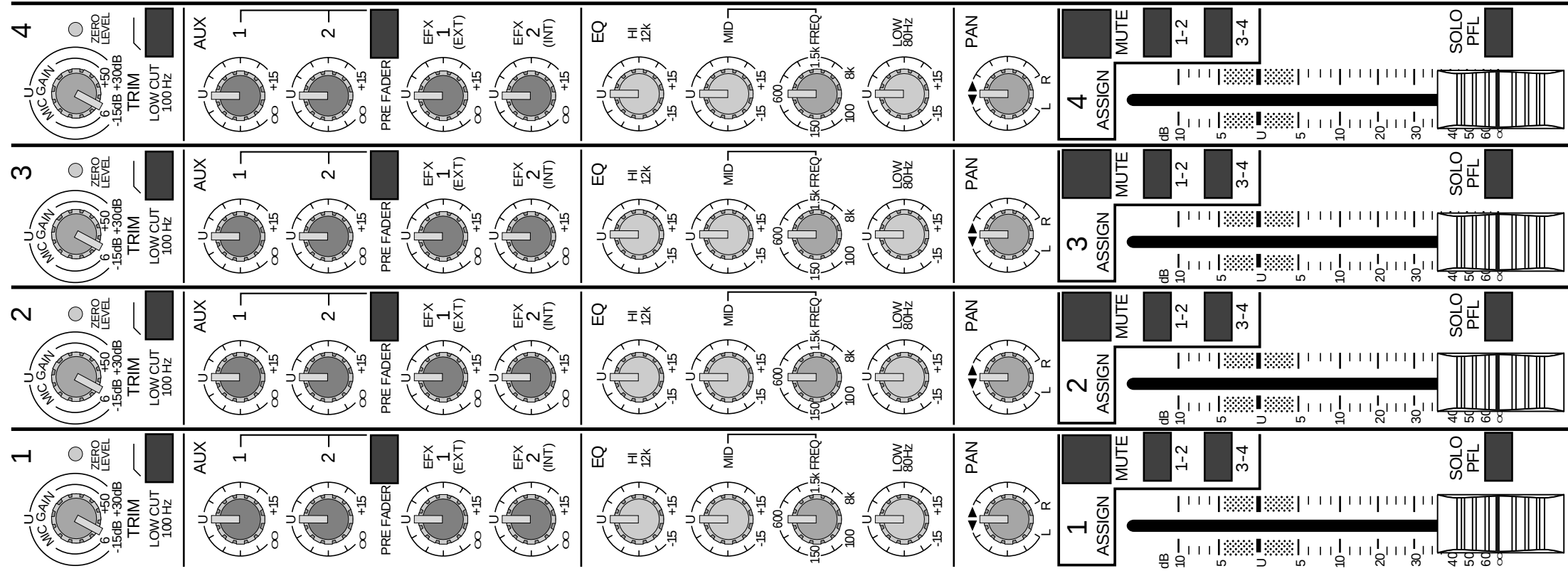
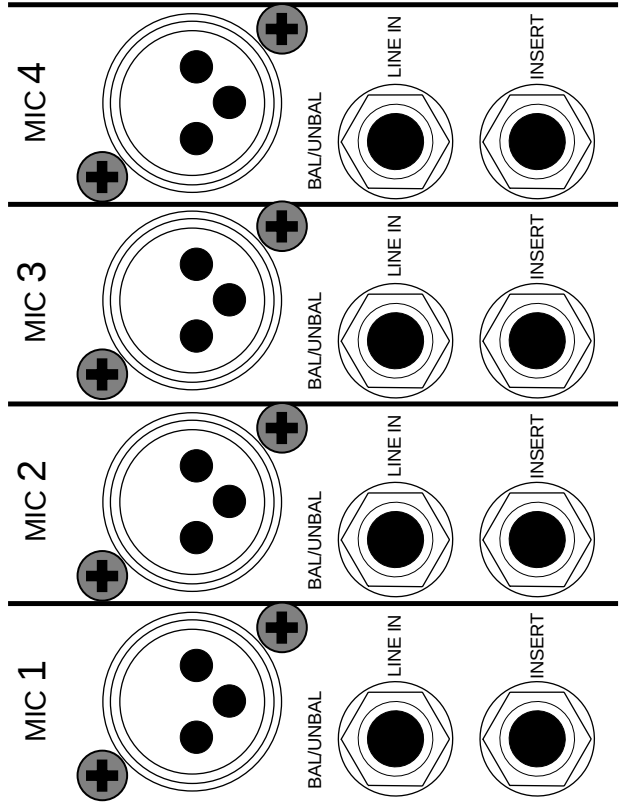




|          |            |             |          |          |      |   |
|----------|------------|-------------|----------|----------|------|---|
| DWG. NO. | 990-242-00 | SHT         | 3        | REV.     | A    | 1 |
| ECO#     | REV.       | DESCRIPTION | REV. BY: | APP. BY: | DATE |   |

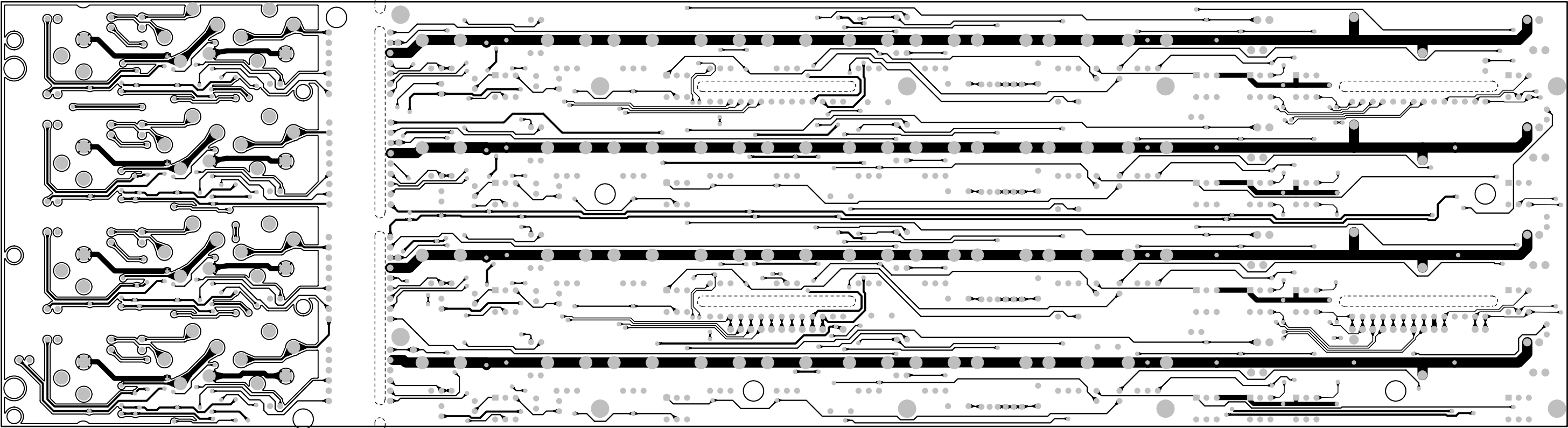




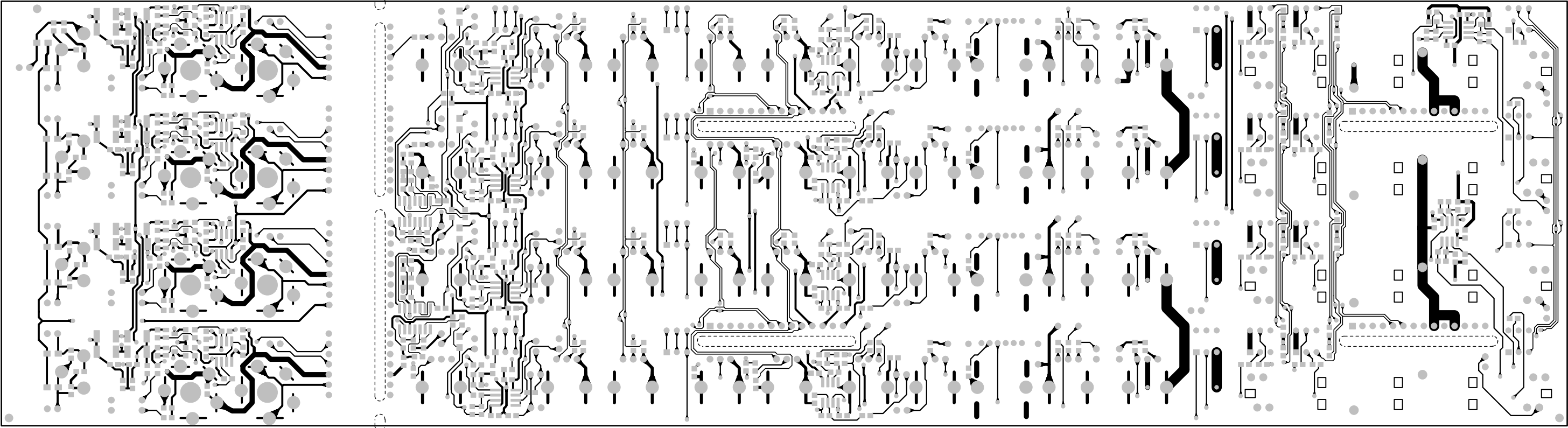


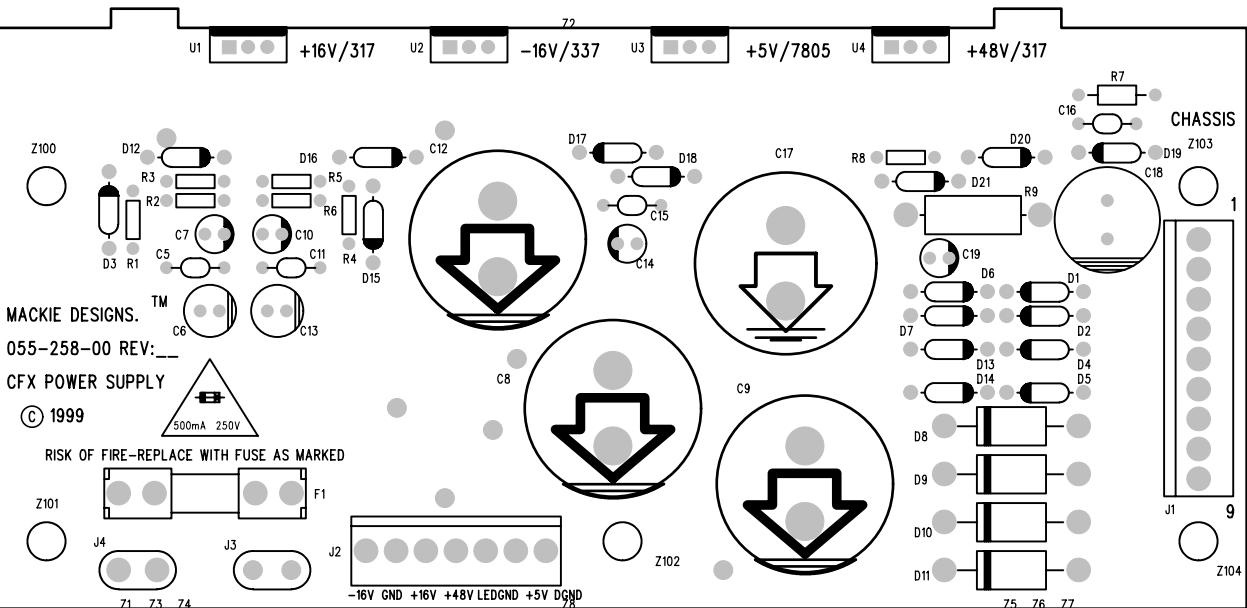
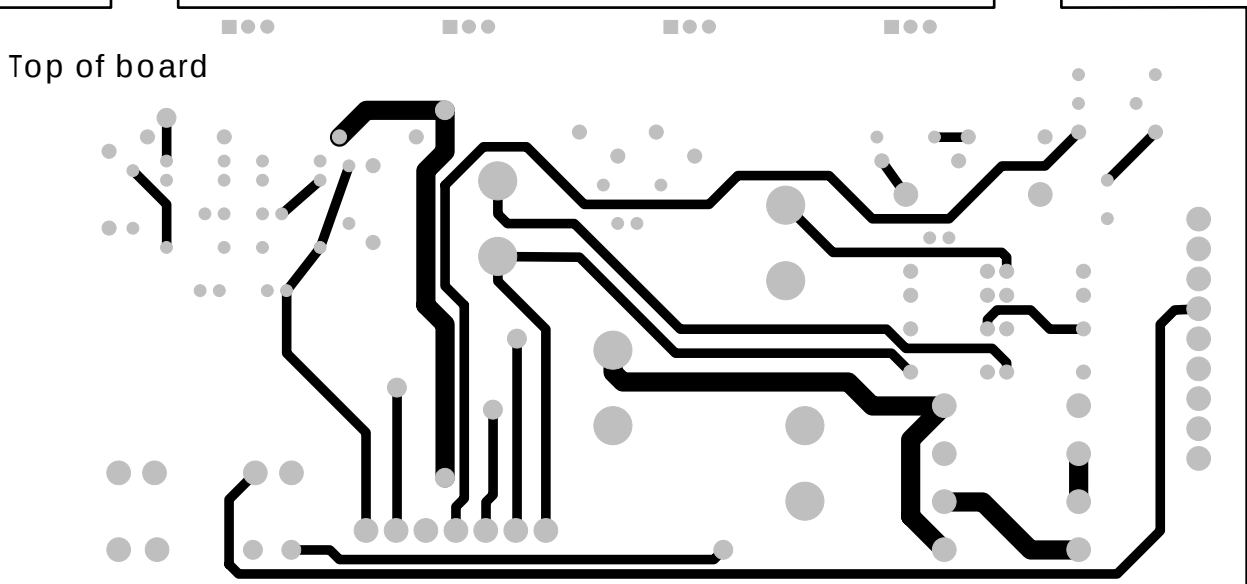
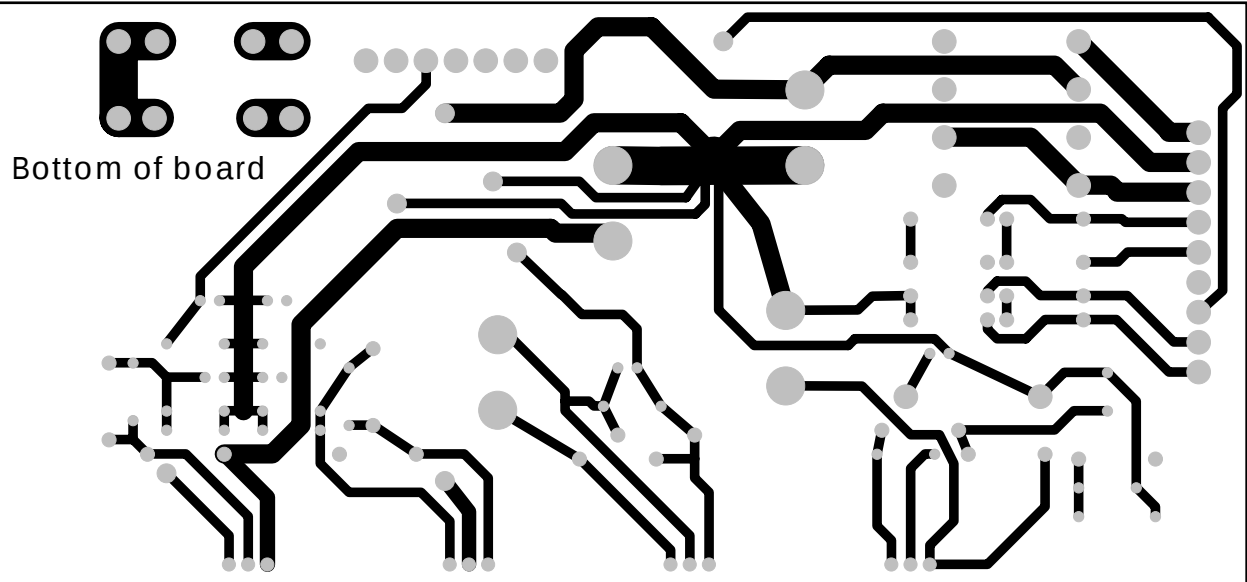
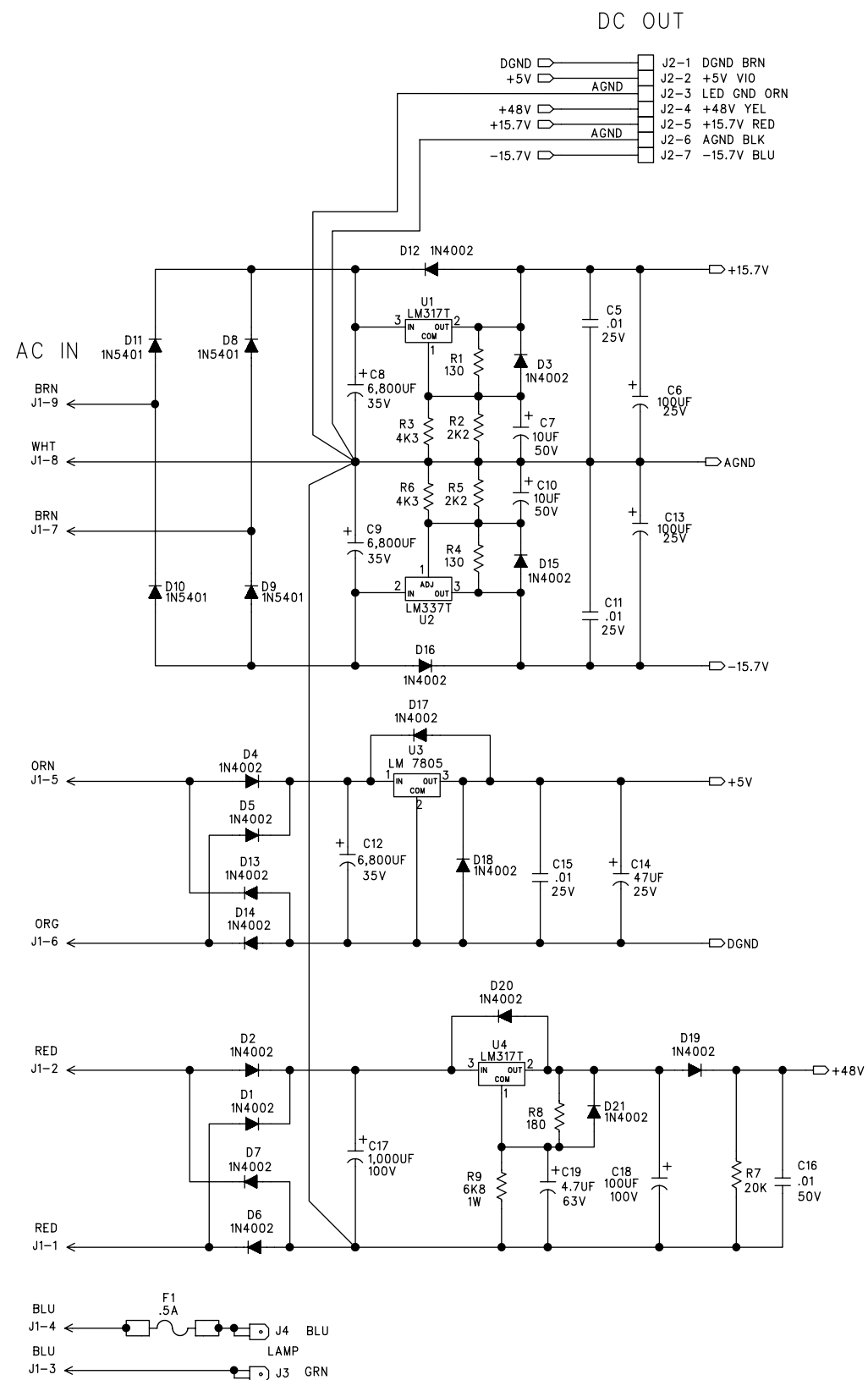
The CFX•12 has one of these boards, it adds four channels to the eight channels of the main board 241.  
 The CFX•16 has two of these boards.  
 The CFX•20 has three.

Bottom of Board

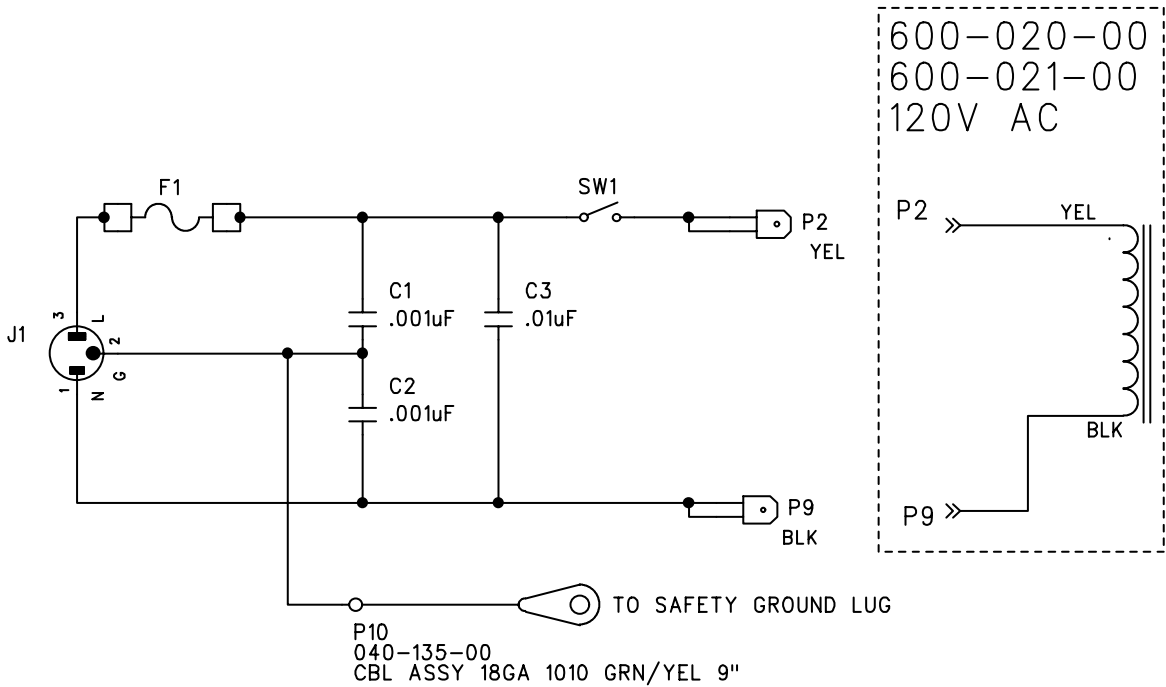


Top of Board



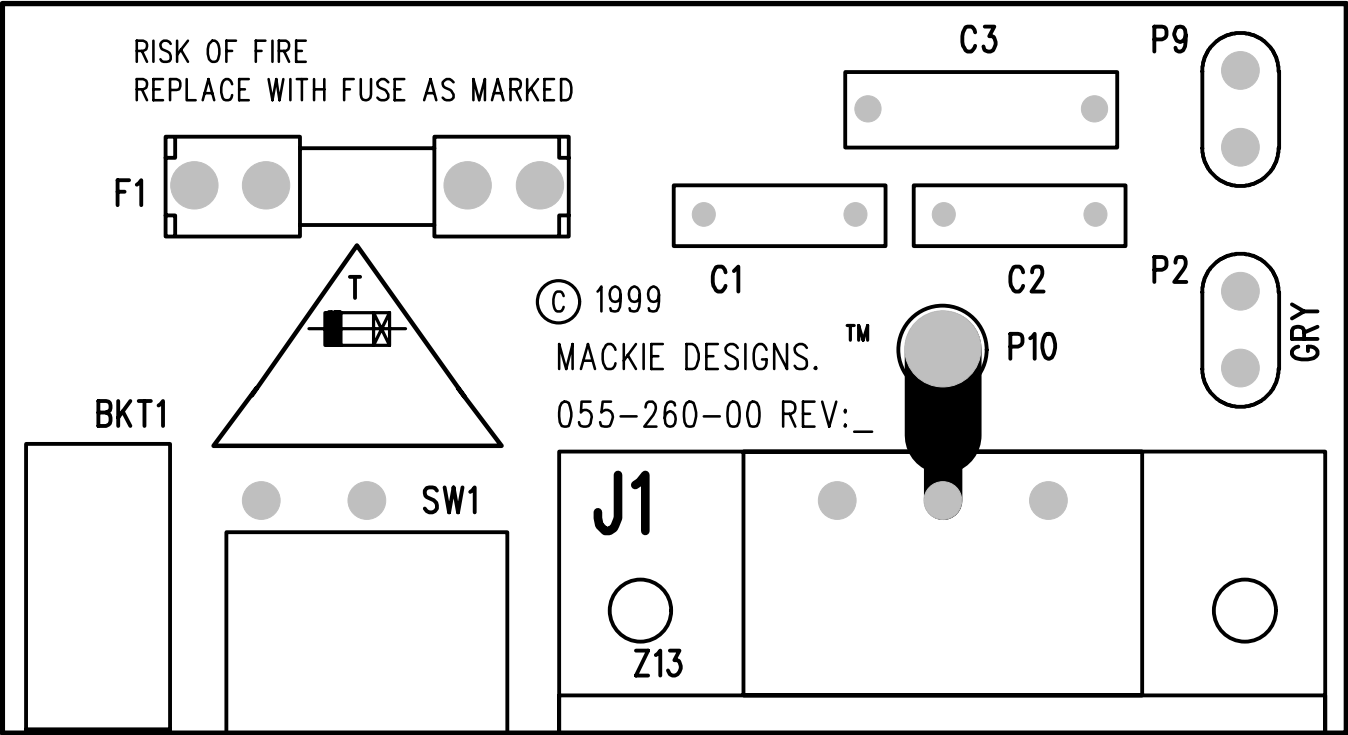
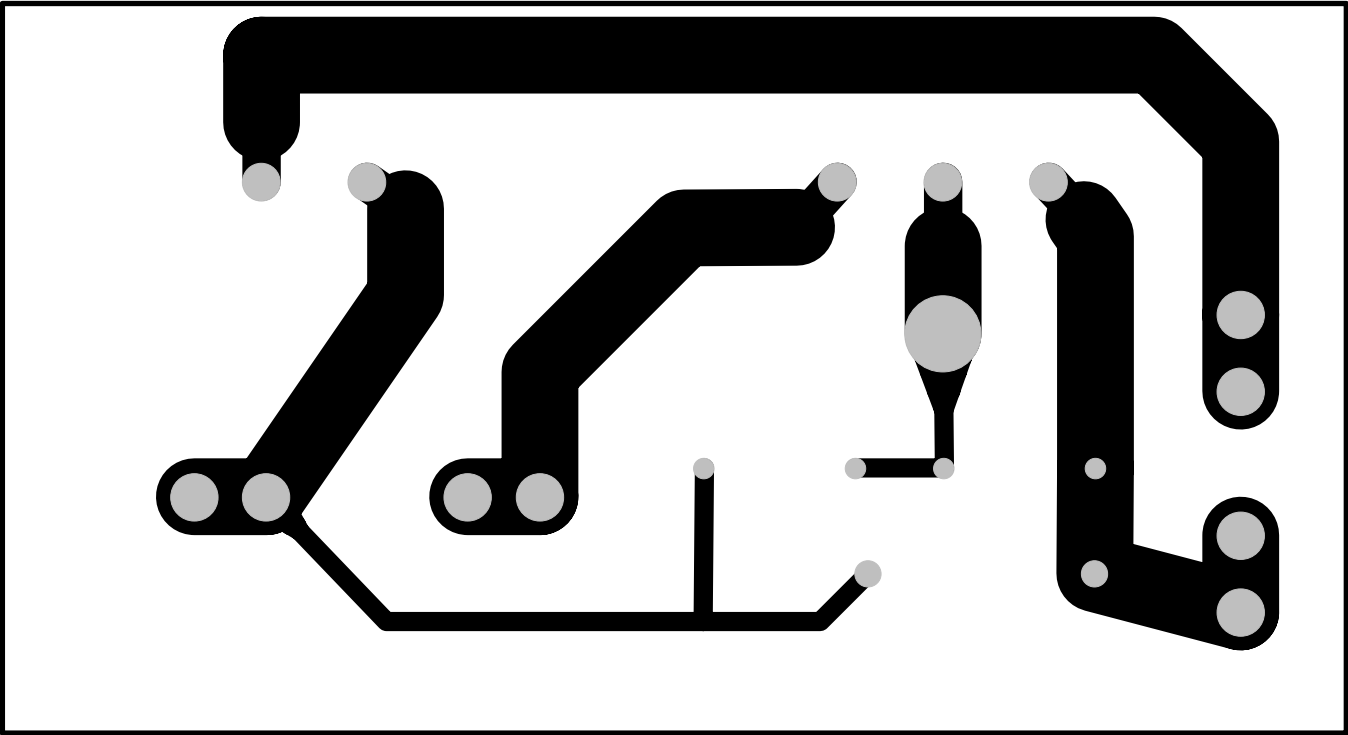


| DASH #     | VERSION    | FUSE USED                     |
|------------|------------|-------------------------------|
| 055-260-01 | CFX 100VAC | 0.5A SLO-BLO 250V 510-002-00  |
| 055-260-02 | CFX 120VAC | 1.0A SLO-BLO 250V 510-001-00  |
| 055-260-03 | CFX 230VAC | 1.25A SLO-BLO 250V 510-025-00 |



- 712-021-01 RIVET, CL END .125
- 712-020-00 BRKT ANG 6-32X.037THK STL
- 400-060-00 FUSE CLIP PCMT 5MM DIA
- 450-260-00 PCB, CFX AC POWER INPUT

Bottom of board



Top of board

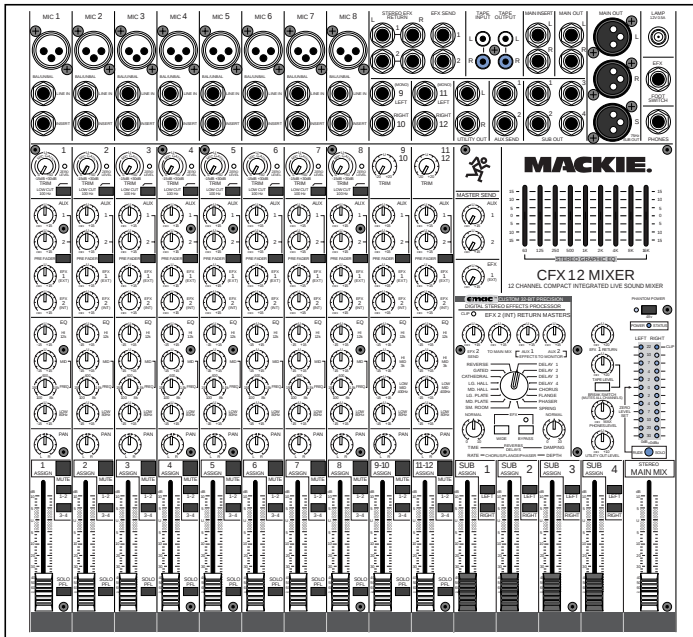
## Master Parts List CFX Assembly, 120v

| Item# | Part #        | Description               | Rev | Qty  | Notes                                   |
|-------|---------------|---------------------------|-----|------|-----------------------------------------|
|       | 090-120-00    | CFX12                     | A3  | A2 1 | CFX12 ASSEMBLY                          |
|       | 090-121-00    | CFX16                     | A3  | A2 1 | CFX16 ASSEMBLY                          |
|       | 090-122-00    | CFX20                     | A3  | A2 1 | CFX20 ASSEMBLY                          |
| 1     | 040-358-00    | CBL RIB 18G 7P .156 16IN  | B   | 1    |                                         |
| 4     | 055-192-00-01 | PCB ASSY LC EFTS-PWR MIX  | B1  | A1 1 |                                         |
|       | 055-241-00-02 | ASSY PCB CFX MASTER       | A   | A2 1 |                                         |
| 6     | 055-242-00-01 | ASSY PCB CFX SLAVE 4      | 1   | A1 1 | (CFX12 has 1, CFX16 has 2, CFX20 has 3) |
| 7     | 055-258-00-01 | PCB ASSY PWR SPLY CFX     | A   | A1 1 |                                         |
| 8     | 055-260-00-01 | PCB ASSY AC INPUT CFX     | A   | A1 1 |                                         |
| 9     | 080-142-00    | SA XFMR -010 120V CFX12   | A   | A1 1 |                                         |
| 2     | 080-144-00    | SA BNC CFX 12/16/20       | C1  | A1 1 |                                         |
| 44    | 400-365-00    | QDISK TAB .250 M #6 MNT   | A   | 1    |                                         |
| 11    | 410-005-00    | INSL SILPAD TO-220        | A   | 4    |                                         |
| 12    | 510-001-00    | FUSE SB 1A 5X20MM 250V UL | B   | 1    |                                         |
| 13    | 550-442-00    | SCR CHASSIS TOP CFX 12    |     | 1    | CFX12                                   |
| 13    | 550-443-00    | SCR CHASSIS TOP CFX 16    | A   | 1    | CFX16                                   |
| 13    | 550-444-00    | SCR CHASSIS TOP CFX 20    | A   | 1    | CFX20                                   |
| 14    | 550-445-00    | CHASSIS BOTTOM CFX 12     | A   | 1    | CFX12                                   |
| 14    | 550-446-00    | CHASSIS BOTTOM CFX 16     | A   | 1    | CFX16                                   |
| 14    | 550-447-00    | CHASSIS BOTTOM CFX 20     | A   | 1    | CFX20                                   |
| 15    | 550-462-00    | CLAMP TO-220 X 4          | A   | 1    |                                         |
| 43    | 550-491-00    | FAB PLT HTSK CFX PWR SPLY | A   | 1    |                                         |
| 16    | 550-551-10    | PNT LEFT SIDE CFX         | A   | 1    |                                         |
| 17    | 550-551-20    | PNT RIGHT SIDE CFX        | A   | 1    |                                         |
| 18    | 550-552-00    | SCR BACK CFX 12           | B   | 1    | CFX12                                   |
| 18    | 550-553-00    | SCR BACK CFX-16           | B   | 1    | CFX16                                   |
| 18    | 550-554-00    | SCR BACK CFX-20           | B   | 1    | CFX20                                   |
| 20    | 620-045-00    | CBL FLT 14C W/PINS 3.5IN  | A   | 2    |                                         |
|       | 640-001-00    | LC IEC SJT 10A/125V 6FT   | D   | 1    | LINECORD                                |
| 22    | 700-010-00    | TF 6-32X1/4 PHP BLKZC     | A   | 26   |                                         |
| 23    | 700-011-00    | MCH 4-40X1/4 BTNSKT BLKOX | A   | 34   |                                         |
| 24    | 700-028-01    | SEMS 6-32X5/16 PHP BLKZC  | B   | 6    |                                         |
| 25    | 700-028-03    | SEMS 6-32X1/2 PHP BLKZC   | B   | 4    |                                         |
| 26    | 701-016-00    | 5-20X5/16 PHPII TYP B BLK | A   | 23   |                                         |
| 27    | 705-001-00    | KEPNUT 6-32               | A   | 4    |                                         |
| 28    | 705-003-00    | NUT HEX-SPLD W/400-214-00 | A   | AR   |                                         |
| 29    | 705-008-00    | NUT LOCK 8-32             | A   | 2    |                                         |
| 31    | 710-002-00    | WASHER-SPLD W/400-214-00  | A   | AR   |                                         |
| 33    | 750-001-00    | BUMPON ROUND BLK .63X.31  | A   | 4    |                                         |
| 34    | 760-037-01    | KNOB SLIDE 10X25MM MLDLIN | A   | 11   |                                         |
| 35    | 760-037-03    | KNOB SLIDE 11X24 BLUE     | A   | 4    |                                         |
| 36    | 760-048-01    | KNOB 9MM LT GRY           | B   | 17   |                                         |
|       | 760-048-02    | KNOB 9MM MAGENTA          | B   | 44   |                                         |
|       | 760-048-03    | KNOB 9MM BLU/GRY          | B   | 34   |                                         |
| 39    | 760-048-04    | KNOB 9MM DARK GRAY        | B   | 18   |                                         |
| 40    | 760-091-00    | KNOB MASTER VOLUME        | A   | 1    |                                         |
| 41    | 780-050-00    | LIPSEAL MASTER CFX        | A   | 1    |                                         |
| 42    | 780-051-00    | LIPSEAL SLAVE 4 CFX       | A   | 1    |                                         |
|       | 790-002-00    | BAG POLY 12 X 18 2MIL     | A   | 1    |                                         |
|       | 790-027-00    | BAG POLY 20X7X36 4MIL GUS | A   | 1    |                                         |
|       | 800-130-00    | BOX CMPT CFX 12           | B   | 1    | CFX12                                   |
|       | 800-131-00    | BOX CMPT CFX 16           | B   | 1    | CFX16                                   |
|       | 800-132-00    | BOX CMPT CFX 20           | B   | 1    | CFX20                                   |
|       | 810-086-00    | FOAM SET CFX              |     | 1    |                                         |
|       | 820-104-00    | OWNR MNL COMPACT CFX      | A   | 1    | COVERS ALL MODELS                       |

# MACKIE®

## CFX series

Compact Effects Mixers:  
CFX•12, CFX•16 and CFX•20



## SERVICE MANUAL

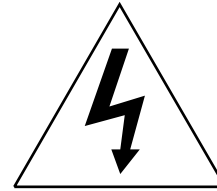


SERVICE ON THIS EQUIPMENT IS TO BE PERFORMED BY  
EXPERIENCED REPAIR TECHNICIANS ONLY  
*CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE*



## CAUTION AVIS

RISK OF ELECTRIC SHOCK  
DO NOT OPEN  
*RISQUE DE CHOC ELECTRIQUE  
NE PAS OUVRIR*



CAUTION: TO REDUCE THE RISK OF  
ELECTRIC SHOCK DO NOT REMOVE  
THE COVER (OR BACK)  
NO USER SERVICEABLE PARTS INSIDE  
REFER SERVICING TO QUALIFIED  
PERSONNEL

WARNING: TO REDUCE THE RISK OF  
FIRE OR ELECTRIC SHOCK, DO NOT  
EXPOSE THIS PRODUCT TO RAIN OR  
MOISTURE

TO PREVENT ELECTRIC SHOCK, DO  
NOT USE THIS POLARIZED PLUG WITH  
AN EXTENSION CORD, RECEPTACLE OR  
OTHER OUTLET UNLESS THE BLADES  
CAN BE FULLY INSERTED TO PREVENT  
BLADE EXPOSURE.

ATTENTION: POUR EVITER LES  
RISQUES DE CHOC ELECTRIQUE, NE  
PAS ENLEVER LE COUVERCLE. AUCUN  
ENTRETIEN DE PIECES INTERIEURES  
PAR L'USAGER. CONFIER L'ENTRETIEN  
AU PERSONNEL QUALIFIE.

AVIS: POUR EVITER LES RISQUES  
D'INCENDIE OU D'ELECTROCUTION,  
N'EXPOSEZ PAS CET ARTICLE A LA  
PLUIE OU A L'HUMIDITE.

POUR PREVENIR LES CHOCES  
ELECTRIQUES NE PAS UTILISER CETTE  
FICHE POLARISEE AVEC UN  
PROLONGATEUR, UN PRISE DE  
COURANT OU UNE AUTRE SORTIE DE  
COURANT, SAUF SI LES LAMES  
PEUVENT ETRE INSEREES A FOND  
SANS LAISSER AUCUNE PARTIE A  
DECOUVERT.

This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

ATTENTION :Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio energy and, if not installed properly and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.

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## INTRODUCTION



This manual contains basic service information. It is essential that you have a copy of the user's manual as this contains the complete operating instructions.

### SERVICE TECHNICAL ASSISTANCE

Mackie Designs, Service Technical Assistance, is available 8AM - 5PM PST, Monday through Friday for Authorized Mackie Service Centers, at 1-800-258-6883. Feel free to call with any questions and speak with a carefully-calibrated technician. If one is not available, leave a detailed message and a qualified Mackoid will return your call asap.

### DISCLAIMER

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## Overview

The CFX mixer series consists of 3 models: the CFX•12, CFX•16 and CFX•20. Each consists of five circuit boards: Effects, Master, Slave, Power and AC Power.

The Master board is the main mixer circuit.

The Effects board is fitted on the back of the Master board. This is exactly the same as used in the PPM Professional Powered Mixer series.

The Slave board connects to the left of the Master board and adds four channels. The CFX•12 has one Slave board, the CFX•16 has two, and the CFX•20 has three. This is the main difference between the three models.

The power board regulates the AC power to +/- 15VDC, +5VDC and +48VDC (phantom power).

The AC power board holds the IEC connector, fuse holder, power switch and caps.

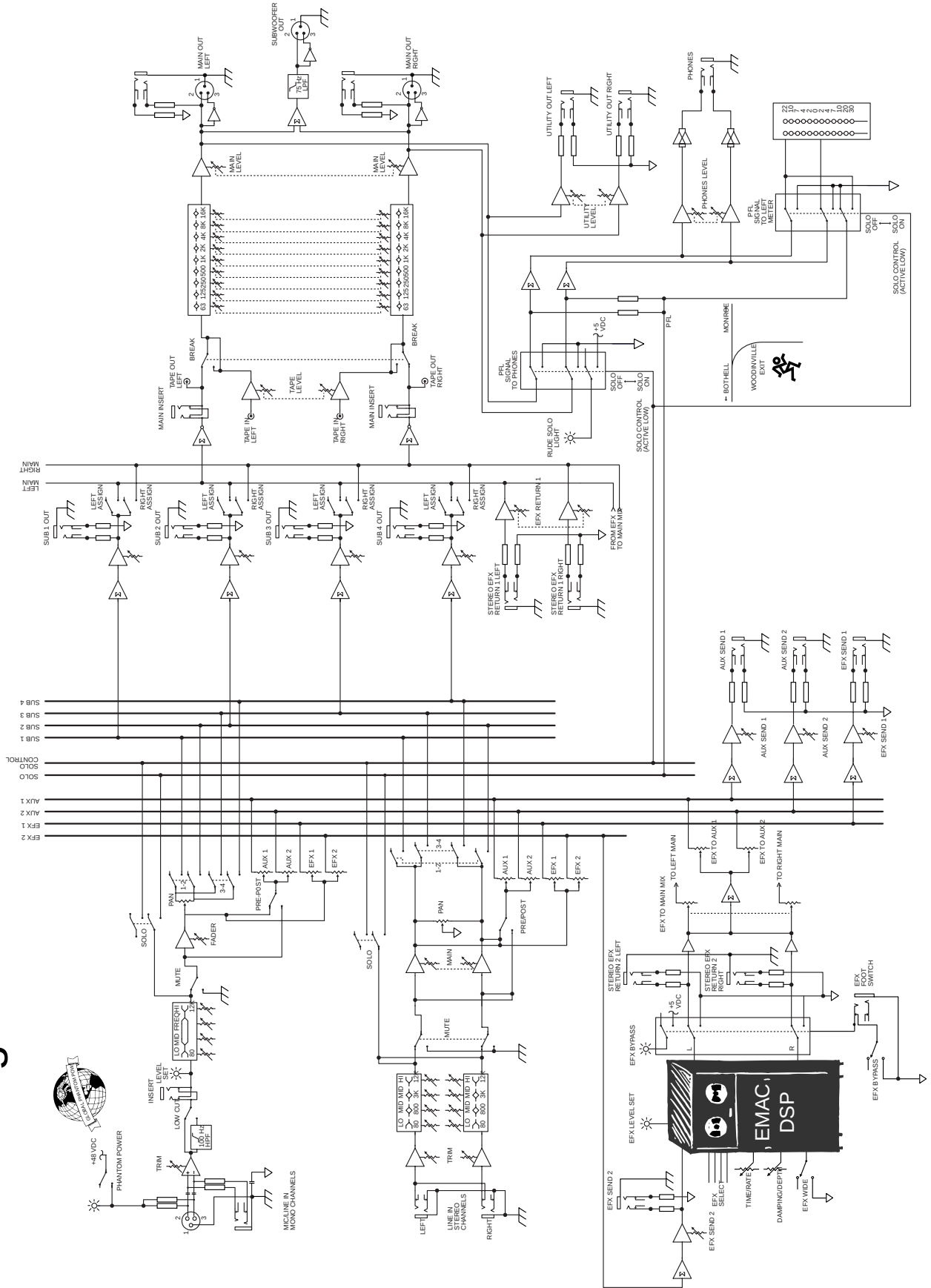
This table shows which boards are used in each mixer.

Note: Each schematic chapter is labeled with the number of the board it describes. For example, chapter 241 contains schematics and pcb layouts for circuit board number 550-241-00, chapter 192 is for circuit board 550-192-00.

| MODEL  | EFFECTS | MASTER | SLAVE       | POWER | AC POWER |
|--------|---------|--------|-------------|-------|----------|
| CFX•12 | 192     | 241    | 242 (QTY 1) | 258   | 260      |
| CFX•16 | 192     | 241    | 242 (QTY 2) | 258   | 260      |
| CFX•20 | 192     | 241    | 242 (QTY 3) | 258   | 260      |



# Block Diagram



# Specifications

## Frequency Response

Mic Input to any Output (Trim at 0 dB):  
+0, -1 dB, 32Hz to 20kHz

## Distortion THD and SMPTE IMD; 20Hz to 20kHz

Mic Input to Main Output:  
< 0.05% @ +4 dBu output

## Noise 20Hz to 20kHz BandWidth (150Ω source impedance)

Equivalent Input Noise (EIN):  
-127 dBu

Residual Output Noise:  
Main, Monitor, & Effects outputs  
Channel & Master levels off  
-95 dBu

## Common Mode Rejection Ratio (CMRR)

60 dB @ 1kHz, Trim @ 0 dB

## Crosstalk

Adjacent Inputs or Input to Output:  
-90 dB @ 1kHz  
Fader Off  
-90 dB @ 1kHz  
Mute Switch and Break Switch Mute  
-80 dB @ 1kHz

## Input Level Trim Control Range

+6 to -50 dB

## Phantom Power

+48V DC

## Equalization

Low Cut: 100Hz, -18 dB/octave  
Mono Channel EQ:

High ±15 dB @ 12kHz  
Mid ±15 dB @ 100Hz  
Low ±15 dB @ 80Hz

Stereo Channel EQ:

High ±15 dB @ 12kHz  
High Mid ±15 dB @ 3kHz  
Low Mid ±15 dB @ 400Hz  
Low ±15 dB @ 80Hz

Graphic EQ (9 bands):

Q = 1.414, ISO octave centers  
±15 dB @ 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz

## Mixer Rated Output

Main, Sub, Aux, & Efx: +4 dBu  
Max Rated Output: +20 dBu

## Maximum Input Levels

Mic Input: -28 dBu, Trim @ +50 dB  
+18 dBu, Trim @ +6 dB  
Line Input: -8 dBu, Trim @ +30 dB  
+38 dBu, Trim @ -15 dB  
Insert Input, Stereo Line Input, Tape Input, and Effects Return: +20 dBu

## Maximum Voltage Gain

### Mic Input to

Insert Output: 50 dB  
Tape Output: 66 dB  
Sub Output: 66 dB  
Main Output: 76 dB  
Aux Send: 71 dB

### Line Input to

Insert Output: 30 dB  
Tape Output: 46 dB  
Sub Output: 46 dB  
Main Output: 56 dB  
Aux Send: 51 dB

### Stereo Line Input to

Tape Output: 40 dB  
Sub Output: 40 dB  
Main Output: 50 dB  
Aux Send: 45 dB

### Tape Input to

Main Output: 30 dB  
Effects Return to Main Output: 30 dB

## Input Impedance

Mic Input: 3kΩ, bal  
Line Input: 40kΩ, bal  
Insert Input, Stereo Line Input, Tape Input, and Effects Returns: 10kΩ, unbal

## Output Impedance

Main Output, Insert Output, Tape Output, Sub Output, and Effects Sends: 150Ω

## Digital Effects

Resolution: 16-bit, 2-channel  
No. of Presets: 16

## Channel Level Set LED (Sensitivity)

0 dBu (normal operating level)

## VU Meters

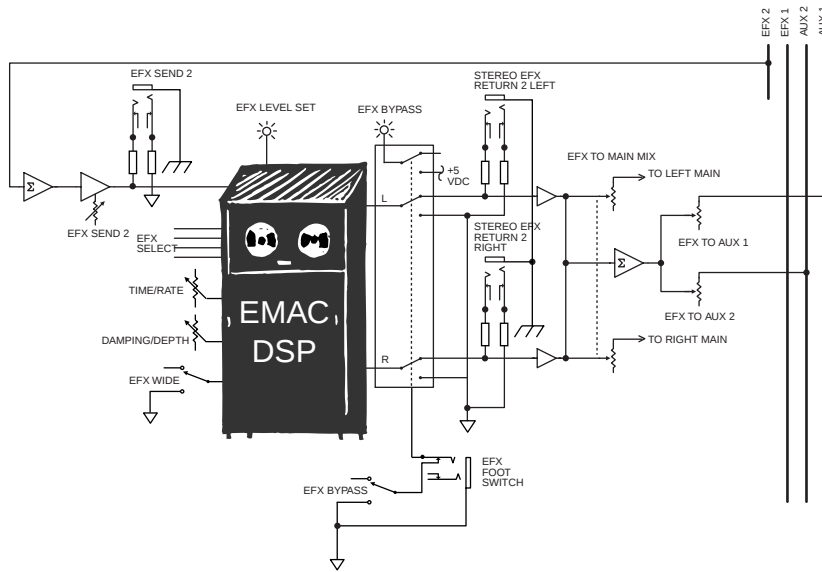
Main L/R  
12 segments:  
Clip, +10, +7, +4, +2, 0, -2, -4, -7, -10, -20, -30

## Disclaimer

Since we are always striving to make our products better by incorporating new and improved materials, components, and manufacturing methods, we reserve the right to change these specifications at any time without notice.

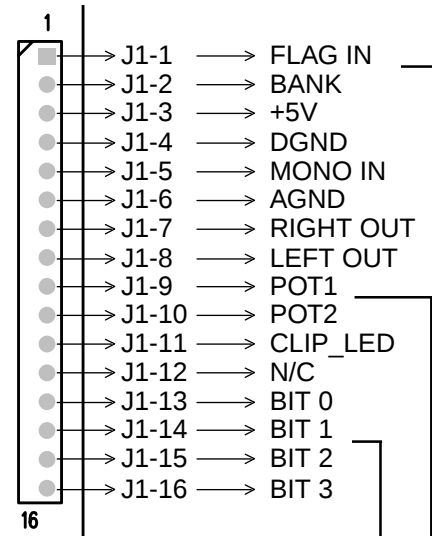
# Effects board

## BLOCK DIAGRAM

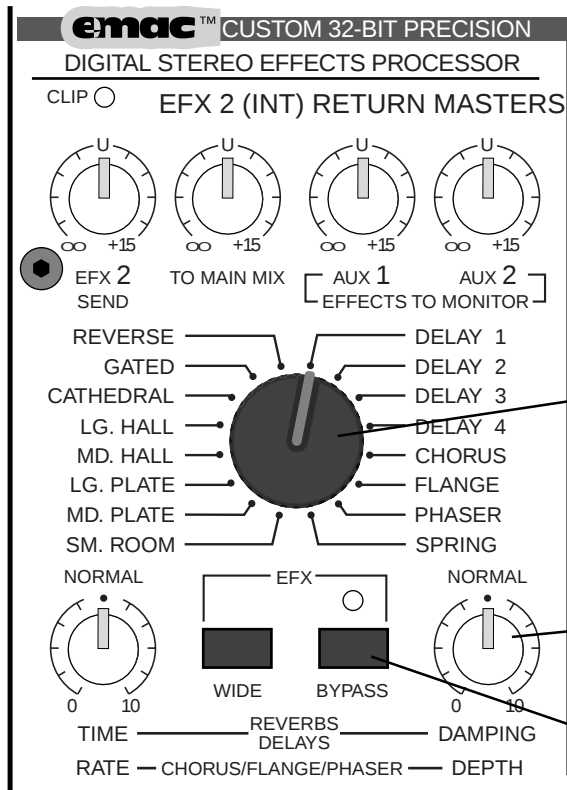


This shows the signals present on the EFX board connector J1.

**J1**



## EFX CONTROLS



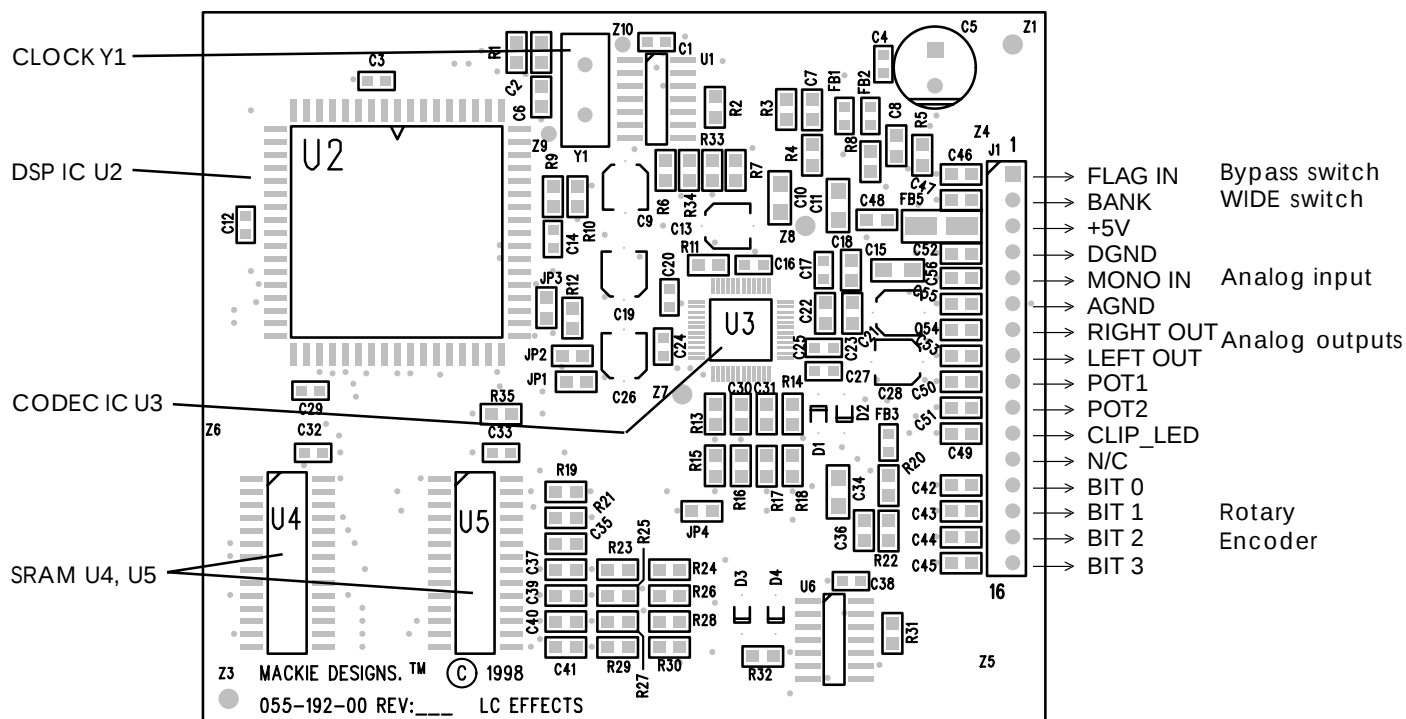
Adjustment of the rotary encoder S1 will vary the level of BIT 0 through to BIT 3. This will select which DSP algorithm is in effect on the EFX board's DSP IC U2.

The adjustment of these two pots directly affects the CODEC IC U3. The levels are named POT 1 and POT 2 at connector J1.

The state of the WIDE switch and the BYPASS switch directly affect the DSP IC. The WIDE status is named BANK. The BYPASS status is named FLAG.

# The EFX board

The EFX circuit board schematics and pcb layouts are shown in chapter 192.  
The circuit is made from the following main elements: Clock, CODEC, DSP and SRAM



## INTEGRATED CIRCUITS

| PART NO.   | DESCRIPTION         | VALUE    | REF  |
|------------|---------------------|----------|------|
| 080-088-00 | IC, ADSP-2163       |          | U2   |
| 315-017-00 | CRYSTAL, 24.576 MHZ | 24.576   | Y1   |
| 325-027-03 | IC, SMD, DUAL D F/F | 74HC74A  | U6   |
| 325-071-03 | IC, HEX, INV, SMD   | 74HCU04  | U1   |
| 329-042-03 | IC, AD1819 QFP      | AD1819   | U3   |
| 329-047-03 | IC, 32KX8 SRAM 20nS | 7C256-20 | U4-5 |

## EFX OVERVIEW

The CODEC receives a mono analog input from the mixer circuit board and converts it into a digital signal. The CODEC also receives analog control signals from the two Parameter pots, converts this to digital and sends a combined digital signal to the DSP.

The DSP and the two SRAM ICs, form a powerful DSP system. The DSP receives the digital data from the CODEC as well as the direct control signals from the rotary encoder and the EFX WIDE switch. The DSP programing selects and performs the appropriate DSP function on the data, and sends it back to the CODEC.

The CODEC converts the incoming digital signals to two analog outputs which are sent to the main left and right mix, and summed to the monitor mix. For Phaser and Delay effects, the two analog outputs from the CODEC are mono. For other effects, there is a difference between the signals.

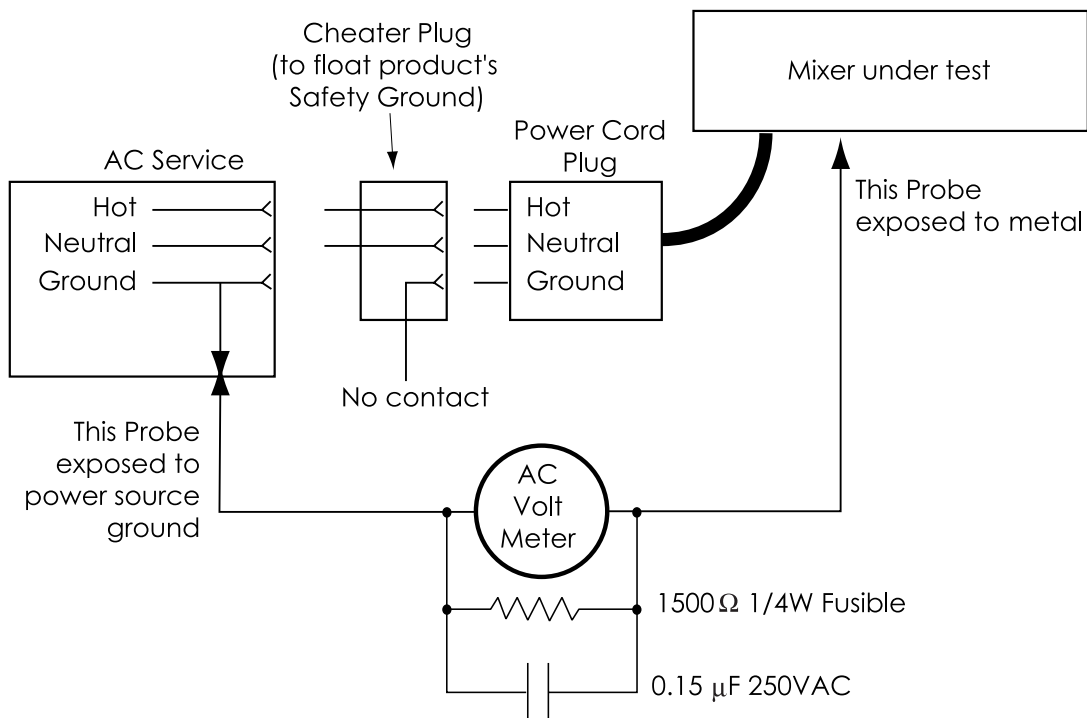
# Safety test



You must perform the following leakage test before returning the mixer to your customer. Take every safety precaution to protect yourself while doing this test.



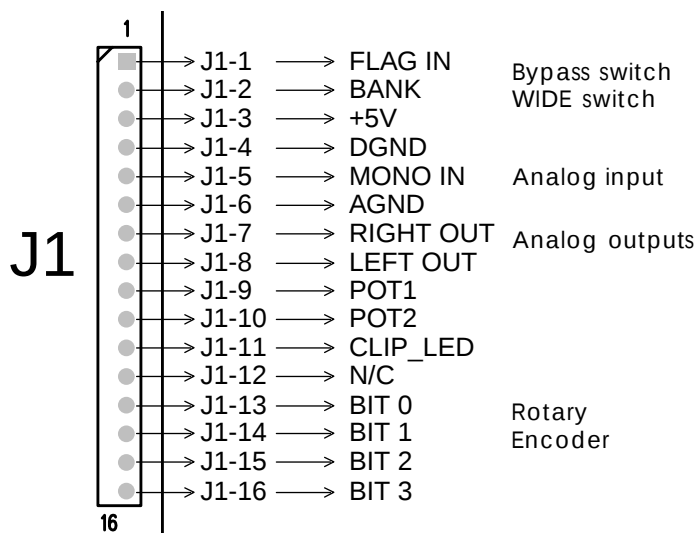
1. Make a small loading RC circuit as shown in the diagram below, and connect the AC volt meter between the AC power source ground and any exposed metal on the unit under test.
2. Connect the mixer under test to an AC power source using a ground-lift adaptor, leaving the mixer's safety ground floating. Turn the mixer on.
3. The meter reading should be less than 750mVAC (note: this is equivalent to 0.5mA of leakage current).
4. Flip the plug over in the receptical so the hot and neutral are swapped. Verify that the reading is still less then 750mVAC.
5. If either reading is greater than 750mVAC, then you must investigate and repair the mixer before returning it to your customer.



## Connectors

### MIXER TO EFX BOARD

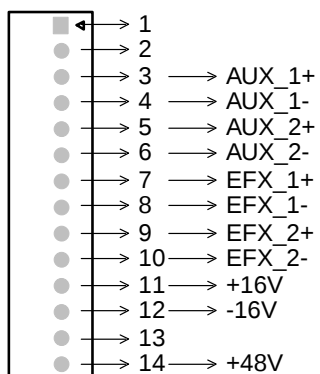
The details for the mixer to EFX board connector are shown on page 8, but here it is again.



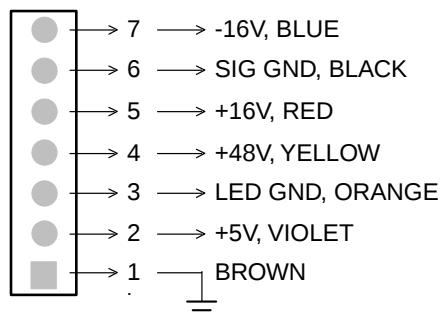
This shows the signals present on the EFX board connector J1.

### MASTER CIRCUIT BOARD

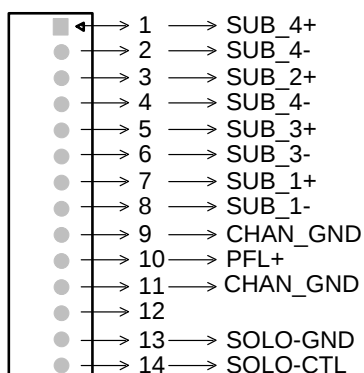
#### J4



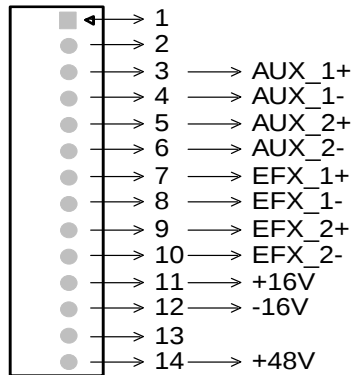
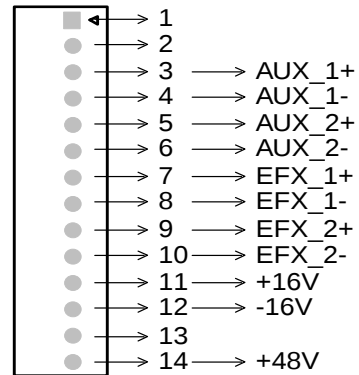
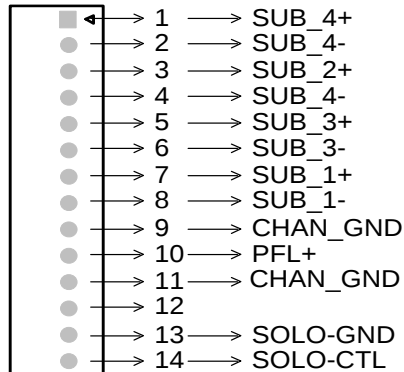
#### J44



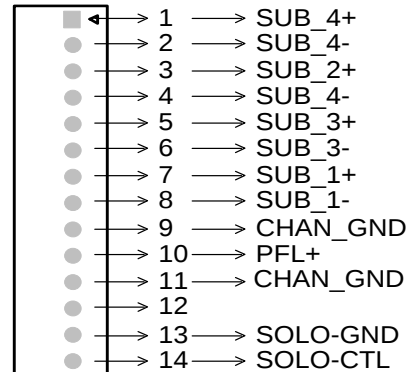
#### J5



## SLAVE CIRCUIT BOARD CONNECTIONS

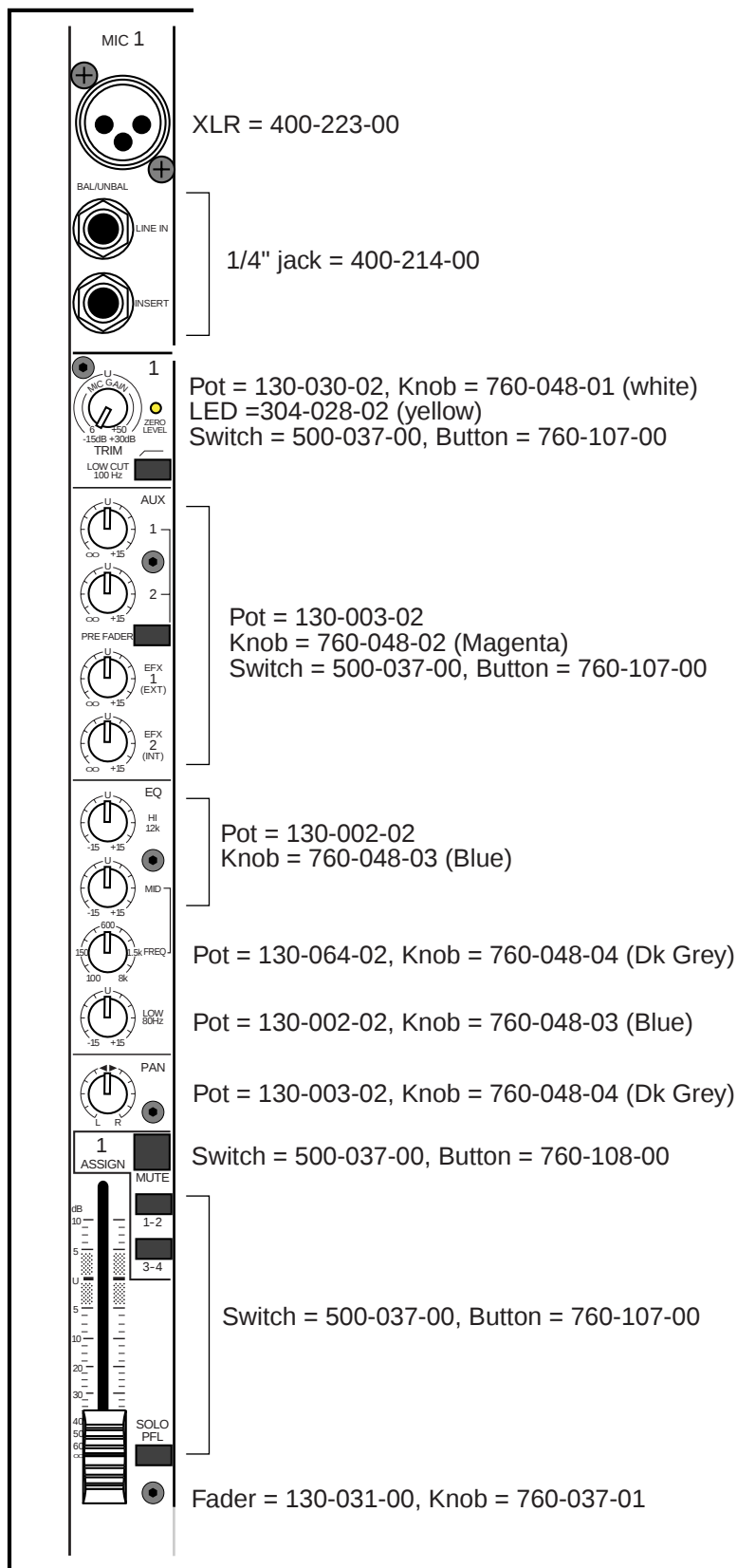
**J4****J15****J5**

This shows the signals between  
SLAVE boards.

**J16**

This shows the signals into the  
SLAVE board from the MASTER.  
Actually, this is all rather sad,  
that past generations fought in  
the American Civil War to put a  
stop to this sort of thing.  
All circuit boards are created  
equal.

# Quick Parts

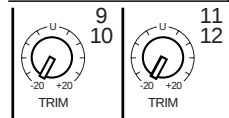
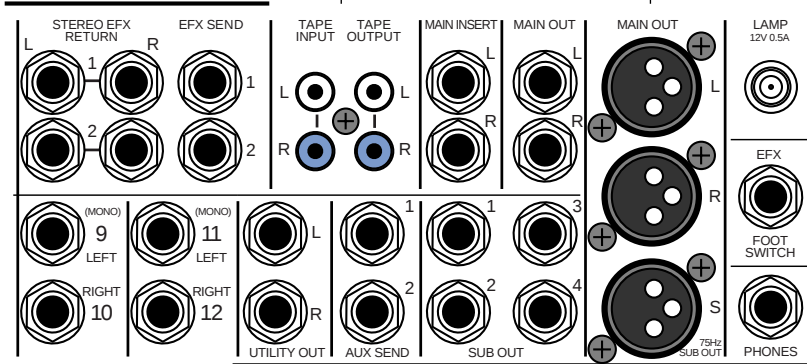


# CFX MIXER SERVICE MANUAL **MACKIE.**

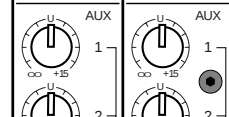
All 1/4" jacks = 400-214-00

Quad RCA jack = 400-022-00

XLR = 400-041-00



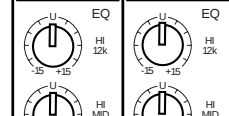
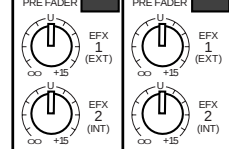
Pot = 130-061-02, Knob = 760-048-01 (white)



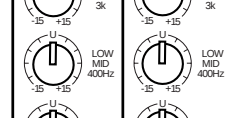
Pot = 130-003-02

Knob = 760-048-02 (magenta)

Switch = 500-037-00, Button = 760-107-00

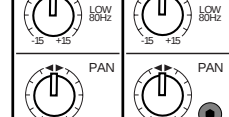


Pot = 130-061-02, Knob = 760-048-03 (blue)



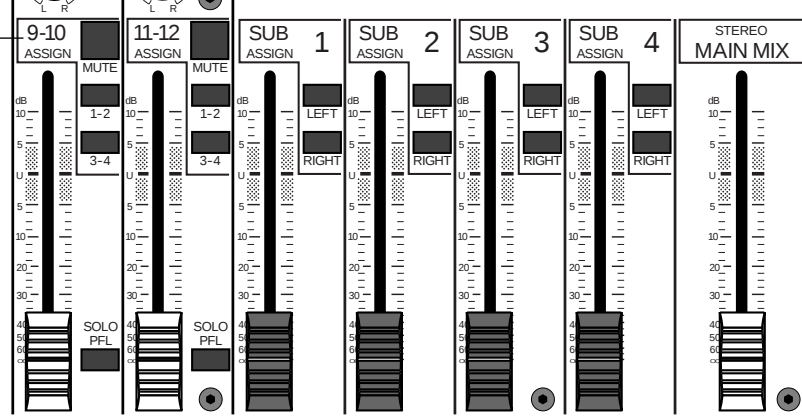
Pot = 130-061-02, Knob = 760-048-04 (dark grey)

Pot = 130-061-02, Knob = 760-048-03 (blue)



Pot = 130-003-02, Knob = 760-048-04 (dark grey)

Switch = 500-037-00  
Button = 760-108-00



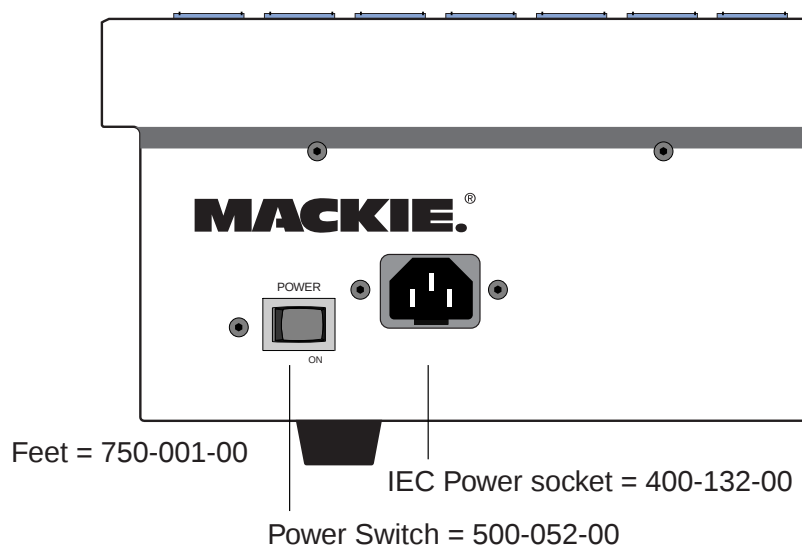
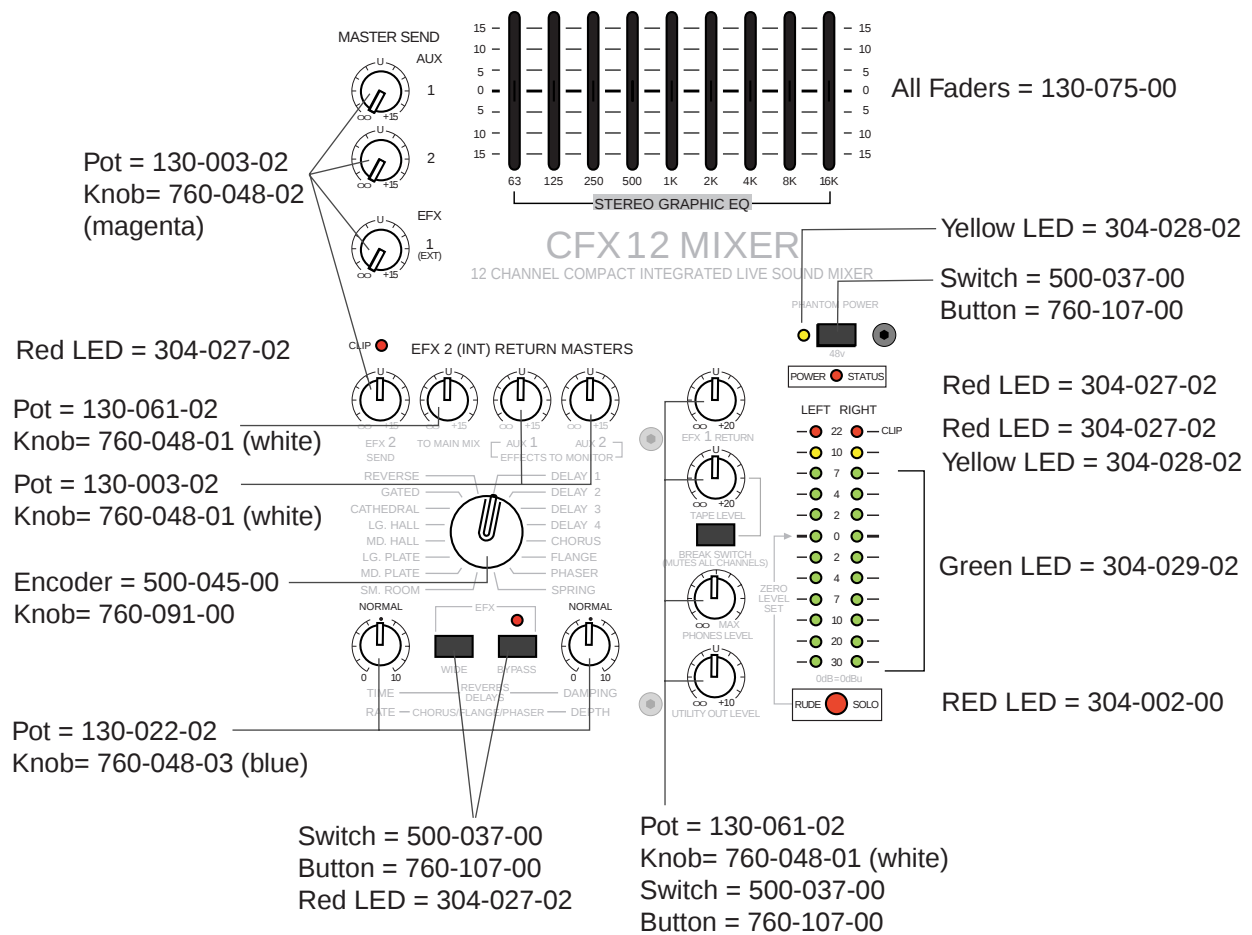
Switch = 500-037-00  
Button = 760-107-00

Fader = 130-032-00 (dual)  
Knob = 760-037-01

Fader = 130-031-00 (mono)  
Knob = 760-037-03 (blue)

Fader = 130-032-00 (dual)  
Knob = 760-037-01

# MACKIE. CFX MIXER SERVICE MANUAL



## PARTS LIST

**Parts Numbering guide**

040- Cables  
055- Finished PCB Assy  
100- Pots and resistors  
200- Capacitors  
300- Semiconductors  
400- Jacks/Connectors  
500- Switches  
510- Fuses  
550- Chassis Metalwork  
600- Transformers  
601- Inductors  
610- Wires and Cables  
640- AC line cords  
700- Hardware  
760- Knobs/Plastic  
770- Fans  
790- Misc./Packing  
800- Printed Material  
860- EPROM

| PART#      | DESCRIPTION        | PAGES |
|------------|--------------------|-------|
| 090-063-00 | MASTER PARTS       | A-2   |
| 055-192-00 | EFFECTS BOARD      | A-4   |
| 055-241-00 | MASTER BOARD       | A-5   |
| 055-242-00 | SLAVE 4 BOARD      | A-10  |
| 055-258-00 | POWER SUPPLY BOARD | A-12  |
| 055-260-00 | AC INPUT BOARD     | A-12  |



Components noted with this symbol shall be replaced only by the component specified.  
This is required to maintain product safety.

## Master Parts List CFX Assembly

| Item#      | Part #        | Description               | Rev   | Qty                                  | Notes                 |
|------------|---------------|---------------------------|-------|--------------------------------------|-----------------------|
|            | 090-120-00    | CFX12                     | A3-A2 | 1                                    | CFX12 ASSEMBLY        |
|            | 090-121-00    | CFX16                     | A3-A2 | 1                                    | CFX16 ASSEMBLY        |
|            | 090-122-00    | CFX20                     | A3-A2 | 1                                    | CFX20 ASSEMBLY        |
| 1          | 040-358-00    | CBL RIB 18G 7P .156 16IN  | B     | 1                                    |                       |
| 4          | 055-192-00-01 | PCB ASSY LC EFTS-PWR MIX  | B1-A1 | 1                                    | See Page A-4          |
|            | 055-241-00-02 | ASSY PCB CFX MASTER       | A-A2  | 1                                    | See Page A-5          |
| 6          | 055-242-00-01 | ASSY PCB CFX SLAVE 4      | 1-A1  | 1                                    | See Page A-10         |
| 7          | 055-258-00-01 | PCB ASSY PWR SPLY CFX     | A-A1  | 1                                    | See Page A-12         |
| 8          | 055-260-00-01 | PCB ASSY AC INPUT CFX     | A-A1  | 1                                    | See Page A-12         |
| 9          | 080-142-00    | SA XFMR -010 120V         | A-A1  | 1                                    | 120V models (all CFX) |
| 9          | 080-142-01    | SA XFMR -010 230V         | A     | 1                                    | 230V models (all CFX) |
| 9          | 080-142-02    | SA XFMR -010 100V         | A     | 1                                    | 100V models (all CFX) |
| 2          | 080-144-00    | SA BNC CFX 12/16/20       | C1    | A1 1                                 |                       |
| 44         | 400-365-00    | QDISK TAB .250 M #6 MNT   | A     | 1                                    |                       |
| 11         | 410-005-00    | INSL SILPAD TO-220        | A     | 4                                    |                       |
| 12         | 510-001-00    | FUSE SB 1A 5X20MM 250V UL | B     | 1                                    | 120V models (all CFX) |
| 12         | 510-002-00    | FUSE SB .5A 5X20 250V IEC | C     | 1                                    | 230V models (all CFX) |
| 12         | 510-025-00    | FUSE SB 1.25A 5X20MM 250V | B     | 1                                    | 100V models (all CFX) |
| 13         | 550-442-00    | CHASSIS TOP CXF 12        |       | 1                                    | CFX12                 |
| 13         | 550-443-00    | CHASSIS TOP CXF 16        | A     | 1                                    | CFX16                 |
| 13         | 550-444-00    | CHASSIS TOP CXF 20        | A     | 1                                    | CFX20                 |
| 14         | 550-445-00    | CHASSIS BOTTOM CXF 12     | A     | 1                                    | CFX12                 |
| 14         | 550-446-00    | CHASSIS BOTTOM CXF 16     | A     | 1                                    | CFX16                 |
| 14         | 550-447-00    | CHASSIS BOTTOM CXF 20     | A     | 1                                    | CFX20                 |
| 15         | 550-462-00    | CLAMP TO-220 X 4          | A     | 1                                    |                       |
| 43         | 550-491-00    | FAB PLT HTSK CFX PWR SPLY | A     | 1                                    |                       |
| 16         | 550-551-10    | PNT LEFT SIDE CFX         | A     | 1                                    |                       |
| 17         | 550-551-20    | PNT RIGHT SIDE CFX        | A     | 1                                    |                       |
| 18         | 550-552-00    | BACK CFX 12               | B     | 1                                    | CFX12                 |
| 18         | 550-553-00    | BACK CFX-16               | B     | 1                                    | CFX16                 |
| 18         | 550-554-00    | BACK CFX-20               | B     | 1                                    | CFX20                 |
| 20         | 620-045-00    | CBL FLT 14C W/PINS 3.5IN  | A     | 2, 4, 6 (2 for CFX•12, 4=•16, 6=•20) |                       |
| 640-001-00 |               | LC IEC SJT 10A/125V 6FT   | D     | 1                                    | 120v Linecord         |
| 640-002-02 |               | LC JAPAN 12A 125VAC 8FT   | C     | 1                                    | 100V Linecord         |
| 22         | 700-010-00    | TF 6-32X1/4 PHP BLKZC     | A     | 26                                   |                       |
| 23         | 700-011-00    | MCH 4-40X1/4 BTNSKT BLKX  | A     | 34, 44, 54                           |                       |
| 24         | 700-028-01    | SEMS 6-32X5/16 PHP BLKZC  | B     | 6                                    |                       |
| 25         | 700-028-03    | SEMS 6-32X1/2 PHP BLKZC   | B     | 4                                    |                       |
| 26         | 701-016-00    | 5-20X5/16 PHPII TYP B BLK | A     | 23, 31, 39                           |                       |
| 27         | 705-001-00    | KEPNUT 6-32               | A     | 4                                    |                       |
| 28         | 705-003-00    | NUT HEX-SPLD W/400-214-00 | A     | AR                                   |                       |
| 29         | 705-008-00    | NUT LOCK 8-32             | A     | 2                                    |                       |
| 31         | 710-002-00    | WASHER-SPLD W/400-214-00  | A     | AR                                   |                       |
| 33         | 750-001-00    | BUMPON ROUND BLK .63X.31  | A     | 4                                    |                       |
| 34         | 760-037-01    | KNOB SLIDE 10X25MM MLDLIN | A     | 11, 15, 19                           |                       |
| 35         | 760-037-03    | KNOB SLIDE 11X24 BLUE     | A     | 4                                    |                       |
| 36         | 760-048-01    | KNOB 9MM LT GRY           | B     | 17, 21, 25                           |                       |
|            | 760-048-02    | KNOB 9MM MAGENTA          | B     | 44, 60, 76                           |                       |
|            | 760-048-03    | KNOB 9MM BLU/GRY          | B     | 34, 46, 58                           |                       |
| 39         | 760-048-04    | KNOB 9MM DARK GRAY        | B     | 18, 26, 34                           |                       |
| 40         | 760-091-00    | KNOB MASTER VOLUME        | A     | 1                                    |                       |
| 41         | 780-050-00    | LIPSEAL MASTER CFX        | A     | 1                                    |                       |
| 42         | 780-051-00    | LIPSEAL SLAVE 4 CFX       | A     | 1, 2, 3                              |                       |

Note: The Item numbers in the first column refer to the circled numbers in the exploded views, chapters B, C and D.



| Item# | Part #     | Description               | Rev | Qty | Notes          |
|-------|------------|---------------------------|-----|-----|----------------|
|       | 790-002-00 | BAG POLY 12 X 18 2MIL     | A   | 1   |                |
|       | 790-027-00 | BAG POLY 20X7X36 4MIL GUS | A   | 1   |                |
|       | 800-130-00 | BOX CMPT CFX 12           | B   | 1   | CFX12          |
|       | 800-131-00 | BOX CMPT CFX 16           | B   | 1   | CFX16          |
|       | 800-132-00 | BOX CMPT CFX 20           | B   | 1   | CFX20          |
|       | 810-086-00 | FOAM SET CFX              |     | 1   |                |
|       | 820-104-00 | OWNR MNL COMPACT CFX      | A   | 1   | COVERS ALL CFX |

# 055-192-00 REV B, Effects board

| PART NO.   | DESCRIPTION                    | VALUE      | REFERENCE DESIGNATORS                                   |
|------------|--------------------------------|------------|---------------------------------------------------------|
| 080-088-00 | IC, ADSP-2163                  |            | U2                                                      |
| 140-009-00 | RESISTOR TF SMT                | 2.2 5%     | R11                                                     |
| 140-049-00 | RES TF SM .1W 5% 100 OHM       | 100 5%     | R33-34                                                  |
| 140-053-00 | RESISTOR TF SMT                | 150 5%     | R13-14                                                  |
| 140-073-00 | RESISTOR TF SMT                | 1K0 5%     | R4 R8-9 R20 R31                                         |
| 140-089-00 | RESISTOR TF SMT                | 4K7 5%     | R19 R21 R23-30                                          |
| 140-097-00 | RESISTOR TF SMT                | 10K 5%     | R7 R10 R32                                              |
| 140-097-00 | RESISTOR TF SMT *DO NOT STUFF* | 10K 5%     | R16-18 R15                                              |
| 140-114-00 | RESISTOR TF SMT                | 47K 5%     | R3 R5-6 R22                                             |
| 140-123-00 | RESISTOR TF SMT                | 100K 5%    | R2 R12                                                  |
| 140-123-00 | RES TF SM .1W 5% 100K OHM      | 100K 5%    | R35                                                     |
| 140-139-00 | RESISTOR TF SMT                | 470K 5%    | R1                                                      |
| 212-001-00 | CAPACITOR CERAMIC SMT          | 0.01 10%   | C30-31                                                  |
| 212-003-00 | CER 100PF 5% 50V NPO SM        | 100PF 5%   | C46 C49                                                 |
| 212-005-00 | CAPACITOR CERAMIC SMT          | 20PF 5%    | C2 C6                                                   |
| 212-007-00 | CAPACITOR CERAMIC SMT          | 0.047 5%   | C18                                                     |
| 212-016-00 | CER 1000PF 5% 50V NPO SM       | 1000PF 5%  | C42-45 C47-48 C50-56                                    |
| 212-023-00 | CAPACITOR CERAMIC SMT          | 0.001 10%  | C7-8 C36                                                |
| 212-024-00 | CER 1UF 25V Y5V 1206           | 1UF -400   | C10-11 C15 C34                                          |
| 212-027-00 | CAPACITOR CERAMIC SMT          | .1UF 10%   | C1 C3-4 C12 C14 C16-17 C20 C24-25 C27<br>C29 C32-33 C38 |
| 212-029-00 | CAPACITOR CERAMIC SMT          | 270PF 5%   | C22-23                                                  |
| 212-032-00 | CAPACITOR CERAMIC X7R SMT      | 2200PF 10% | C35 C37 C39-41                                          |
| 220-011-00 | LYT 100UF 20% 25V RAD          | 100UF 10%  | C5                                                      |
| 223-003-00 | LYT 22UF 20% 6.3V SM           | 22UF 20%   | C9                                                      |
| 223-004-00 | LYT 10UF 20% 16V SM            | 10UF 20%   | C13 C19 C21 C26 C28                                     |
| 300-003-00 | DIODE SIGNAL SMD               | DL4148     | D1-4                                                    |
| 315-017-00 | CRYSTAL, 24.576 MHZ            | 24.576     | Y1                                                      |
| 325-027-03 | IC, SMD, DUAL D F/F            | 74HC74A    | U6                                                      |
| 325-071-03 | IC, HEX, INV, SMD              | 74HCU04    | U1                                                      |
| 329-042-03 | IC, AD1819 QFP                 | AD1819     | U3                                                      |
| 329-047-03 | IC, 32KX8 SRAM 20nS            | 7C256-20   | U4-5                                                    |
| 400-280-00 | HDR, SKT, 16P, .1X1 STR        | 1.75       | J1                                                      |
| 450-192-00 | PCB, LC EFFECTS                |            | Z1                                                      |
| 601-009-00 | FERRITE BEAD, SMT              | Z=1000     | FB1-3                                                   |
| 601-010-00 | FERRITE SMT POWER              | Z=73       | FB5                                                     |

## 055-241-00 REV A, Master board

| PART NO.   | DESCRIPTION                             | VALUE | REFERENCE DESIGNATORS                                                                                                                                                                                                                                        |
|------------|-----------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 040-137-00 | CBL ASSY, 18GA 1010 GRN/YEL 9"          |       | E2                                                                                                                                                                                                                                                           |
| 130-002-02 | LUG/AMP IN<br>POT RTY 50KB 9MM MNO H TN | 50KB  | R47 R55 R59 R126 R135 R139 R209 R220<br>R224 R285 R294 R298                                                                                                                                                                                                  |
| 130-003-02 | POTRTY 50KG 9MM MN TN PAN               | 50KG  | R32-33 R38-39 R63 R112-113 R118-119<br>R143 R195-196 R201-202 R228 R273-274<br>R279-280 R304 R332-333 R340-341 R387<br>R429-430 R438-439 R492 R525-526 R531<br>R535 R617 R621                                                                                |
| 130-022-02 | RESISTOR POT 9MM HORIZ                  | 10KB  | R545 R629                                                                                                                                                                                                                                                    |
| 130-030-02 | RESISTOR POT 9MM HORIZ                  | 5KZY  | R15 R95 R180 R260                                                                                                                                                                                                                                            |
| 130-031-00 | POT SLD 10KD 60MM MONO                  | 10KD  | R74 R154 R239 R316 R562 R569 R648 R713                                                                                                                                                                                                                       |
| 130-032-00 | POT SLD 50KD 60MM DUAL                  | 50KD  | R398 R503 R861                                                                                                                                                                                                                                               |
| 130-061-02 | POT 50KG 12MM DUAL WO SLV               | 50KG  | R320 R350 R360-361 R374 R417 R450<br>R464-465 R481 R539 R744 R748 R753 R759                                                                                                                                                                                  |
| 130-064-02 | POT 500KC 12MM DUL WO SLV               | 500KC | R56 R136 R221 R295                                                                                                                                                                                                                                           |
| 130-075-00 | POT SLD 50KW 30MM PANA                  | 50KW  | R603 R605 R664-665 R669 R729 R732 R735<br>R825                                                                                                                                                                                                               |
| 140-032-00 | RESISTOR CF                             | 20    | 5% R848                                                                                                                                                                                                                                                      |
| 140-037-00 | RESISTOR CF                             | 33    | 5% R847                                                                                                                                                                                                                                                      |
| 140-049-00 | RESISTOR TF SMT                         | 100   | 5% R624                                                                                                                                                                                                                                                      |
| 140-051-00 | RES TF SM .1W 5% 120 OHM                | 120   | 5% R407 R409 R412 R415 R514 R516 R576<br>R578 R652 R654 R786 R790 R846                                                                                                                                                                                       |
| 140-057-00 | RESISTOR CF                             | 220   | 5% R852-853 R857-860                                                                                                                                                                                                                                         |
| 140-061-00 | RESISTOR CF                             | 330   | 5% R842 R844                                                                                                                                                                                                                                                 |
| 140-064-00 | RES TF SM .1W 5% 430 OHM                | 430   | 5% R765                                                                                                                                                                                                                                                      |
| 140-065-00 | RESISTOR CF                             | 470   | 5% R841 R843 R845                                                                                                                                                                                                                                            |
| 140-066-00 | RES TF SM .1W 5% 510 OHM                | 510   | 5% R35 R37 R40-41 R70-73 R115 R117 R121<br>R132 R150-153 R198 R200 R204 R215<br>R235-238 R276 R278 R282 R291 R312-315<br>R336-337 R347 R356 R394-397 R433-434<br>R445 R456 R499-502 R618 R675 R840<br>R850-851                                               |
| 140-068-00 | RESISTOR CF                             | 620   | 5% R839                                                                                                                                                                                                                                                      |
| 140-073-00 | RES TF SM .1W 5% 1K0 OHM                | 1K0   | 5% R10 R13 R53-54 R60 R62 R85 R88 R133-134<br>R140 R142 R170 R173 R216-217 R225 R227<br>R255 R258 R292-293 R299 R301 R351-354<br>R365-368 R370-372 R376 R378-381<br>R451-454 R461-462 R469-472 R474-476<br>R479-480 R483-487 R494 R534 R552 R623<br>R574-575 |
| 140-074-00 | RESISTOR CF                             | 1K1   | 5% R838                                                                                                                                                                                                                                                      |
| 140-076-00 | RESISTOR CF                             | 1K3   | 5% R548 R628                                                                                                                                                                                                                                                 |
| 140-077-00 | RESISTOR TF SMT                         | 1K5   | 5% R568 R572 R647 R650                                                                                                                                                                                                                                       |
| 140-079-00 | RES TF SM .1W 5% 1K8 OHM                | 1K8   | 5% R23 R103 R187 R265 R622 R747 R834 R837                                                                                                                                                                                                                    |
| 140-080-00 | RES TF SM .1W 5% 2K0 OHM                | 2K    | 5% R547 R627                                                                                                                                                                                                                                                 |
| 140-083-00 | RESISTOR TF SMT                         | 2K7   | 5% R5-6 R9 R12 R80-81 R84 R87 R165-166<br>R169 R172 R250-251 R254 R257                                                                                                                                                                                       |
| 140-084-00 | RESISTOR TF SMT                         | 3K0   | 5% R691-692                                                                                                                                                                                                                                                  |
| 140-085-00 | RES TF SM .1W 5% 3K3 OHM                | 3K3   | 5% R327 R329 R421 R423                                                                                                                                                                                                                                       |
| 140-086-00 | RES TF SM .1W 5% 3K6 OHM                | 3K6   | 5% R51 R61 R131 R141 R214 R226 R290 R300<br>R303 R382-384 R386 R488 R490-491 R836                                                                                                                                                                            |
| 140-087-00 | RESISTOR CF                             | 3K9   | 5% R556-557 R636-637 R701-702 R766-767                                                                                                                                                                                                                       |
| 140-088-00 | RES TF SM .1W 5% 4.3K                   | 4K3   | 5%                                                                                                                                                                                                                                                           |

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| PART NO.   | DESCRIPTION               | VALUE |    | REFERENCE DESIGNATORS                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------|---------------------------|-------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 140-089-00 | RES TF SM .1W 5% 4K7 OHM  | 4K7   | 5% | R29 R64-69 R109 R144-149 R182-183<br>R229-234 R305-311 R388-393 R493<br>R495-498                                                                                                                                                                                                                                                                                                                                                                                                          |
| 140-090-00 | RES TF SM .1W 5% 5K1 OHM  | 5K1   | 5% | R20 R34 R36 R42-43 R57-58 R100 R114<br>R116 R120 R122 R137-138 R156 R158 R184<br>R194 R197 R199 R203 R205 R222-223 R241<br>R245 R275 R277 R281 R283 R296-297<br>R334-335 R338-339 R342-346 R348-349<br>R355 R400 R404 R431-432 R435-436<br>R440-444 R446-447 R455 R505 R509 R522<br>R529 R533 R538 R553-554 R563 R642 R707<br>R770 R776-777                                                                                                                                               |
| 140-091-00 | RESISTOR CF               | 5K6   | 5% | R835                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 140-094-00 | RES TF SM .1W 5% 7K5 OHM  | 7K5   | 5% | R50 R130 R213 R289 R358-359 R459-460<br>R558 R638 R693 R698 R703 R768 R854<br>R868                                                                                                                                                                                                                                                                                                                                                                                                        |
| 140-097-00 | RES TF SM .1W 5% 10K OHM  | 10K   | 5% | R44-45 R75 R123-124 R160 R206-207<br>R218-219 R244 R317 R448 R458 R540-541<br>R543-544 R549 R555 R559-561 R567 R580<br>R583-584 R586-588 R590-591 R597-599<br>R601 R609 R612-613 R615-616 R619-620<br>R625-626 R633-635 R639-641 R646<br>R657-658 R672-673 R676-677 R686-687<br>R694-696 R699-700 R704-706 R709 R711<br>R714 R718-719 R722 R739-740 R743 R754<br>R764 R769 R771-773 R782 R784 R789<br>R793-795 R797 R799 R812 R814 R817-823<br>R826 R828 R833 R849 R869 R872 R875<br>R877 |
| 140-098-00 | RES TF SM .1W 5% 11K OHM  | 11K   | 5% | R155 R157 R240 R243 R399 R403 R504<br>R508 R565 R570 R644 R649                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 140-101-00 | RES TF SM .1W 5% 15K OHM  | 15K   | 5% | R159 R161 R242 R246 R377 R463 R478<br>R489 R571 R573 R651 R716                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 140-104-00 | RES TF SM .1W 5% 20K OHM  | 20K   | 5% | R30 R46 R91 R110 R125 R176 R208 R284<br>R542 R546 R874 R876                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 140-105-00 | RESISTOR TF SMT           | 22K   | 5% | R537                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 140-108-00 | RESISTOR TF SMT           | 27K   | 5% | R11 R86 R171 R256                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 140-109-00 | RES TF SM .1W 5% 30K OHM  | 30K   | 5% | R262 R272 R323 R325 R328 R331 R405-406<br>R419 R422 R425 R427 R437 R449 R510-511<br>R518 R521 R527 R536 R680-681 R688-690<br>R697 R749-750 R755-756 R760-761                                                                                                                                                                                                                                                                                                                              |
| 140-111-00 | RES TF SM .1W 5% 36K OHM  | 36K   | 5% | R25 R105 R189 R267 R678-679 R682-683                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 140-112-00 | RES TF SM .1W 5% 39K OHM  | 39K   | 5% | R870-871                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 140-114-00 | RES TF SM .1W 5% 47K OHM  | 47K   | 5% | R48-49 R127-128 R210-211 R286-287 R302<br>R357 R364 R375 R385 R457 R468 R482<br>R362-363 R369 R373 R466-467 R473 R477                                                                                                                                                                                                                                                                                                                                                                     |
| 140-119-00 | RES TF SM .1W 5% 75K      | 75K   | 5% | R3-4 R17 R27 R31 R52 R78-79 R89 R94 R97<br>R107 R111 R129 R164 R174 R179 R191<br>R193 R212 R249 R269 R271 R288 R318-319<br>R321-322 R324 R326 R330 R411 R414 R418<br>R420 R424 R512-513 R519-520 R528 R532<br>R550-551 R564 R566 R630-632 R643 R645<br>R708 R710 R751-752 R757-758 R762 R774<br>R778 R785 R787 R791 R810-811 R855-856<br>R862-863                                                                                                                                         |
| 140-123-00 | RES TF SM .1W 5% 100K OHM | 100K  | 5% | R401-402 R506-507 R796 R798                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| PART NO.   | DESCRIPTION                | VALUE  |       | REFERENCE DESIGNATORS                                                                                                                                                                                                                                                                                            |
|------------|----------------------------|--------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 141-051-00 | RES TF SM .25W 5% 120 OHM  | 120    | 5%    | R28 R108 R192 R270 R408 R410 R413 R416<br>R515 R517 R577 R579 R653 R655 R763<br>R775 R779-781 R783 R788 R792 R800-809<br>R865-866                                                                                                                                                                                |
| 145-066-00 | RES MF SM .1W 1% 4.75 OHM  | 4.75   | 1%    | R16 R96 R181 R261                                                                                                                                                                                                                                                                                                |
| 145-279-00 | RES MF SM .1W 787 OHM      | 787    | 1%    | R596 R608                                                                                                                                                                                                                                                                                                        |
| 145-288-00 | RESISTOR MF SMT            | 976    | 1%    | R723 R730                                                                                                                                                                                                                                                                                                        |
| 145-296-00 | RESISTOR MF SMT            | 1K18   | 1%    | R816 R831                                                                                                                                                                                                                                                                                                        |
| 145-307-00 | RESISTOR MF SMT            | 1K54   | 1%    | R593 R604                                                                                                                                                                                                                                                                                                        |
| 145-317-00 | RESISTOR MF SMT            | 1K96   | 1%    | R663 R670                                                                                                                                                                                                                                                                                                        |
| 145-330-00 | RES MF SM .1W 1% 2K43 OHM  | 2K43   | 1%    | R684-685 R745-746                                                                                                                                                                                                                                                                                                |
| 145-330-00 | RESISTOR MF SMT            | 2K43   | 1%    | R727 R736                                                                                                                                                                                                                                                                                                        |
| 145-339-00 | RESISTOR MF SMT            | 3K01   | 1%    | R14 R90 R175 R259 R592 R602                                                                                                                                                                                                                                                                                      |
| 145-341-00 | RES MF SM .1W 1% 3K16 OHM  | 3K16   | 1%    | R426                                                                                                                                                                                                                                                                                                             |
| 145-346-00 | RES MF SM .1W 1% 3K57 OHM  | 3K57   | 1%    | R19 R93 R99 R178                                                                                                                                                                                                                                                                                                 |
| 145-350-00 | RESISTOR MF SMT            | 3K92   | 1%    | R660 R666                                                                                                                                                                                                                                                                                                        |
| 145-352-00 | RES MF SM .1W 1% 4K12 OHM  | 4K12   | 1%    | R18 R92 R98 R177                                                                                                                                                                                                                                                                                                 |
| 145-356-00 | RES MF SM .1W 1% 4K53 OHM  | 4K53   | 1%    | R712 R715                                                                                                                                                                                                                                                                                                        |
| 145-358-00 | RESISTOR MF SMT            | 4K75   | 1%    | R726 R734                                                                                                                                                                                                                                                                                                        |
| 145-368-00 | RESISTOR MF SMT            | 6K04   | 1%    | R595 R607                                                                                                                                                                                                                                                                                                        |
| 145-373-00 | RES MF SM .1W 1% 6K81 OHM  | 6K81   | 1%    | R428                                                                                                                                                                                                                                                                                                             |
| 145-377-00 | RESISTOR TF SMT            | 7K50   | 1%    | R724 R731                                                                                                                                                                                                                                                                                                        |
| 145-388-00 | RESISTOR MF SMT            | 9K76   | 1%    | R815 R832 R864 R867 R873                                                                                                                                                                                                                                                                                         |
| 145-389-00 | RES MF SM .1W 1% 10K0 OHM  | 10K0   | 1%    | R21-22 R24 R26 R101-102 R104 R106<br>R185-186 R188 R190 R263-264 R266 R268                                                                                                                                                                                                                                       |
| 145-397-00 | RESISTOR MF SMT            | 12K1   | 1%    | R585 R594 R606 R614                                                                                                                                                                                                                                                                                              |
| 145-406-00 | RESISTOR MF SMT            | 15K0   | 1%    | R662 R668 R717 R738                                                                                                                                                                                                                                                                                              |
| 145-416-00 | RESISTOR MF SMT            | 19K1   | 1%    | R728 R737                                                                                                                                                                                                                                                                                                        |
| 145-417-00 | RESISTOR MF SMT            | 19K6   | 1%    | R813 R830                                                                                                                                                                                                                                                                                                        |
| 145-418-00 | RES MF SM .1W 1% 20K0 OHM  | 20K0   | 1%    | R7-8 R82-83 R167-168 R252-253                                                                                                                                                                                                                                                                                    |
| 145-426-00 | RESISTOR MF SMT            | 24K3   | 1%    | R582 R589 R600 R611                                                                                                                                                                                                                                                                                              |
| 145-435-00 | RESISTOR MF SMT            | 30K1   | 1%    | R659 R661 R667 R674                                                                                                                                                                                                                                                                                              |
| 145-445-00 | RESISTOR MF SMT            | 38K3   | 1%    | R721 R725 R733 R742                                                                                                                                                                                                                                                                                              |
| 145-455-00 | RESISTOR MF SMT            | 48K7   | 1%    | R581 R610                                                                                                                                                                                                                                                                                                        |
| 145-456-00 | RES MF SM .1W 1% 49K9 OHM  | 49K9   | 1%    | R523-524 R530 R824 R827 R829                                                                                                                                                                                                                                                                                     |
| 145-464-00 | RESISTOR MF SMT            | 60K4   | 1%    | R656 R671                                                                                                                                                                                                                                                                                                        |
| 145-474-00 | RESISTOR MF SMT            | 76K8   | 1%    | R720 R741                                                                                                                                                                                                                                                                                                        |
| 146-373-00 | RES MF SM .25W 1% 6K81 OHM | 6K81   | 1%    | R1-2 R76-77 R162-163 R247-248                                                                                                                                                                                                                                                                                    |
| 200-010-02 | PLY .0018UF 10% 100V TR    | 0.0018 | 2.00% | C34 C75 C121 C163 C192-193 C234-235                                                                                                                                                                                                                                                                              |
| 200-011-02 | CAPACITOR MYLART&R         | 0.0022 | 2.50% | C409-412 C420-423 C467-468 C480-481                                                                                                                                                                                                                                                                              |
| 200-013-02 | PLY .0082UF 10% 100V TR    | 0.0082 | 2.00% | C195-198 C236-237 C241-242                                                                                                                                                                                                                                                                                       |
| 200-014-02 | PLY .0033UF 10% 100V TR    | 0.0033 | 2.50% | C35-36 C76-77 C123-124 C164-165                                                                                                                                                                                                                                                                                  |
| 200-025-02 | PLY/BX .56UF 5% 63V TR     | 0.56   |       | C39 C80 C127 C168 C171 C203 C210<br>C249                                                                                                                                                                                                                                                                         |
| 200-029-02 | CAPACITOR MYLART&R         | 0.22   | 10%   | C316-319 C330-333 C354-355 C367-368<br>C500-501 C505                                                                                                                                                                                                                                                             |
| 200-031-02 | PLY .022UF 2% 50V TR       | 0.022  | 5%    | C199-200 C204-205 C243-244 C250-251<br>C356-359 C369-372 C407-408 C418-419                                                                                                                                                                                                                                       |
| 212-001-00 | CER .01UF 10% 50V X7R SM   | 0.01   | 10%   | C14 C17-18 C20 C24 C29 C31 C54 C57<br>C59 C61 C65 C70 C72 C82 C85 C99<br>C102-103 C105-106 C110 C115-116 C118<br>C122 C130-131 C147 C150 C154 C160<br>C230 C238 C265 C272-273 C277-280<br>C291-292 C320 C322-325 C328-329<br>C360-366 C373 C376 C413-417 C471-474<br>C478-479 C482-483 C488 C509-510<br>C516-517 |

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| PART NO.   | DESCRIPTION                | VALUE     | REFERENCE DESIGNATORS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------|----------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 212-003-00 | CER 100PF 5% 50V NPO SM    | 100PF 5%  | C334 C338                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 212-004-00 | CER 220PF 5% 50V NPO SM    | 220PF 5%  | C5 C45 C90 C138                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 212-005-00 | CER 20PF 5% 50V NPO SM     | 20PF 5%   | C81 C83 C129 C132 C180 C184 C188<br>C212 C215 C224 C255 C258 C264 C266<br>C275 C282 C290 C303 C309 C313 C340<br>C342 C348 C351 C374-375 C378-380<br>C384-385 C391-393 C399 C402 C440                                                                                                                                                                                                                                                                                                                                                                               |
| 212-006-00 | CAPACITOR CERAMIC SMT      | 470PF 5%  | C2 C4 C6 C11 C42 C44 C46 C51 C87 C89<br>C91 C96 C135 C137 C139 C144                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 212-007-00 | CER .047UF 20% 50V Z5U SM  | 0.047 20% | C513                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 212-009-00 | CER 47PF 5% 50V NPO SM     | 47PF 5%   | C12-13 C52-53 C97-98 C145-146<br>C228-229 C231-232 C308 C347 C398<br>C441 C444-445 C450 C454 C457 C460<br>C504 C506                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 212-010-00 | CAPACITOR CERAMIC SMT      | .1UF -400 | C19 C58 C60 C104 C170 C182-183 C202<br>C207 C214 C217 C222-223 C239-240<br>C245-246 C248 C257 C260 C285 C287<br>C295 C297 C300-302 C304-305 C310<br>C314 C336-337 C339 C343-344 C349<br>C352 C377 C381-383 C386-389 C394-395<br>C400 C403 C442-443 C447-448 C452<br>C455 C458 C461 C463-464 C485<br>C489-493 C496-497 C507-508 C514-515                                                                                                                                                                                                                            |
| 212-015-00 | CAPACITOR CERAMIC SMT      | 33PF 5%   | C288 C293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 212-018-00 | CER 10PF 5% 50V NPO SM     | 10PF 5%   | C32 C73 C119 C161 C169 C201 C206<br>C247                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 212-019-00 | CAPACITOR CERAMIC SMT      | 150PF 5%  | C10 C15 C21 C23 C50 C55 C62 C64 C95<br>C100 C107 C109 C143 C148 C151 C153                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 212-021-00 | CAPACITOR CERAMIC SMT      | 27pF      | C270-271 C276 C321 C326-327 C469-470<br>C475-477 C484                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 212-023-00 | CAPACITOR CERAMIC SMT      | 0.001 10% | C9 C49 C94 C142 C175 C220                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 220-002-02 | LYT 47UF 20% 25V RAD TR    | 47UF 20%  | C3 C8 C26 C28 C30 C33 C37-38 C40 C43<br>C48 C67 C69 C71 C74 C78-79 C84 C88<br>C93 C112 C114 C117 C120 C125-126<br>C128 C133 C136 C141 C156 C158-159<br>C162 C166-167 C172-174 C176-179 C181<br>C185-187 C189-191 C194 C208-209 C211<br>C213 C216 C218-219 C221 C225-227<br>C233 C252-254 C256 C259 C261-263<br>C267-269 C274 C281 C283-284 C286<br>C289 C294 C296 C306-307 C311-312<br>C315 C335 C341 C345-346 C350 C353<br>C390 C396-397 C401 C404-406 C424-439<br>C446 C449 C451 C453 C456 C459 C462<br>C465-466 C486-487 C494-495 C498-499<br>C502-503 C511-512 |
| 220-003-02 | LYT 47UF 20% 50V RAD TR    | 47UF 10%  | C1 C7 C41 C47 C86 C92 C134 C140                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 220-004-02 | CAPACITOR LYTIC RADIAL T&R | 470UF 10% | C16 C56 C101 C149                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 220-008-02 | LYT 1UF 20% 50V RAD TR     | 1UF 10%   | C298-299                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 220-013-02 | LYT .22UF 20% 50V RAD TR   | .22UF 10% | C22 C25 C27 C63 C66 C68 C108 C111<br>C113 C152 C155 C157                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| PART NO.   | DESCRIPTION                    | VALUE    | REFERENCE DESIGNATORS                               |
|------------|--------------------------------|----------|-----------------------------------------------------|
| 300-003-00 | DIODE SIGNAL SMD               | DL4148   | D24-25 D54-59                                       |
| 301-004-00 | DIO PWR DL4002 SM              | DL4002   | D1-4 D6-9 D11-14 D16-19                             |
| 302-010-03 | DIO ZEN DL5232B 5.6V SM        | DL5232   | D22-23                                              |
| 304-002-00 | LED RED T1-3/4 W FLASHER       | RED      | D53                                                 |
| 304-027-02 | LED RED W/.425 SPACER TR       | RED      | D21 D26 D28 D40-41                                  |
| 304-028-02 | LED YEL W/.425 SPACER TR       | YEL      | D5 D10 D15 D20 D27 D29 D42                          |
| 304-029-02 | LED GRN W/.425 SPACER TR       | GRN      | D30-39 D43-52                                       |
| 310-002-02 | XSTR PNP 2N4403 T/A            | 2N4403   | Q12-13                                              |
| 311-001-00 | XSTR NPN IMBT4401 SM           | IMBT4401 | Q9-11                                               |
| 311-002-00 | X-SISTOR PNP SMD               | IMBT4403 | Q1-8                                                |
| 320-011-00 | I.C. LINEAR                    | NJM 4560 | U60-61                                              |
| 320-012-00 | OPAMP NJM4560M                 | NJM4560M | U1 U3-5 U7-31 U33-34 U36-39 U41-59<br>U62-65 U72-77 |
| 323-002-00 | I.C. QUAD COMPARATOR SMD       | LM339    | U2 U6 U66-71                                        |
| 325-086-03 | IC, ANALOG MUX/DEMUX           | 74HC4053 | U32 U35 U40                                         |
| 400-022-00 | CONNECTOR JACK QUAD RCA HORIZ  |          | J25                                                 |
| 400-041-00 | CONNECTOR XLR PC MTG VERT MALE |          | J39-41                                              |
| 400-048-00 | HDR 7P .156X1 RTA              |          | J44                                                 |
| 400-214-00 | JACK 1/4 V PCMNT 1MM WASH      |          | J2-3 J7-8 J10-11 J13-24 J26-33 J35-38<br>J42-43     |
| 400-223-00 | CONNECTOR XLR PC MTG VERT FML  |          | J1 J6 J9 J12                                        |
| 400-349-00 | HDR SKT BOT ENTRY 14P .100X1   |          | J4-5                                                |
| 450-241-00 | PCB, CFX: MAIN                 |          | Z2                                                  |
| 500-037-00 | SWITCH 2PDT PUSH V SNAPIN      | 2P2T     | SW1-46                                              |
| 500-045-00 | SW ROT ENCODER 15.5MM 4BIT     |          | S1                                                  |
| 601-010-00 | FERRITE BEAD, SMT              | Z=73     | L1                                                  |
| 620-042-00 | CBL FLEX STRIP 16C .1X1 4IN    |          | J34                                                 |
| 660-002-00 | JUMPER WIRE 24GA T&R           |          | Z1 Z5-7 Z50 Z901                                    |
| 660-002-00 | JUMPER WIRE 24GA T&R           |          | JP1-76                                              |
| 706-009-00 | SPACER, NYLON, LED .385        |          | Z8                                                  |
| 706-033-01 | STDF SWAGE NO.4 X .542L F      |          | H1-21                                               |
| 706-038-00 | STDF NO.4 X .250L              |          | H22-24                                              |
| 760-107-00 | BTN 2 COLOR 9X5MM              |          | B1-2 B4-8 B10-14 B16-20 B22-25 B27-30<br>B32-46     |
| 760-108-00 | BTN 2 COLOR 9X9MM              |          | B3 B9 B15 B21 B26 B31                               |

## 550-242-00 REV A, Slave 4 board

| PART NO.   | DESCRIPTION                | VALUE        | REFERENCE DESIGNATORS                                                                                                                                        |
|------------|----------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 130-002-02 | POT RTY 50KB 9MM MNO H TN  | 50KB         | R47 R55 R59 R126 R135 R139 R209 R220<br>R224 R285 R294 R298                                                                                                  |
| 130-003-02 | POTRTY 50KG 9MM MN TN PAN  | 50KG         | R32-33 R38-39 R63 R112-113 R118-119<br>R143 R195-196 R201-202 R228 R273-274<br>R279-280 R304                                                                 |
| 130-030-02 | RESISTOR POT 9MM HORIZ     | 5KZY         | R15 R95 R180 R260                                                                                                                                            |
| 130-031-00 | POT SLD 10KD 60MM MONO     | 10KD         | R74 R154 R239 R316                                                                                                                                           |
| 130-064-02 | POT 500KC 12MM DUL WO SLV  | 500KC        | R56 R136 R221 R295                                                                                                                                           |
| 140-066-00 | RES TF SM .1W 5% 510 OHM   | 510 5%       | R35 R37 R40-41 R70-73 R115 R117 R121<br>R132 R150-153 R198 R200 R204 R215<br>R235-238 R276 R278 R282 R291 R312-315                                           |
| 140-073-00 | RES TF SM .1W 5% 1K0 OHM   | 1K0 5%       | R10 R13 R53-54 R60 R62 R85 R88 R133-134<br>R140 R142 R170 R173 R216-217 R225 R227<br>R255 R258 R292-293 R299 R301                                            |
| 140-080-00 | RES TF SM .1W 5% 2K0 OHM   | 2K 5%        | R23 R103 R187 R265                                                                                                                                           |
| 140-084-00 | RESISTOR TF SMT            | 3K0 5%       | R5-6 R9 R12 R80-81 R84 R87 R165-166<br>R169 R172 R250-251 R254 R257                                                                                          |
| 140-087-00 | RESISTOR CF                | 3K9 5%       | R51 R61 R131 R141 R214 R226 R290 R300                                                                                                                        |
| 140-089-00 | RES TF SM .1W 5% 4K7 OHM   | 4K7 5%       | R29 R64-69 R109 R144-149 R182-183<br>R229-234 R305-306 R308-311                                                                                              |
| 140-090-00 | RES TF SM .1W 5% 5K1 OHM   | 5K1 5%       | R20 R34 R36 R42-43 R57-58 R100 R114<br>R116 R120 R122 R137-138 R156 R158 R184<br>R194 R197 R199 R203 R205 R222-223 R241<br>R245 R275 R277 R281 R283 R296-297 |
| 140-094-00 | RES TF SM .1W 5% 7K5 OHM   | 7K5 5%       | R50 R130 R213 R289                                                                                                                                           |
| 140-097-00 | RES TF SM .1W 5% 10K OHM   | 10K 5%       | R44-45 R75 R123-124 R160 R206-207<br>R218-219 R244 R317                                                                                                      |
| 140-098-00 | RES TF SM .1W 5% 11K OHM   | 11K 5%       | R155 R157 R240 R243                                                                                                                                          |
| 140-101-00 | RES TF SM .1W 5% 15K OHM   | 15K 5%       | R159 R161 R242 R246                                                                                                                                          |
| 140-104-00 | RES TF SM .1W 5% 20K OHM   | 20K 5%       | R30 R46 R91 R110 R125 R176 R208 R284                                                                                                                         |
| 140-108-00 | RESISTOR TF SMT            | 27K 5%       | R11 R86 R171 R256                                                                                                                                            |
| 140-111-00 | RES TF SM .1W 5% 36K OHM   | 36K 5%       | R25 R105 R189 R267                                                                                                                                           |
| 140-114-00 | RES TF SM .1W 5% 47K OHM   | 47K 5%       | R48-49 R127-128 R210-211 R286-287                                                                                                                            |
| 140-123-00 | RES TF SM .1W 5% 100K OHM  | 100K 5%      | R3-4 R17 R27 R31 R52 R78-79 R89 R94 R97<br>R107 R111 R129 R164 R174 R179 R191<br>R193 R212 R249 R269 R271 R288                                               |
| 141-051-00 | RES TF SM .25W 5% 120 OHM  | 120 5%       | R28 R108 R192 R270                                                                                                                                           |
| 145-066-00 | RES MF SM .1W 1% 4.75 OHM  | 4.75 1%      | R16 R96 R181 R261                                                                                                                                            |
| 145-339-00 | RESISTOR MF SMT            | 3K01 1%      | R14 R90 R175 R259                                                                                                                                            |
| 145-346-00 | RES MF SM .1W 1% 3K57 OHM  | 3K57 1%      | R19 R93 R99 R178                                                                                                                                             |
| 145-352-00 | RES MF SM .1W 1% 4K12 OHM  | 4K12 1%      | R18 R92 R98 R177                                                                                                                                             |
| 145-389-00 | RES MF SM .1W 1% 10K0 OHM  | 10K0 1%      | R21-22 R24 R26 R101-102 R104 R106<br>R185-186 R188 R190 R263-264 R266 R268                                                                                   |
| 145-418-00 | RES MF SM .1W 1% 20K0 OHM  | 20K0 1%      | R7-8 R82-83 R167-168 R252-253                                                                                                                                |
| 146-373-00 | RES MF SM .25W 1% 6K81 OHM | 6K81 1%      | R1-2 R76-77 R162-163 R247-248                                                                                                                                |
| 200-010-02 | PLY .0018UF 10% 100V TR    | 0.0018 2.00% | C34 C75 C121 C163                                                                                                                                            |
| 200-014-02 | PLY .0033UF 10% 100V TR    | 0.0033 2.50% | C35-36 C76-77 C123-124 C164-165                                                                                                                              |
| 200-025-02 | PLY/BX .56UF 5% 63V TR     | 0.56         | C39 C80 C127 C168                                                                                                                                            |
| 212-001-00 | CER .01UF 10% 50V X7R SM   | 0.01 10%     | C14 C17-18 C20 C24 C29 C31 C54 C57<br>C59 C61 C65 C70 C72 C82 C85 C99<br>C102-103 C105-106 C110 C115-116 C118<br>C122 C130-131 C147 C150 C154 C160           |
| 212-004-00 | CER 220PF 5% 50V NPO SM    | 220PF 5%     | C5 C45 C90 C138                                                                                                                                              |
| 212-005-00 | CER 20PF 5% 50V NPO SM     | 20PF 5%      | C81 C83 C129 C132                                                                                                                                            |

| PART NO.   | DESCRIPTION                   | VALUE     | REFERENCE DESIGNATORS                                                                                                                                                         |
|------------|-------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 212-006-00 | CAPACITOR CERAMIC SMT         | 470PF 5%  | C2 C4 C6 C11 C42 C44 C46 C51 C87 C89<br>C91 C96 C135 C137 C139 C144                                                                                                           |
| 212-009-00 | CER 47PF 5% 50V NPO SM        | 47PF 5%   | C12-13 C52-53 C97-98 C145-146                                                                                                                                                 |
| 212-010-00 | CAPACITOR CERAMIC SMT         | .1UF -400 | C19 C58 C60 C104                                                                                                                                                              |
| 212-018-00 | CER 10PF 5% 50V NPO SM        | 10PF 5%   | C32 C73 C119 C161                                                                                                                                                             |
| 212-019-00 | CAPACITOR CERAMIC SMT         | 150PF 5%  | C10 C15 C21 C23 C50 C55 C62 C64 C95<br>C100 C107 C109 C143 C148 C151 C153                                                                                                     |
| 212-023-00 | CAPACITOR CERAMIC SMT         | 0.001 10% | C9 C49 C94 C142                                                                                                                                                               |
| 220-002-02 | LYT 47UF 20% 25V RAD TR       | 47UF 20%  | C3 C8 C26 C28 C30 C33 C37-38 C40 C43<br>C48 C67 C69 C71 C74 C78-79 C84 C88<br>C93 C112 C114 C117 C120 C125-126<br>C128 C133 C136 C141 C156 C158-159<br>C162 C166-167 C169-170 |
| 220-003-02 | LYT 47UF 20% 50V RAD TR       | 47UF 10%  | C1 C7 C41 C47 C86 C92 C134 C140                                                                                                                                               |
| 220-004-02 | CAPACITOR LYTIC RADIAL T&R    | 470UF 10% | C16 C56 C101 C149                                                                                                                                                             |
| 220-013-02 | LYT .22UF 20% 50V RAD TR      | .22UF 10% | C22 C25 C27 C63 C66 C68 C108 C111<br>C113 C152 C155 C157                                                                                                                      |
| 301-004-00 | DIO PWR DL4002 SM             | DL4002    | D1-4 D6-9 D11-14 D16-19                                                                                                                                                       |
| 304-028-02 | LED YEL W/.425 SPACER TR      | YEL       | D5 D10 D15 D20                                                                                                                                                                |
| 311-002-00 | X-SISTOR PNP SMD              | IMBT4403  | Q1-8                                                                                                                                                                          |
| 320-012-00 | OPAMP NJM4560M                | NJM4560M  | U1 U3-5 U7-16                                                                                                                                                                 |
| 323-002-00 | I.C. QUAD COMPARATOR SMD      | LM339     | U2 U6                                                                                                                                                                         |
| 400-214-00 | JACK 1/4 V PCMNT 1MM WASH     |           | J2-3 J7-8 J10-11 J13-14                                                                                                                                                       |
| 400-223-00 | CONNECTOR XLR PC MTG VERT FML |           | J1 J6 J9 J12                                                                                                                                                                  |
| 400-349-00 | HDR SKT BOT ENTRY 14P .100X1  |           | J4-5 J15-16                                                                                                                                                                   |
| 450-242-00 | PCB, CFX: CHANNEL             |           | Z1                                                                                                                                                                            |
| 500-037-00 | SWITCH 2PDT PUSH V SNAPIN     | 2P2T      | SW1-24                                                                                                                                                                        |
| 660-002-00 | JUMPER WIRE 24GA T&R          |           | JP1-31                                                                                                                                                                        |
| 706-033-01 | STDF SWAGE NO.4 X .542L F     |           | H1-10                                                                                                                                                                         |
| 760-107-00 | BTN 2 COLOR 9X5MM             |           | Z2-17 Z22-25                                                                                                                                                                  |
| 760-108-00 | BTN 2 COLOR 9X9MM             |           | Z18-21                                                                                                                                                                        |

## 550-258-00 REV B, Power Supply

| PART NO.   | DESCRIPTION                                      | VALUE       | REFERENCE DESIGNATORS |
|------------|--------------------------------------------------|-------------|-----------------------|
| 100-028-00 | RESISTOR CF                                      | 130 5%      | R1 R4                 |
| 100-031-00 | RESISTOR CF                                      | 180 5%      | R8                    |
| 100-057-00 | RESISTOR CF                                      | 2K2 5%      | R2 R5                 |
| 100-064-00 | RESISTOR CF                                      | 4K3 5%      | R3 R6                 |
| 110-080-00 | RESISTOR CF                                      | 20K 5%      | R7                    |
| 121-093-00 | RESISTOR MF                                      | 6K8 5%      | R9                    |
| 211-001-00 | CAPACITOR CERAMIC                                | 0.01 -400   | C5 C11 C15            |
| 211-010-00 | CER .01UF +80/-20% 50V AX                        | 0.01 -400   | C16                   |
| 220-002-02 | CAPACITOR LYTIC RADIAL TAPE                      | 47UF 10%    | C14                   |
| 220-007-00 | CAPACITOR LYTIC RADIAL                           | 100UF 10%   | C18                   |
| 220-011-02 | LYT 100UF 20% 25V RAD                            | 100UF 10%   | C6 C13                |
| 220-012-02 | CAPACITOR LYTIC RADIAL TAPE                      | 4.7UF 10%   | C19                   |
| 220-023-00 | CAPACITOR LYTIC RADIAL                           | 6,800UF 10% | C8-9 C12              |
| 220-026-00 | CAPACITOR LYTIC RADIAL                           | 1,000UF 10% | C17                   |
| 220-027-02 | CAPACITOR LYTIC RADIAL TAPE                      | 10UF 10%    | C7 C10                |
| 301-001-00 | DIO PWR 1N4002                                   | 1N4002      | D1-7 D12-21           |
| 301-003-00 | DIODE POWER                                      | 1N5401      | D8-11                 |
| 321-003-00 | I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR LM 7805 |             | U3                    |
| 321-008-00 | I.C. ADJ POS 3 TERM VOLTAGE REGULATOR LM317T     |             | U1 U4                 |
| 321-009-00 | I.C. ADJ NEG 3 TERM VOLTAGE REGULATOR LM337T     |             | U2                    |
| 400-060-00 | FUSE CLIP PC MT 5MM DIA                          | NULL        | Z8-9                  |
| 400-093-00 | HDR 7P .156X1 LOCKING                            |             | J2                    |
| 400-173-00 | TERM .25 QKDS PCMT STABLE                        |             | J3                    |
| 400-348-00 | TERM QDISC .187 MALE PCMT                        |             | J4                    |
| 400-350-00 | HDR 9P .156X1 STR LOCK                           |             | J1                    |
| 450-258-00 | PCB, CFX POWER SUPPLY                            |             | Z18                   |
| 510-002-00 | FUSE .5A SLO BLO 5 X 20MM                        | .5A         | F1                    |

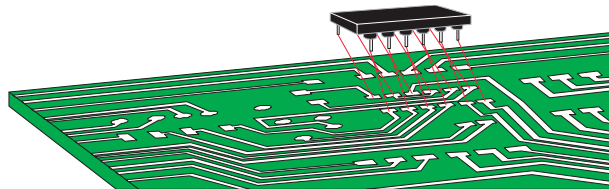


## 550-260-00 REV A, AC Power Input

| PART NO.   | DESCRIPTION                   | VALUE      | REFERENCE DESIGNATORS |
|------------|-------------------------------|------------|-----------------------|
| 040-135-00 | CBL ASSY 18GA 1010 GRN/YEL 9" |            | P10                   |
| 200-023-00 | PLY/BX .001UF 20% 250V Y2     | .001uF 20% | C1-2                  |
| 200-024-00 | PLY/BX .01UF 20% 250V Y2      | .01uF 20%  | C3                    |
| 400-060-00 | FUSE CLIP PCMT 5MM DIA        |            | Z2-3                  |
| 400-132-00 | IEC MALE RTA PCMT             |            | J1                    |
| 400-173-00 | TERM .25 QKDS PCMT STABLE     |            | P2 P9                 |
| 450-260-00 | PCB, CFX AC POWER INPUT       |            | Z1                    |
| 500-052-00 | SW SPST PWR ROCKER RTA BLK    |            | SW1                   |
| 712-020-00 | BRKT ANG 6-32X.037THK STL     |            | BKT1                  |
| 712-021-01 | RIVET, CL END .125"           |            | Z6-7                  |



# MACKIE®



## THE MACKIE FIXER • MACKIE DESIGNS SERVICE NEWS

### EFX Board Modification Instructions:

#### Models affected:

All PPM series powered mixers: 406M, 408M, 408S, 808M and 808S

All CFX series compact effects mixers: CFX•12, CFX•16 and CFX•20

Verify the following symptom on any of these units in for repair:

#### Symptom:

While program material is playing, if the EFX BYPASS switch is depressed and a delay function is selected, as soon as the EFX BYPASS is unselected, the program material that was last recorded in the delay line is played at the outputs. In other words, the EFX BYPASS switch acts like a sample and hold when a delay function is selected.

**Solution:** Cut Pin 1 of the EFX board's ribbon cable.

#### Safety Warning:



Caution! These instructions are for use by qualified personnel only. To avoid electric shock, do not perform any servicing unless you are qualified to do so. Refer all service and modifying to qualified personnel.

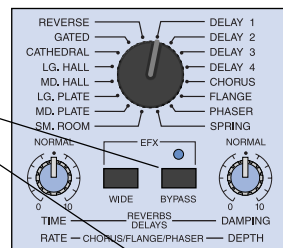
#### Tools Required:

Sharp pair of electrical cutters, Phillips screwdriver, safety glasses.

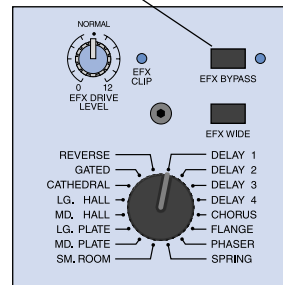
#### Powered Mixer repair

In order to perform this on the Powered Mixer series, the front panel must be removed.

- 1/ Remove all cords- including the power cable and speaker outputs- from the mixer.
- 2/ Place the mixer on a dry, non-marring surface with the heat sink facing down.
- 3/ Remove the six screws securing the front panel of the mixer to the plastic enclosure. These are located three per side on the far left and right edges of the front panel. Keep track of which screws go where.
- 4/ Carefully disconnect the white block connector located on the right side of the front panel of the mixer.
- 5/ Disconnect the green 16-gauge chassis ground wire located in the center of the bottom edge of the mixer's front panel.
- 6/ Remove the mixer front panel from the plastic chassis and place face down on a dry, non-marring surface.
- 7/ Pull the ribbon cable off the EFX board and cut pin 1 as shown in the diagram on page 2. The cut should be flush with the ribbon cable's insulation, so there is no chance of any electrical contact.
- 8/ Replace the ribbon cable onto the EFX board, making sure that all pins are inserted correctly, and there is no connection to pin 1.
- 9/ Reassemble the mixer and fully retest before returning it to your customer.



Front panel EFX controls for CFX mixers

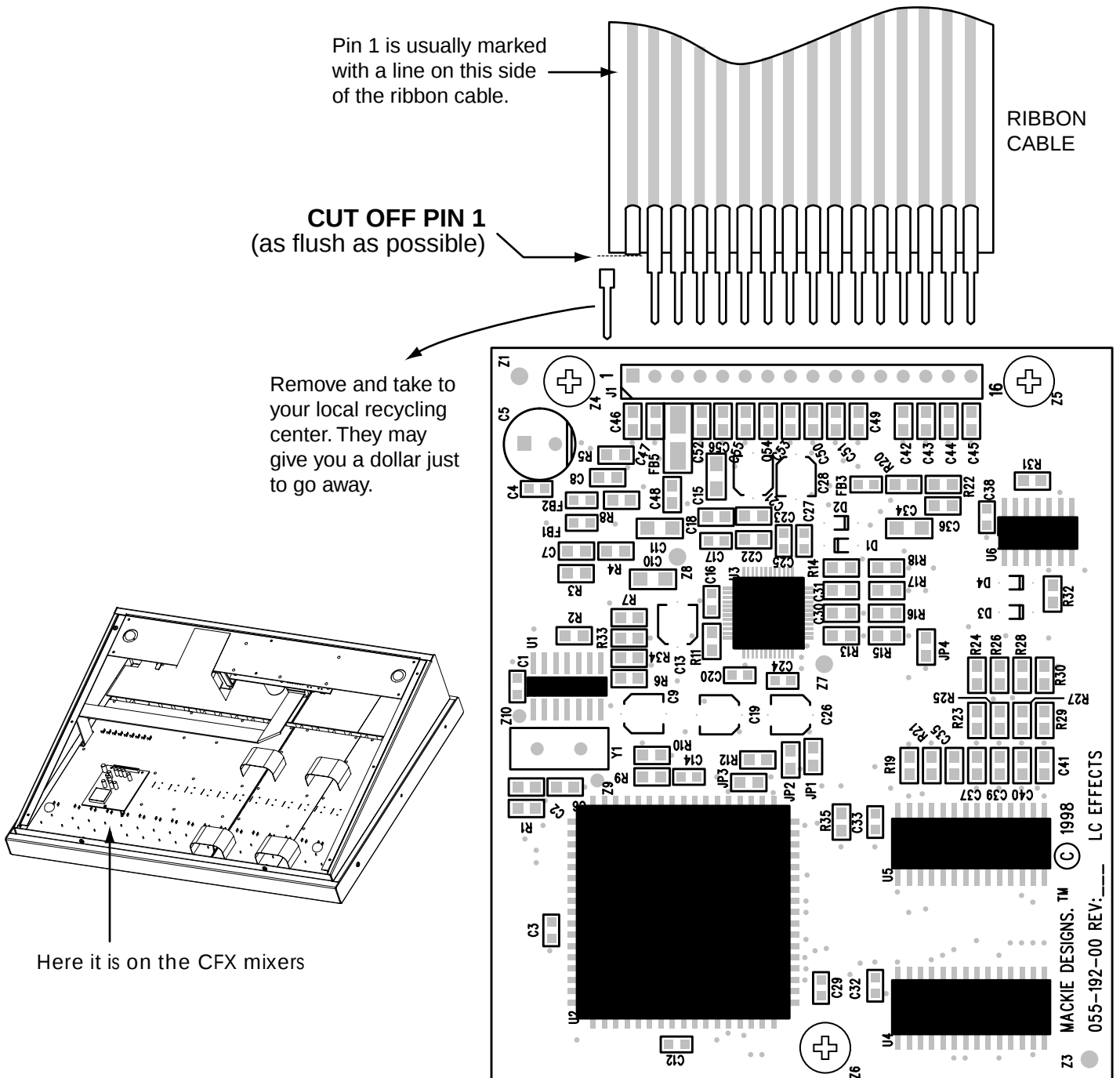


Front panel EFX controls for PPM mixers

## CFX Mixer repair

In order to perform this on the CFX Compact Mixer series, the bottom panel must be removed.

- 1/ Remove all cords- including the power cable from the mixer.
- 2/ Place the mixer upside down on a dry, non-marring and donut-free surface.
- 3/ Remove the screws securing the bottom panel of the mixer.
- 4/ Pull the ribbon cable off the EFX board and carefully cut pin 1 of the cable as shown in the diagram below. The cut should be flush with the ribbon cable's insulation, so there is no chance of any electrical contact.
- 5/ Replace the ribbon cable onto the EFX board, making sure that all pins are inserted correctly, and there is no connection to pin 1.
- 6/ Reassemble the mixer and fully retest before returning it to your customer.



EFX BOARD, BOLTED TO THE REAR FACE OF THE MIXER BOARD.