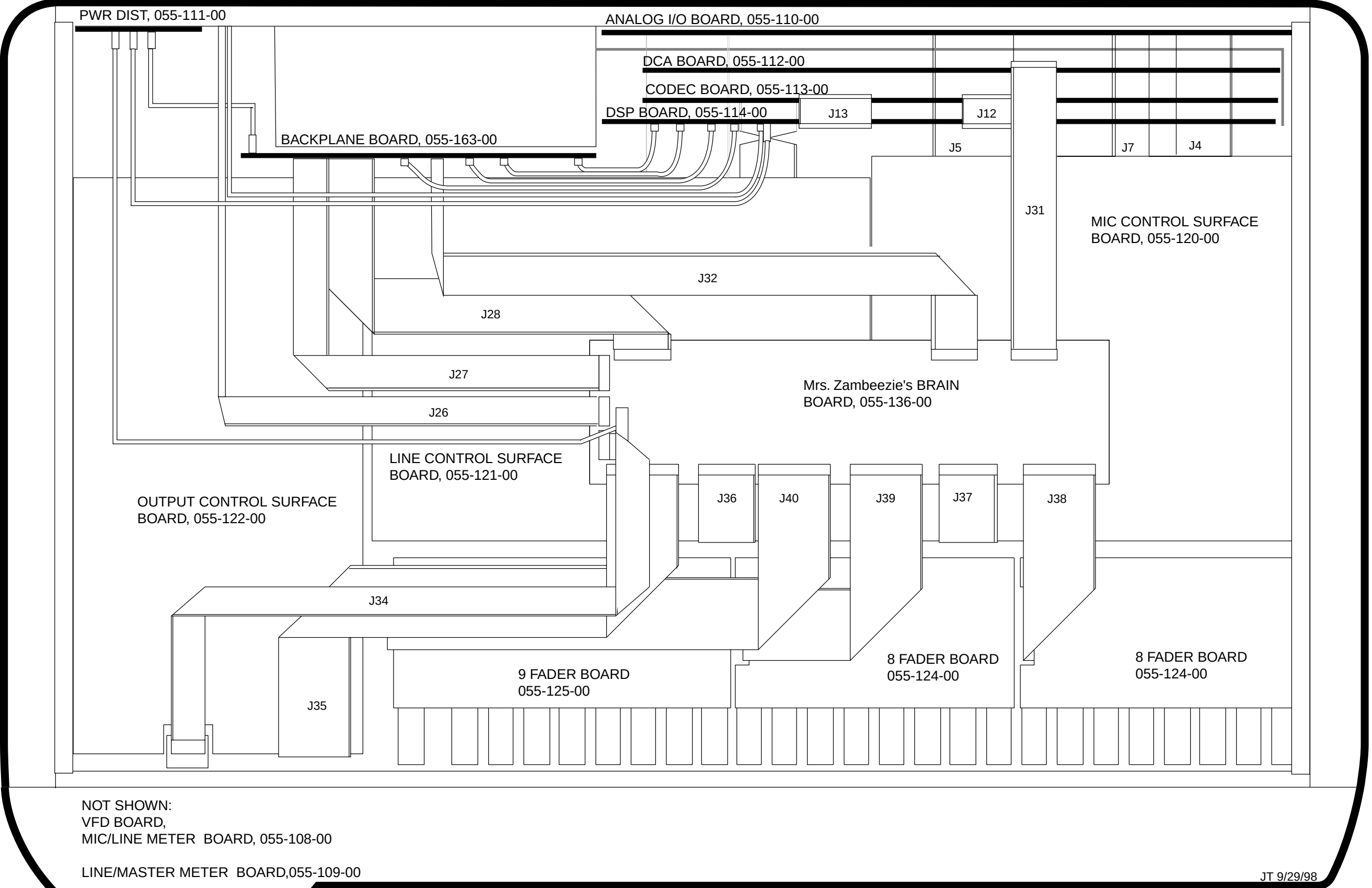
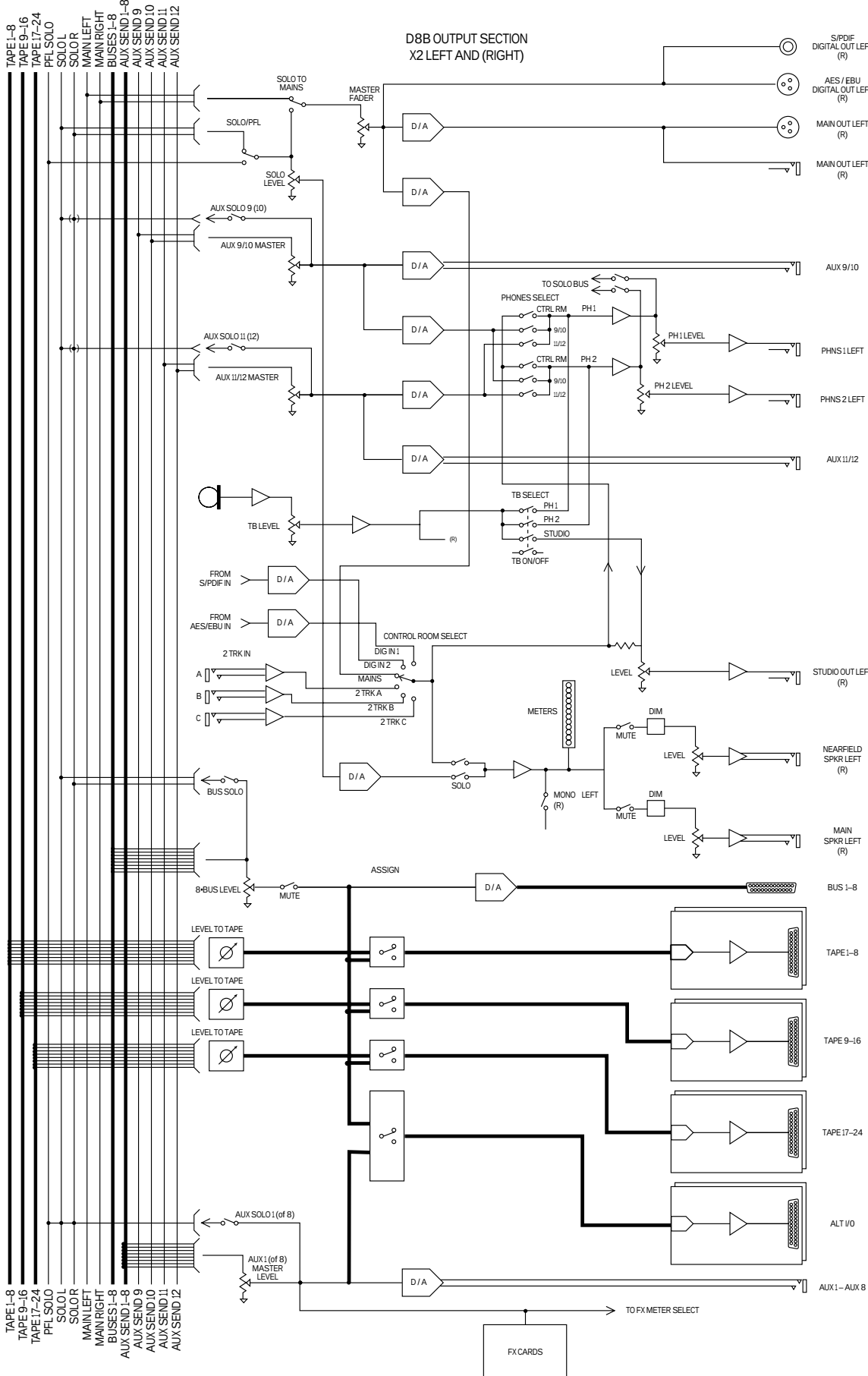
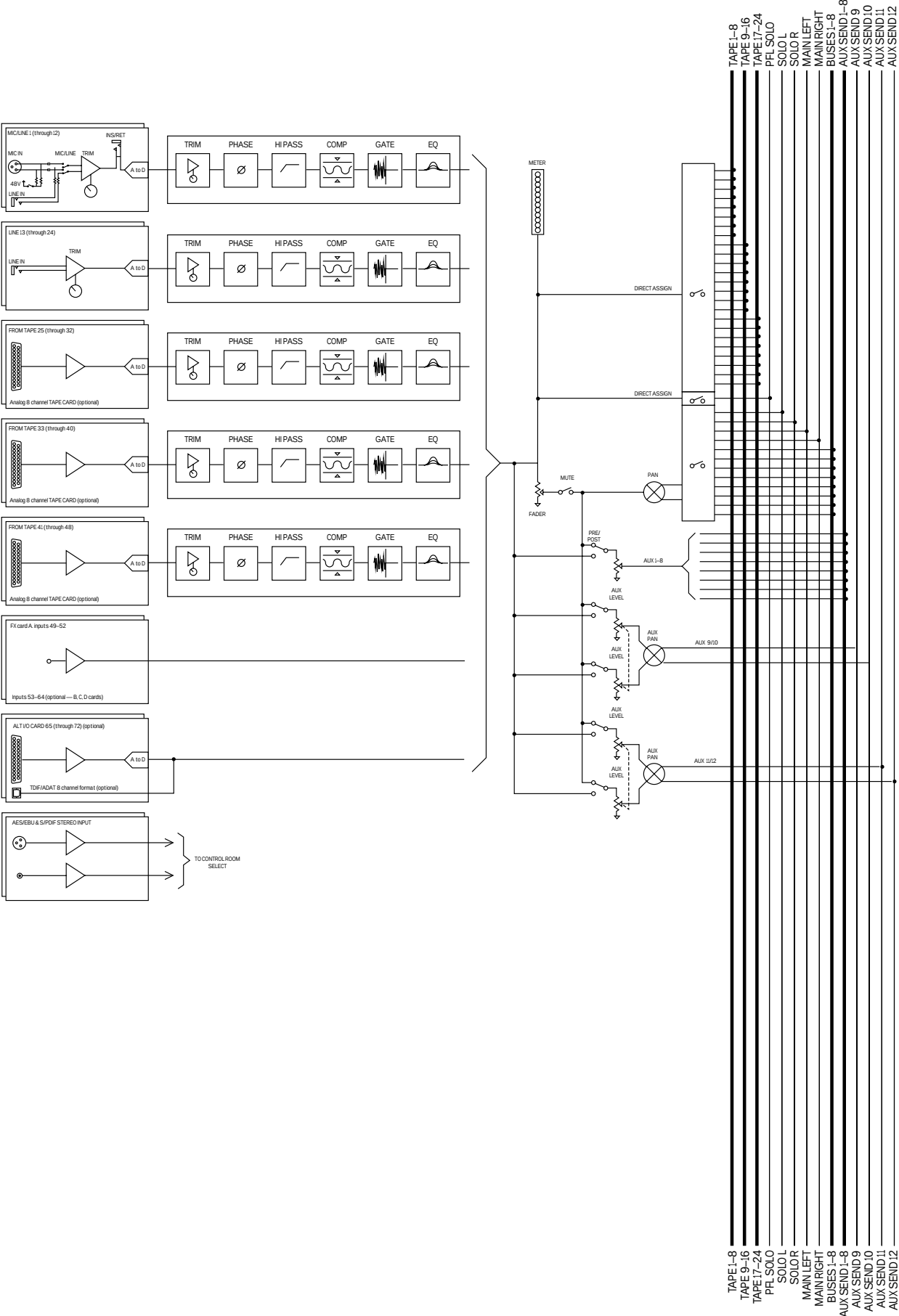
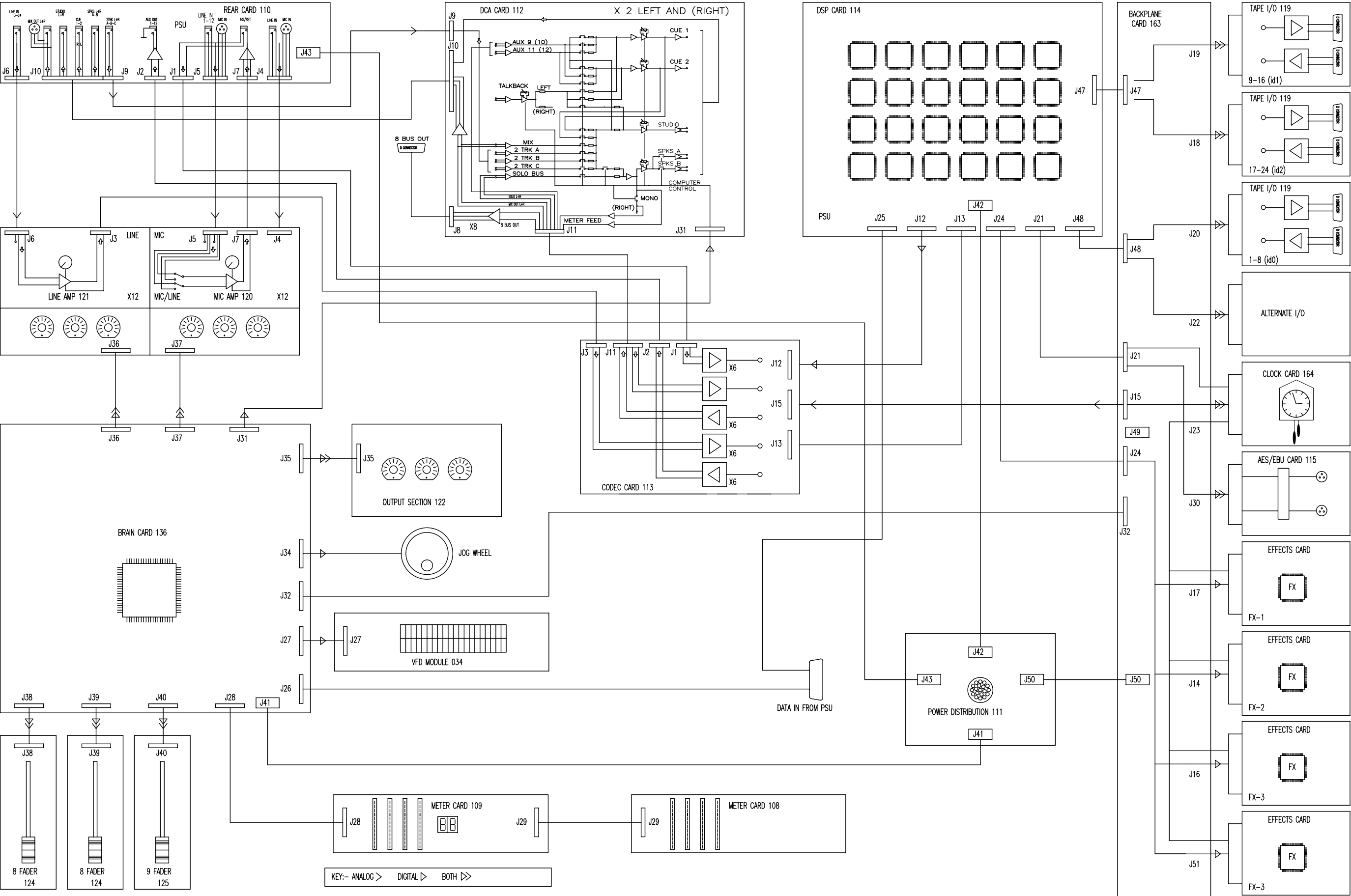
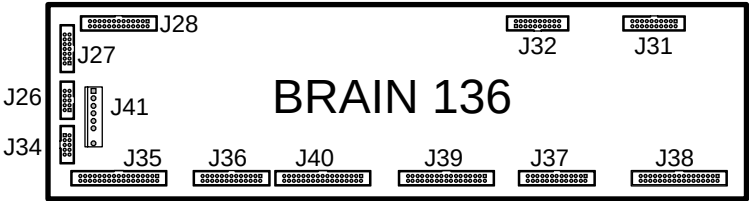
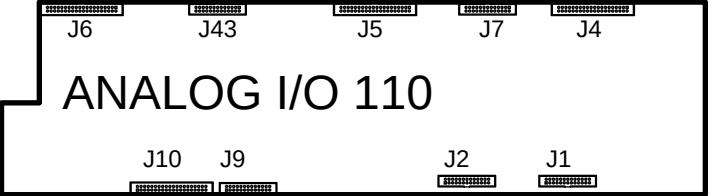
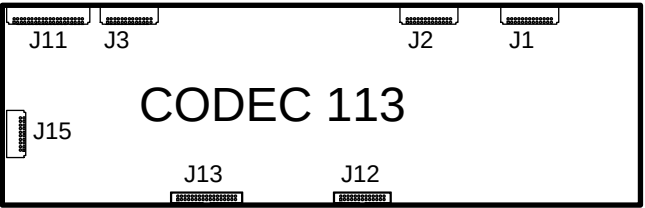
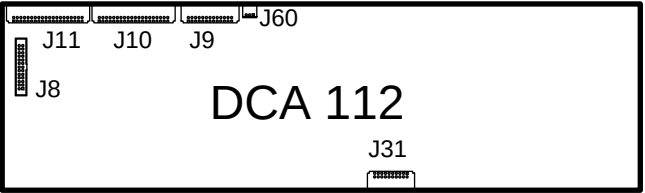
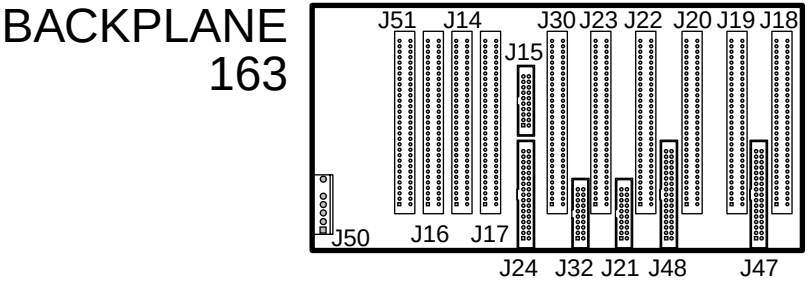
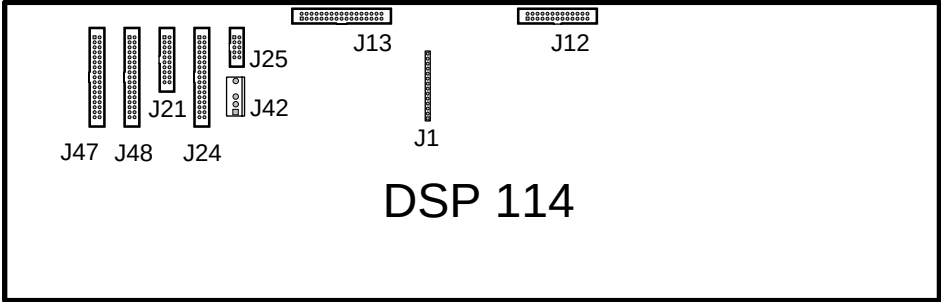
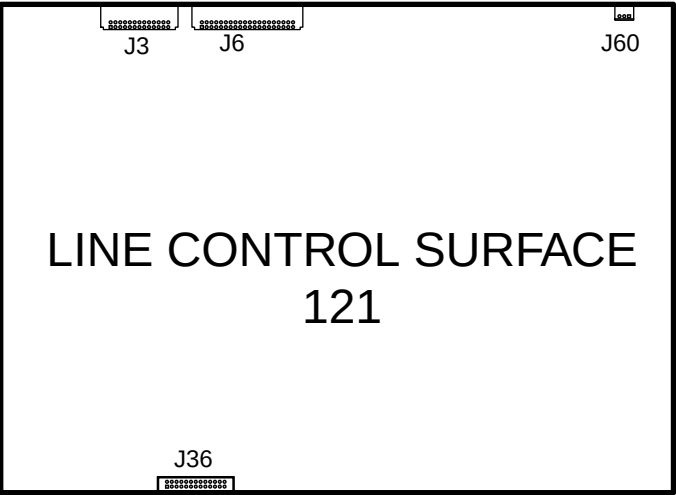
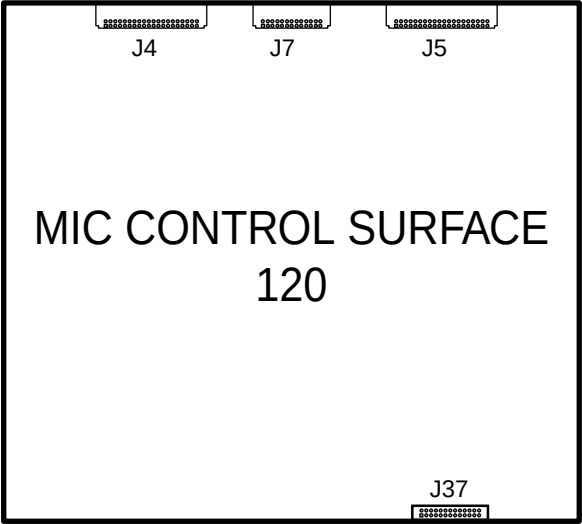
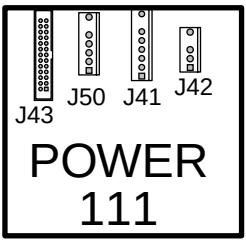
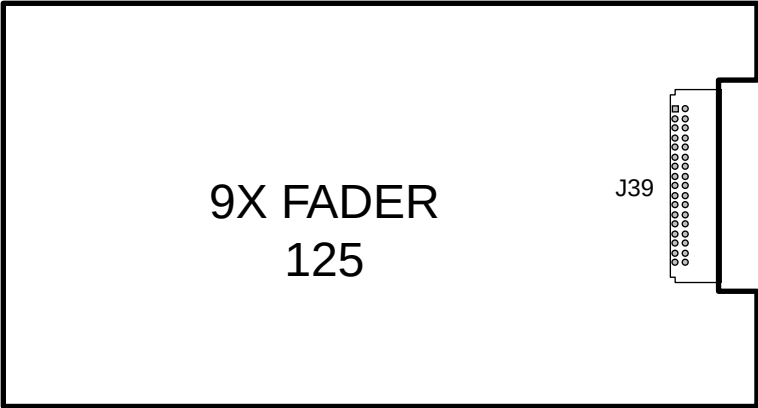
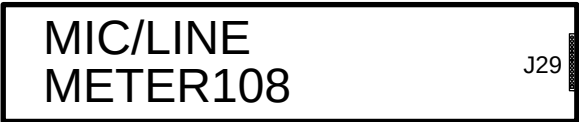
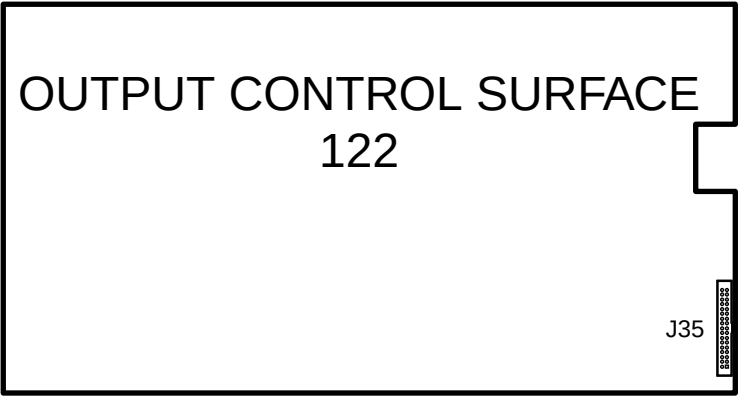


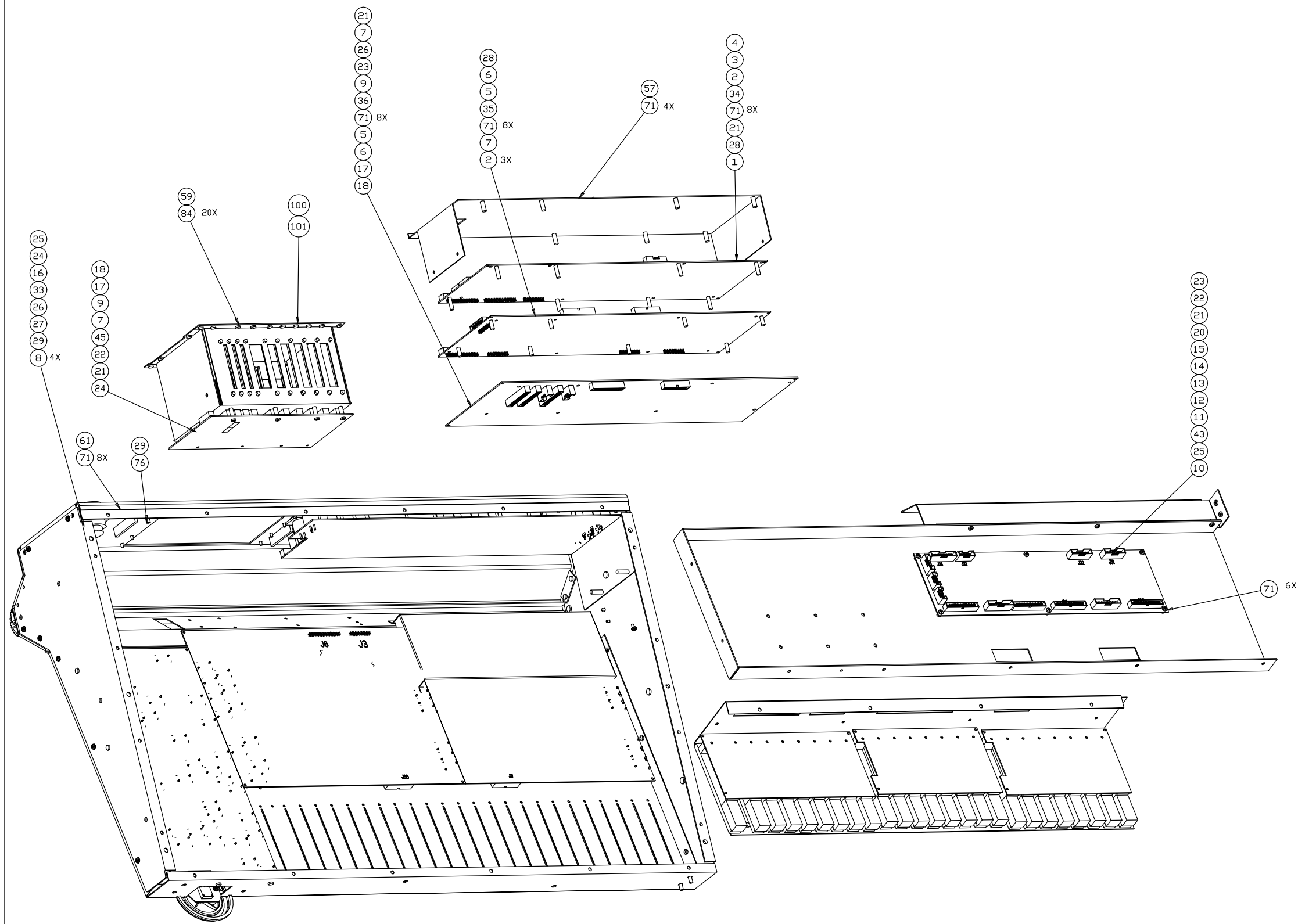




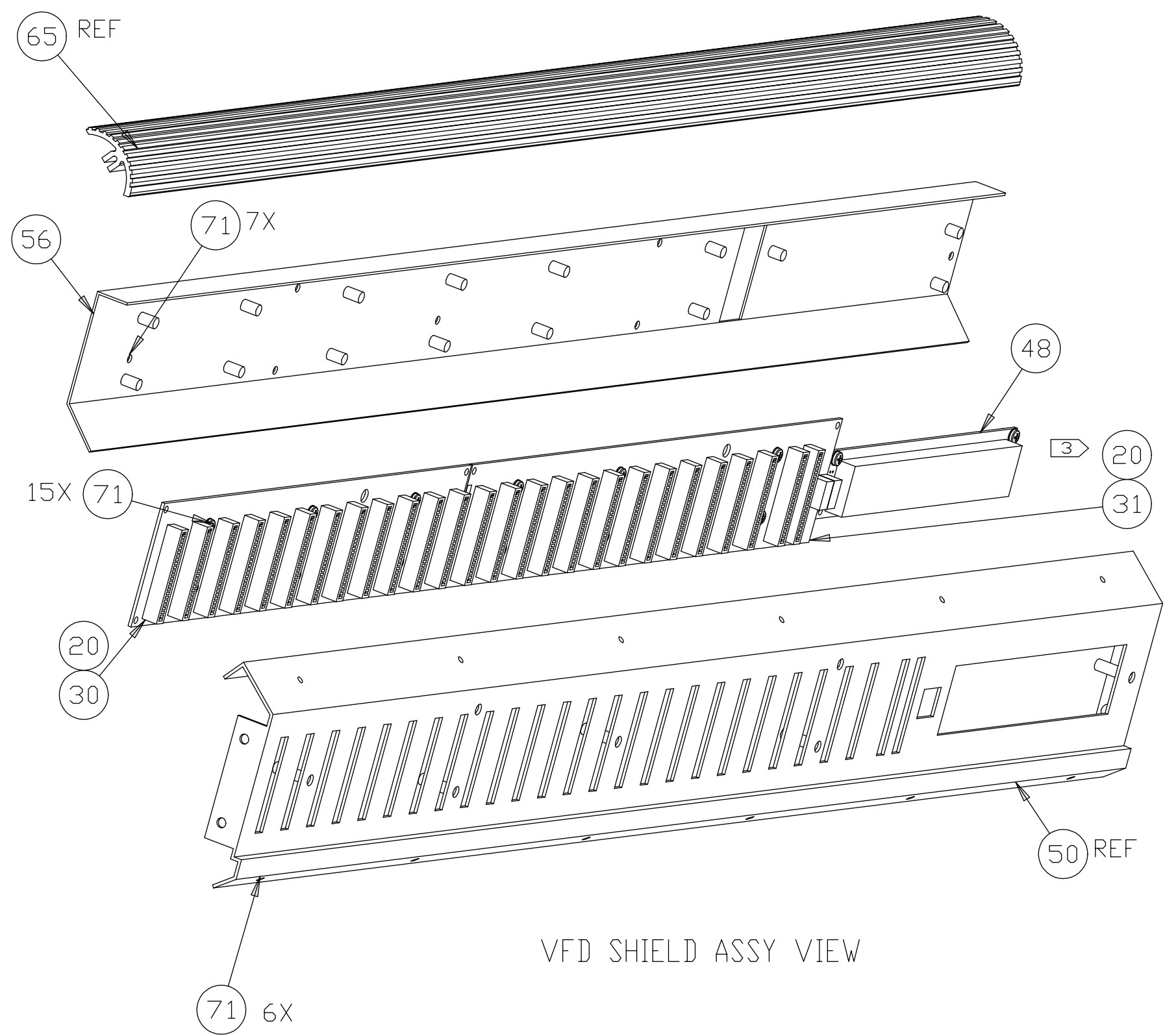




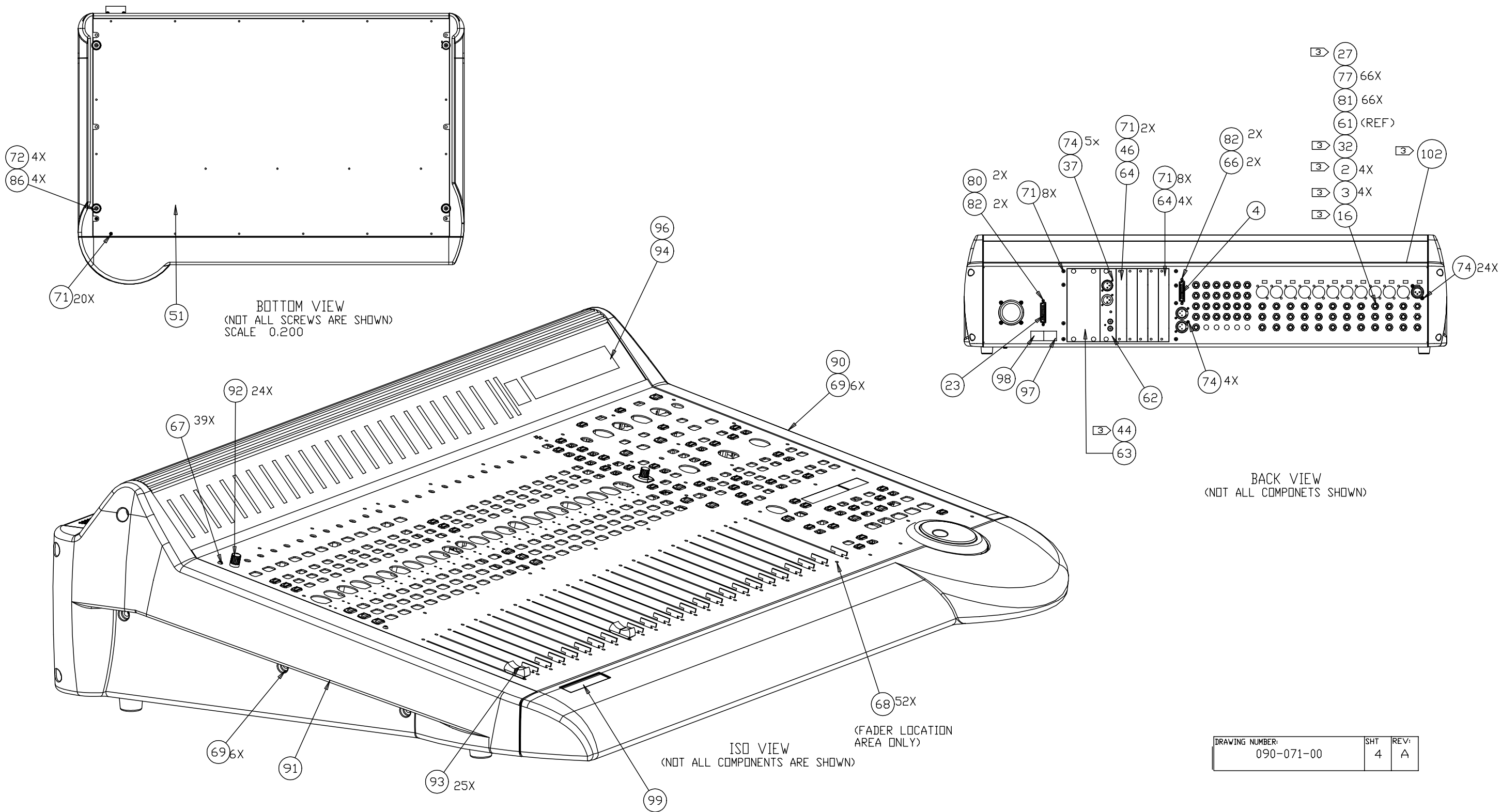
The circled numbers are the item numbers shown in the left column of the Parts list chapter on pages A10 and A11.



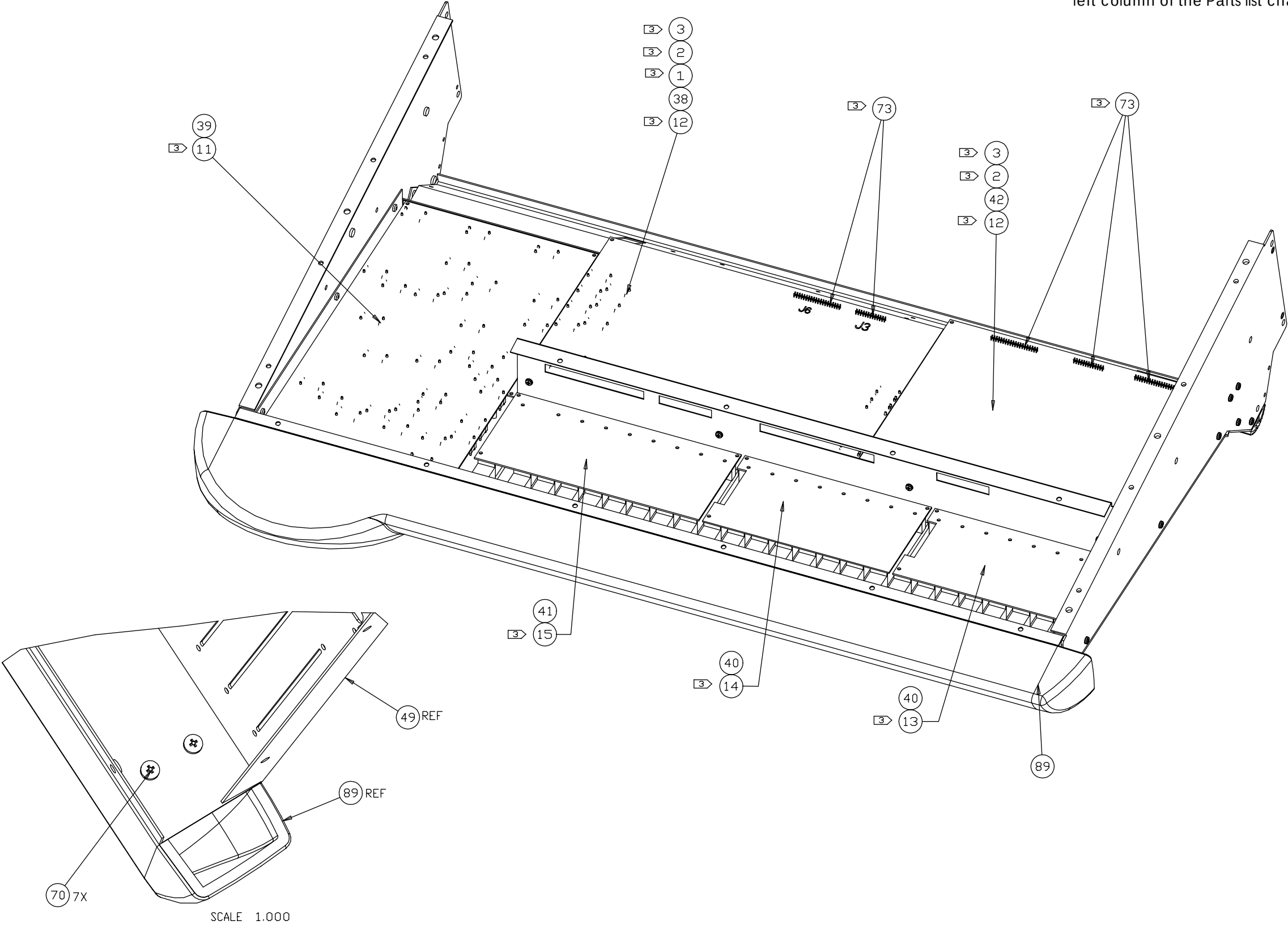
The circled numbers are the item numbers shown in the left column of the Parts list chapter on pages A10 and A11.



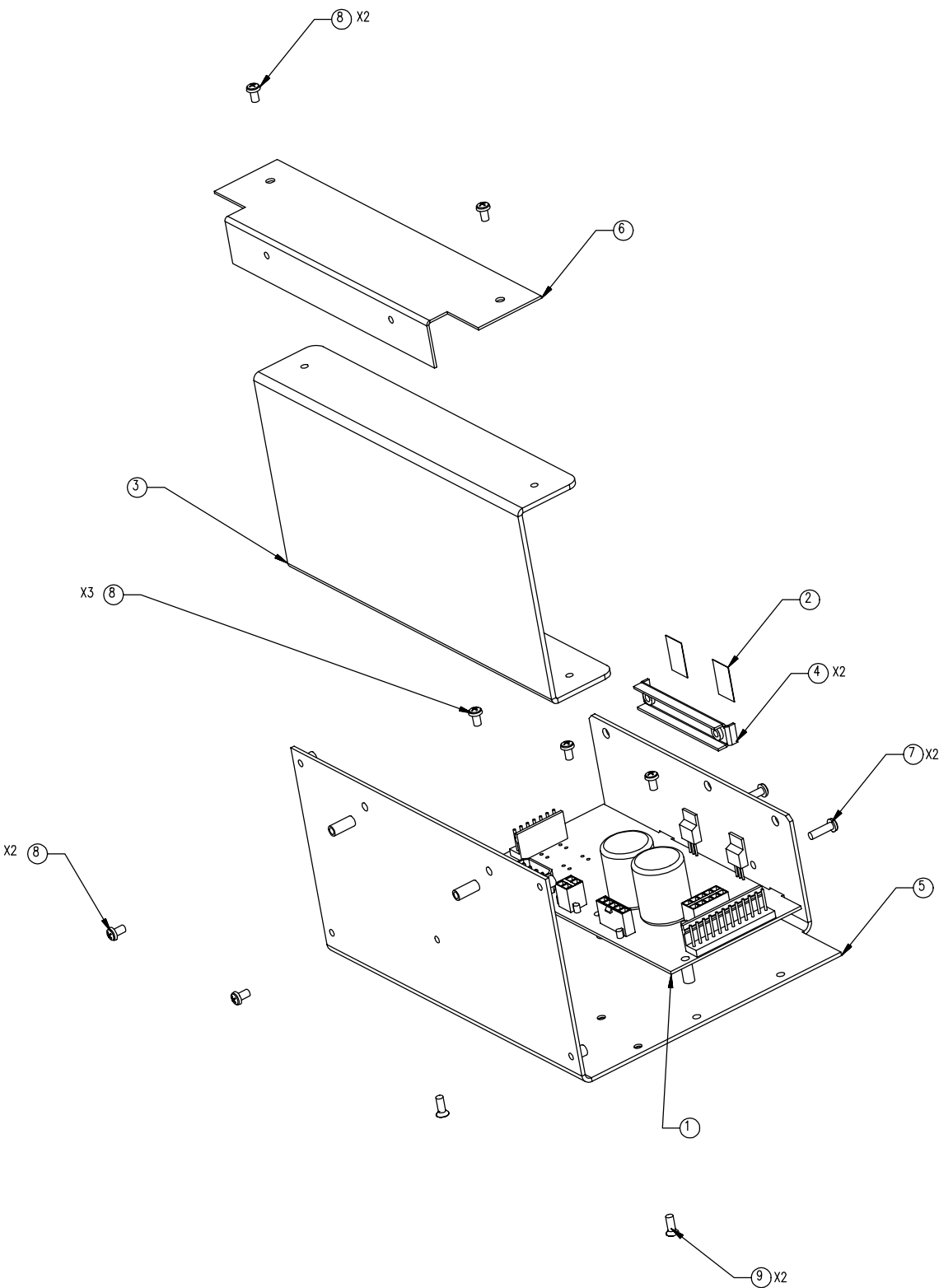
The circled numbers are the item numbers shown in the left column of the Parts list chapter on pages A10 and A11.

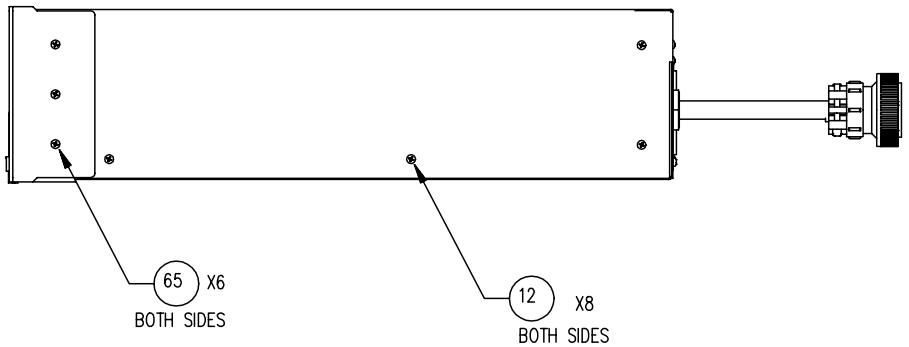
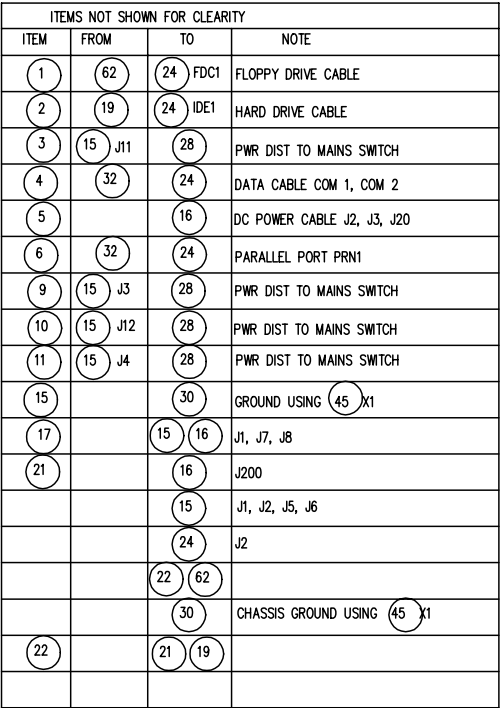


The circled numbers are the item numbers shown in the left column of the Parts list chapter on pages A10 and A11.



The circled numbers are the item numbers shown in the left column of the Parts list chapter on pages A12 and A13.

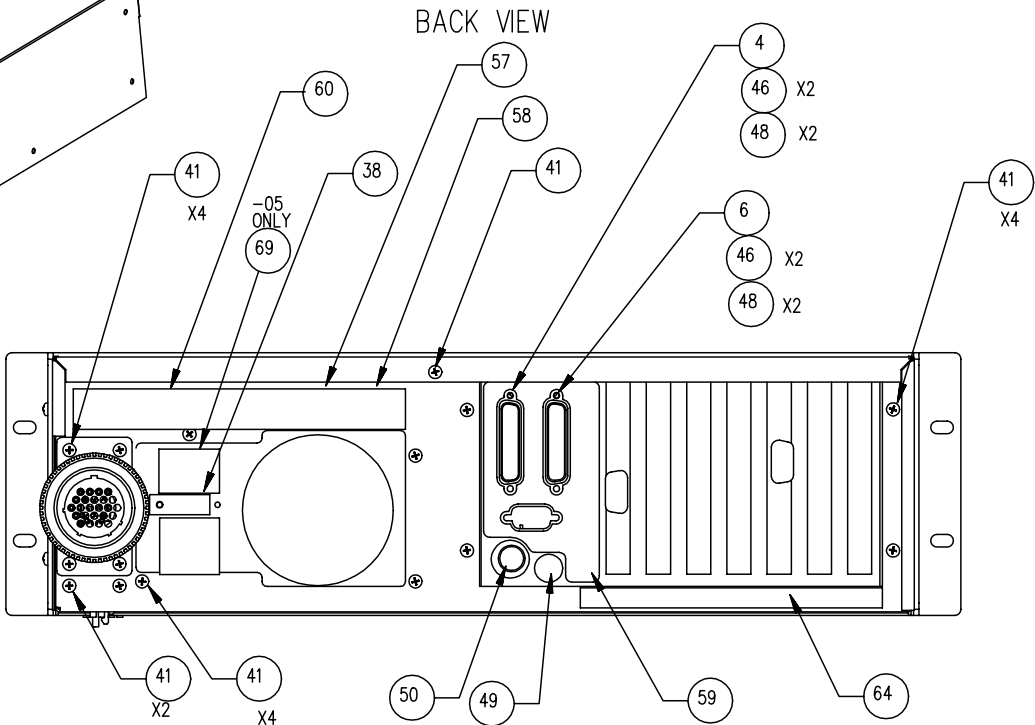
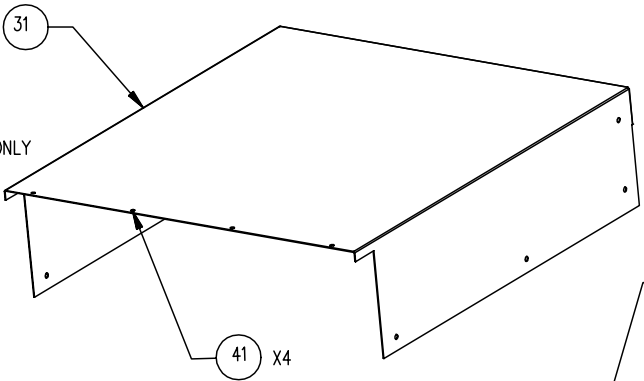




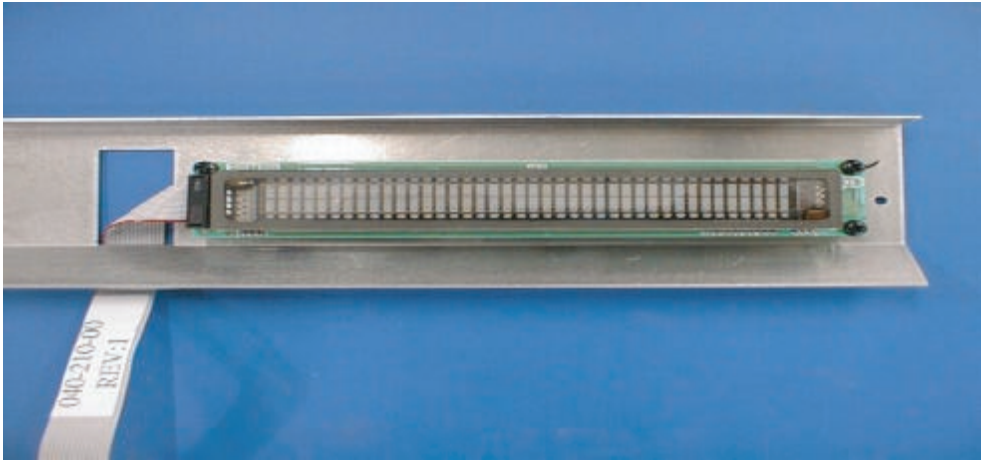
RIGHT SIDE VIEW

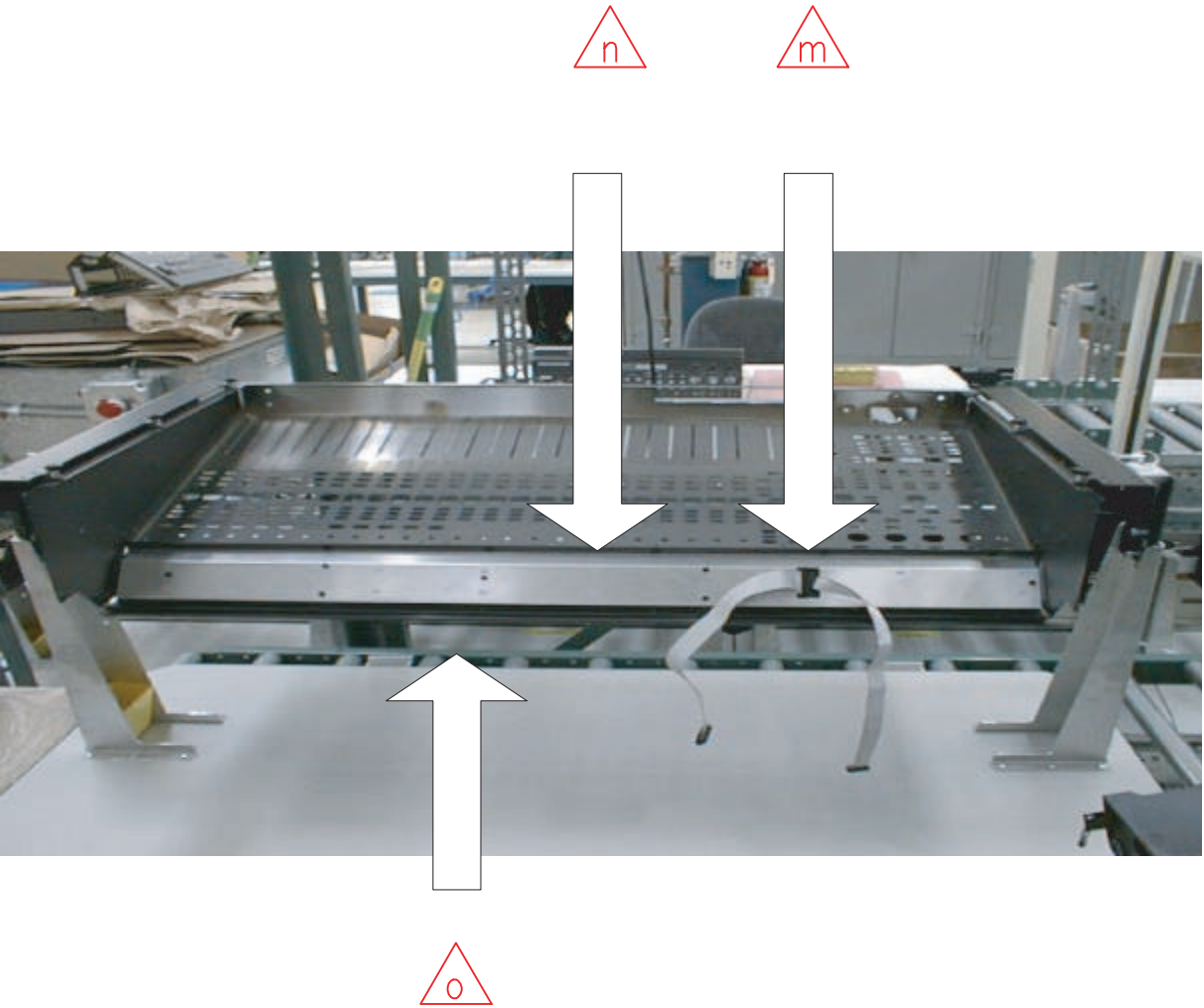
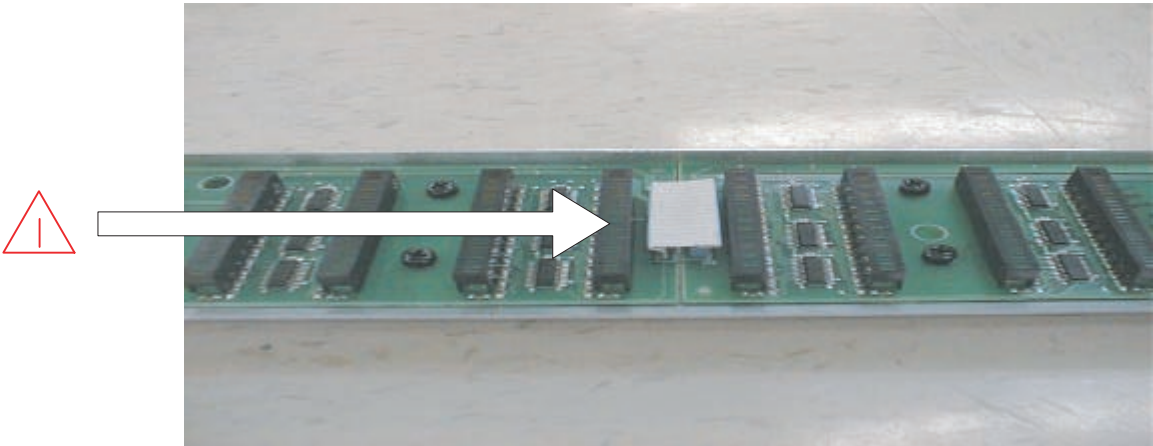
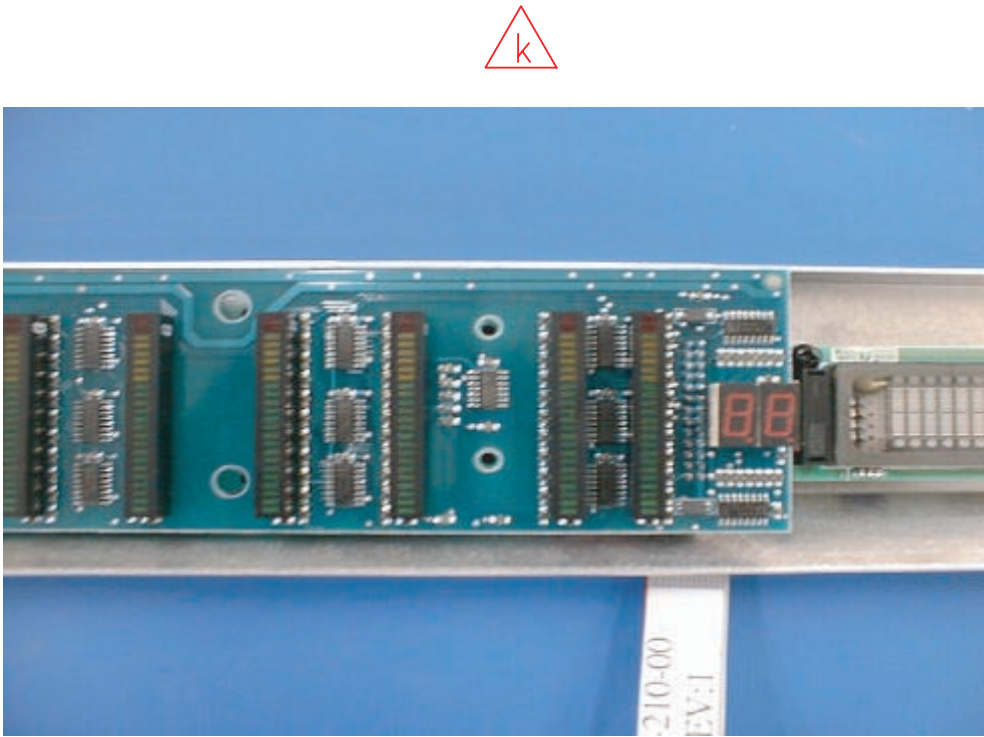
NOTES:

- 1 REFERENCE MANUFACT BOM
- 2 REFERENCE ASSEMBLY AID FOR INSTALLATION INFORMATION
- 3 NOT SHOWN FOR CLARITY



-00	120V UL
-05	230V NON-CE

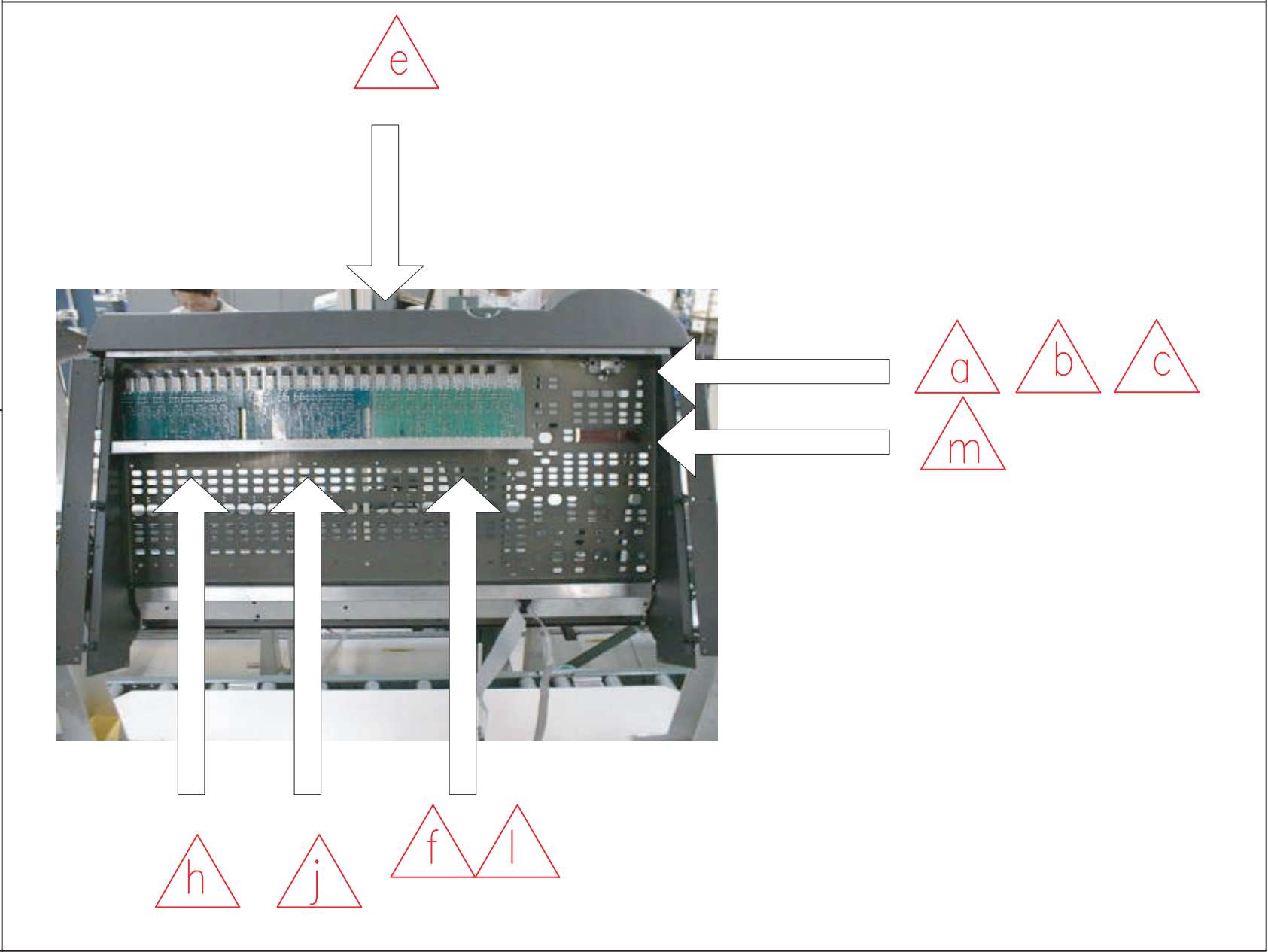
REV #PARTPART NBRCREVQTY					SEQ. TASK	
①	SCREEN TOP PANEL D8	550-260-00	*	1	⚠	Attach the CONNECTOR linking the MIC/LINE and LINE/MASTER METER BOARDS and push it down so it is not higher than meters.
②	FAB SIDE PANEL RIGHT D8	550-264-00	*	1	⚠	Attach Cable J28 ⑫ to the REAR of METER BRIDGE ASSY and leave it hanging
③	FAB SIDE PANEL LEFT D8	550-263-00	*	1	⚠	Attach the METER BRIDGE ASSEMBLY to the TOP PANEL with SCREWS ④(7x)
④	SEMS 6-32x1/4 Php Blkzc	700-028-00	*	38	⚠	Attach METAL GASKET ⑬ to the METER BRIDGE. Make sure gasket edge is flush with metal edge toward inside of unit.
⑤	EXTR PNT MTR BRIDGE RIDGE	551-039-00	*	1		
⑥	PNT FRONT MTR BRIDGE D8	550-261-00	*	1		
⑦	Sm A-AB 6x1/4 Php Blkzc	701-005-00	*	6		
⑧	SA VFD D8	080-096-00	A1	1		
⑨	FAB SHIELD METER - D8	550-279-00	*	1		
⑩	PCB ASSY MIC/LINE METERS	055-108-00	A1	1		
⑪	PCB ASSY LINE/MASTER METER	055-109-00	A1	1		
⑫	RIB 28GA 26C 13.5IN PLZD	040-211-00	*	1		
⑬	GASKET EMI NYL FOAM 32IN	712-051-00	*	1		
SEQ. TASK						
SHELL ASSEMBLY						
a Attach RIGHT SIDE PANEL ② to the HOLDING FIXTURE using FIXTURE SCREWS (3x)						
b Attach LEFT SIDE PANEL ③ to the HOLDING FIXTURE using FIXTURE SCREWS (3x)						
c Place the TOP PANEL ① in between the two SIDE PANELS on the HOLDING FIXTURE						
d Attach RIGHT SIDE PANEL to TOP PANEL using screw ④(3x) from the outside.						
e Attach LEFT SIDE PANEL to TOP PANEL using screw ④ (3x) from the outside.						
f Attach the FRONT METER BRIDGE ⑥ to the TOP PANEL and SIDE PANELS with SCREWS ④(10x)						
g Attach the CROWN ⑤ to the FNT MTR BRIDGE using SCREWS ⑦(6x)						
THE THICK EDGE MUST BE POSITIONED TOWARD THE FRONT OF THE UNIT!						
VFD SUB ASSEMBLY						
⚠ Feed Cable J27 from the VFD ASSEMBLY ⑧ through the hole in the METER SHIELD ⑨						
⚠ Attach the VFD ASSY to the METER SHIELD on the FAR RIGHT SIDE with SCREWS ④(3x)						
j Attach the MIC/LINE METER BOARD ⑩ to the METER SHIELD on the FAR LEFT with the RED LEDs on TOP and using SCREWS ④ (6x)						
⚠ Attach the LINE/MASTER METER BOARD ⑪ to the METER SHIELD in the MIDDLE with the RED LEDs on TOP using SCREWS ④ (6x). MAKE SURE THAT THE CONNECTOR ON THE BACK IS PUSHED THROUGH THE PUNCH OUT IN THE SHIELD!						
					⚠ ⚠ 	



REV #	PART	PART NBR	CREV	QTY
①	TRIM RING – D8	760–070–00	*	1
②	FAB PLATE MOUNT JOG – D8	550–283–00	*	1
③	PCB ASSY JOG WHEEL D8	055–191–00	A1	1
④	JOG WHEEL – D8	760–071–00	A1	1
⑤	ARMREST – D8	760–077–00	*	1
⑥	MCH 10–32x3/8 PHP BLKZC	700–019–00	*	7
⑦	PCB ASSY FADER X 8 – D8	055–124–00	A1	2
⑧	FAB STIFFENER – D8	550–278–00	*	1
⑨	MCH 4–40x3/16 BTNSK BLKOX	700–011–01	*	52
⑩	PCB ASSY FADER X 9 – D8	055–125–00	A1	1
⑪	LENS DISPLAY – D8	780–041–00	A1	1
⑫	NUT CAP 1/2 DIA OD STLZC	705–021–00	*	3
⑬	SEMS 6–32x1/4 PHP BLKZC	700–028–00	*	3
⑭	WASH FLAT M9 (W/ENCODER)	710–027–00	*	1
⑮	NUT HEX M9 (W/ENCODER)	705–020–00	*	1
⑯	RIB 28GA 34C 11.5IN PLZD	040–199–00	*	1
⑰	RIB 28GA 34C 8.25IN PLZD	040–198–00	*	1
⑱	RIB 28GA 34C 18IN PLZD	040–200–00	*	1

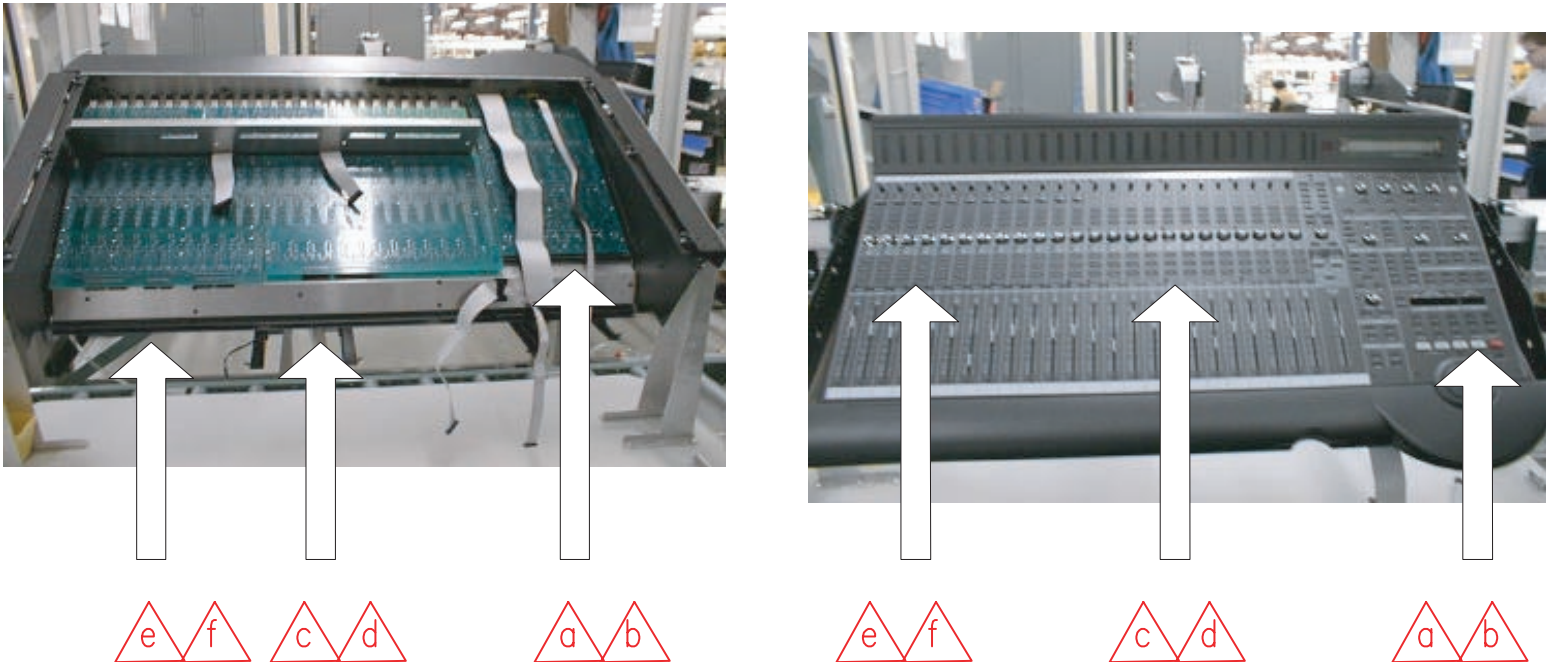
SEQ. TASK
JOG WHEEL ASSEMBLY
a Attach the JOG WHEEL RING ① to the TOP PANEL from the UNDER SIDE using NUTS ⑫ (3x) TIGHTEN BY HAND – CHECK ALIGNMENT ON TOP PANEL MAKE SURE RING RESTS FLAT AGAINST THE TOP PANEL!
b Attach the JOG WHEEL MOUNTING PLATE ② to the UNDER SIDE of the TOP PANEL with SCREWS ⑬ (3x)
c Attach the JOG WHEEL BOARD ③ to the JOG WHEEL MOUNTING PLATE with WASHER ⑭ (1x) and NUT ⑮ (1x) CONNECTOR SHOULD FACE THE INSIDE OF THE UNIT. TIGHTEN BY HAND – BE VERY CAREFUL NOT TO CROSS THREAD THE NUT.
d Push the JOG WHEEL ④ into the JOG WHEEL RING MAKE SURE IT SPINS SMOOTHLY & EVENLY
e Attach the ARMREST ⑤ to the TOP PANEL using SCREWS ⑥ (7x) MAKE SURE THAT THE ARMREST POSITIONS OVER THE EDGE OF JOG WHEEL RING
FADER ASSEMBLY
f Attach the STIFFENER ⑧ to the TOP PANEL on the FAR RIGHT SIDE using SCREWS ⑨ (2x)
g Attach Cable J38 ⑰ to the 8 CHAN FADER BOARD ⑦ and leave hanging

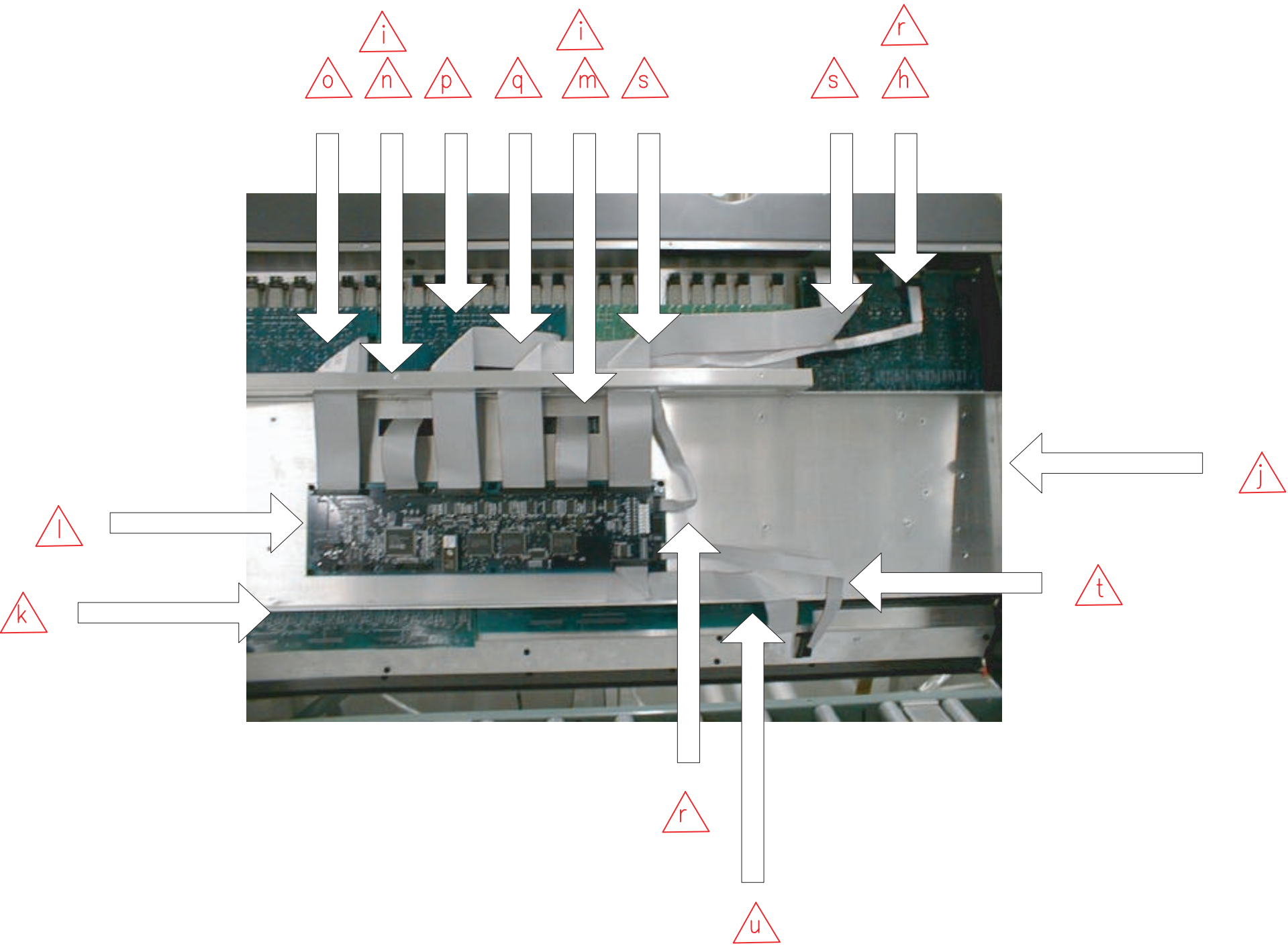
SEQ. TASK
h Attach 8 CHANNEL FADER BOARD to the left side of the TOP PANEL with screws ⑨ (16x). INSERT WITH MOTORS TOWARD FRONT OF MIXER. CHECK STIFFENEER ALIGNMENT BEFORE TIGHTENING.
i Attach Cable J39 ⑯ to the second 8 CHAN FADER BOARD ⑦ and leave hanging
j Attach 8 CH FADER BOARD ⑦ to middle of TOP PANEL with SCREWS ⑨ (16x) .
k Attach Cable J40 ⑱ to the 9 CHAN FADER BOARD ⑩ and leave hanging
l Attach the 9 CHANNEL FADER BOARD ⑩ to the TOP PANEL with SCREWS ⑨ (18x)
m Attach the WINDOW LENS ⑪ to the BACK SIDE of the TOP PANEL.





AFTER FADER BOARD INSTALLATION

					SEQ. TASK
REV #	PART	PART NBR	CREV	QTY	
①	RIB 28GA 10C 23IN PLZD	040-195-00	*	1	△ _n Attach Cable J37 to CONTROL BRAIN BOARD POS. J37
②	RIB 28GA 34C 21IN PLZD	040-196-00	*	1	△ _o Connect Cable J38 from THE END 8 CHAN FADER BOARD POS.J39 to CONTROL BRAIN BOARD POS. J38. ROUTE THROUGH THE STIFFENER
③	RIB 28GA 26C 6IN PLZD	040-197-00	*	2	△ _p Connect Cable J39 from the MIDDLE 8 CHAN FADER BOARD to CONTROL BRAIN BOARD POS. J39 FOLD, THEN ROUTE THROUGH THE STIFFENER
④	PCB ASSY MIC/CTL SURF	055-120-01	A1	1	△ _q Connect Cable J40 from 9 CHAN FADER BOARD to CONTROL BRAIN BOARD POS. J40 ROUTE THROUGH THE THIRD HOLE FROM THE RIGHT ON THE STIFFENER
⑤	PCB ASSY LINE/CTL SURF D8	055-121-01	A1	1	△ _r Attach Cable J34 from the JOG WHEEL BOARD to CONTROL BRAIN BOARD POS. J34 ROUTE THROUGH THE SECOND SLOT FROM THE RIGHT ON THE STIFFENER
⑥	PCB ASSY OUT/CTL SURF - D8	055-122-01	A1	1	△ _s Attach Cable J35 from the OUT/CTL SURFACE BOARD POS. J35 to CONTROL BRAIN BOARD POS. J35 ROUTE THROUGH THE SECOND SLOT FROM THE RIGHT ON THE STIFFENER WITH J34
⑦	PSB ASSY CNTRL BRAIN - D8	055-136-00 -01	A1	1	△ _t Attach Cable J27 from the VFD BOARD to CONTROL BRAIN BOARD POS. J27 MUST ROUTE OVER THE SUB CHASSIS BEFORE IT FOLDS AND THEN LAY TO THE LEFT.
⑧	FAB SUB CHASSIS D8	550-273-00	*	1	△ _u Attach Cable J28 from the METER BRIDGE ASSY TO CONTROL BRAIN BOARD POS. J28. BEND IT SO THAT IT FOLLOWS J27
⑨	MCH 4-40x1/4 BTNSK BLK0X	700-011-00	*	39	
⑩	SEMS 6-32x1/4 PHP BLKZC	700-028-00	*	12	
⑪	BUMPON ROUND BLK	750-001-00	*	1	
SEQ. TASK					
CONTROL SURFACE ASSEMBLY					
△ _a Attach Cable J35 ② to the OUT/CTL SURFACE BOARD ⑥ POS. J35 THE RIBBON CABLE MUST BE ATTACHED BEFORE PLACING IT IN THE TOP PANEL!					
△ _b Attach the OUT/CTL SURFACE BOARD to the TOP PANEL with SCREWS ⑨ (15x)					
△ _c Attach Cable J36 ③ to the LIN/CTL SURFACE BOARD ⑤ POS. J36 THE RIBBON CABLE MUST BE ATTACHED BEFORE PLACING IT IN THE TOP PANEL!					
△ _d Attach the LIN/CTL SURFACE BOARD to the TOP PANEL with SCREWS ⑨ (12x)					
△ _e Attach Cable J37 ③ to the MIC/CTL SURFACE BOARD ④ POS. J37 THE RIBBON CABLE MUST BE ATTACHED BEFORE PLACING IT IN THE TOP PANEL					
△ _f Attach the MIC/CTL SURFACE BOARD to the TOP PANEL with SCREWS ⑨ (12x)					
△ _g Fold Cable J35 from the OUT/CTL BOARD ⑥ and position it so that it is out of the way					
△ _h Connect Cable J34 ① to the JOG WHEEL and fold it so that the SUB CHASSIS can be placed in the unit					
SUB CHASSIS ASSEMBLY					
△ _i Feed RIBS J36 & J37 of the CONTROL SURFACE BOARDS through holes in the SUB CHASSIS					
△ _j Attach the SUB CHASSIS ⑧ to the STIFFENER & SIDE PANEL with SCREWS ⑩ (6x) TIGHTEN DOWN THE JOG WHEEL SIDE FIRST. THE SCREWS MUST GO THROUGH THE STIFFENER					
△ _k Place one BUMPON ⑪ on the UNDER SIDE of the LEFT CORNER of the SUB CHASSIS					
△ _l Attach the CONTROL BRAIN BOARD ⑦ to the SUB CHASSIS with SCREWS ⑩ (6x) J41 OF THE BRAIN BOARD MUST POINT AWAY FROM THE JOG WHEEL!					
△ _m Attach Cable J36 to CONTROL BRAIN BOARD POS. J36					
					



REV #	PART	PART NBR	CREV	QTY
①	PCB ASSY DCA – D8	055–112–00 –01	C1	1
②	FAB SHIELD DSP – D8	550–280–00	*	1
③	SEMS 6–32x1/4 PHP BLKZC	700–028–00	*	24
④	RIB 28GA 20C 11.5IN PLZD	040–147–00	*	1
⑤	PCB ASSY CODEC – D8	055–113–00 –01	B1	1
⑥	PCB ASSY DSP – D8	080–095–00	B1	1
⑦	RIB 28GA 20C 8.5IN PLZD	040–212–00	*	1
⑧	RIB 28GA 40C 1IN PLZD	040–277–00	*	1
⑨	RIB 28GA 34C 3IN PLZD	040–146–00	*	1
⑩	RIB 28GA 26C 2.5IN PLZD	040–145–00	*	1
⑪	1/2” COPPER TAPE	720–012–00	*	A/R

- SEQ. TASK
- a

Mount the DCA BOARD ① to the DSP SHIELD ② with SCREWS ③ (8x)
MOUNT WITH COMPONENT SIDE DOWN! BOARD WILL BE AT THE BOTTOM OF A STACK OF BOARDS.
MOUNT WITH THE SHIELD ENDTABS FACING UP!
- b

Attach Cable J15 ④ to CODEC BOARD ⑤ POS. J15 and leave it hanging
- c

Mount the CODEC BOARD with SCREWS ③ (8x). IT WILL BE SANDWICHED BETWEEN 2 BOARDS
MOUNT WITH COMPONENT SIDE DOWN
- d

Attach the DSP BOARD ⑥ to TOP OF CODEC BOARD with SCREWS ③ (8x)
MOUNT WITH COMPONENTS FACING UP
- e

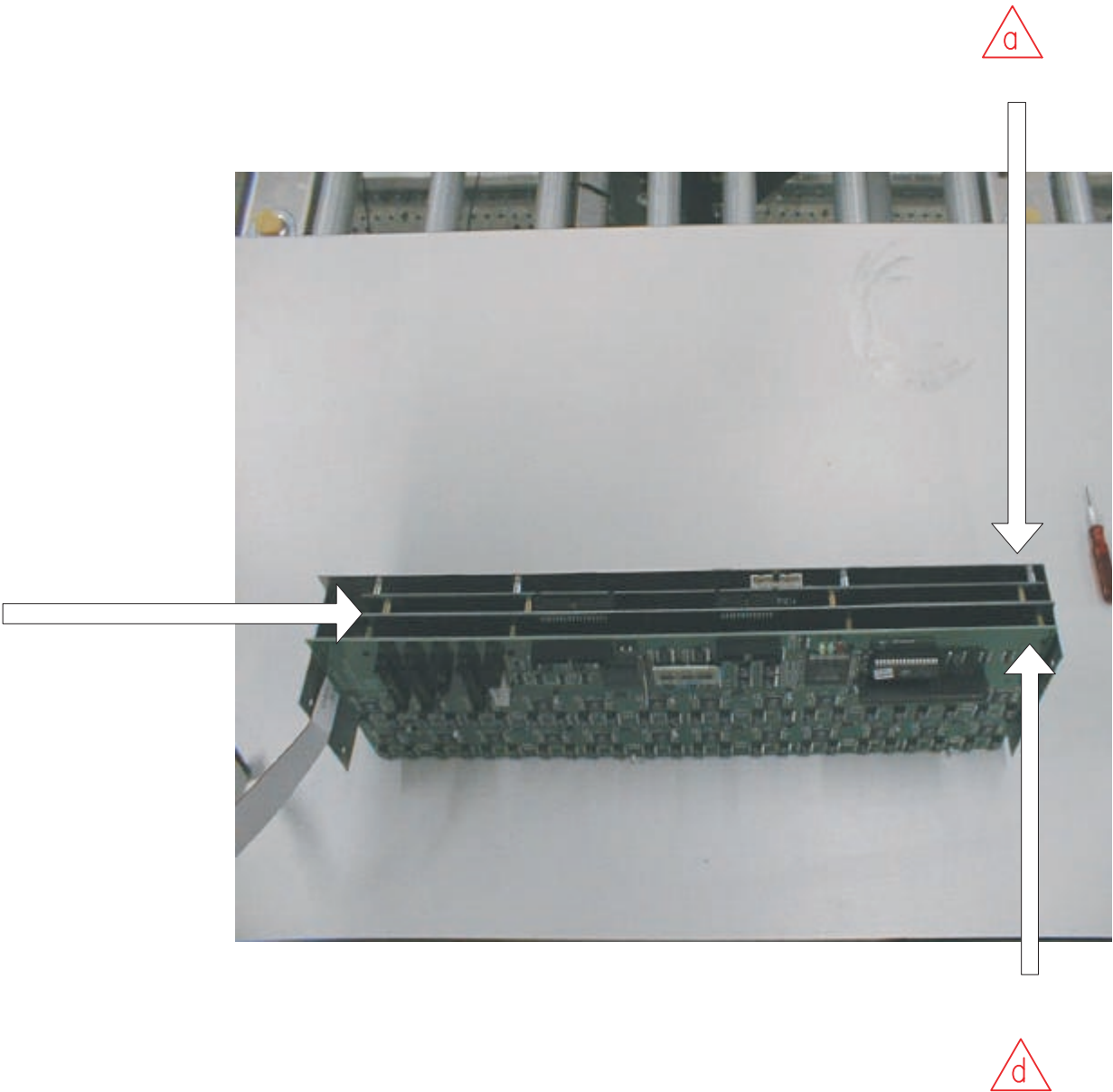
Connect Cable J12 ⑩ from DSP BOARD POS. J12 to CODEC BOARD POS. J12
- f

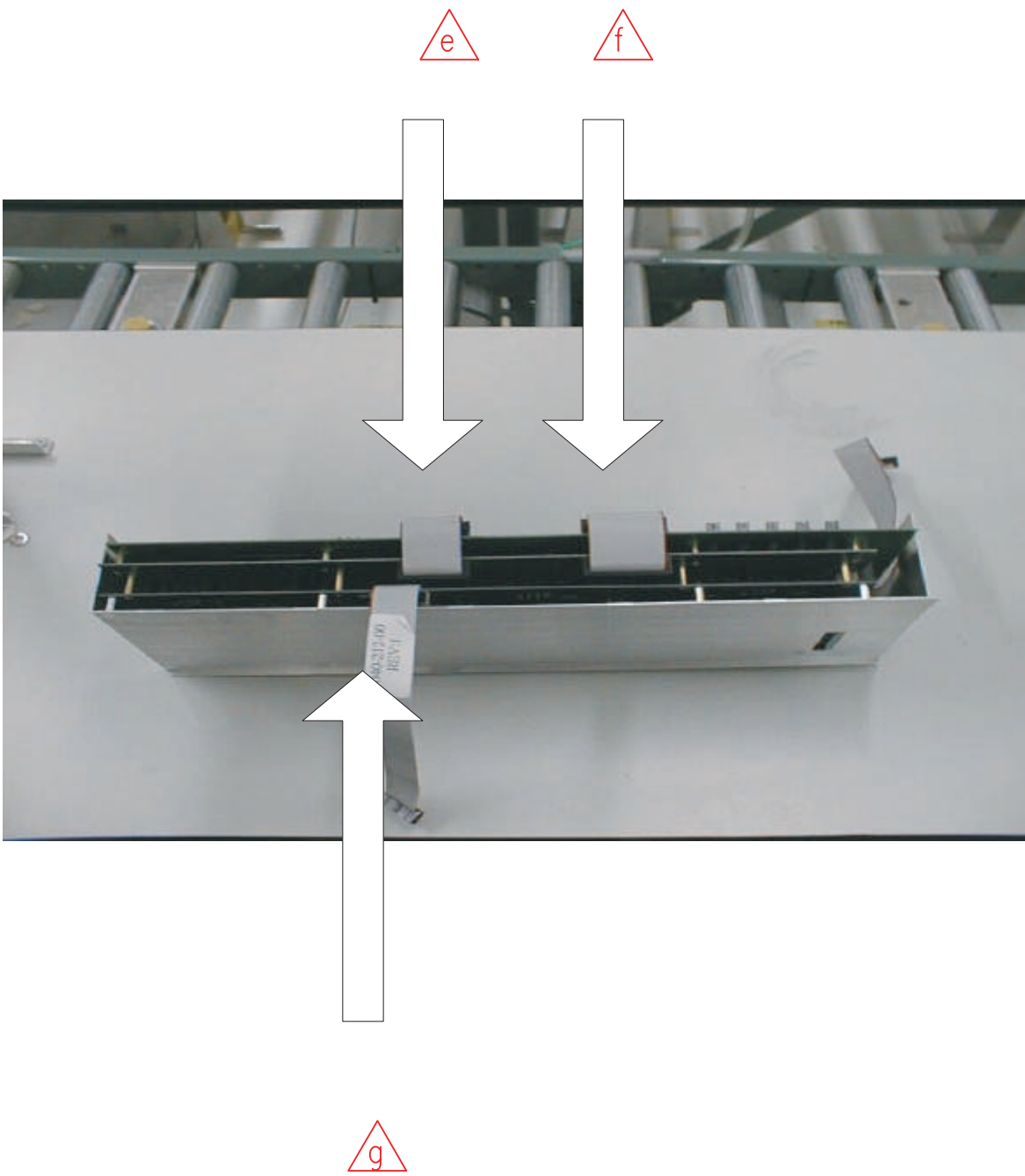
Connect Cable J13 ⑨ from DSP BOARD POS. J13 to CODEC BOARD POS. J13
- g

Connect Cable J31 ⑦ to DCA BOARD POS. J31 and leave it hanging
- h

Connect Cable J11 ⑧ from DCA BOARD POS. J11 to CODEC BOARD POS. J11
- i

Attach COPPER TAPE ⑪ from Copper Patch on CODEC BOARD to TOP of DSP BOARD





REV #	PART	PART NBR	CREV	QTY
①	SCREEN REAR PANEL D8	550-303-00	*	1
②	RIB 28GA 25C 4.5IN DSUB	040-143-00	*	1
③	STDF 4-40x.25 JACKSCREW	706-017-00	*	2
④	WASHER SPLTLCK NO 4	710-008-00	*	4
⑤	PCB ASSY ANA I/O JACKFLD	055-110-00 -01	B1	1
⑥	RIB 28GA 26C 8IN PLZD	040-141-00	*	4
⑦	RIB 28GA 40C 8IN PLZD	040-142-00	*	4
⑧	RIB 28GA 20C 22 28IN DSUB	040-252-00	*	1
⑨	WASHER (SPLD WITH JACK)	710-002-00	*	66
⑩	NUT (SPLD W/JACK)	705-003-00	*	66
⑪	MCH 4-24X3/8 PHP BLK HILO	700-055-00	*	28
⑫	FAB CARD CAGE	550-285-00	*	1
⑬	SEMS 6-32x1/4 PHP BLKZC	700-028-00	*	16
⑭	CARD GUIDE 4.0L SNAP-IN	740-017-00	*	20
⑮	PCB ASSY EFFECTS BACKPLN	055-163-00 -01	C1	1
⑯	RIB 28GA 26C 20.5IN PLZD	040-202-00	*	1
⑰	STDF 4-40\M2.6F JACKSCREW	706-065-00	*	2

- SEQ. TASK
- REAR PANEL ASSEMBLY
- a

 Attach Cable J8② to the REAR PANEL① with SCREW⑰(2x) and WASHERS④(2x)
- b

 Attach Cable J25 & J26⑧ to the RIGHT END of the REAR PANEL with SCREWS③(2x) and WASHERS④(2x) then cover with PLUG⑱(1x)
- c

 Sub assemble the REAR PANEL BOARD⑤ with Cables J1,J2,J7,J9⑥(4x)
- d

 Sub assemble the REAR PANEL BOARD with Cables J4,J5,J6,J10⑦(4x).
- e

 Attach Cable J43⑯ to REAR PANEL BOARD POS. J43 and leave it hanging.
- f

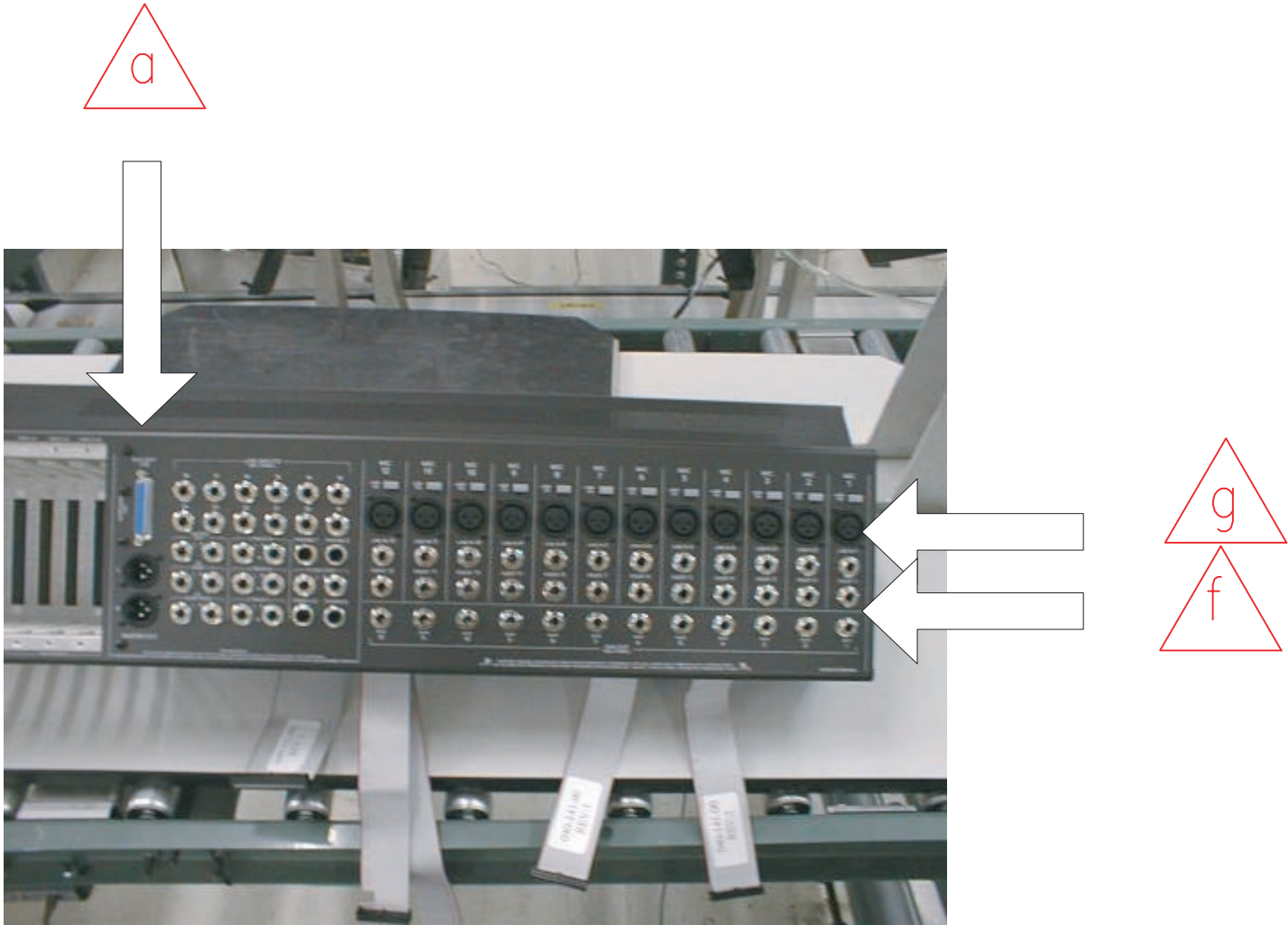
 Attach assembled REAR PANEL BOARD to the REAR PANEL, install WASHERS⑨ and tighten with NUTS⑩. THE NUTS ON THE PLASTIC JACKS MUST BE TIGHTENED BY HAND
- g

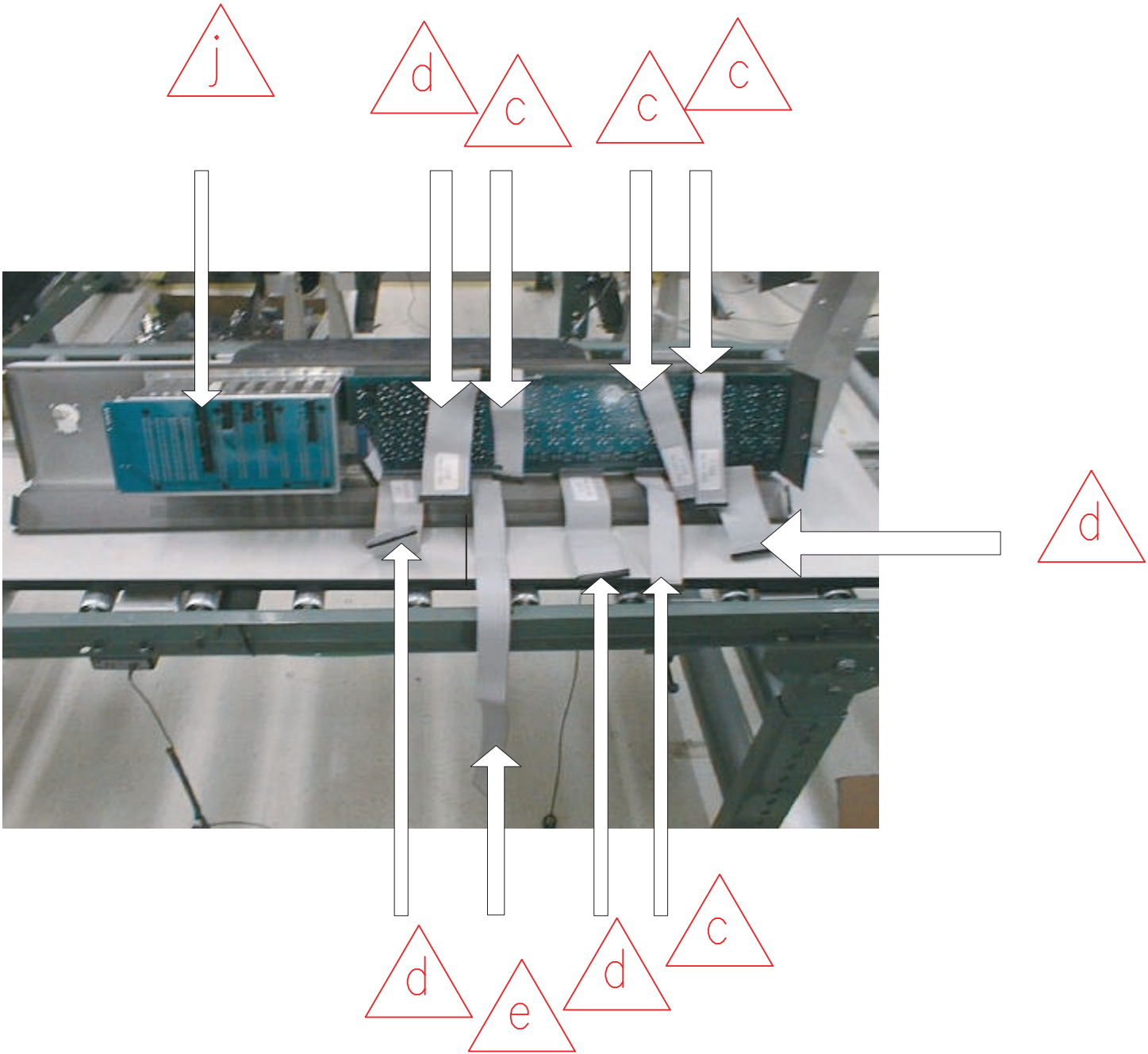
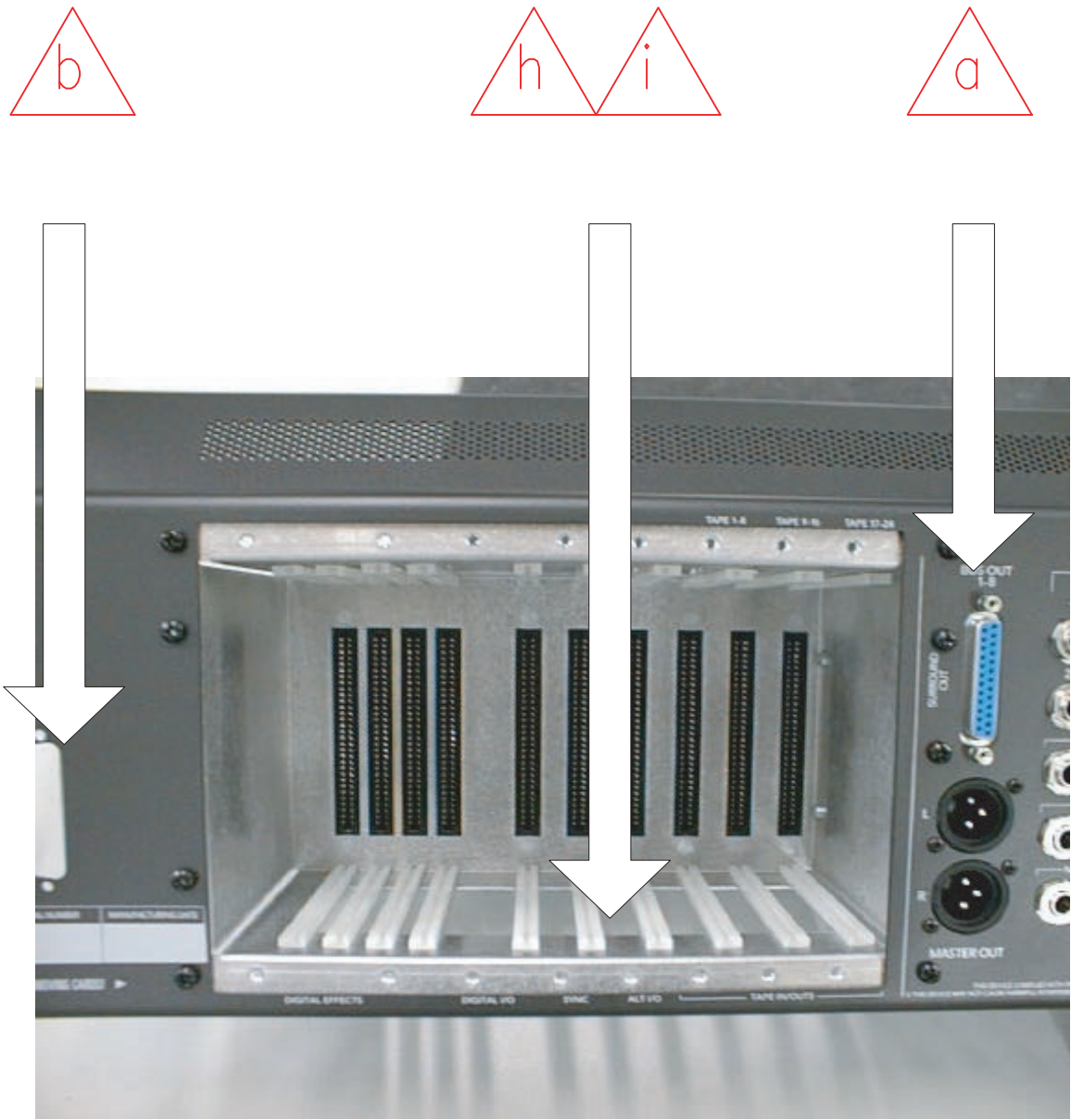
 Tighten down XLR MALES and XLR FEMALES with SCREWS⑪.
- CARD CAGE ASSEMBLY
- h

 Snap CARD GUIDES⑭- WIDE END FACING OUT - into place in the CARD CAGE⑫.
- i

 Attach CARD CAGE to the REAR PANEL with SCREWS⑬(8x)
- j

 Attach CARD CAGE BAKPLANE BOARD⑮ to BACK OF THE CARD CAGE using screws⑬(8x).





REV #	PART	PART NBR	CREV	QTY
①	RIB 28GA 26C 8IN PLZD	040-141-00	*	1
②	CBL 3P 22GA .098CL 17IN	040-138-00	*	1
③	SEMS 6-32x1/4 PHP BLKZC	700-028-00	*	4
④	RIB 28GA 34C 4IN PLZD	040-203-00	*	1
⑤	RIB 28GA 34C 6.5IN PLZD	040-204-00	*	1
⑥	RIB 28GA 20C 8.5IN PLZD	040-212-00	*	1
⑦	RIB 26GA 20C 17.5IN PLZD	040-213-00	*	1
⑧	RIB 28GA 34C 10.5IN PLZD	040-149-00	*	1

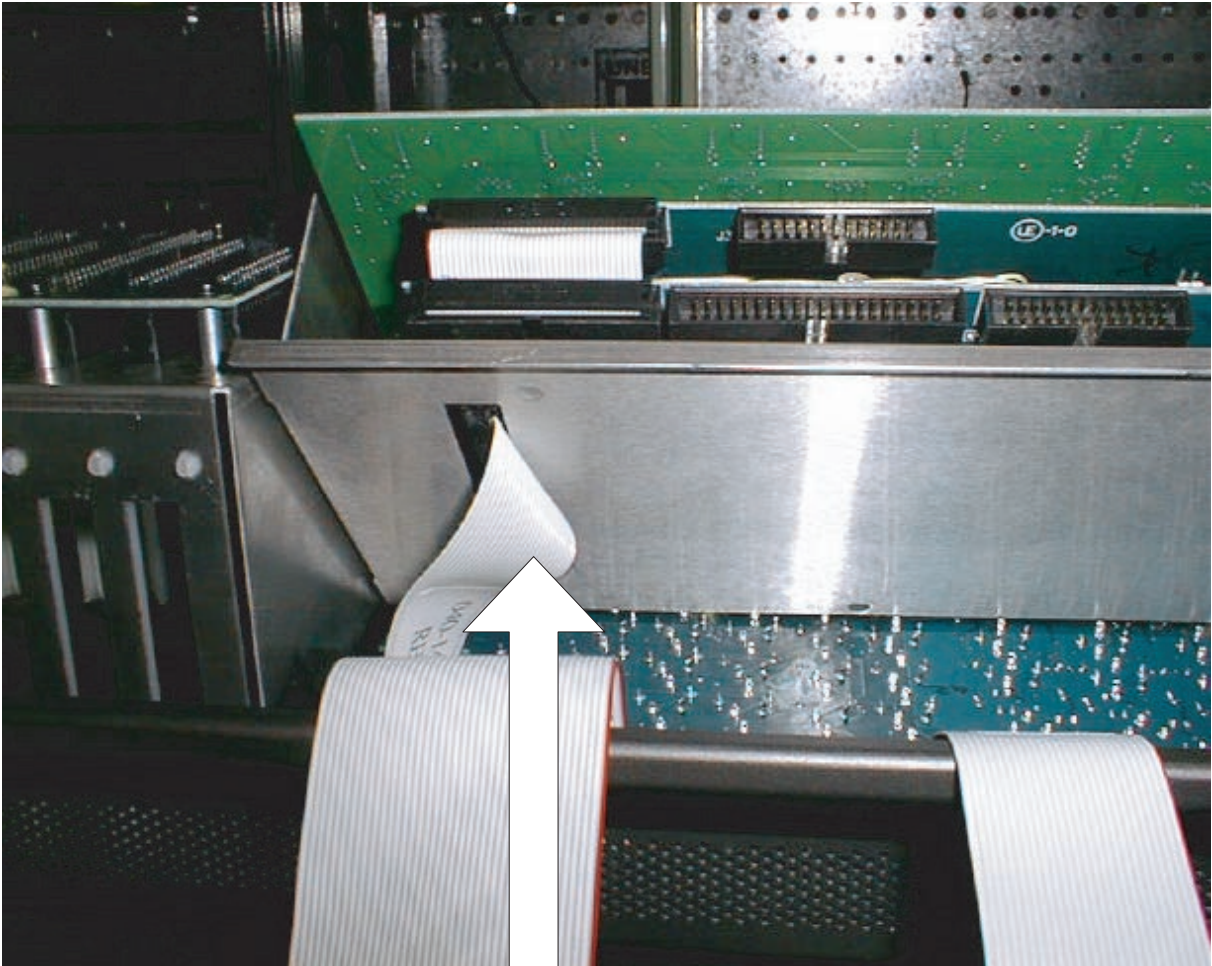
SEQ. TASK

CABLE ASSEMBLY FROM REAR PANEL TO DSP ASSEMBLY

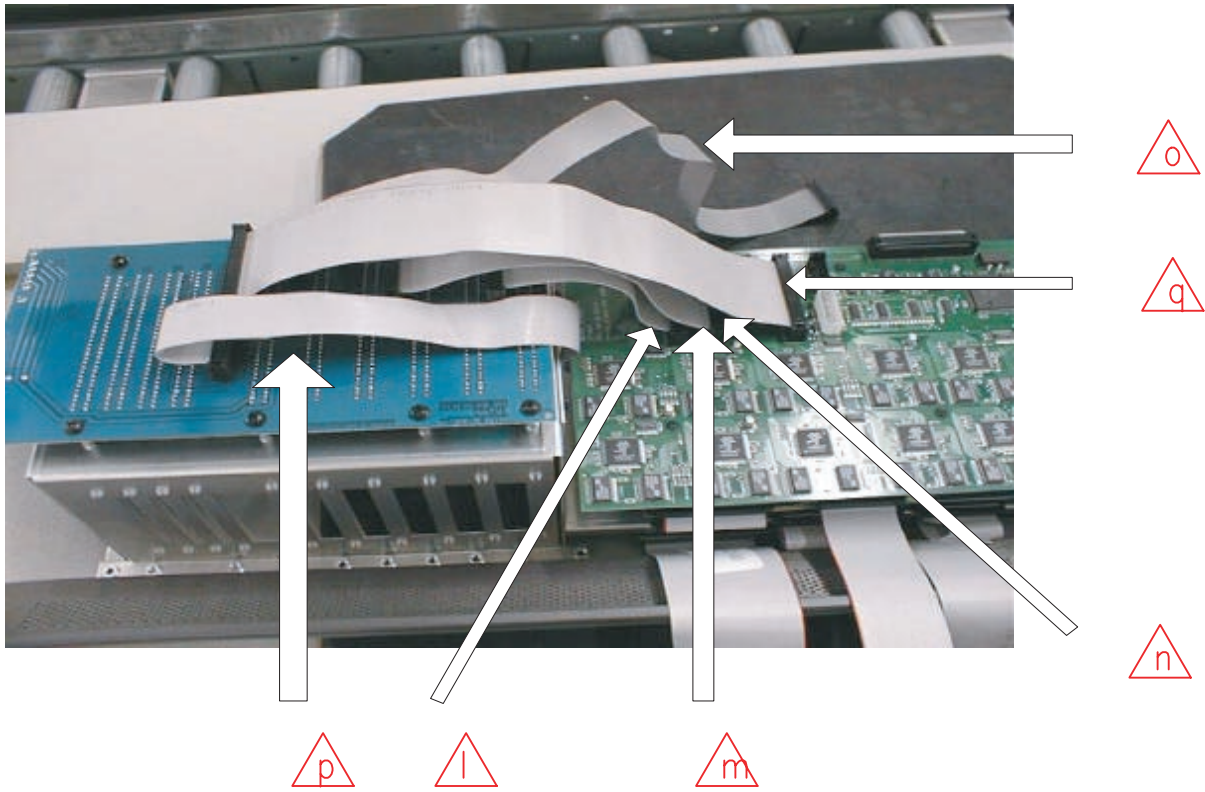
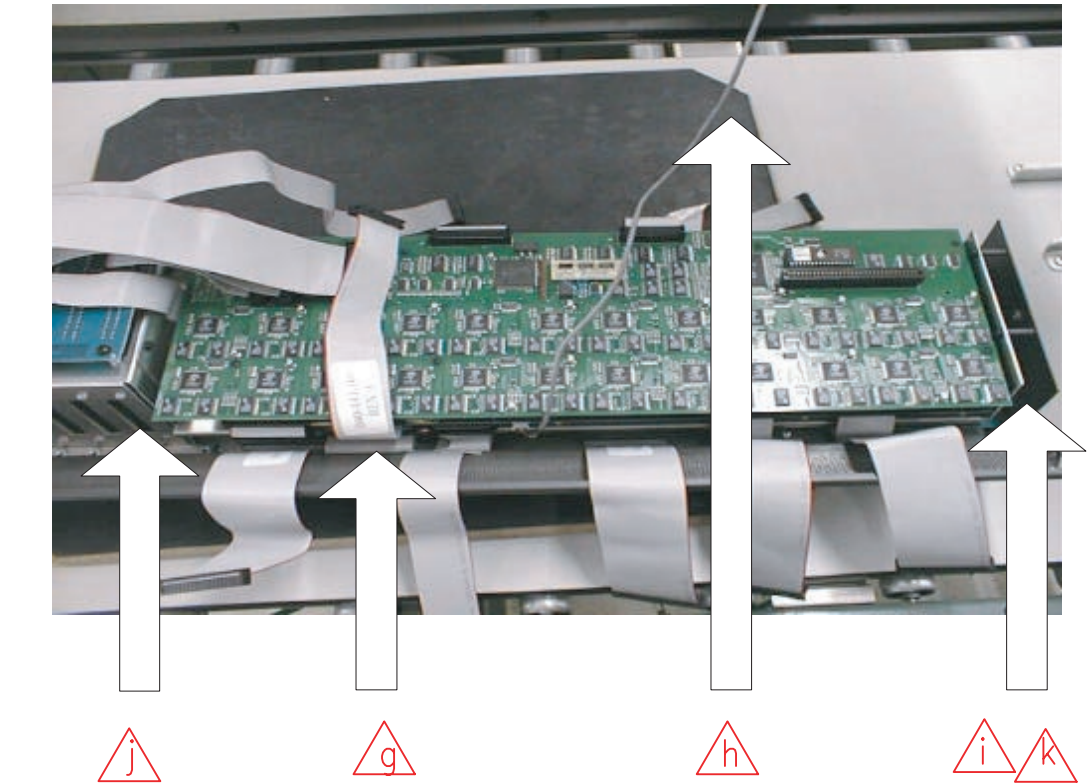
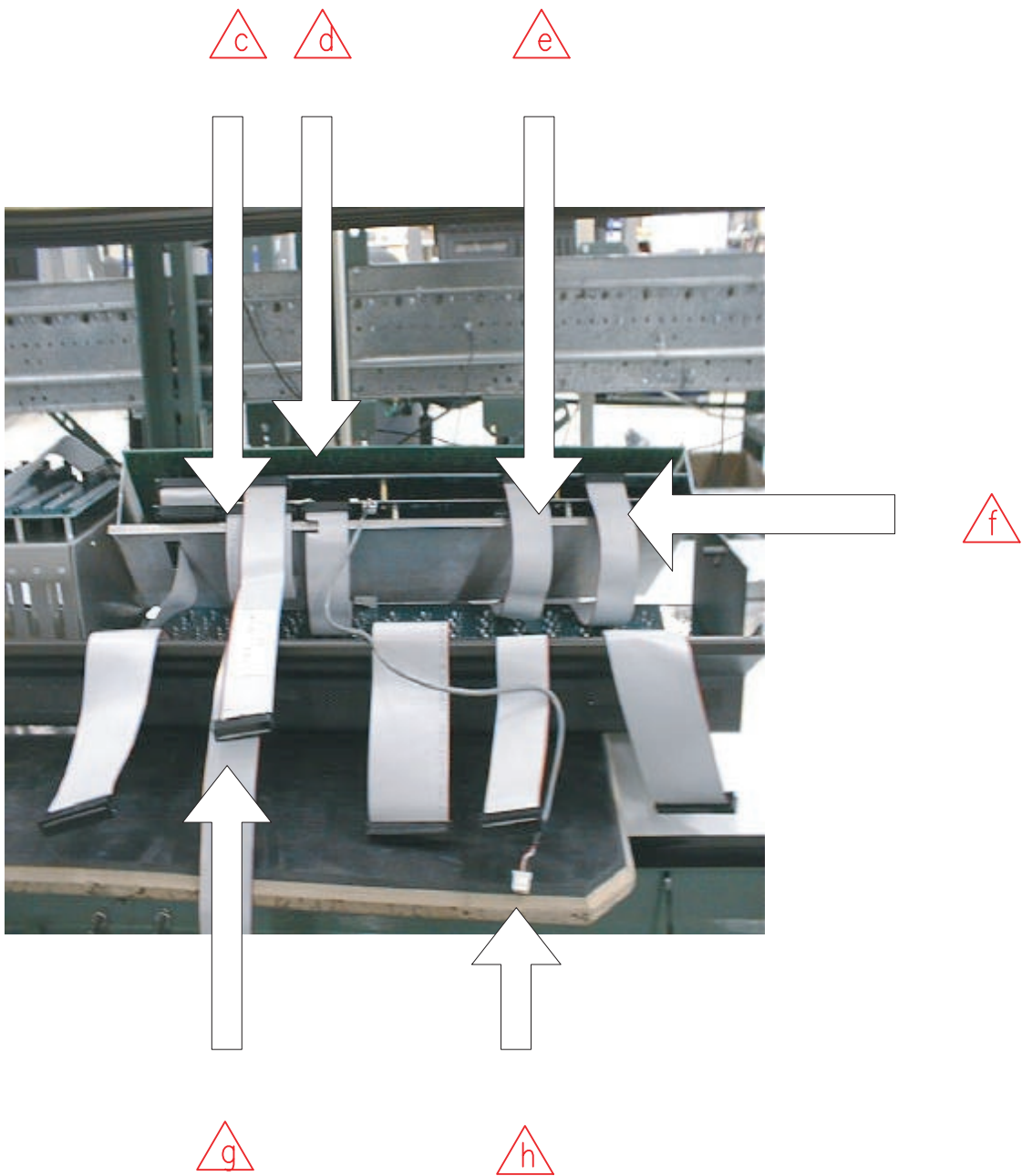
- a
- Position ALL CABLES from rear panel board so that the connectors are toward the ANGLED METAL. Four cables will route over the NON-COMPONENT SIDE of the REAR PANEL BOARD. They will route UNDER the DSP SHIELD!
- b
- Attach the LEFT DB25 CABLE from the REAR PANEL to DCA BOARD POS. J8
VERY IMPORTANT TO POSITION CORRECTLY! OTHERWISE IT WILL HAVE TO BE RE-ASSEMBLED!
- c
- Plug Cable J10 from REAR PANEL BOARD POS. J10 to DCA BOARD POS. J10
- d
- Plug Cable J9 from REAR PANEL BOARD POS. J9 to DCA BOARD POS. J9
- e
- Plug Cable J2 from REAR PANEL BOARD POS. J2 to CODEC BOARD POS. J2
- f
- Plug Cable J1 from REAR PANEL BOARD POS. J1 to CODEC BOARD POS. J1
- g
- Attach Cable J3 ① to CODEC BOARD POS. J3 and leave it hanging
- h
- Attach CABLE ASSY J60 ② to DCA BOARD POS. J60 then to the LINE/CTL SURFACE BOARD POS. J60 (MUST ROUTE UNDER J3 & J6 TO LINE/CTL SURFACE)
- i
- Slip the DSP ASSY into the REAR PANEL ASSY. Rest it on it's BACK EDGE, not on PCBS
- j
- Attach one end to the CARD CAGE using ③ (2x)
- k
- Attach the other end to the REAR PANEL using ③ (2x). Make sure that the BLACK WIRE coming from the CODEC BOARD is attached under one of the screws.

CABLE ASSEMBLY FROM DSP ASSEMBLY TO CARD CAGE

- l
- Attach Cable J47 ④ to DSP BOARD POS. J47 and to CARD CAGE BACKPLANE POS. J47
- m
- Attach Cable J48 ⑤ to DSP BOARD POS. J48 and to CARD CAGE BACKPLANE POS. J48
- n
- Attach Cable J21 ⑥ to DSP BOARD POS. J21 and to CARD CAGE BACKPLANE POS. J21
- o
- Attach Cable J32 ⑦ to CARD CAGE BACKPLANE POS. J32 and leave it hanging
- p
- Attach Cable J15 from the CODEC BOARD to the CARD CAGE PLANEBOARD POS. J15
- q
- Attach Cable J24 ⑧ to DSP BOARD POS. J24 and to CARD CAGE BACKPLANE POS. J24



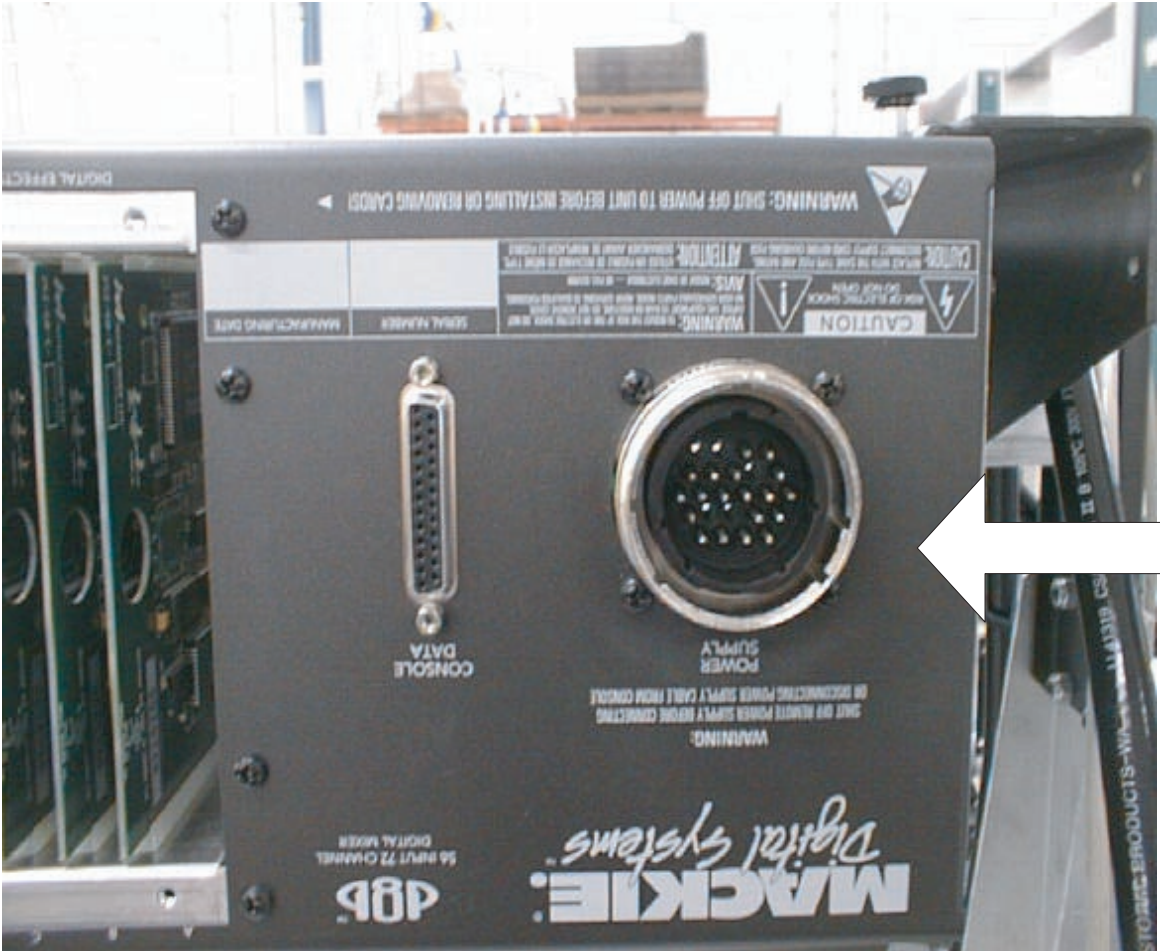
b



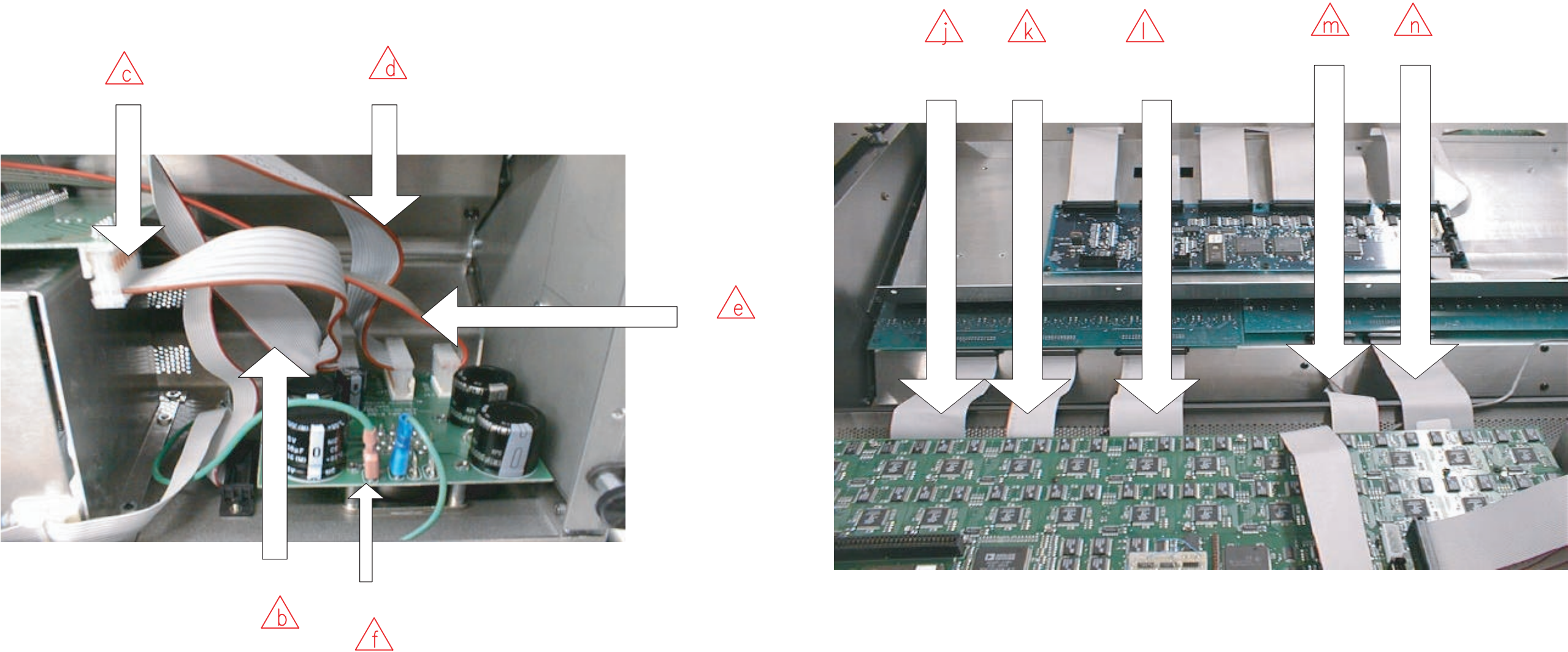
REF #	PART	PART NBR	CREV	QTY
①	PCB ASSY PWR DIST – D8	055–111–00	B1	1
②	SEMS 6–32x3/8 PHP BLKZC	700–028–02	*	4
③	RIB 18GA 7C .156x1 6.75IN	040–253–00	*	1
④	RIB 18GA 8P .156x1 19IN	040–254–00	*	1
⑤	RIB 18GA 5C .156x1 21.5IN	040–255–00	*	1
⑥	DIS 214GA BLK 6.5IN LIG/LUG	040–340–00	*	1
⑦	DIS 16GA 1007 GN/YL 5 Q/L	040–278–00	*	1
⑧	KEPNUT 6–32	705–001–00	*	2
⑨	SEMS 6–32x1/4 PHP BLKZC	700–028–00	*	9

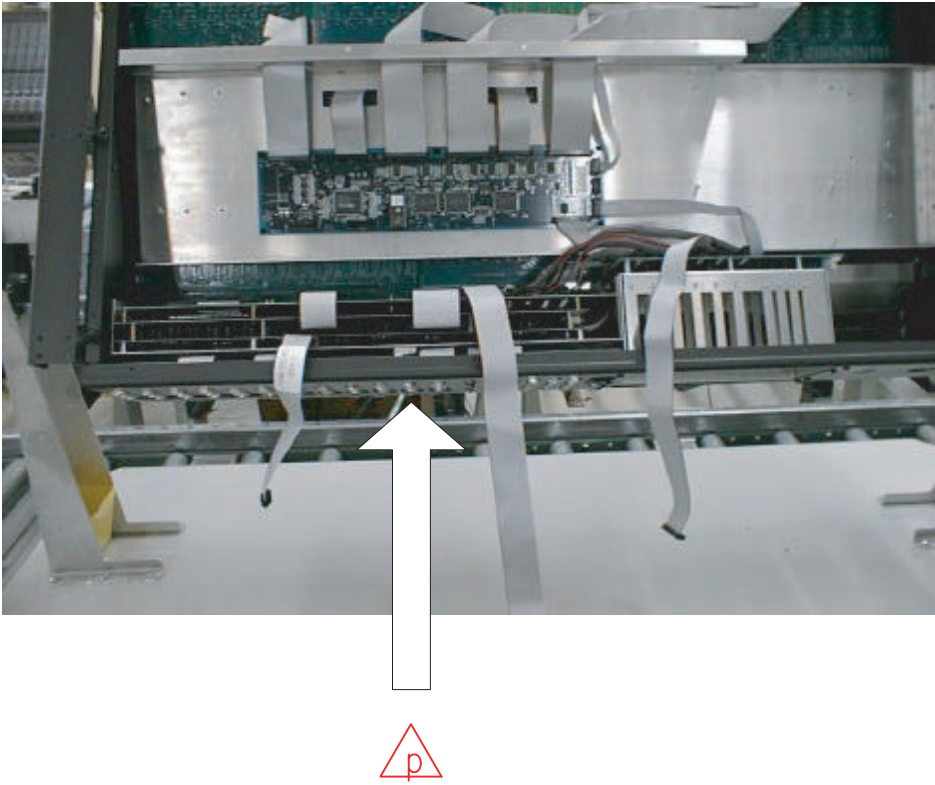
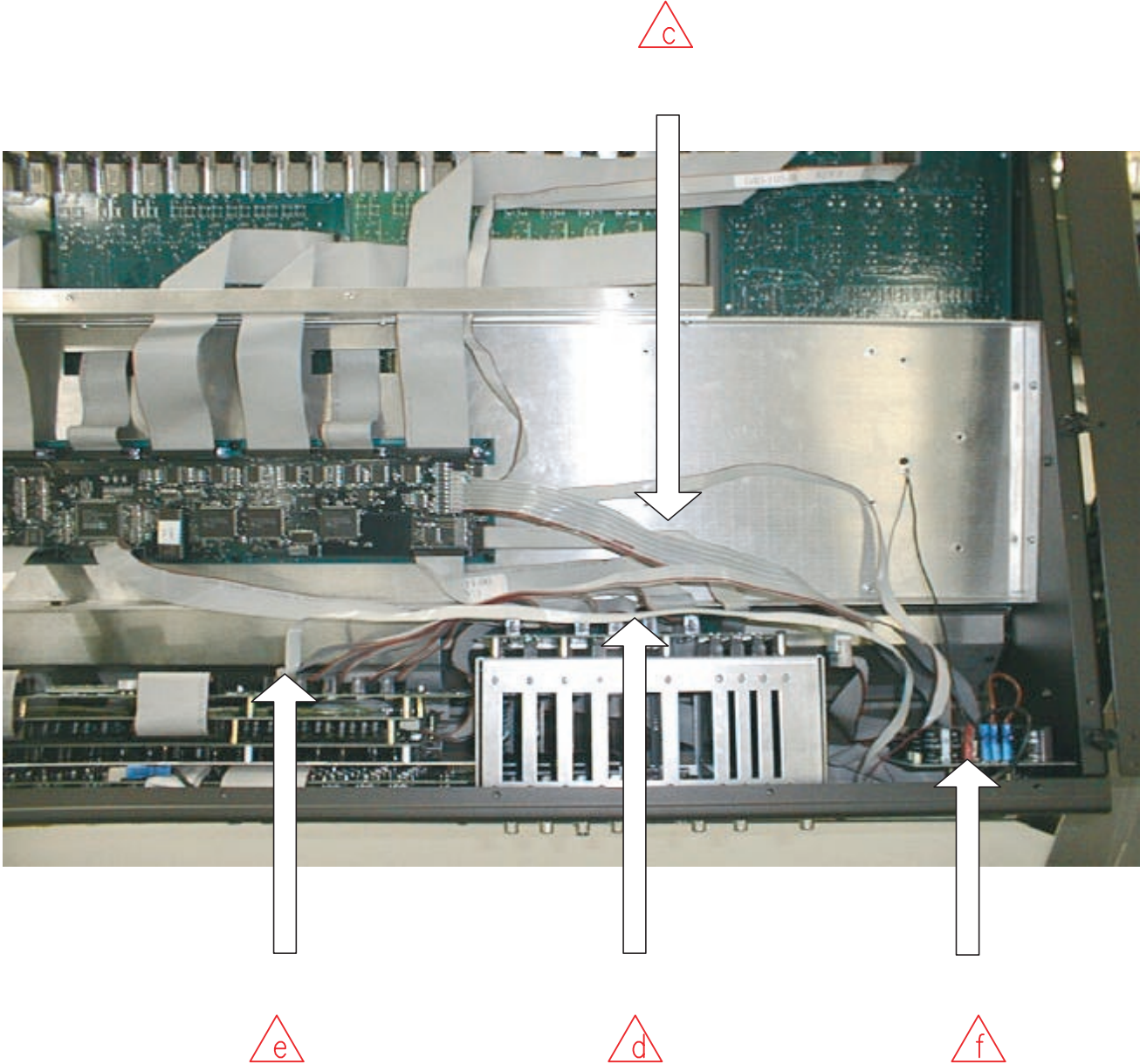
SEQ. TASK				
△a	Attach the POWER DIST BOARD ① to the REAR PANEL with SCREWS ② (4x)			
△b	Attach Cable J43 from the REAR PANEL BOARD to POS. J43 of the POWER DIST BOARD			
△c	Attach Cable J50 ③ to the CARD CAGE BACKPLANE BOARD POS. J50 and to POWER DIST BOARD POS. J50			
△d	Attach Cable J41 ④ to CONTROL BRAIN BOARD POS. J41 and to POWER DIST BOARD POS. J41			
△e	Attach Cable J42 ⑤ to DSP BOARD POS. J42 and to POWER DIST BOARD POS. J42			
△f	Attach cable with GROUNDING LUG 7 from the FAR LEFT TERMINAL on the POWER DIST BOARD to the GROUNDING LUG on the BACK PANEL and tighten down using 8 (1x)			
g	Attach Cable with GROUNDING LUGS ⑥ to Card Cage using Screw ⑨ and then to the Grounding Lug on the Back Panel and tighten down using ⑧ (1x)			
h	POSITION ALL CABLES OUT OF THE WAY SO THAT THE REAR PANEL ASSY CAN BE ATTACHED TO THE SHELL			
i	Place the REAR PANEL ASSY on the fixture for support			
△i	Attach Cable J4 from the REAR PANEL to MIC/CTL SURFACE BOARD POS. J4.			
△k	Attach Cable J7 from the REAR PANEL to MIC/CTL SURFACE BOARD POS. J7.			
△l	Attach Cable J5 from the REAR PANEL to MIC/CTL SURFACE BOARD POS. J5. MUST ROUTE OVER THE TALK BACK CABLE!			
△m	Attach Cable J3 from the CODEC BOARD to POS J3 of the LINE/CTL SURFACE BOARD IT WILL HAVE TO BE TWISTED ONCE AS CLOSE AS POSSIBLE TO THE REAR PANEL. MUST ROUTE OVER THE TALK BACK CABLE!			

SEQ. TASK
△n Attach Cable J6 from the REAR PANEL to Pos. J6 of the LINE/CTL SURFACE BOARD o Roll the REAR PANEL ASSEMBLY PARTIALLY into the TOP PANEL. Bend ALL RIBBON CABLES so that they FOLD OPPOSITE of how they naturally fold and tuck under the meter shield.
△p Roll The REAR PANEL ASSEMBLY into the TOP PANEL and tighten with SCREWS ⑨ (8x) BE SURE THAT NONE OF THE CABLES GET PULLED OUT!



△a





REF #	PART	PART NBR	CREV	QTY
①	SEMS 6-32x1/4 PHP BLKZC	700-028-00	*	1
③	PCB ASSY DIGITAL I/O	055-115-00-03	E3	1
④	PCB ASSY CLOCK	055-164-00-01	C1	1
⑤	PNT BLANK COV PLATE SM D8	550-332-00	*	1
⑥	PCB IVL EFFECTS D8	055-154-00	A1	1
⑦	KNOB 24X10 T-SLOT MLD LIN	760-085-01	*	25
⑨	TYRAP MOUNT .75 X .75	740-002-00	*	3
⑩	TYRAP 3-1/4L	740-001-00	*	3

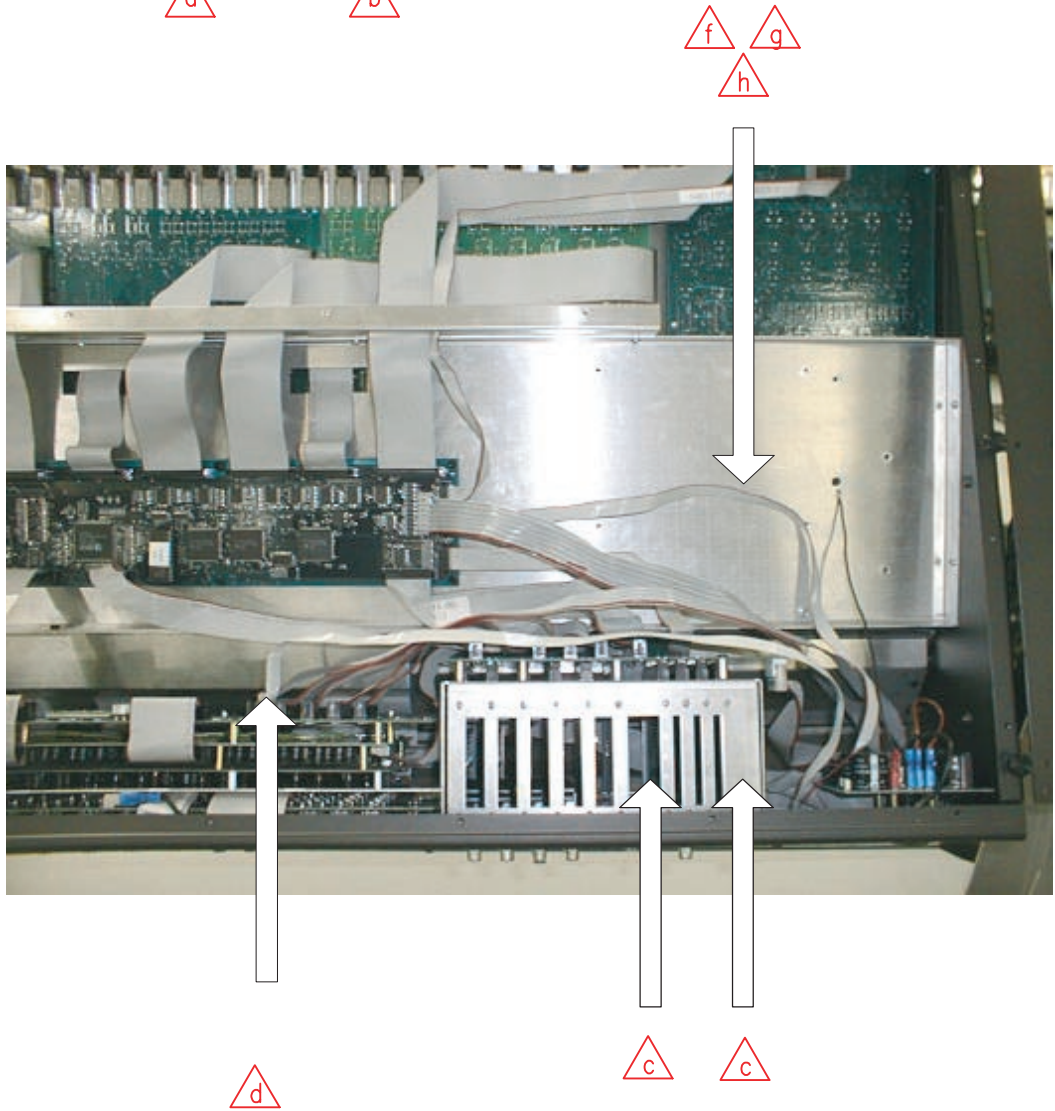
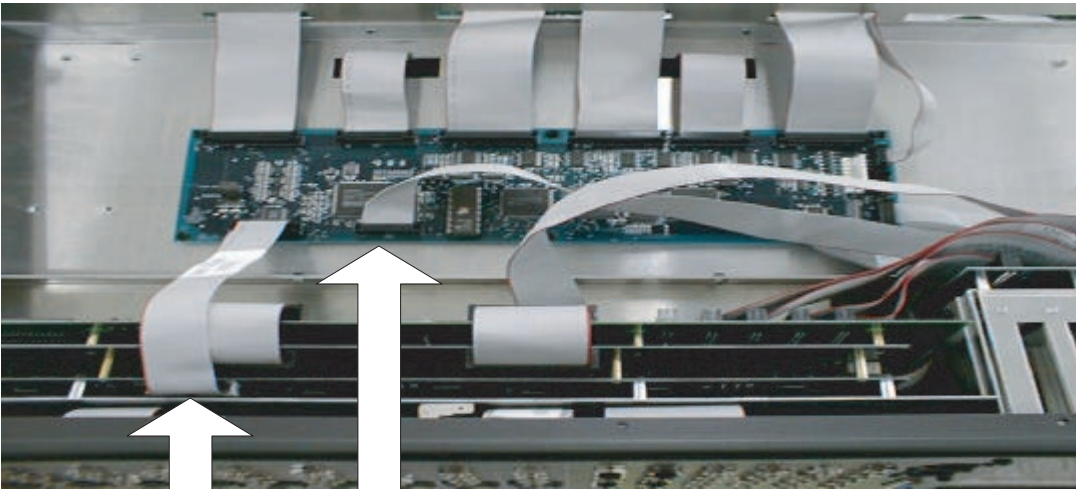
SEQ. TASK

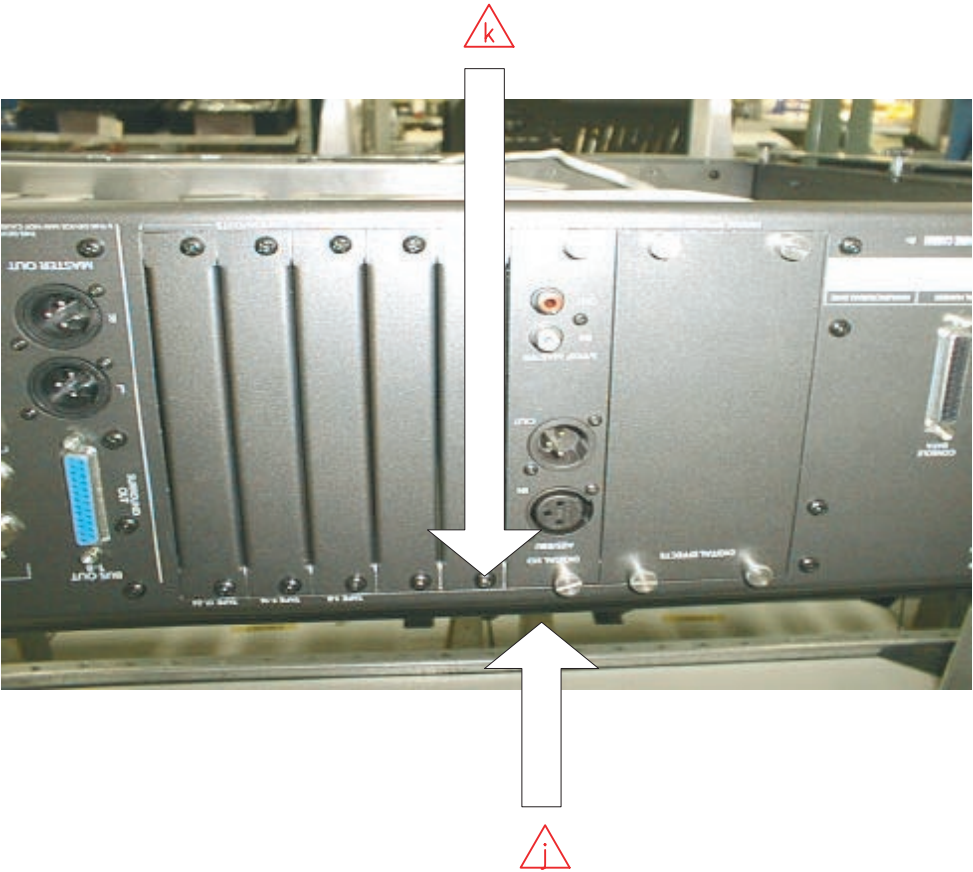
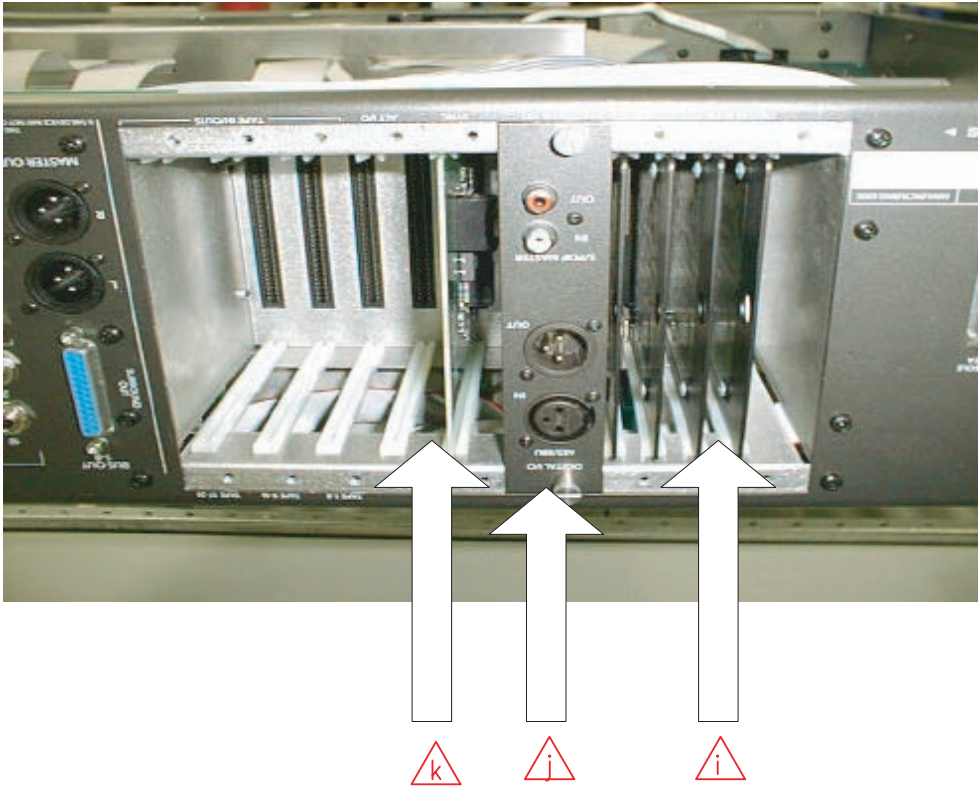
CABLE ASSEMBLY

-  Connect Cable J31 of DCA BOARD to POS. J31 of the CONTROL BRAIN BOARD
-  Connect Cable J32 of the CARD CAGE BP BOARD to POS. J32 of the CONTROL BRAIN BOARD
-  Stick Tyrap mounts  (2x) to the top of the card cage metal.
-  Attach the FIRST PART (LONG PORTION) of the SPLIT DATA CABLE to POS. J26 of DSP BOARD.
-  Route the SPLIT DATA CABLE over the tyrap mount and fasten down with tyraps  (2x).
-  Attach the SECOND PART (SHORT PORTION) of the SPLIT DATA CABLE to POS J25 of the CONTROL BRAIN BOARD
-  Stick a Tyrap mount  to the right of the brain board on the sub chassis.
-  Route the SECOND PART of the SPLIT DATA CABLE through the mount and fasten it down with a tyrap .

CARD CAGE ASSEMBLY

-  Slide the IVL EFFECTS CARD  into the CARD CAGE on FAR RIGHT END
-  Slide it into the REAR PANEL and tighten using attached hardware
-  Slide the CLOCK CARD  into the REAR PANEL SYNC SLOT. Place the COVER  over it using screws  (2x)
- I Attach FADER KNOBS  to FADERS

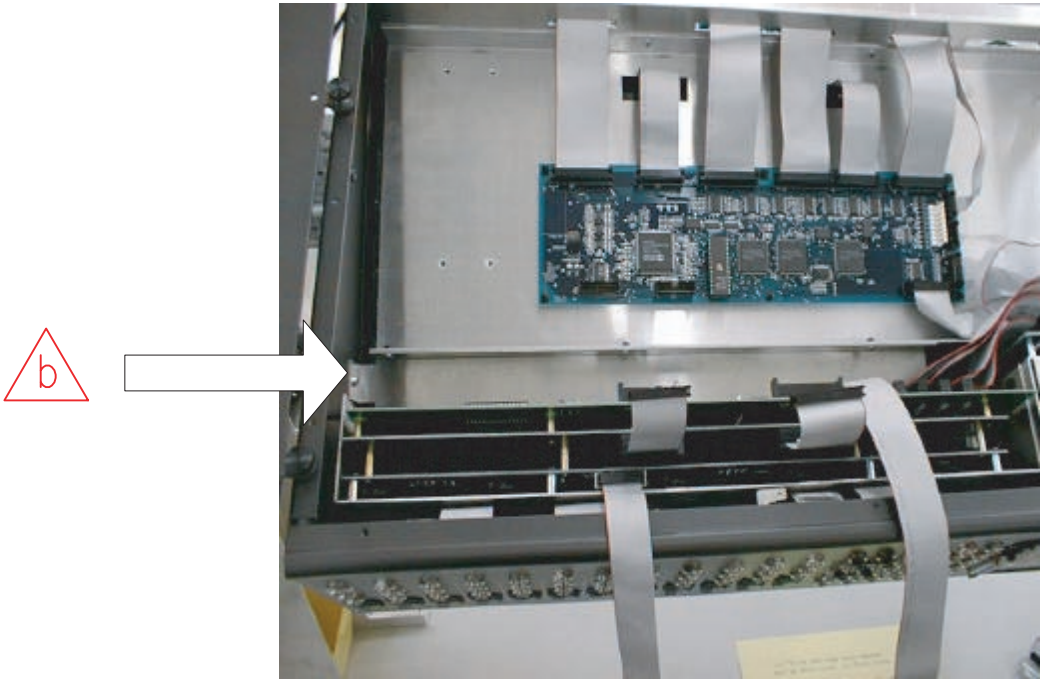
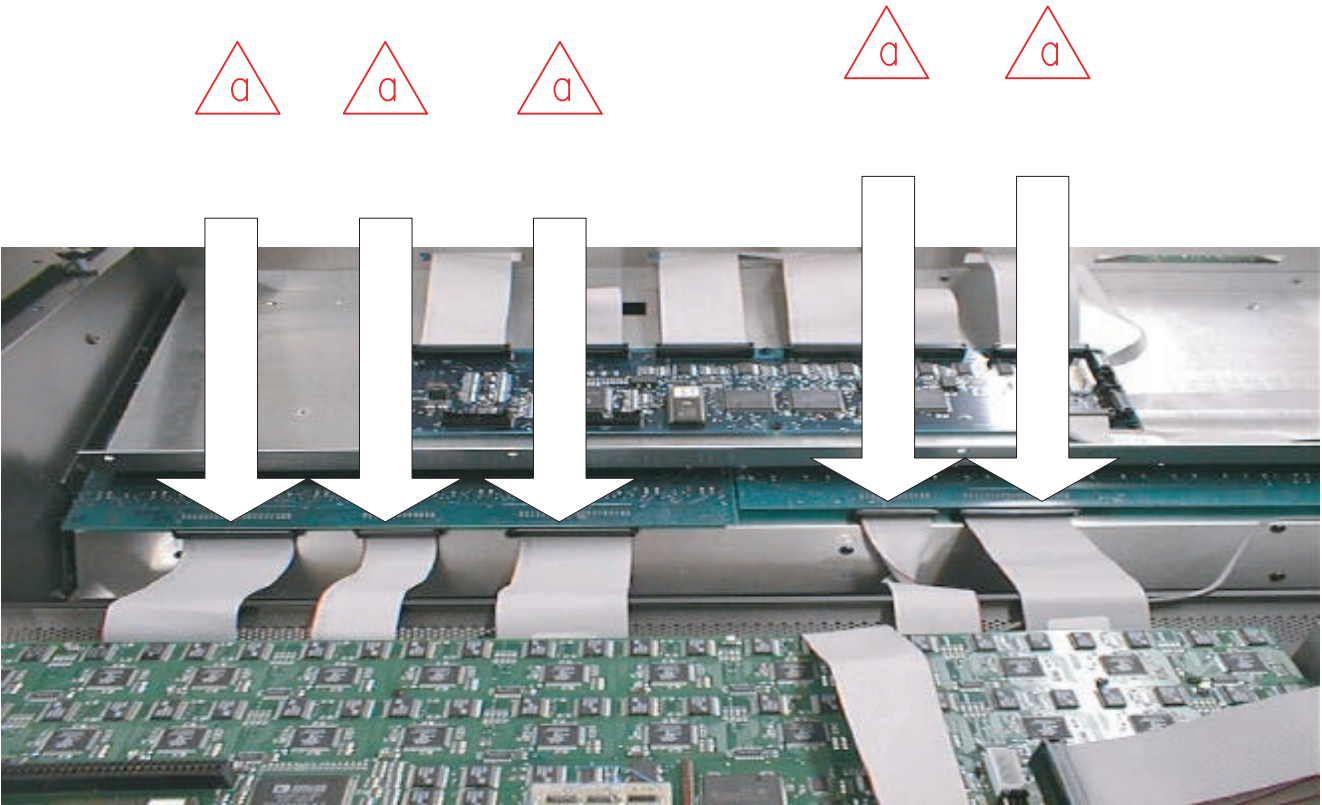


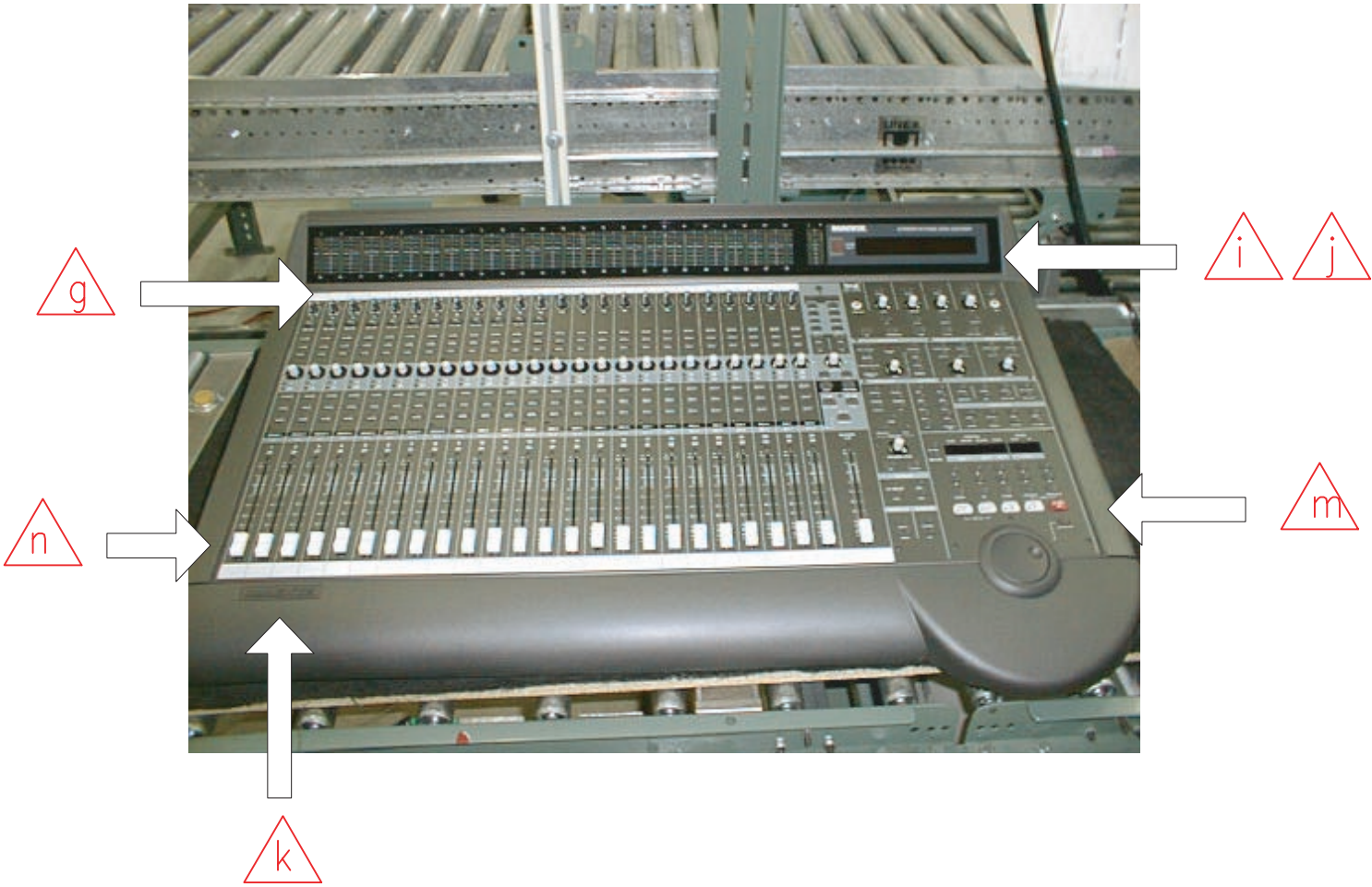
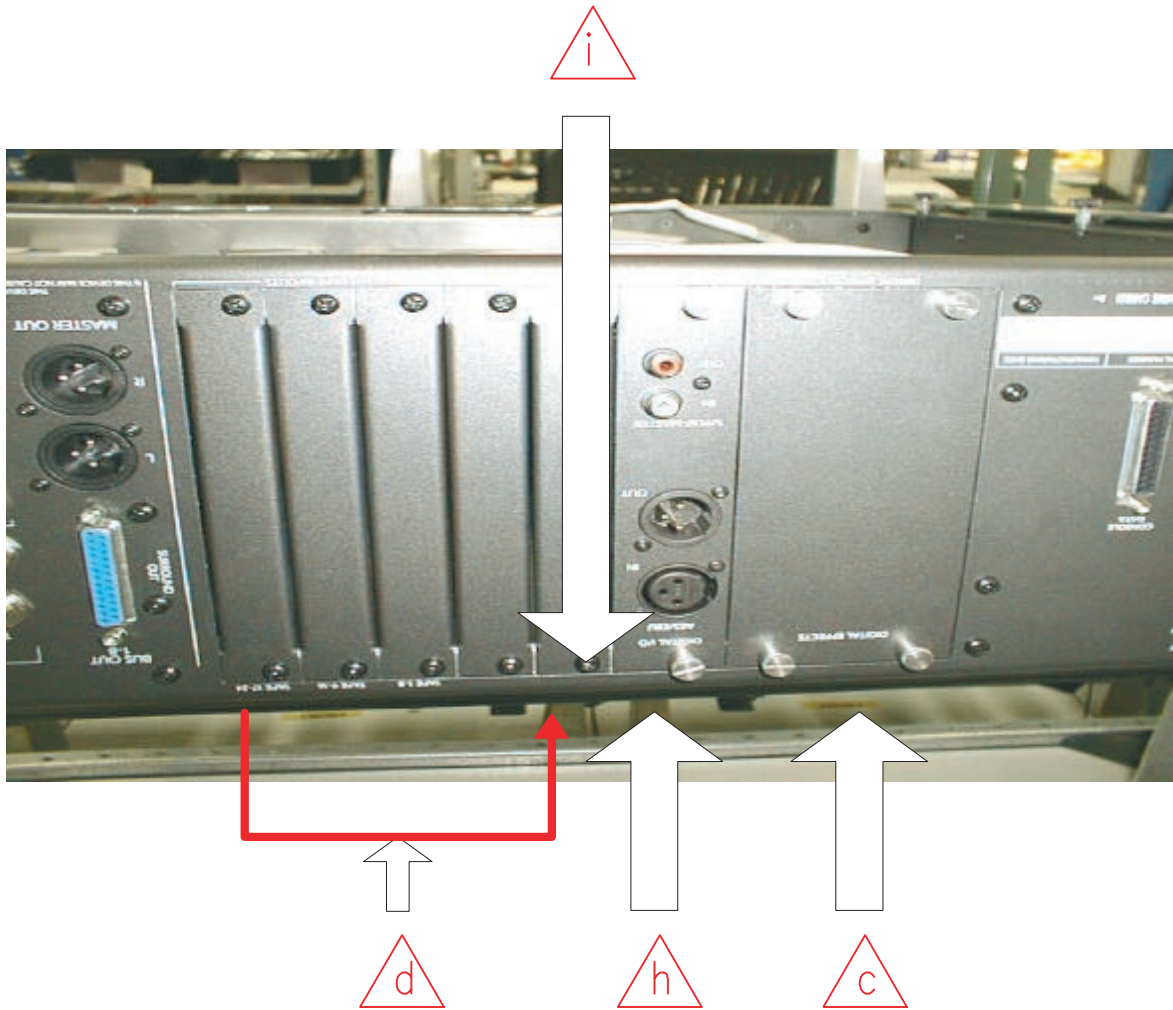


REF #	PART	PART NBR	CREV	QTY
①	FAB SHIELD AUDIO – D8	550–287–00	x	1
②	SEMS 6–32x1/4 PHP BLKZC	700–028–00	x	33
③	PNT BLANK COV PL LG D8	550–307–00	x	1
④	PNT BLANK COV PLATE SM D8	550–332–00	x	4
⑤	PAINT BOTTOM – D8	550–262–00	x	1
⑥	FOOT #10 BLK 1x.562	750–004–00	x	4
⑦	SEMS 6–32x5/8 PHP BLKZC	700–044–08	x	4
⑧	KNOB TRIM W/PNTR	760–081–00	x	24
⑨	VFD FILTER – D8	780–046–00	x	1
⑩	LENS MTR BRIDGE – D8 SLKSCR	780–040–00	x	1
⑪	LOGO NAMEPLATE – MOLDED	840–100–00	x	1
⑫	ENDCAP RT – D8	760–079–00	x	1
⑬	MCH 10–32x3/4 PHP BLKZC	700–015–00	x	12
⑭	ENDCAP LT – D8	760–080–00	x	1
⑮	ADHESIVE RTV162	730–026–00	x	A/R
⑯	1/2” ALUMINUM TAPE	720–013–00	x	A/R

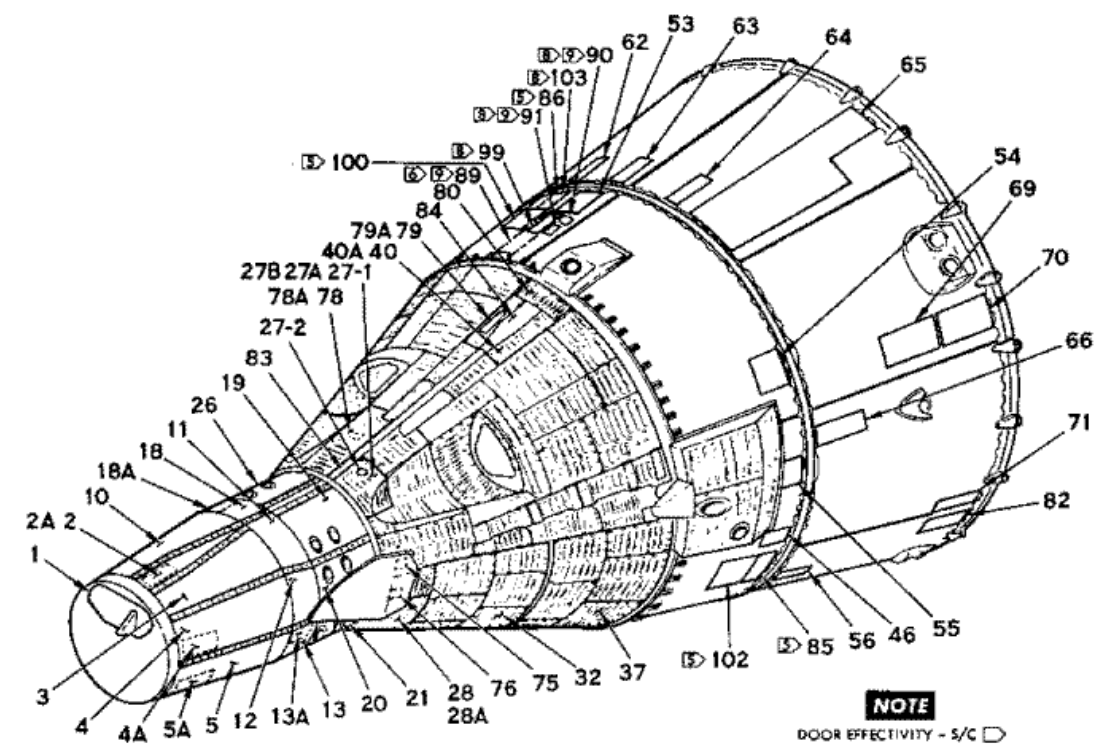
- SEQ. TASK
- △a RTV ⑮all cables located beneath the rear panel that connect to the control surface boards. Make sure that both portions of the connector have RTV.
 - △b Attach the AUDIO SHIELD ①to the SUB CHASSIS with SCREWS ②(3x) from the FRONT SIDE and ②(2x) on the LEFT SIDE; SCREW FROM THE OUTSIDE
MAKE SURE THAT ALL CABLES GET PUSHED UNDER THE METAL BUT DO NOT GET PULLED OUT
 - △c Attach the COVER PLATE ③over IVL EFFECTS CARD on REAR PANEL using attached hardware
 - △d Attach the COVER PLATES ④(4x) to the open slots on REAR PANEL with SCREWS ②(8x)
 - △e Attach CHASSIS BOTTOM ⑤with SCREWS ②(20x) **DO NOT TIGHTEN SCREWS IN CLOCKWISE ORDER. TIGHTEN SCREWS OPPOSITE ONE ANOTHER (ZIG-ZAG)**
 - △f Place FEET ⑥(4x) on the bottom of the unit and tighten down with SCREWS ⑦(4x)
 - △g Attach TRIM KNOBS ⑧(24x)
 - △h Attach the VFD FILTER ⑨to the VFD DISPLAY AREA. MAKE SURE IT IS CLEAN & CENTERED
 - △i Attach ALUMINUM TAPE ⑯from RIGHT EDGE of VFD Filter to Meter Bidge. Be sure tape touches both parts.
 - △j Attach the METER BRIDGE LENS ⑩to the TOP PANEL METAL. MAKE SURE IT IS CLEAN
NO COPPER TAPE SHOULD SHOW THROUGH THE LENS!
 - △k Attach LOGO NAMEPLATE ⑪to ARMREST
 - l Remove unit from fixture

- △m Attach RIGHT ENDCAP ⑫ with SCREWS ⑬(6x)
- △n Attach LEFT ENDCAP ⑭with SCREWS ⑬(6x)
- o POSITION ALL FADER KNOBS DOWN
- p TURN ALL KNOBS ALL THE WAY TO THE LEFT





PROJECT GEMINI



NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
1	DROGUE CHUTE DOOR	28	SHINGLE	79	RECOVERY LIGHT DOOR
2	DOCKING BAR CARTRIDGE ACCESS	28A	Z160.20 EQUIPMENT ACCESS	79A	RECOVERY LIGHT DOOR RELEASE MECHANISM
2A	PYRO ELECTRICAL DISCONNECT ACCESS	32	FORWARD EQUIPMENT BAY DOOR - LEFT	80	HOIST LOOP DOOR
3	SHINGLE	37	AFT EQUIPMENT BAY DOOR - LEFT	82	SHAPED CHARGE DETONATOR ACCESS
4	EMERGENCY DOCKING RELEASE CART. AND GUILLOTINE CARTRIDGE ACCESS	40	SHINGLE	83	COVER ASS'Y - PARACHUTE CONTROL CABLES
4A	PILOT CHUTE DEPLOY SENSOR SWITCH ACCESS	40A	RECOVERY LIGHT AND HOIST LOOP RIGGING AND CARTRIDGE ACCESS	84	COVER ASS'Y - PARACHUTE CONTROL CABLES
5	SHINGLE	46	SEPARATION SENSING SWITCH ACCESS	85	RADIOMETER
5A	RADAR ACCESS	53	OAMS LINE GUILLOTINE ACCESS	86	CRYO SPECTROMETER/INTERFEROMETER
10	SHINGLE	54	F. L.S.C. TUBING CUTTER ACCESS	89	MICROMETEORITE EXPERIMENT
11	INTERFACE ACCESS	55	FORWARD MANEUVERING ENGINE ACCESS	90	UHF - VHF POLARIZATION
12	INTERFACE ACCESS	56	FUEL CELL SERVICE ACCESS	91	UHF - VHF POLARIZATION ACCESS
13	INTERFACE ACCESS	62	OAMS OXIDIZER PURGE ACCESS	99	NUCLEAR EMULSION
13A	GUILLOTINE CARTRIDGE ACCESS	63	OAMS LINE GUILLOTINE ACCESS	100	CRYO SPECTROMETER/INTERFEROMETER ACCESS
18	INTERFACE ACCESS	64	OAMS OXIDIZER PURGE ACCESS	102	RADIOMETER ACCESS
18A	PYROTECHNIC SWITCH CARTRIDGE AND BRIDLE DISCONNECT CARTRIDGE ACCESS	65	OAMS MODULE SERVICE ACCESS	103	SPACE POWER TOOL ACCESS
19	RE-ENTRY CONTROL SYSTEM ACCESS	66	ECS SERVICE ACCESS		
20	RE-ENTRY CONTROL SYSTEM ACCESS	69	ECS PUMP MODULE SERVICE ACCESS		
21	RE-ENTRY CONTROL SYSTEM ACCESS	70	ECS PUMP MODULE SERVICE ACCESS		
26	RE-ENTRY CONTROL SYSTEM ACCESS	71	SEPARATION SENSING SWITCH ACCESS		
27-1	SHINGLE	75	ELECTRICAL DISCONNECT ACCESS		
27-2	FRESH AIR DOOR	76	ELECTRICAL DISCONNECT ACCESS		
27A	Z160.20 EQUIPMENT ACCESS	78	SHINGLE		
27B	Z160.20 EQUIPMENT ACCESS	78A	Z160.20 EQUIPMENT ACCESS		

Figure 2-7 Access Doors, Spacecraft 4 and Up (Sheet 1 of 2)

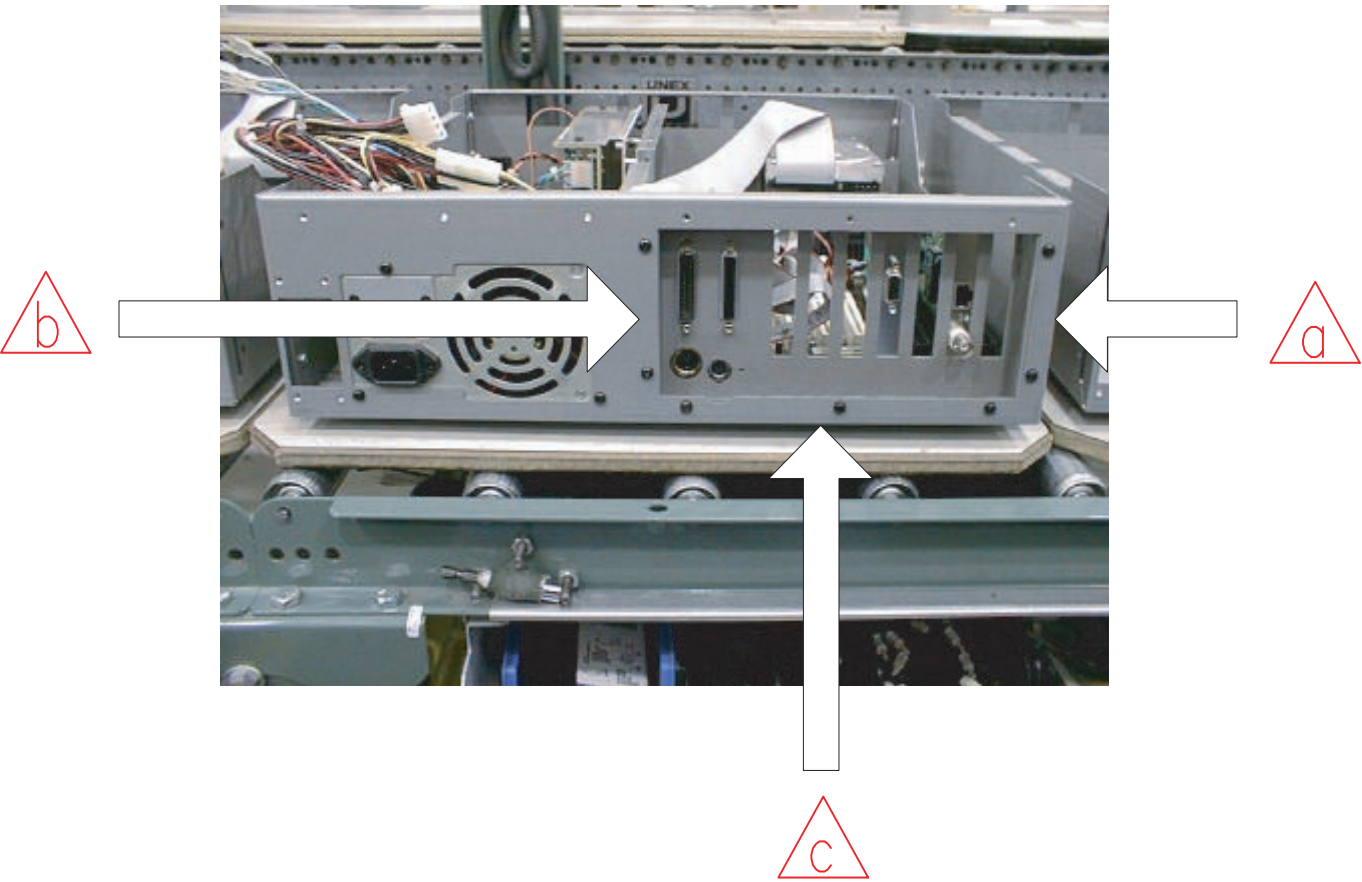
FM2-2-7

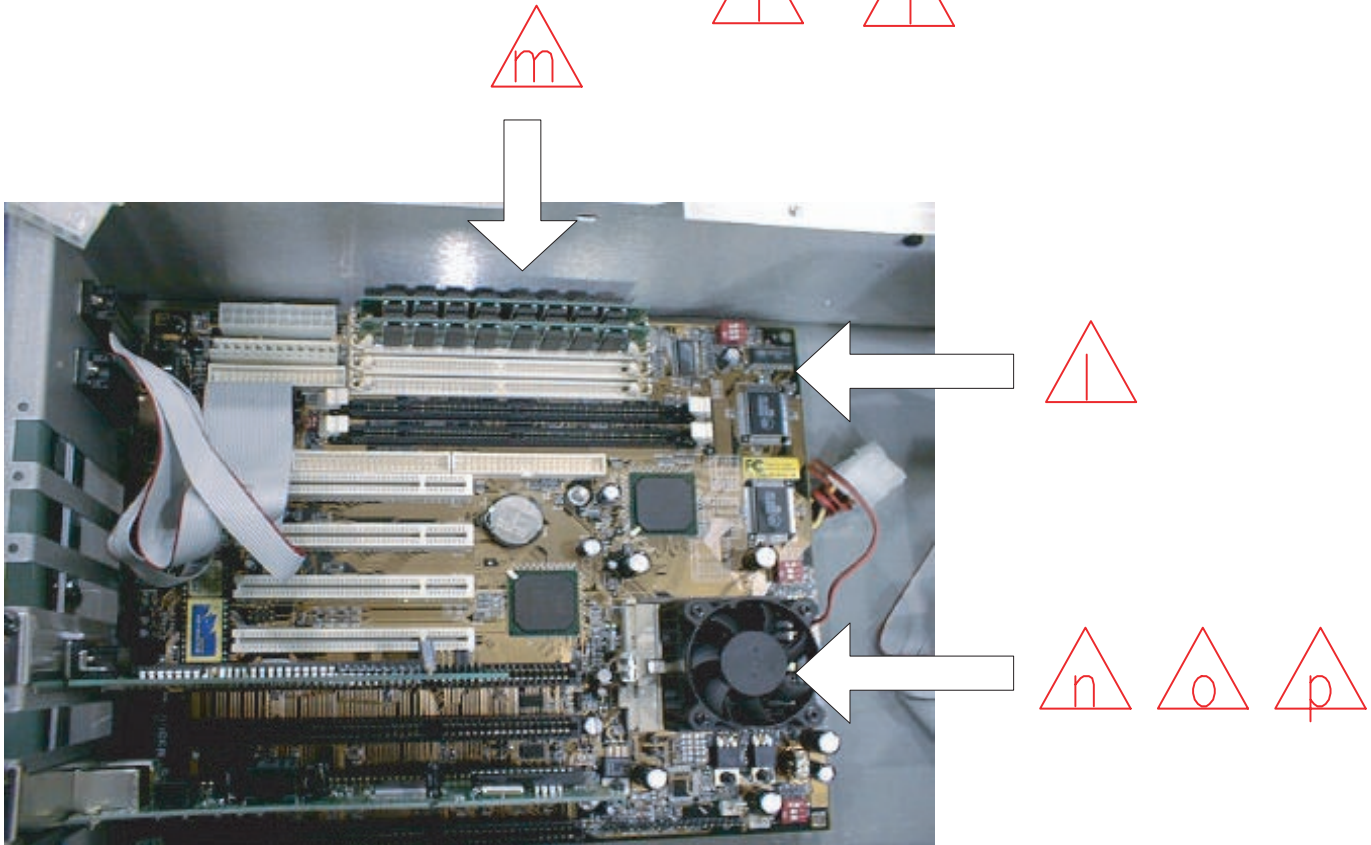
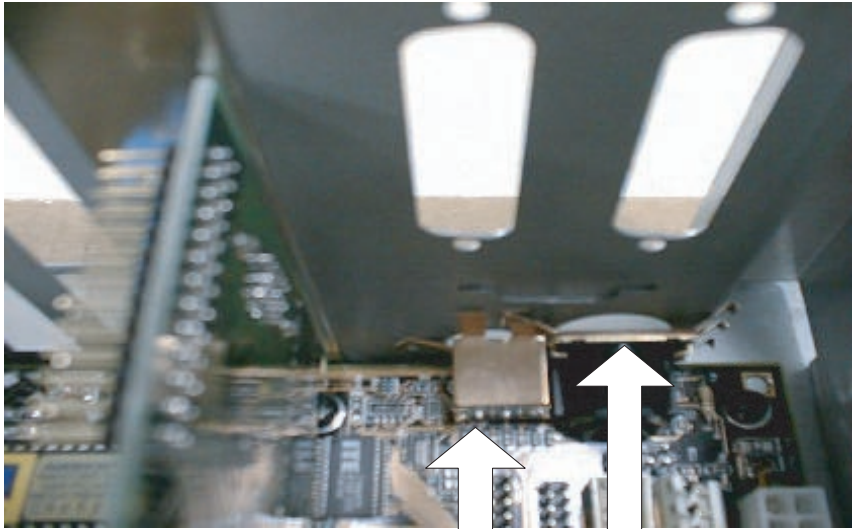
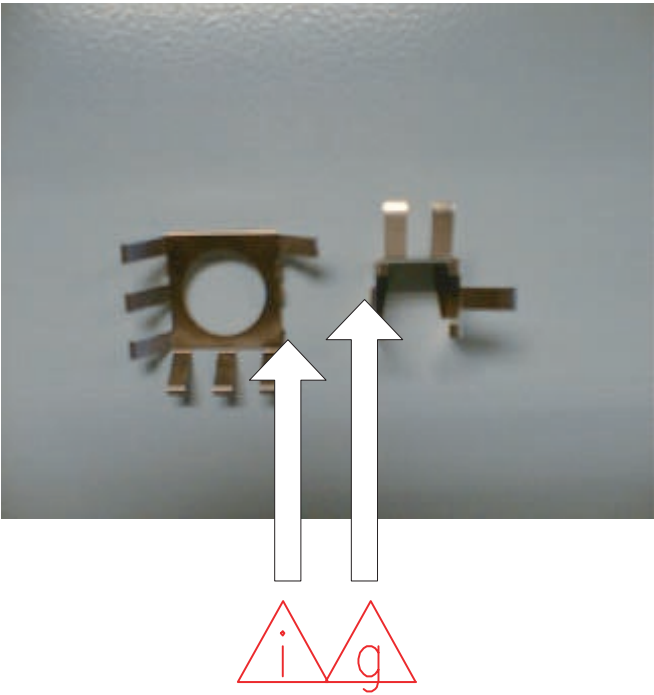
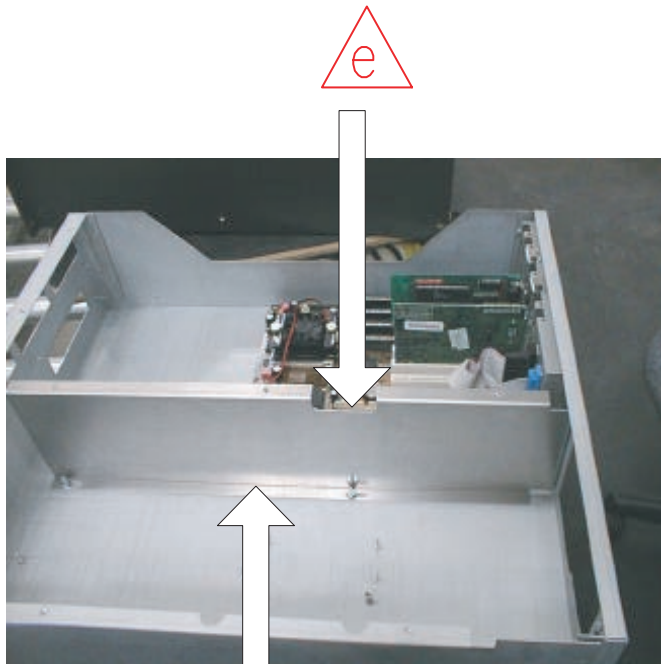
REF #	PART	PART NBR	CREV	QTY
①	FAB CARD RACK D8 PWR SPLY	550-453-00		1
②	FAB CHASSIS D8 PWR SPPLY	550-451-00		1
③	SEMS 6-32x1/4 PHP BLKZC	700-028-00		10
④	FAB SHIELD D8 PWR SPLY	550-415-00		1
⑤	KEPNUT 6-32	705-001-00		2
⑥	GROMMET STRIP MEDIUM	740-007-01		2.8"
⑦	STDF NYL 1/2" SNAP-IN	706-059-00		2
⑧	TF 6-32x3/8 FL 100 DG BLK	700-086-00		2
⑨	SA GASKET MOUSE PORT	080-100-00		1
⑩	OEM MOTHER PM 9800 INTEL	080-113-00	A1	1
⑪	SA GASKET KEYBOARD PORT	080-099-00		1
⑫	DRAM 72P SIMM 8MB 2x32	480-015-00		2
⑬	MICRO PROC PENTIUM 166MHz	329-049-03	A1	1
⑭	THERMAL JOINT COMPOUND	730-001-00		A/R
⑮	FAN MICROPROC W/HTSK	480-008-00	A1	1

SEQ.	TASK
	Attach Card Rack ① to rear of Chassis ② on outside edge only. Mount on inside of unit with connector holes toward the CENTER of the unit. THE RACK WILL PROTRUDE INTO THE UNIT! Screw in from the outside using ③ (2x)
	Attach end of SHIELD ④ to chassis rear and Card RACK using Screw ③ (2x) from the outside. The CUTOUT will be on TOP
	Attach BOTTOM of CARDRACK to chassis using SCREW ③ (3x)
	Attach SHIELD to center of chassis bottom using NUTS ⑤ (2x)
	Attach GROMMET STRIP ⑥ to cutout in shield. Make sure it locks under ledge on the ends.
f	Attach STANDOFFS ⑦ (2x) to Mother Board Mounting Holes on chassis bottom using SCREW ⑧ (2x). Screw in from BOTTOM. Use mounting hole closest to side and the second one on the same plane
	Cut leg on MOUSE GASKET ⑨. IT IS CRITICAL TO CUT THE PROPER LEG!
	Place MOUSE GASKET over mouse port (smaller of two) on rear of MOTHER BOARD ⑩ with legs pointing away from the board.
	Cut 2 legs on KEYBOARD GASKET ⑪. IT IS CRITICAL TO CUT THE PROPER LEG!
	Place KEYBOARD GASKET on keyboard port (larger) on rear of mother board with legs pointing away from the board.

SEQ.	TASK
------	------

k	Configure MOTHER BOARD by setting DIP SWITCHES: SW1-ALL OFF; SW2-1 ON, 2 ON, 3 OFF; SW3-1 ON, 2 ON, 3 OFF.
	Mount the Mother Board to the chassis. Push on over STANDOFFS. SCREW other end using screws ③ (3x). Make sure both gaskets stay pushed down all of the way.
	Place MEMORY BOARDS ⑫ (2x) in Mother Board SIMM1-SIMM2 SLOTS. The memory must be put in at 45° then straightened to 90°. Make sure clips close around each board. Insert one farthest from shield first (SIMM2).
	Mount MICROPROCESSOR ⑬ to the Mother Board. Lift arm, place chip, lower and lock arm.
	ORIENTATION: The corner with the white dot must be positioned over the corner of the socket that is free of pins.
	Place a pencil eraser sized drop of THERMAL GREASE ⑭ on TOP of the microprocessor.
	Mount MICROPROCESSOR FAN ⑮ over the microprocessor with ledge in fan lined up over break between the socket and the microprocessor on the Mother Board. Center fan over the microprocessor. Tighten down with attached hardware.

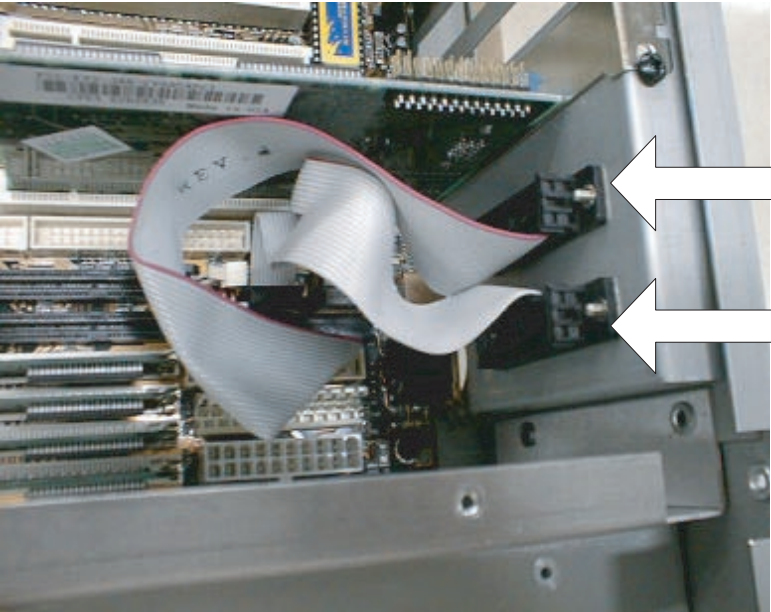
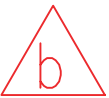
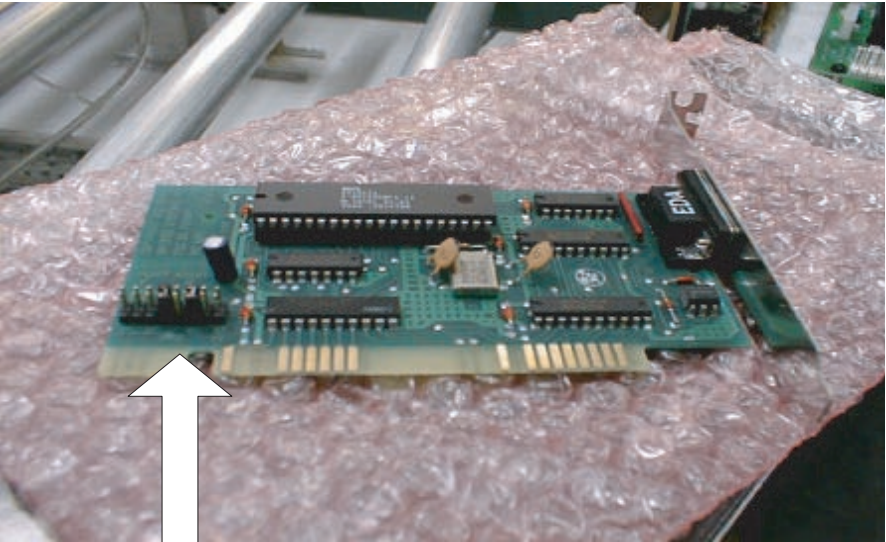


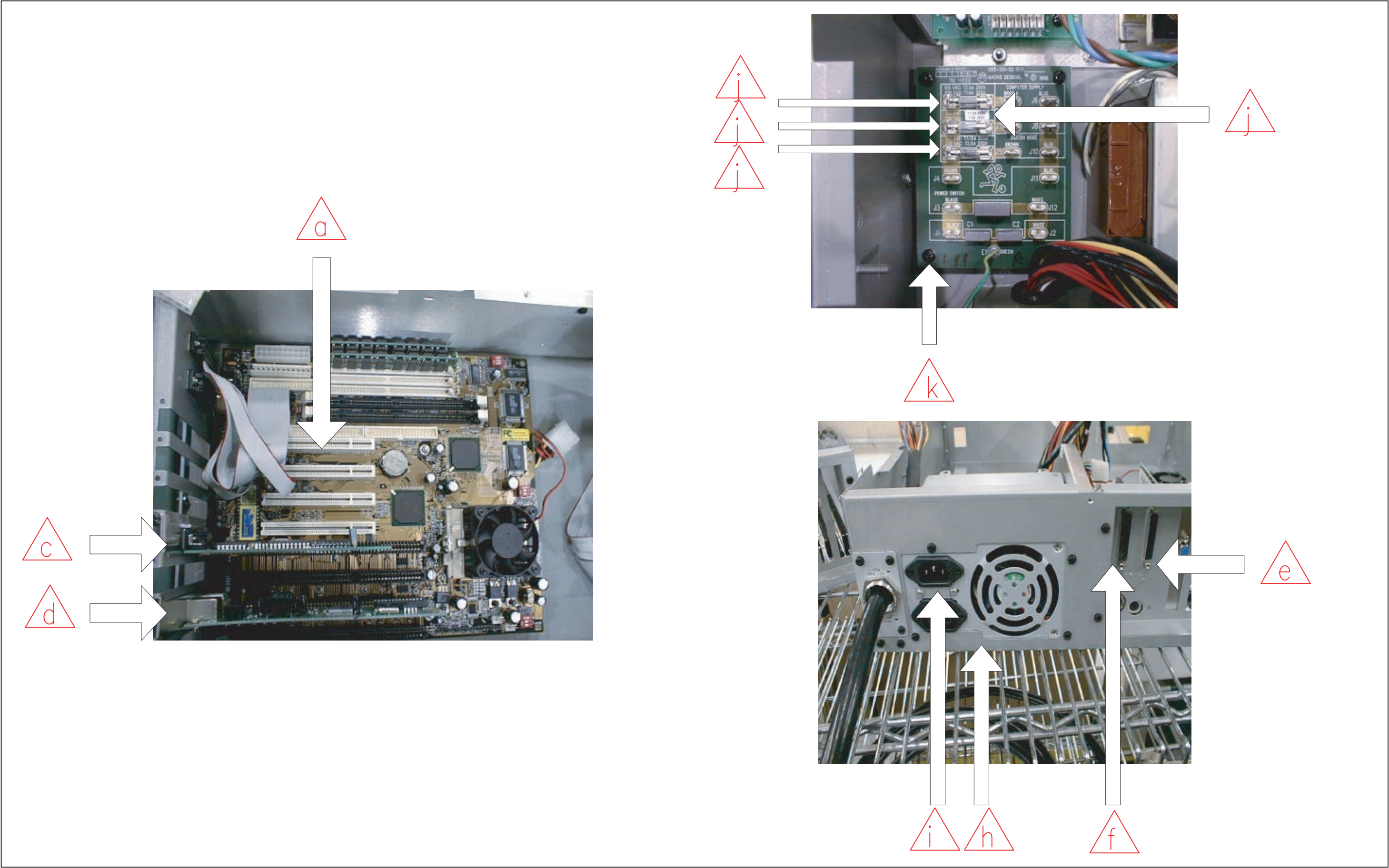


REF #	PART	PART NBR	CREV	QTY
①	OEM PCB VIDEO 64 BIT	480-005-00	A1	1
②	SEM B 6x3/8 PHP BLKZC	701-001-00		3
③	OEM MIDI CARD - D8	480-025-00	A1	1
④	OEM ETHERNET CARD	480-026-00	A1	1
⑤	RIB 28GA 26C DSUB 7.75"	040-282-00		1
⑥	WASHER SPLITLOCK NO. 4	710-008-00		4
⑦	STDF 4-40x.25 JACKSCREW	706-017-00		4
⑧	RIB 28GA 20C 7.5M DSUB	040-276-00		1
⑨	SA DC PWR SPLY D8	080-124-00		1
⑩	SEMS 6-32x1/4 PHP BLKZC	700-028-00		8
⑪	FAB PLATE CVR VOLT SW	550-390-00		1
⑫	PCB ASSY POWER DIST D8 PWR	055-201-00-01	A1	1
⑬	FUSE SB 2.5A 5x20 250V UL	510-029-00		1
⑭	FUSE SB 1A 5x20MM 250V UL	510-001-00		1
⑮	FUSE SB 3.15A 5x20MM 250V UL	510-026-00		1
⑯	LBL FUSE 1.0/.5A 250V	840-171-00		1
⑰	SA PWR SW W/CBLS - D8	080-108-00	A1	1

- SEQ. TASK
- △ Place the VIDEO CARD ① into the PCI1 slot (first long slot from the memory) on the mother board. Screw plate into top of CARD RACK using ② (1x)
 - △ Configure JUMPERS on MIDI CARD ③. Positions P and 10 should both be on (both jumper pins covered).
 - △ Place MIDI CARD into Mother Board position SL1/SL5. Screw plate into top of card rack using ② (1x).
 - △ Place ETHERNET CARD ④ into Mother Board position SL3/SL7. Screw plate into top of CARD RACK using ② (1x).
 - △ Mount Parallel Port Cable ⑤ to Card Rack using Washers ⑥ (2x) and Nuts ⑦ (2x). TIGHTEN BY HAND. Plug into Mother Board Parallel Port PRN1. PIN 1 must be toward the CARD RACK. **Mount in hole farthest from Shield**
 - △ Mount Internal Data Cable ⑧ to Card Rack using Washers ⑥ (2x) and Nuts ⑦ (2x). TIGHTEN BY HAND. Plug into Mother Board. Cable with PIN 1 (toward bottom) plugs into COM1 on Mother Board with PIN 1 toward the Card Rack. Second half of the cable plugs to COM 2 on the Mother Board with PIN 1 toward CARD RACK.

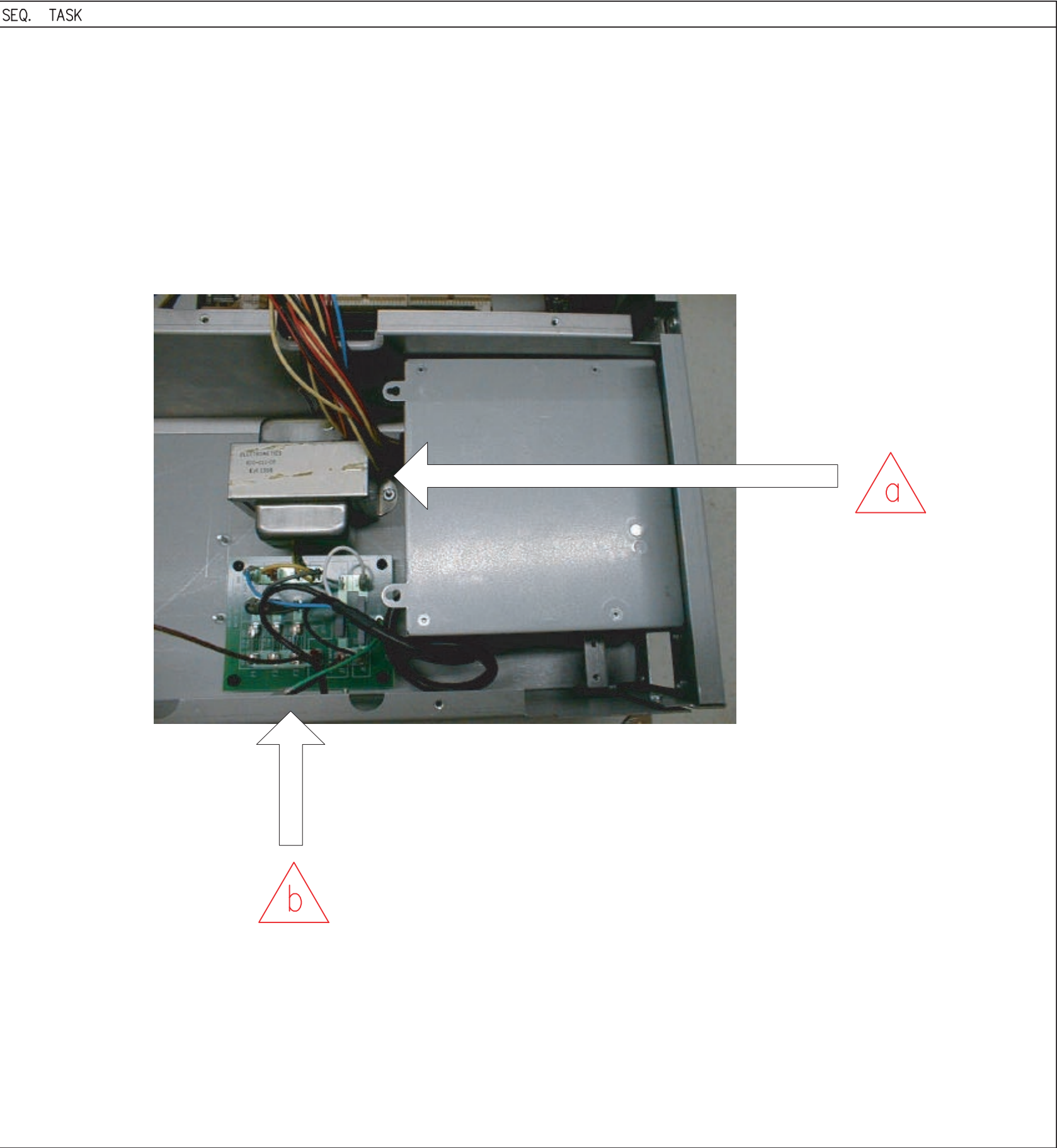
- SEQ. TASK
- g Remove Power Switch from Computer Power Supply ⑨ . Shake PWR SPPLY and listen for loose parts
 - △ Mount Computer Power Supply to Rear of Chassis using Screws ⑩ (4x). MAKE SURE SWITCH IS ON 115V OPTION
 - △ Attach Power Switch Cover Plate ⑪ to REAR of Comp. Power Supply using supplied hardware
 - △ Place proper fuses in Dist. Board ⑫ . Position F1 ⑬ . Position F2 ⑭ . Position F3 ⑮ and place labels on board. Place Label ⑯ in pos. F2 over Silkscreen
 - △ Mount Pwr Dist Board to Bottom of Chassis using Screws ⑩ (4x) with E1 toward computer power supply.
 - l Slide Power Switch Assy ⑰ Wires through cutout in chassis. Push Power Switch in until it snaps on both TOP and BOTTOM. LED MUST BE TOWARD BOTTOM of unit if switch is grey, and towards TOP of unit if switch is black.
 - m Connect cables from Power Switch to the Power Dist. Board. BLUE to Pos. J11, BROWN to Pos. J4, White to Pos. J12, and BLACK to Pos. J3.

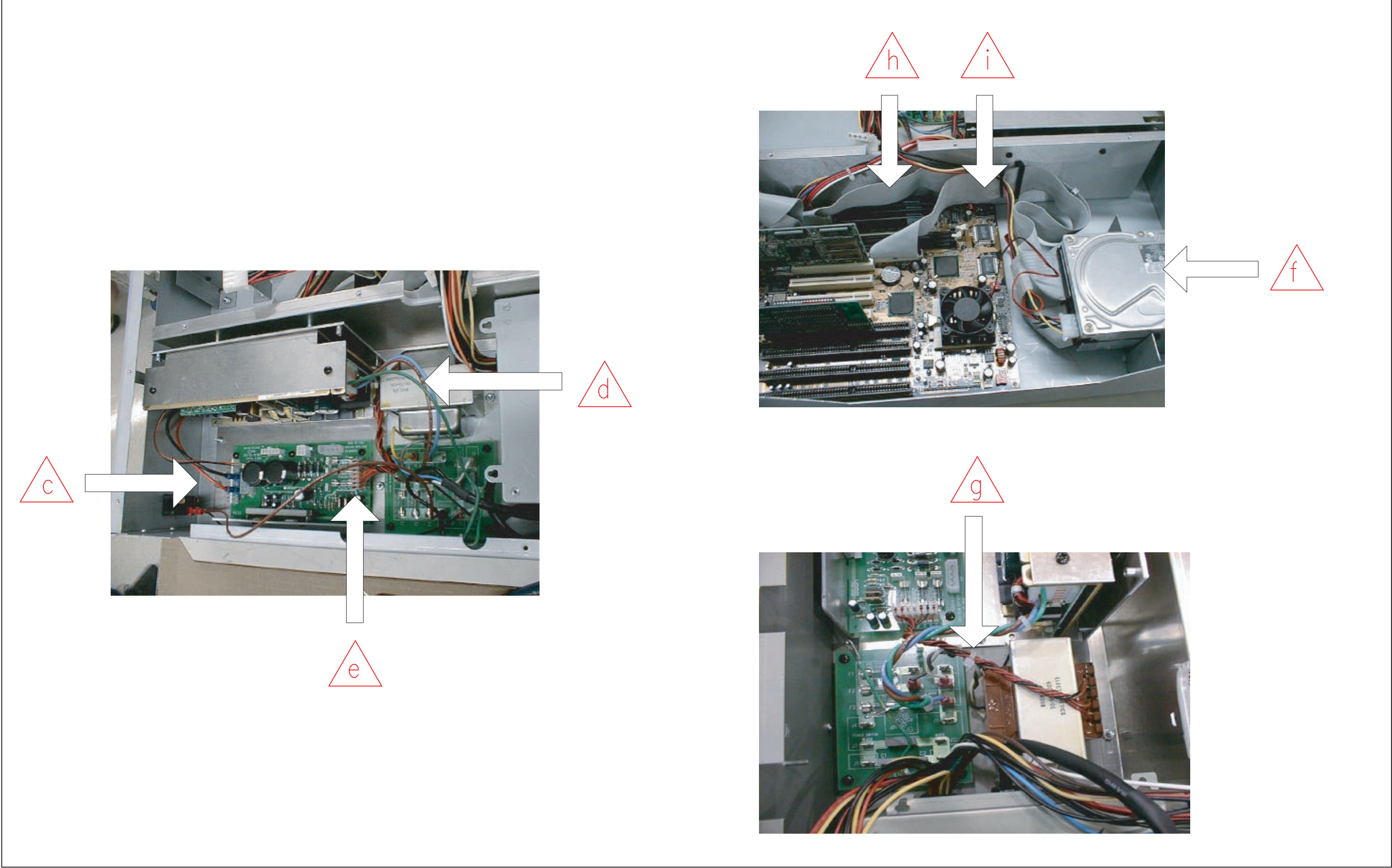




REF #	PART	PART NBR	CREV	QTY
①	SEMS 6-32x1/4 PHP BLKZC	700-028-00		2
②	SA XFMR 120V CE D8	080-107-00	A1	1
③	KEPNUT 6-32	705-001-00		10
④	SA LINEAR SUPPLY - D8	080-036-00	A1	1
⑤	SA HARD DRIVE/FLOPPY DR - D8	080-109-00	B1	1
⑥	RIB 28GA 34C 23' PLZD	040-139-00		1
⑦	RIB 28GA 40C 19' PLZD	040-140-00		1
⑧	TYWRAP 3-1/4L	740-001-00		1

- SEQ. TASK
- a** Mount Transformer Assy ② to Bottom of Chassis on STUDS using NUTS ③ (2x)
The Primary Leads (discrete wires) must be positioned toward the Power Dist. Board.
 - b** Twist primary wires of xfmr and plug them into the Pwr Dist. Board. YELLOW to Pos. J8, GREY to Pos. J7.
 - c** Mount Linear Pwr Supply Sub Assy ④ to the Chassis Bottom and Shield using nuts ③ (4x) and Screws ① (2x).
 - d** Plug BLU/BRN Cables from 5V PWR SPLY to positions J9 & J10 of Pwr Dist Board.
 - e** Twist Secondary Leads (with Panduit Connector) of transformer and plug to position J1 on the Linear Pwr Sply
 - f** Mount Floppy and Hard Drive Sub Assy ⑤ to the Chassis Bottom using ③ (4x).
Make sure the assembly is pushed all the way forward before tightening!
 - g** Tyrap xfmr secondary leads to primary leads using ⑧ (1x) about 2" from the 5V switching supply so that the secondary leads CAN NOT touch the Power Dist. Board.
 - h** Plug NON-TWISTED end of Floppy Drive Cable ⑥ to Floppy Control Port (FDC1) on the mother board. ORIENTATION: PIN 1 must position toward REAR of Chassis. Plug twisted end to floppy drive with PIN 1 TOWARD the Center of the Floppy Drive.
 - i** Plug the Hard Drive Cable ⑦ to position IDE1 on the Mother Board with PIN 1 toward the rear of the chassis. Plug the other end to the Hard Drive with PIN 1 toward the Center of the Hard Drive.



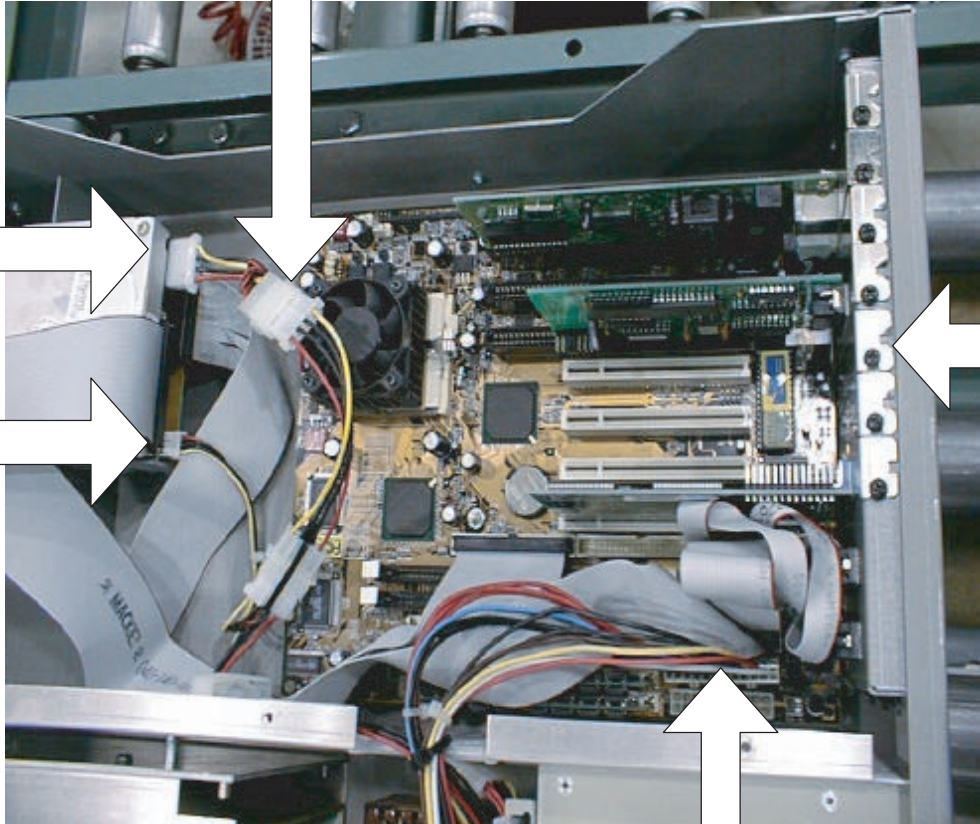


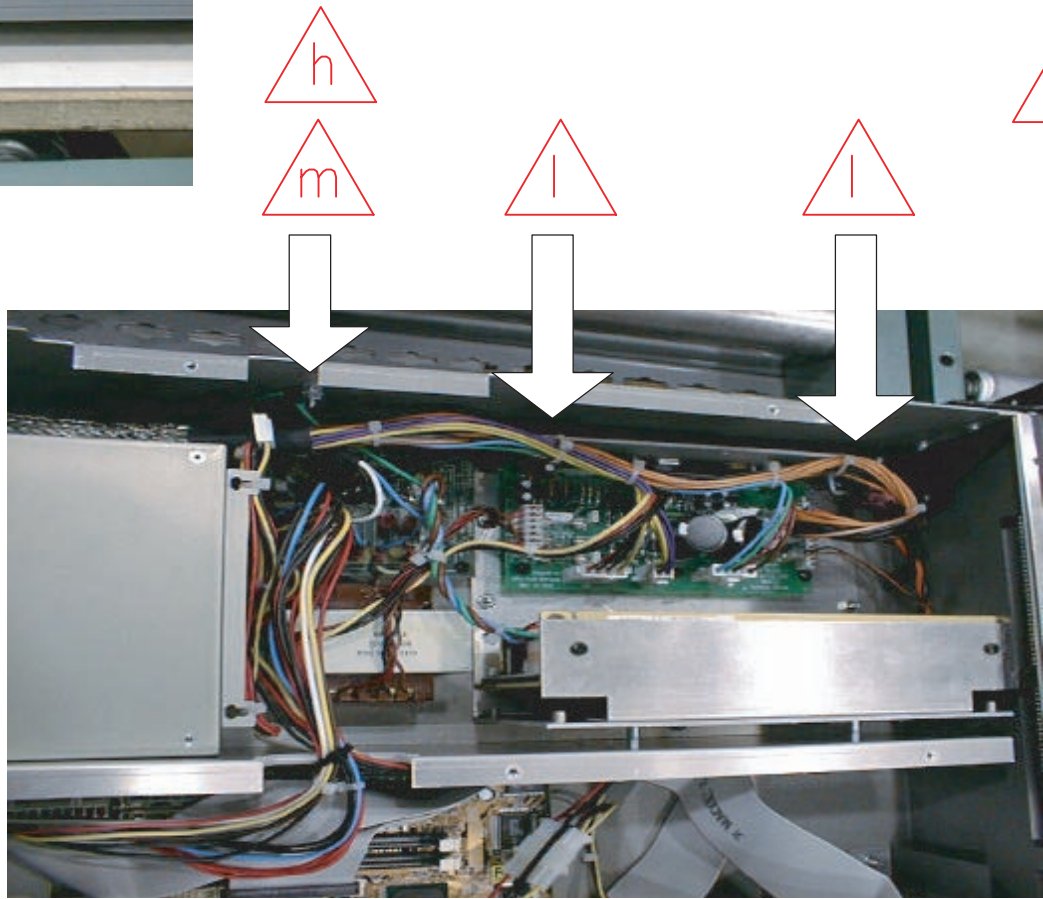
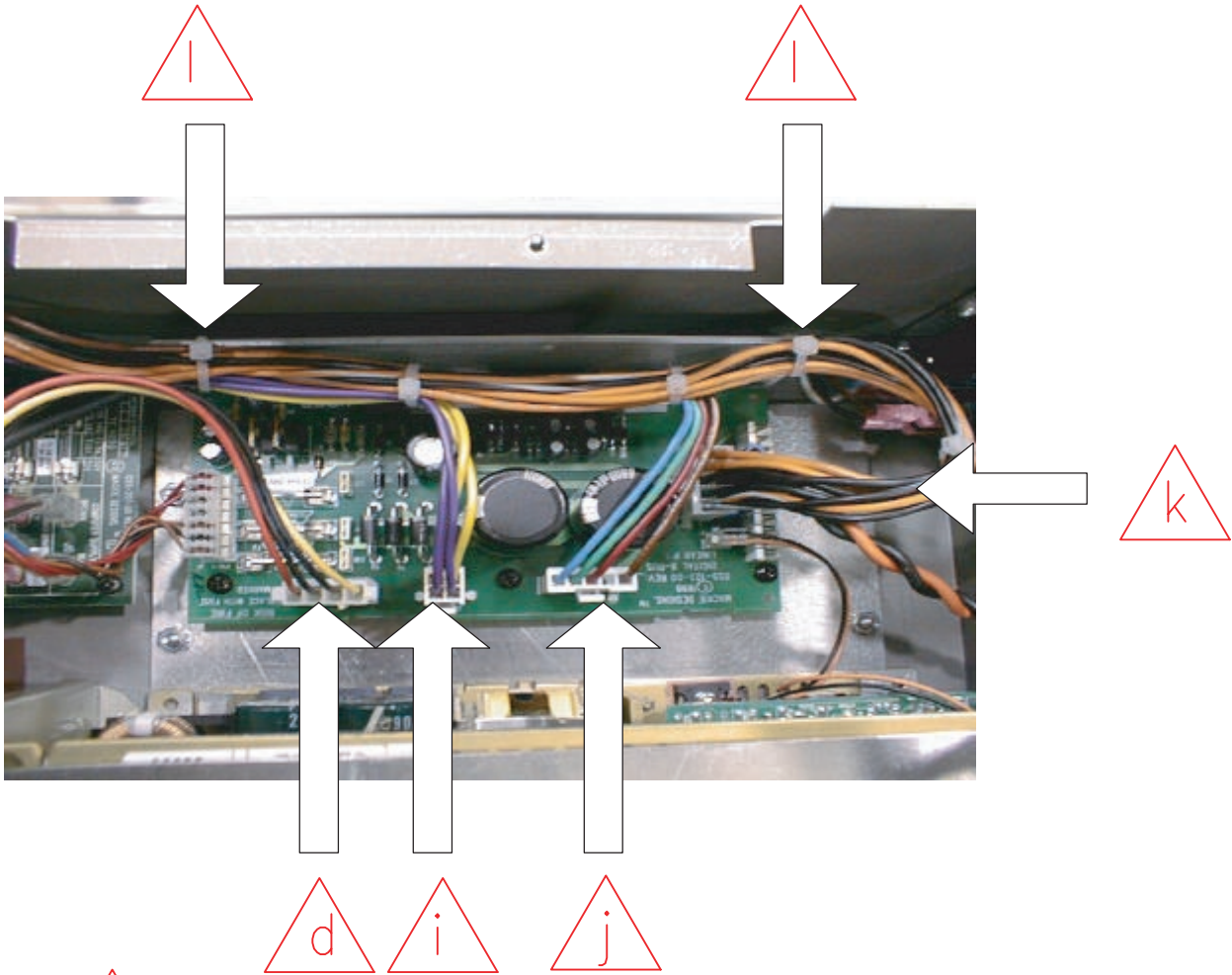
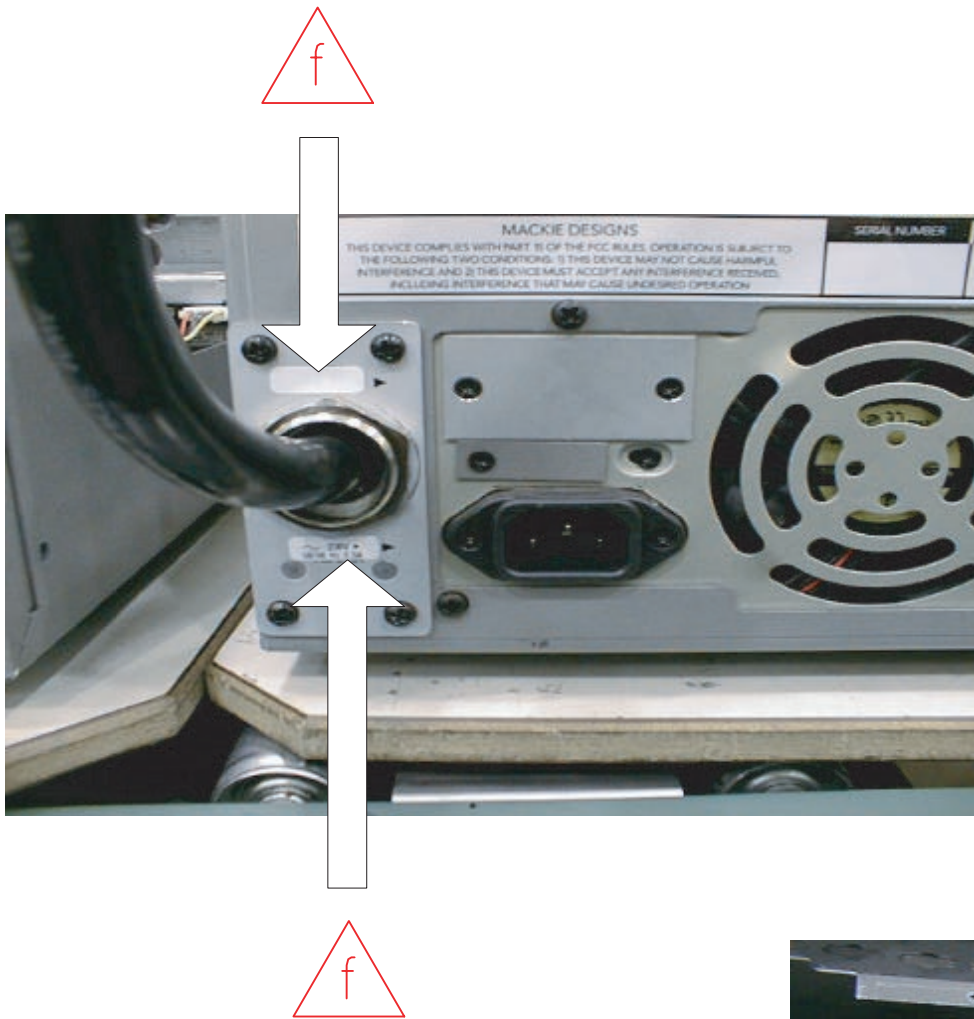
REF #	PART	PART NBR	CREV	QTY
①	CBL DC PWR BRDSHLD D8 PWR	040-294-00		1
②	SEMS 6-32x1/4 PHP BLKZC	700-028-00		4
③	KEPNUT 6-32	705-001-00		2
④	BRKT BLANK PORT	480-024-00		4
⑤	SM B 6x3/8 PHP BLKZC	701-001-00		4
⑥	LBL BLANK .75x.25	840-169-00		1
⑦	LBL 120V D8	840-182-00		1
⑧	TYWRAP 3-1/4I	740-001-00		2

- SEQ. TASK
- ⚠️ Plug the Power Connection Cables with SOLID WHITE CONNECTORS (P8&P9) from the Computer Power Supply to position J2 on the Mother Board.
ORIENTATION: ORANGE WIRE TOWARD REAR AND ALL BLACK WIRES IN MIDDLE
NOTE: THE MOTHER BOARD WILL BE RUINED IF THIS IS WRONG
 - ⚠️ Gather one wire bundle from Computer Power Supply that has 1 LARGE and 1 SMALL WHITE CONNECTOR. Plug LARGE CONNECTOR to Microprocessor Fan. Plug SMALL CONNECTOR to LEFT REAR of FLOPPY DRIVE with RED LEAD toward center.
 - ⚠️ Plug remaining cable on Microprocessor Fan to RIGHT REAR of Hard Drive with YELLOW LEAD toward Disk Drive Bracket.
 - ⚠️ Gather Wire Bundle from Computer Power Supply that has 2 LARGE CONNECTORS. Cut off the end connector as CLOSE AS POSSIBLE to the first connector and plug to Pos. J200 of the Linear Power Supply.
 - e Feed all stripped and terminated DC Pwr Cables ① Wires through hole by Computer Power Supply on REAR of Chassis
 - ⚠️ Screw down plate surrounding DC Power Cable using ② (4x). Place Label ⑥ over Top Silkscreen. Place label ⑦ over Bottom silkscreen on plate.
 - g Attach Power Cable (BLACK CABLE) from Computer Pwr Supply to Power Dist. Board. Plug WHITE LEAD to Pos. J2, BLACK to Pos. J1, BLUE to Pos. J6, BROWN to Pos. J5
 - ⚠️ Attach remaining black wire from Computer Power Supply to Chassis Grounding Post on side and tighten using ③ (1x)
 - ⚠️ Attach PURPLE and YELLOW wires from the DC POWER CABLE to position J2 on the LINEAR POWER SUPPLY BOARD.
 - ⚠️ Attach BLUE/RED/BROWN wires from the DC POWER CABLE to position J3 on the LINEAR POWER SUPPLY BOARD

SEQ. TASK

- ⚠️ Attach ORANGE and BLACK wires from the DC POWER CABLE to pos. J2 on the Linear Power Supply Board.
- ⚠️ Tyrap DC Power Cable at FRONT and BACK of the Heatsink Bracket using ⑧ (2x), so that it CAN NOT touch the Power Dist. Board.
- ⚠️ Attach GREEN WIRE from 5V Supply to GROUNDING STUD and then place the green wire from the Pwr Dist Board over the TOP of it and attach Nut ③.
- ⚠️ Mount BLANK PORT BRACKETS ④ (4x) over BLANK SLOTS on CARD RACK using screws ⑤ (4x). Make sure all slots are fully covered and plates are touching edges.





REV #	PART	PART NBR	CREV	QTY
①	FLT CBL CLMP NYL LOCK 40C	740-023-00		1
②	TYWRAP 8" BLACK	740-003-00		1
③	TYWRAP 3-1/4L	740-001-00		3
④	LABL KEYBOARD/MOUSE D8	840-177-00		1
⑤	LBL PATENT/TRADEMARK D8	840-210-00		1
⑥	LBL SN/DATECODE/FCC	840-208-00		1
⑦	LBL ESD D8	840-183-00		1
⑧	SCR FNT PANEL D8 PWR SPLY	550-385-00		1
⑨	SIDE D8 PWR SPLY	550-356-00		2
⑩	SEMS 10-32x3/8 PHP BLKZC	700-045-04		6

- SEQ. TASK
- a

Tuck power cabling (large black wire) from the Computer Power Supply next to the Computer Power Supply
- b

Attach CABLE CLAMP ① to SHIELD on MOTHER BOARD SIDE. Should be placed with the open end toward the top.
- c

Fold FLOPPY DRIVE CABLE so that it doesn't cross over the MOTHER BOARD more than necessary and route it through the clamp
- d

Fold HARD DRIVE CABLE so that it doesn't cross over the MOTHER BOARD more than necessary and route it through the clamp
- e

Route cables from the COMPUTER POWER SUPPLY that plug to the FAN, HARD DRIVE and FLOPPY DRIVE through the CLAMP and close the clamp.
- f

Gather wires from Computer Power Supply that connect to the Mother Board SIDE of the unit and TYWRAP them to the shield using ② (1x).

LEAVE VERY LITTLE SLACK IN WIRES ON MOTHER BOARD SIDE OF THE UNIT
- g

Gather the 2 unattached cable assemblies from the Computer Power Supply. Fold them once and TYWRAP them to the MOUNTS on the Comp. Pwr Supply using ③ (2x)
- h

Push cabling from Power Switch against Chassis Bottom in between Heatsink Bracket and side of chassis
- i

Gather all transformer wiring, Blue/Brown/Green 5V wiring, and DC Power Supply wiring going to J200 on the linear power supply board and tyrap them together 2" from the 5V Supply using ③ (1x).
- j

Place Keyboard/Mouse Label ④ on REAR of Card Rack

- SEQ. TASK
- k

Place Patent/Trademark Label ⑤ on REAR of Card Rack
- l

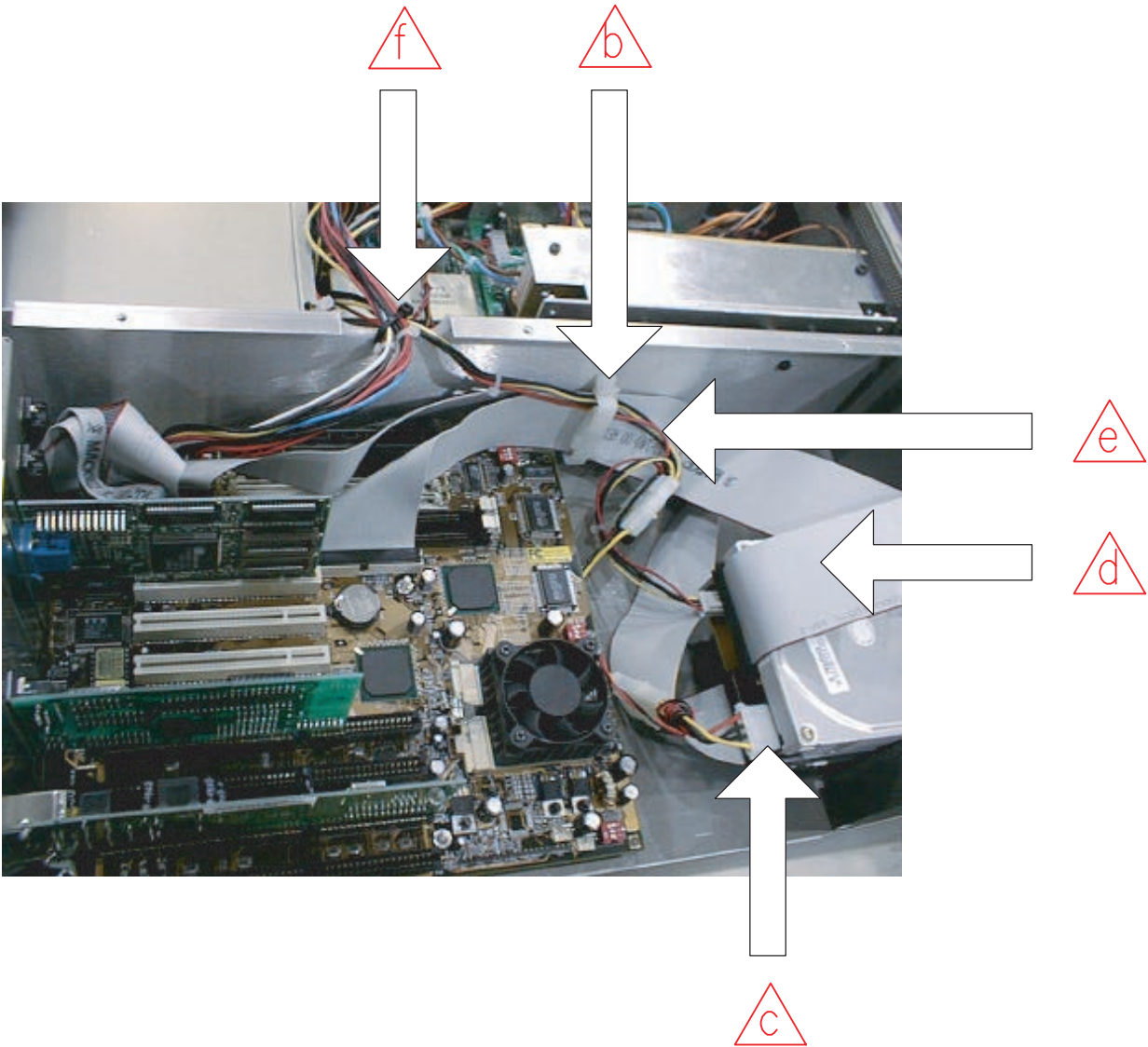
Place SN/Datecode/FCC Label ⑥ on REAR of Card Rack on horizontal surface at bottom of card rack.
- m

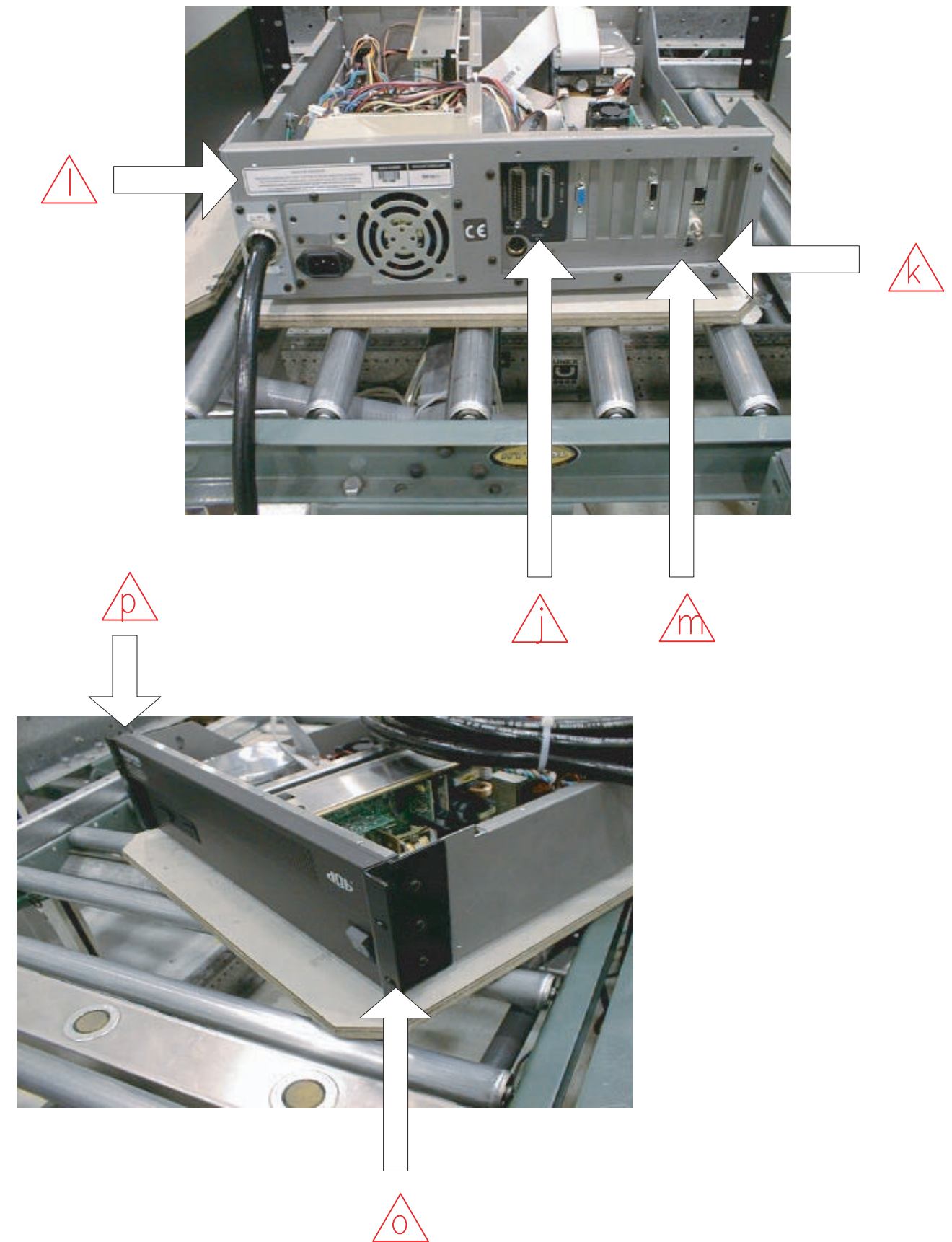
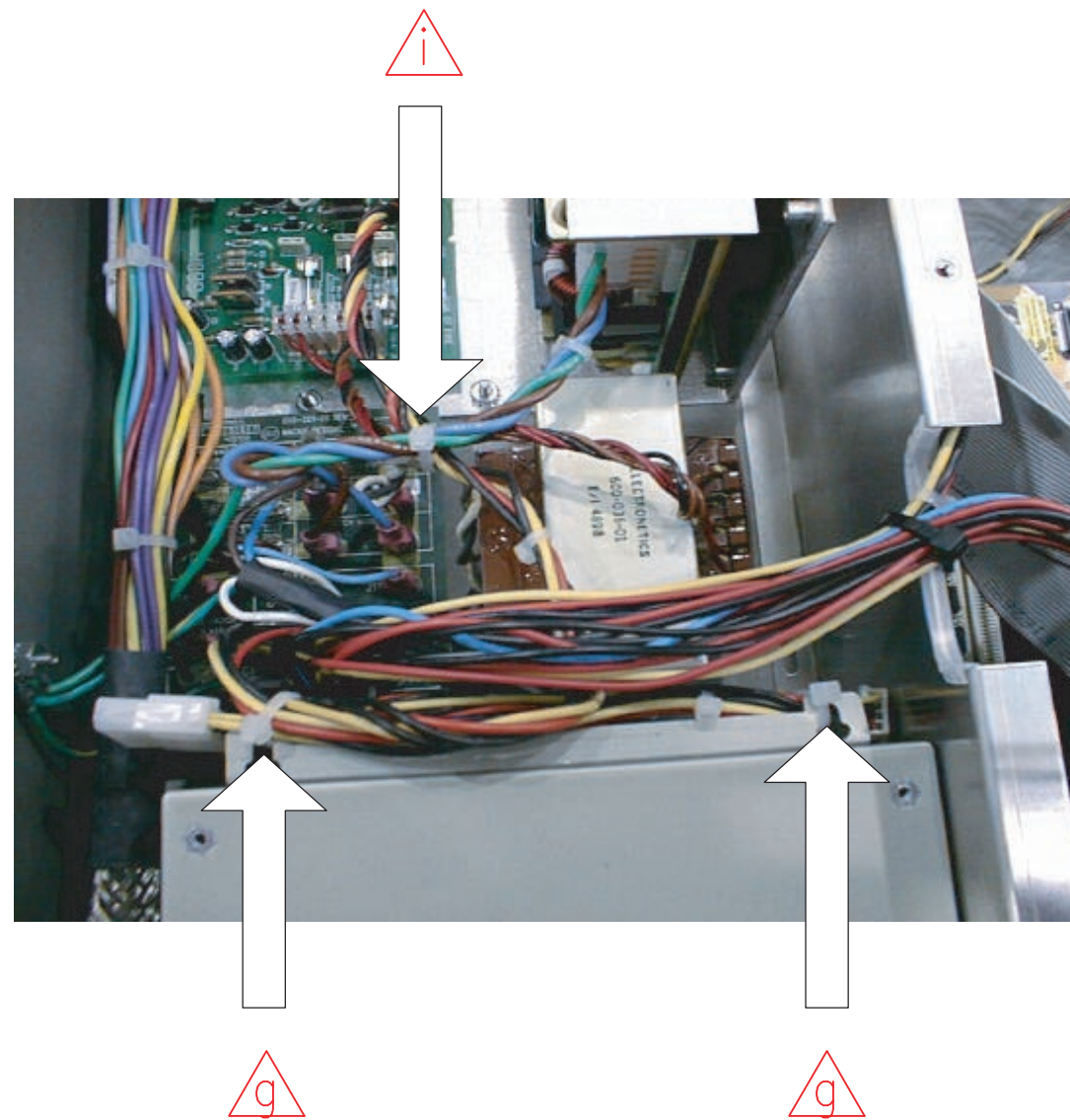
Place ESD label ⑦ on rear of card rack under BNC connector on ethernet card.
- n

Hold FRONT PANEL ⑧ up to front of chassis
- o

Mount the RIGHT SIDE PANEL ⑨ to the FRONT of the right side of the unit over the ⑩
- p

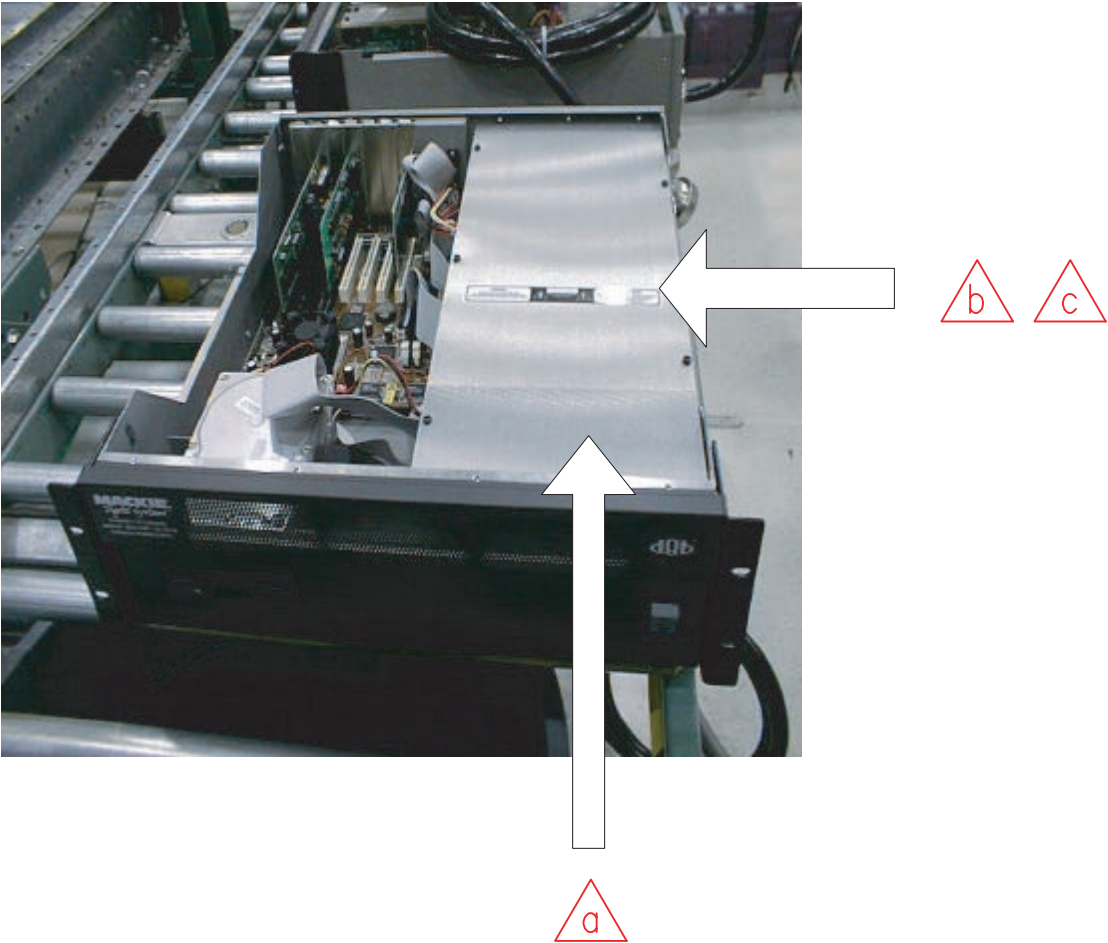
Mount the LEFT SIDE PANEL ⑨ to the FRONT of the LEFT SIDE of the unit over ⑩





REV #	PART	PART NBR	CREV	QTY
①	PNT TOP D8 PWR SUPPLY	550-452-00		1
②	SEMS 6-32x3/8 PHP BLKZC	700-028-02		8
③	BOX POWER SUPPLY	800-085-00		1
④	BAG POLY 20x7x30 4 MIL	790-011-00		1
⑤	FOAM ENDS POWER SUPPLY	810-074-00		2
⑥	SEMS 6-32x1/4 PHP BLKZC	700-028-00		15
⑦	COMPUTER WARNING SHEET	091-161-00		1
⑧	INST TRAY POWER CABLE D8	810-081-00		1
⑨	BAG POLY 20x30 4 MIL	790-001-00		1
⑩	FAB CAGE COVER D8	550-384-00		1
⑪	LABEL "NOT SERVICEABLE"	840-209-00		1
⑫	LABEL CE WHITE	840-204-00		1
⑬	DUST COVER 25P DSUB FEM	760-128-00		1
⑭	DUST COVER 25P DSUB MALE	760-129-00		1
⑮	DUST COVER 15HD/9P DSUB F	760-130-00		2
⑯	REAL TIME OS 2.0 LABEL	091-200-00		1

SEQ.	TASK
	Complete a visual inspection of the unit. Verify hardware and cabling. Verify there is no damage to the unit. Test the unit following the TEST PROCEDURE ① Complete a 15 minute burn-in of the unit while running MOTHER BOARD TEST Test the unit a second time. Plug the REMOTE CPU into the sample unit on the line and verify that there is communication between the two units by moving faders on console and watching to make sure computer screen updates. Then move faders on screen using mouse and make sure console updates. <u>VISUALLY INSPECT UNIT FOR CABLING, HARDWARE AND DAMAGE!</u> △ Mount the CAGE COVER ⑩ to the TOP of the unit using ⑥ (5x) Mount over the POWER PORTION of the unit △ Clean CENTER AREA OF CAGE COVER with alcohol △ Place "NO USER SERVICEABLE PARTS" LABEL ⑪ on CENTER of COVER facing the FRONT of the unit. △ Slide TOP PANEL ① over unit and mount it using SCREWS ② (8x) on SIDES and SCREWS ⑥ (4x) on TOP and ⑥ (6x) on REAR. Place Dust Cover ⑬ over the Parallel Port Connection Place Dust Cover ⑭ over the Data Cable Connection Place Dust Covers ⑮ (2x) over the Video Port Connention and the Midi Connection



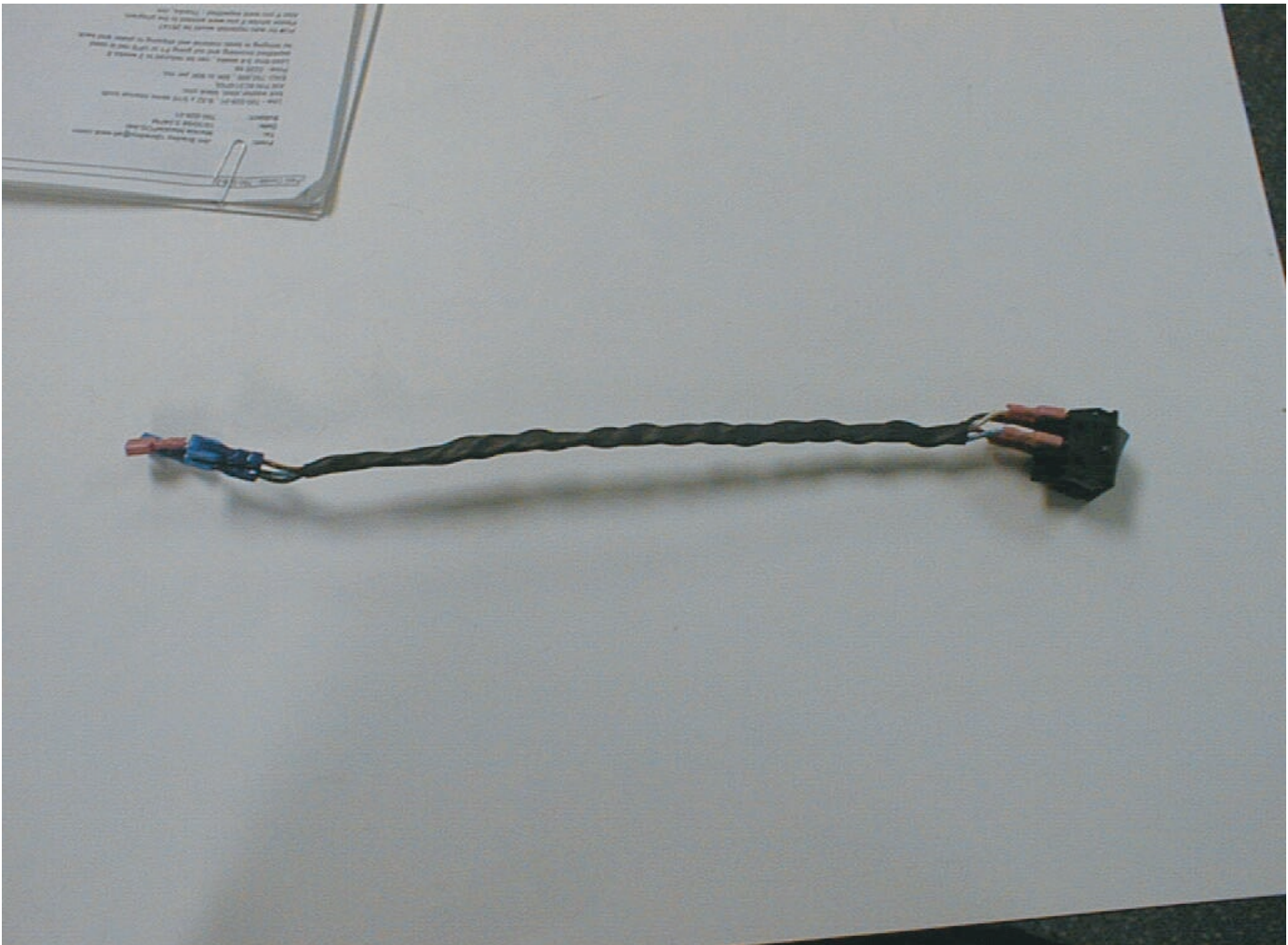
REF #	PART	PART NBR	CREV	QTY
①	SW DPST PWR RCKR W/LED	500-040-00		1
②	DIS 18GA 1010 WHT 14 QDx2	040-287-00		1
③	DIS 18GA 1010 BLK 14 QDc2	040-286-00		1
④	DIS 18GA 1010 BLU 14 QDx2	040-248-00		1
⑤	DIS 18GA 1010 BRN 14 QDx2	040-288-00		1
⑥	TYWRAP 3-1/4L	740-001-00		2
⑦	HEATSHRINK TUBE 2:1 .501D	740-011-00		2

SEQ. TASK

- a Hold Pwr Switch ① with LED toward bottom and terminals facing you
- b Connect Cable ② to bottom left of switch
- c Connect Cable ③ to bottom right of switch
- d Connect Cable ④ to top left of switch
- e Connect Cable ⑤ to top right of switch
- f Tywrap ⑥ 1/2" from terminals on Power Switch end
- g TWIST all 4 wires together approx. one full rotation per 1" (10 TWISTS)
- h Tywrap ⑥ 2" from terminals on open end
- i Cover ENTIRE TWISTED AREA of wires with Heatshrink ⑦ and shrink it

BACK OF SWITCH

BLANK	BLANK
BLU	BRN
WHT	BLK



POWER SUPPLY SUB ASSEMBLY				
REF #	PART	PART NBR	CREV	QTY
①	SW POWER SPLY ASTEC 5V 22A	480-027-00		1
②	FAB BRKT HTSNK LINEAR SUPPLY	550-418-00		1
③	TF 6-32x3/8 FL 100 DG BLK	700-086-00		2
④	FAB BTKT HTSNK ASTEC D8PW	550-401-00		1
⑤	SEMS 6-32x1/4 PHP BLZNC	700-028-00		7
⑥	INSL SILPAD .007 SELF ADHESIVE	410-002-00		2
⑦	PCB ASSY LINEAR SPLY - D8	055-123-00-01	A1	1
⑧	HTSK BRKT POWER DIST - 40.8	550-198-00		1
⑨	SEMS 6-32x1/2 PHP BLKZC	700-028-03		2
⑩	DIS 18GA BRN/BLU .156 7.5	040-284-00		1
⑪	DIS 26GA 2C 2MM/.100 6.5	040-285-00		1
⑫	ADHESIVE RTV 162	730-026-00		A/R
⑬	SA TWISTED PAIR LINEAR SP	080-110-00		1

- SEQ. TASK
- a

Mount 5V Switching Power Supply ① to the Heatsink Bracket ② using Screws ③(2x) SCREW FROM BOTTOM.

b

Mount ASTEC BRACKET ④ to top and back of 5V supply using ⑤ (4x).

c

Mount SIL PADS ⑥ to the back of regulators on Linear Power Supply Board ⑦.

NOTE: WHOLE SURFACE MUST BE COVERED!

d

Place the LINEAR POWER SUPPLY BOARD on the Larger Heatsink Bracket and tighten using SCREWS ⑤ (3x)

e

Place Small Heatsink Bracket ⑧ behind regulators on Linear Power Supply Board and tighten using Screws ⑨(2x)

f

Connect Cable ⑩ to position SK4 on 5V Power Supply and leave hanging

g

Connect Cable ⑪ to position SK1 on 5V Power Supply with the black lead toward the the top of the bracket, TWIST the wire a number of times, then plug to position J4 on the Linear Supply board.

Then RTV ⑫ the Connector where it mates with the 5V supply.

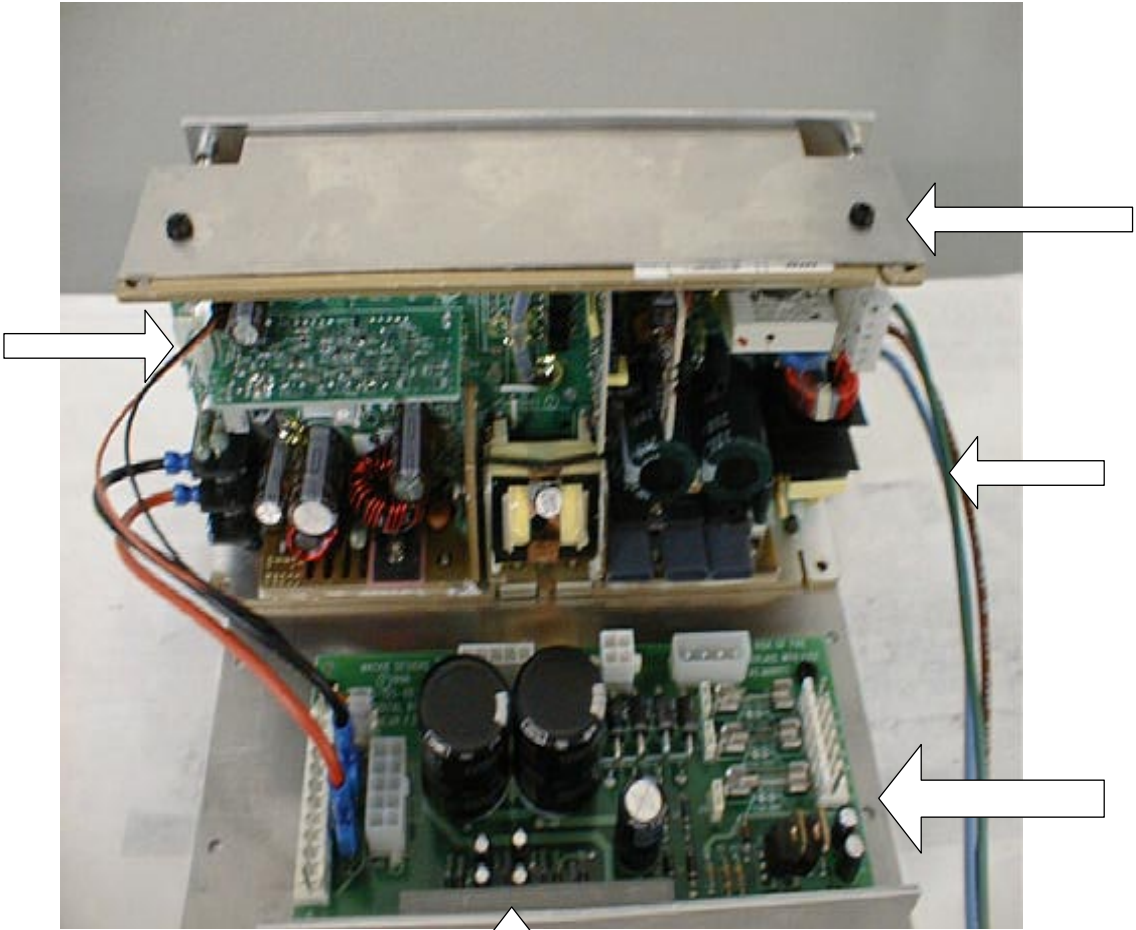
h

Connect Cable ⑬ (BLK) to SK3 PIN 1 of the 5V supply then to position J5 on the linear supply board.

i

Connect Cable ⑬ (ORG) to SK3 PIN 2 of the 5V supply then to position J6 on the linear supply board.

g



a b

f

d

e

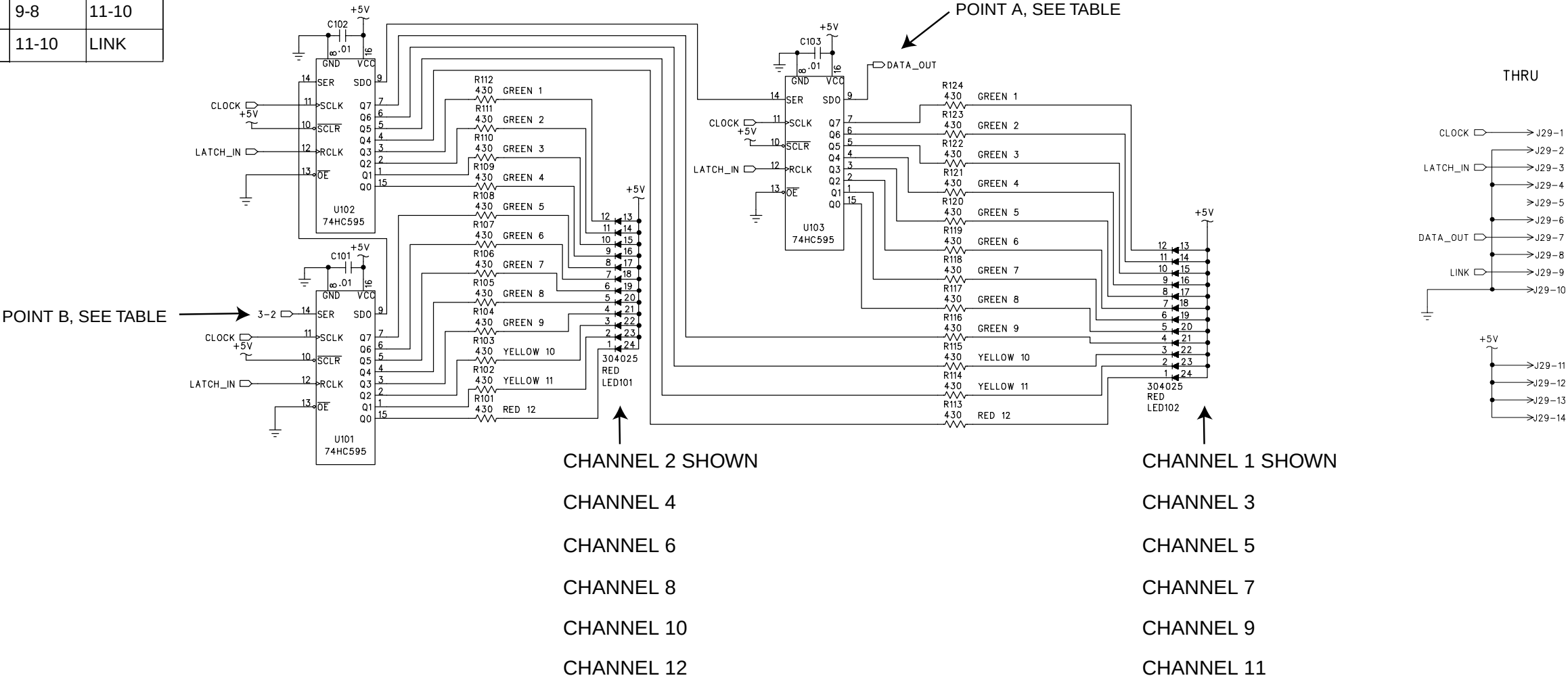
DWG. NO.	990-108-00	SHT	1	REV:	5	1	
ECO#	REV:	DESCRIPTION			REV. BY:	APP. BY:	DATE

REFERENCE DESIGNATOR AND LABEL DIFFERENCES
BETWEEN CHANNELS

CHANNEL	PARTS RANGE	EXAMPLE	POINT A	POINT B
1&2	IN THE 100'S	R103, U102	DATA OUT	3-2
3&4	IN THE 200'S	R203, U202	3-2	5-4
5&6	IN THE 300'S	R303, U302	5-4	7-6
7&8	IN THE 400'S	R403, U402	7-6	9-8
9&10	IN THE 500'S	R503, U502	9-8	11-10
11&12	IN THE 600'S	R603, U602	11-10	LINK

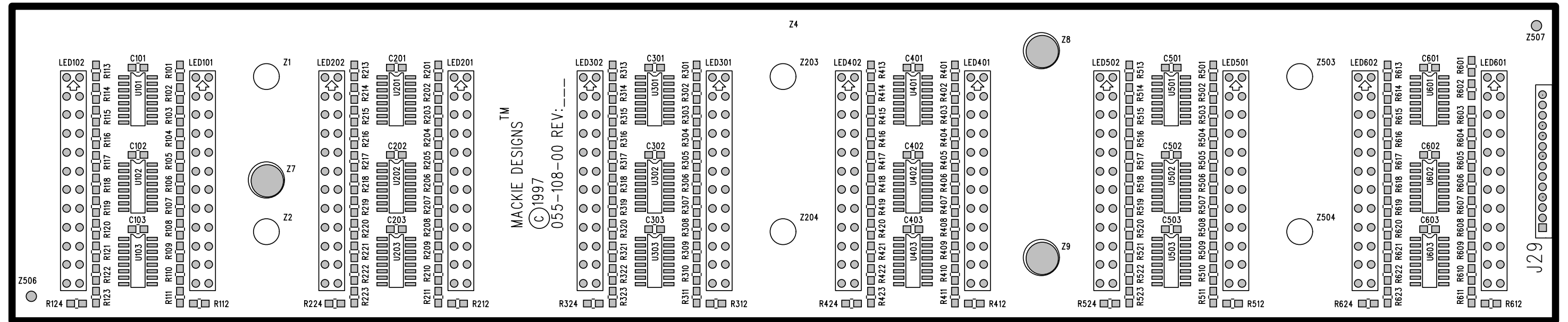
(CH 1&2 SHOWN)

CH1 TO CH 12 ALL HAVE THE SAME
CIRCUIT DESIGN, THIS IS CH 1 AND CH2



450-108-00
PCB, DIGITAL 8-BUS, MIC METERS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ±NA .XX ±.01 ±.NA .XXX ±.005 MATERIAL: SEE NOTES FINISH: SEE NOTES DO NOT SCALE DRAWING	APPROVALS		DATE	
	DRAWN: trh		12-11-96	
	CHECKED: AYES			
	NP ENG:			
	MATERIAL:			
	MFG:			
	MFG ENG:			
	ISSUED:			
	SIZE		SCALE:	
	D		NONE	
DWG. NO.		REV.		
990-108-00		5		
DWG FILE:		1 SHEET		



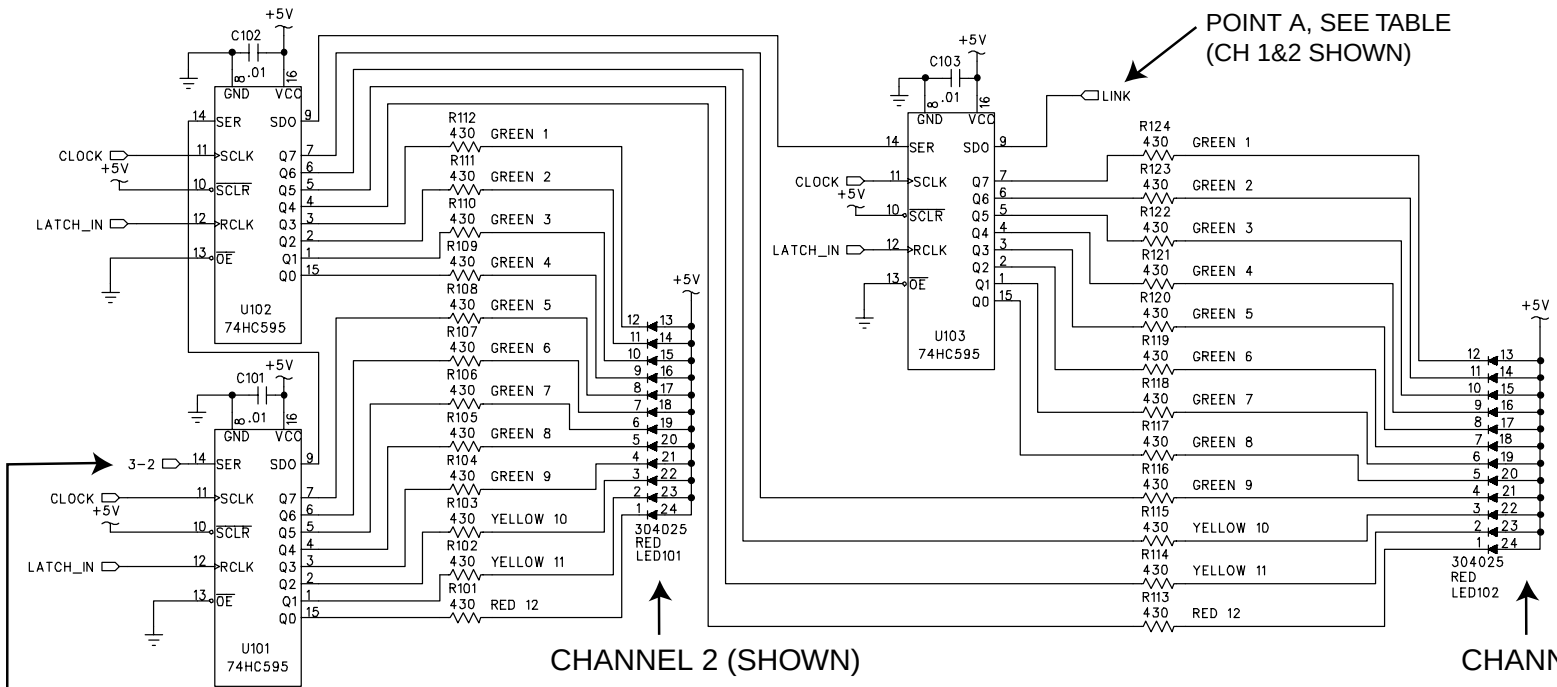
DWG. NO.	990-109-00	SHT	1	REV:	5	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	

REFERENCE DESIGNATOR AND LABEL DIFFERENCES BETWEEN CHANNELS

CHANNEL	PARTS RANGE	EXAMPLE	POINT A	POINT B
1&2	IN THE 100'S	R103, U102	LINK	3-2
3&4	IN THE 200'S	R203, U202	3-2	5-4
5&6	IN THE 300'S	R303, U302	5-4	7-6
7&8	IN THE 400'S	R403, U402	7-6	9-8
9&10	IN THE 500'S	R503, U502	9-8	11-10
11&12	IN THE 600'S	R603, U602	11-10	L-12
MASTER L & RIGHT	IN THE 700'S	R703, U702	L-12	7SEG-R

CH1 TO CH 12 ALL HAVE THE SAME CIRCUIT DESIGN, THIS IS CH 1 AND CH2

POINT A, SEE TABLE (CH 1&2 SHOWN)



CHANNEL 2 (SHOWN)

CHANNEL 4

CHANNEL 6

CHANNEL 8

CHANNEL 10

CHANNEL 12

MASTER RIGHT

CHANNEL 1 (SHOWN)

CHANNEL 3

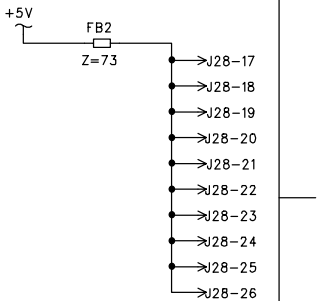
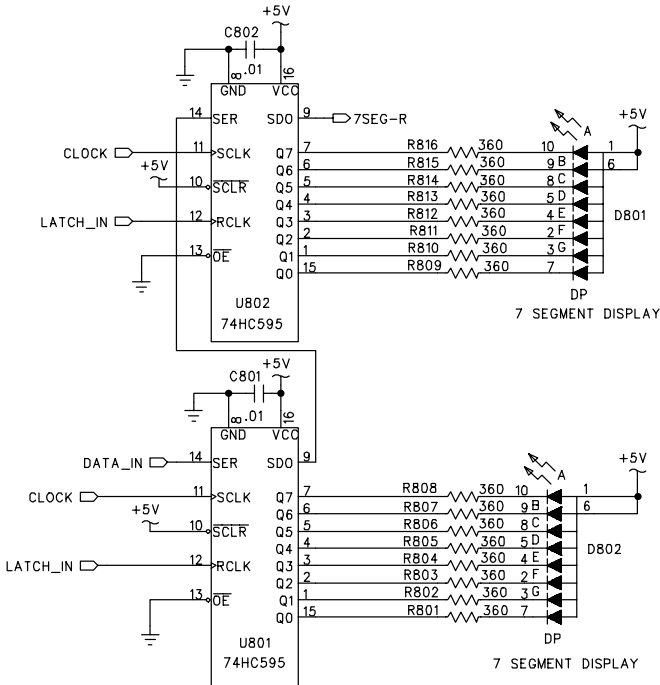
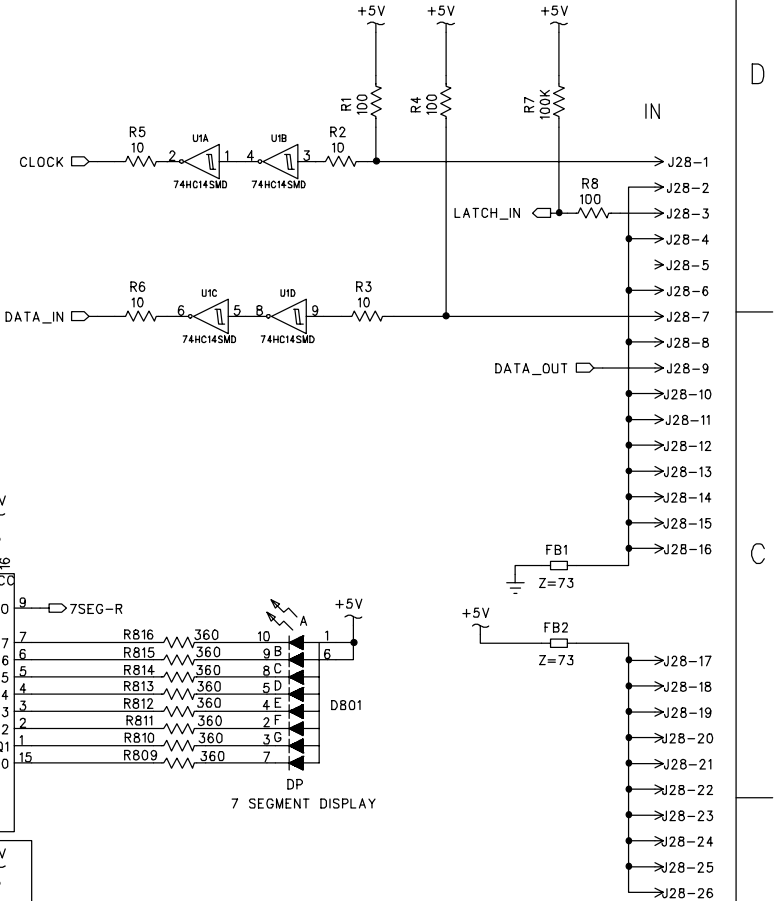
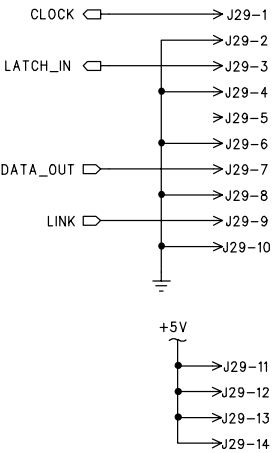
CHANNEL 5

CHANNEL 7

CHANNEL 9

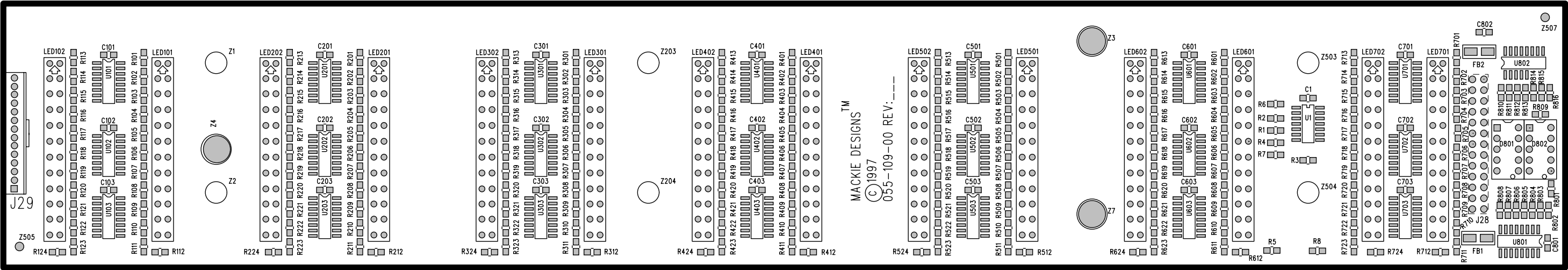
CHANNEL 11

MASTER LEFT



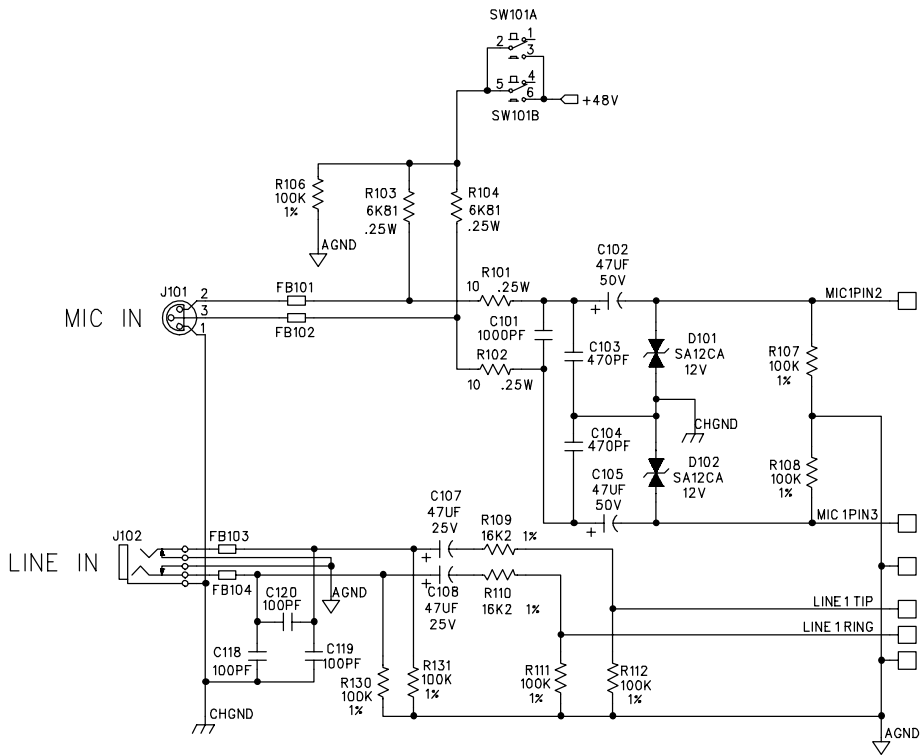
POINT B, SEE TABLE (CH 1&2 SHOWN)

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS: DECIMALS: ±.01 ±.005	APPROVALS DRAWN: trh CHECKED: A NP ENG: MATERIAL: MFG: MFG ENG: ISSUED:	DATE 12-11-96	MACKIE. Mackie Designs Inc. Woodinville, Wa.
MATERIAL: SEE NOTES FINISH: SEE NOTES DO NOT SCALE DRAWING	MATERIAL: MFG: MFG ENG: ISSUED:	SIZE SCALE: D NONE DWG. NO. 990-109-00 REV. 5	SCHEMATIC, DIGITAL 8-BUS LINE/MASTER METERS DWG FILE: 1 SHEET



DWG. NO.	990-110-00	SHT	1	REV.	B	1
ECO#	REV.	DESCRIPTION	REV. BY:	APP. BY:	DATE	

CH1 TO CH12 ALL HAVE THE SAME
CIRCUIT DESIGN, THIS IS CH 1 AND CH2

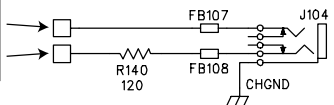


CONNECTOR PIN NUMBER
DIFFERENCES BETWEEN CHANNELS

CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	CHANNEL 7	CHANNEL 8	CHANNEL 9	CHANNEL 10	CHANNEL 11	CHANNEL 12
J4-1	J4-7	J4-13	J4-19	J4-25	J4-31	J5-1	J5-7	J5-13	J5-19	J5-25	J5-31
J4-2	J4-8	J4-14	J4-20	J4-26	J4-32	J5-2	J5-8	J5-14	J5-20	J5-26	J5-32
J4-3	J4-9	J4-15	J4-21	J4-27	J4-33	J5-3	J5-9	J5-15	J5-21	J5-27	J5-33
J4-4	J4-10	J4-16	J4-22	J4-28	J4-34	J5-4	J5-10	J5-16	J5-22	J5-28	J5-34
J4-5	J4-11	J4-17	J4-23	J4-29	J4-35	J5-5	J5-11	J5-17	J5-23	J5-29	J5-35
J4-6	J4-12	J4-18	J4-24	J4-30	NC	J5-6	J5-12	J5-18	J5-24	J5-30	NC

CONNECTOR PIN NUMBER
DIFFERENCES BETWEEN AUX OUTS

AUX OUT 1	AUX OUT 2	AUX OUT 3	AUX OUT 4	AUX OUT 5	AUX OUT 6	AUX OUT 7	AUX OUT 8	AUX OUT 9	AUX OUT 10	AUX OUT 11	AUX OUT 12
J2-1	J2-3	J2-5	J2-7	J2-9	J2-11	J2-13	J2-15	J2-17	J2-19	J2-21	J2-23
J2-2	J2-4	J2-6	J2-8	J2-10	J2-12	J2-14	J2-16	J2-18	J2-20	J2-22	J2-24

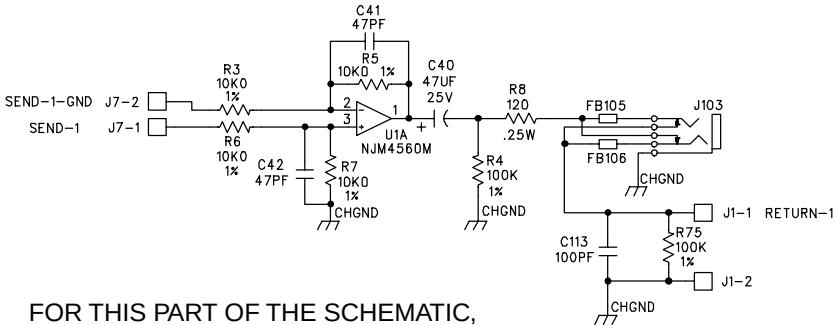


AUX OUT 1

REF DESIGNATORS DIFFERENCES
BETWEEN THE CHANNELS

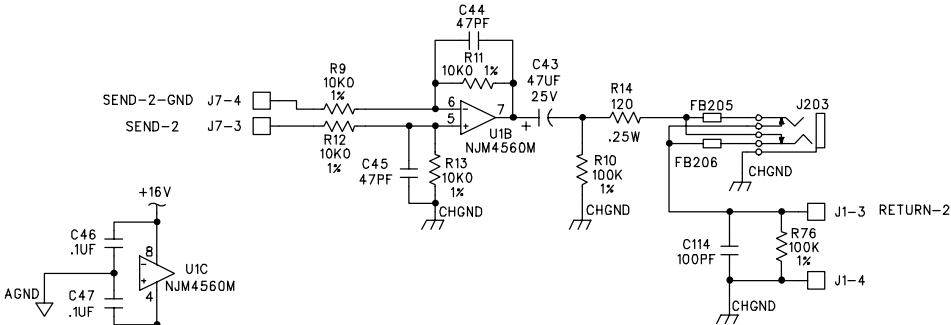
CHANNEL	PARTS RANGE	EXAMPLE
1	IN THE 100'S	R103, C102
2	IN THE 200'S	R203, C202
12	IN THE 1200'S	R1203, C1202

CHANNEL 1



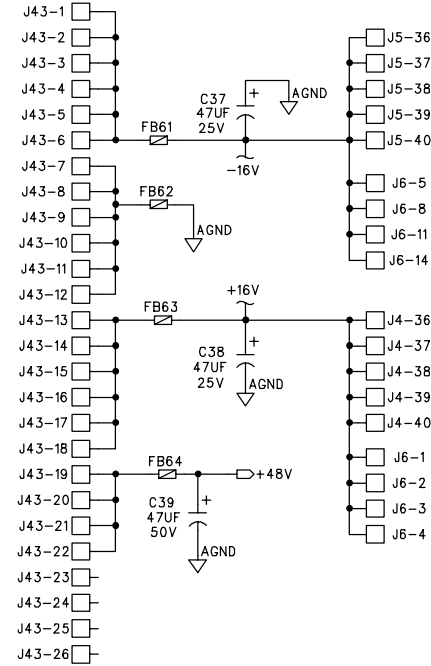
FOR THIS PART OF THE SCHEMATIC,
CH1 TO CH12 HAVE THE SAME DESIGN
BUT THE REF DESIGNATORS DO NOT
INCREASE NICELY BY THE 100'S.
SEE THE NEXT SHEET FOR CH 3 TO 12

CHANNEL 2



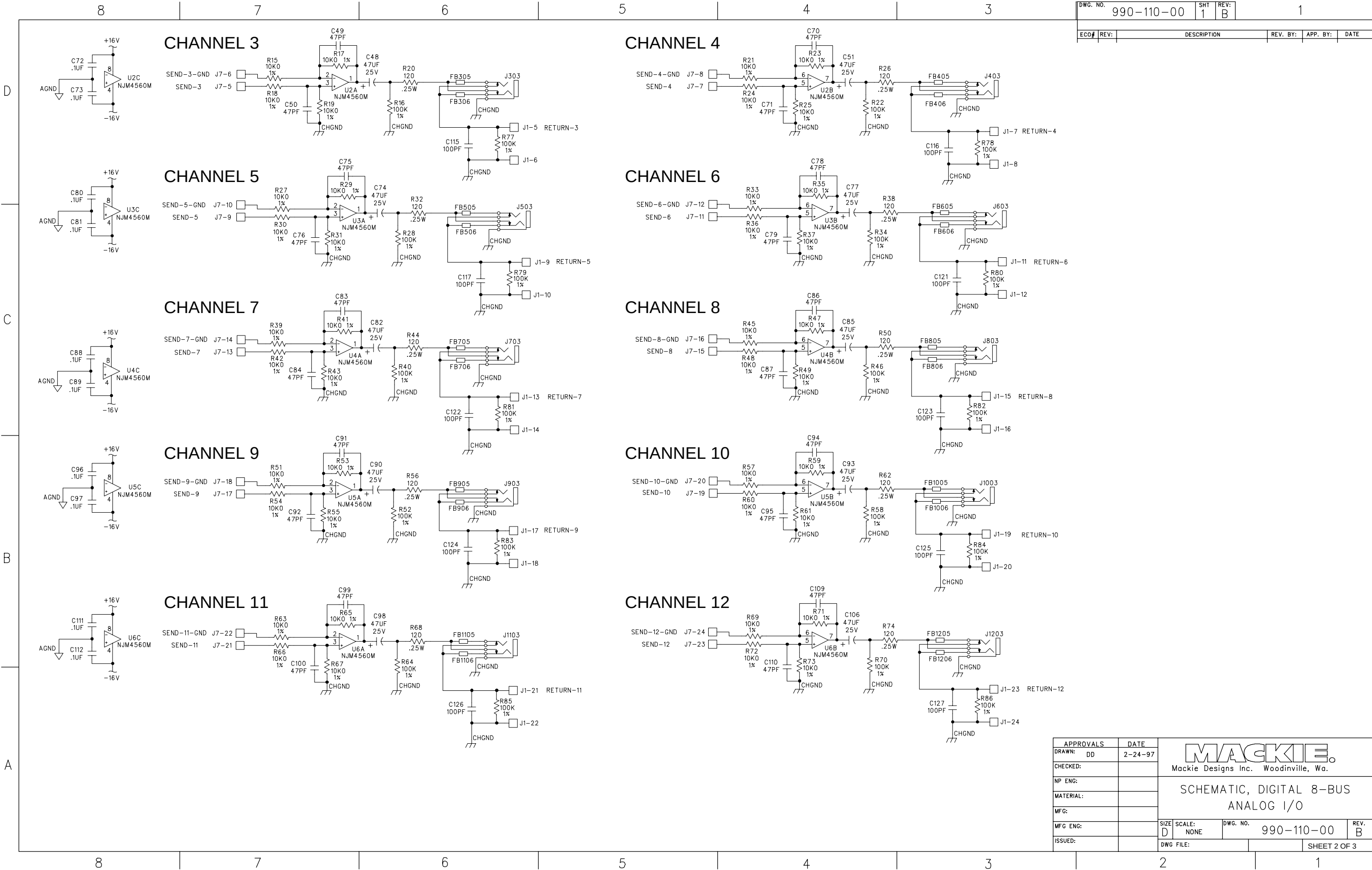
J2-25 □ J7-25 □ □ J1-25
J2-26 □ J7-26 □ □ J1-26

FROM P.S.

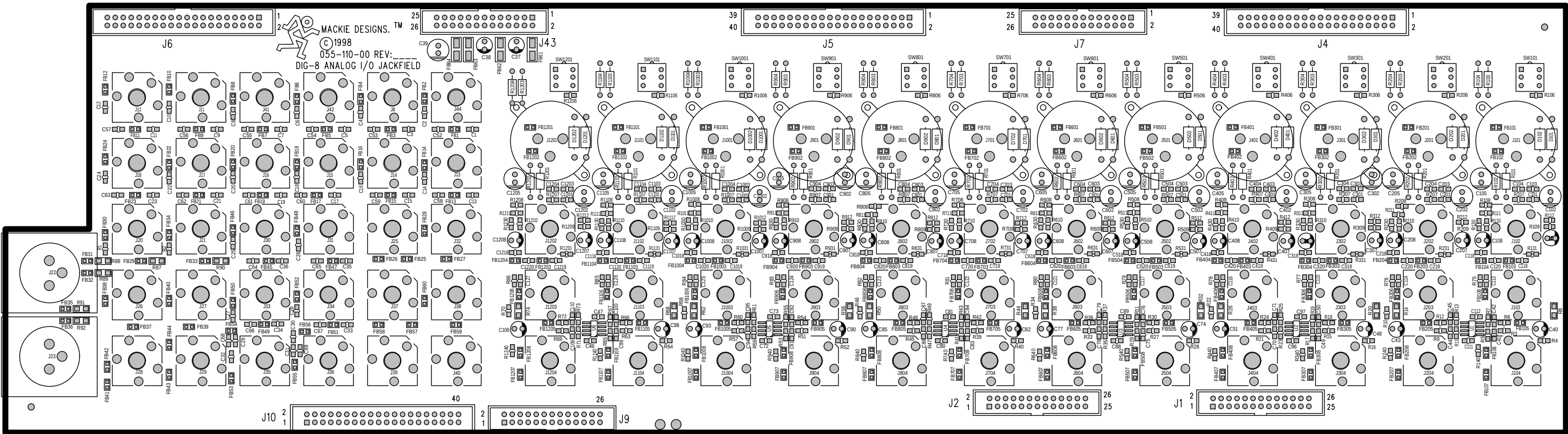
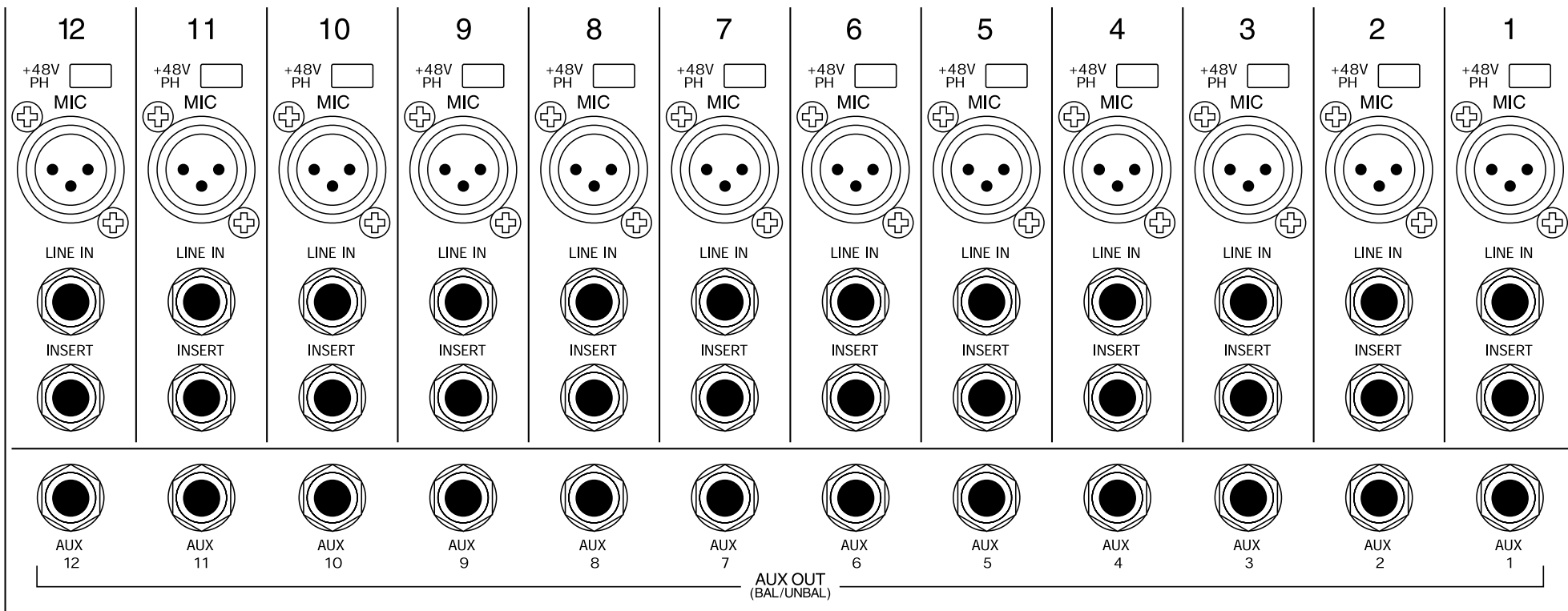
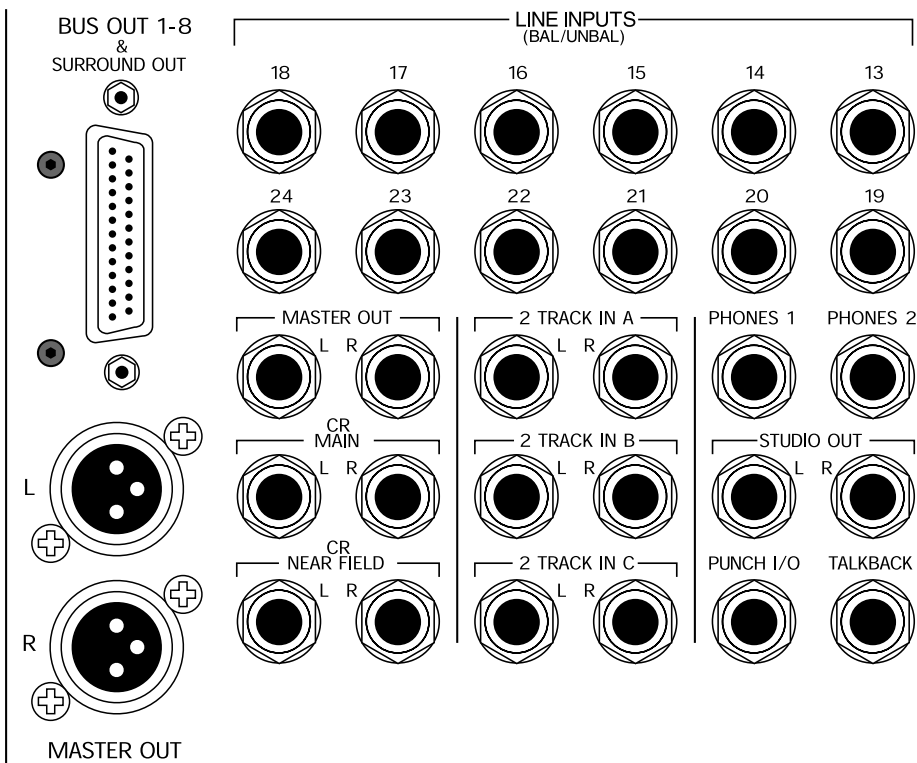


450-110-00
PCB, DIGITAL 8-BUS: ANALOG I/O JACKFIELD

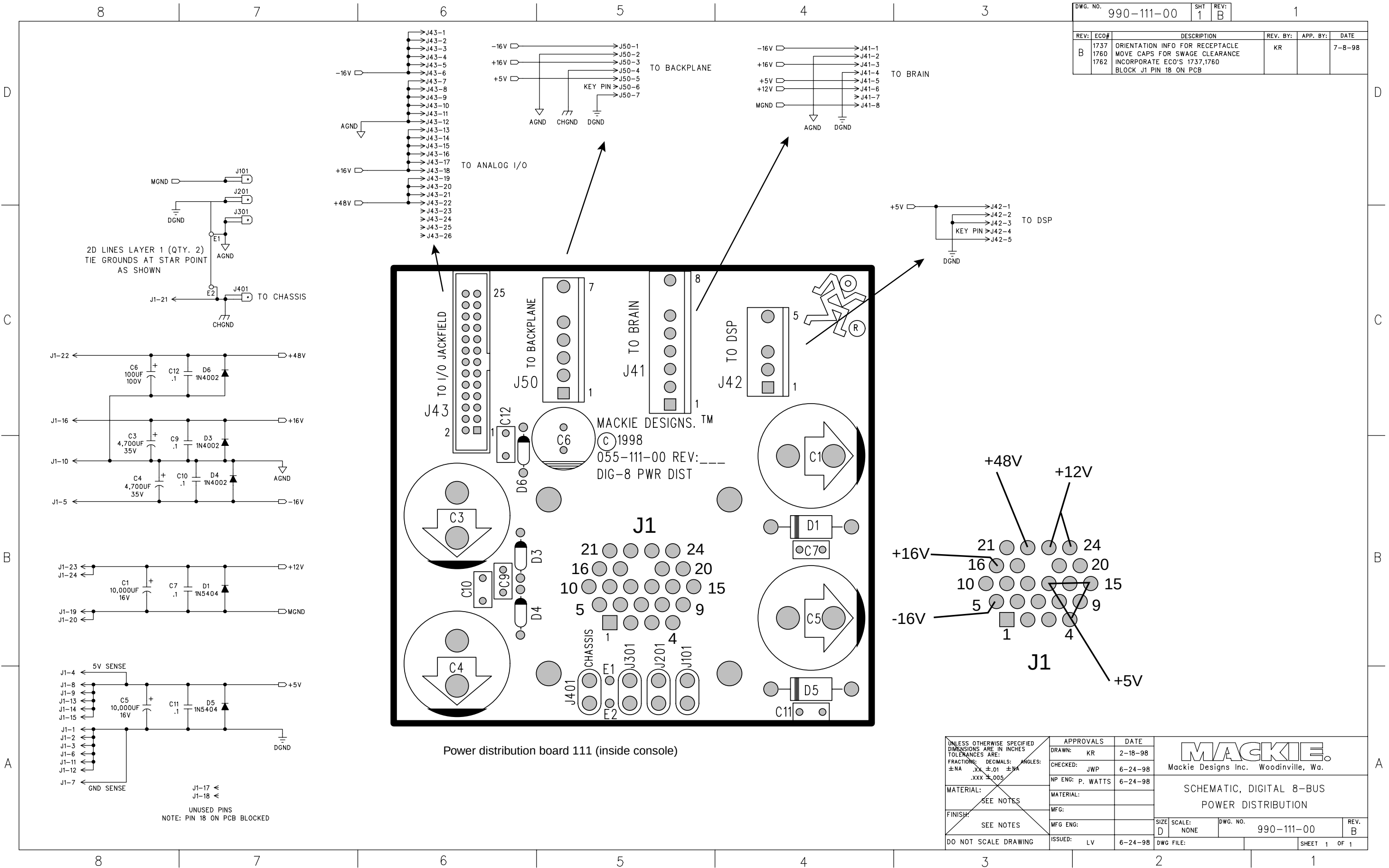
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: .XX ±.01 ±.04 DECIMALS: .XXX ±.005 ANGLES: MATERIAL: FINISH: DO NOT SCALE DRAWING	APPROVALS DRAWN: DD	DATE 2-24-97	MACKIE. Mackie Designs Inc. Woodinville, Wa. SCHEMATIC, DIGITAL 8-BUS ANALOG I/O SIZE: D SCALE: NONE DWG. NO. 990-110-00 REV. B DWG FILE: SHEET 1 OF 3
	CHECKED:		
	NP ENG:		
	MATERIAL:		
	MFG:		
SEE NOTES	MFG ENG:		
SEE NOTES	ISSUED:		

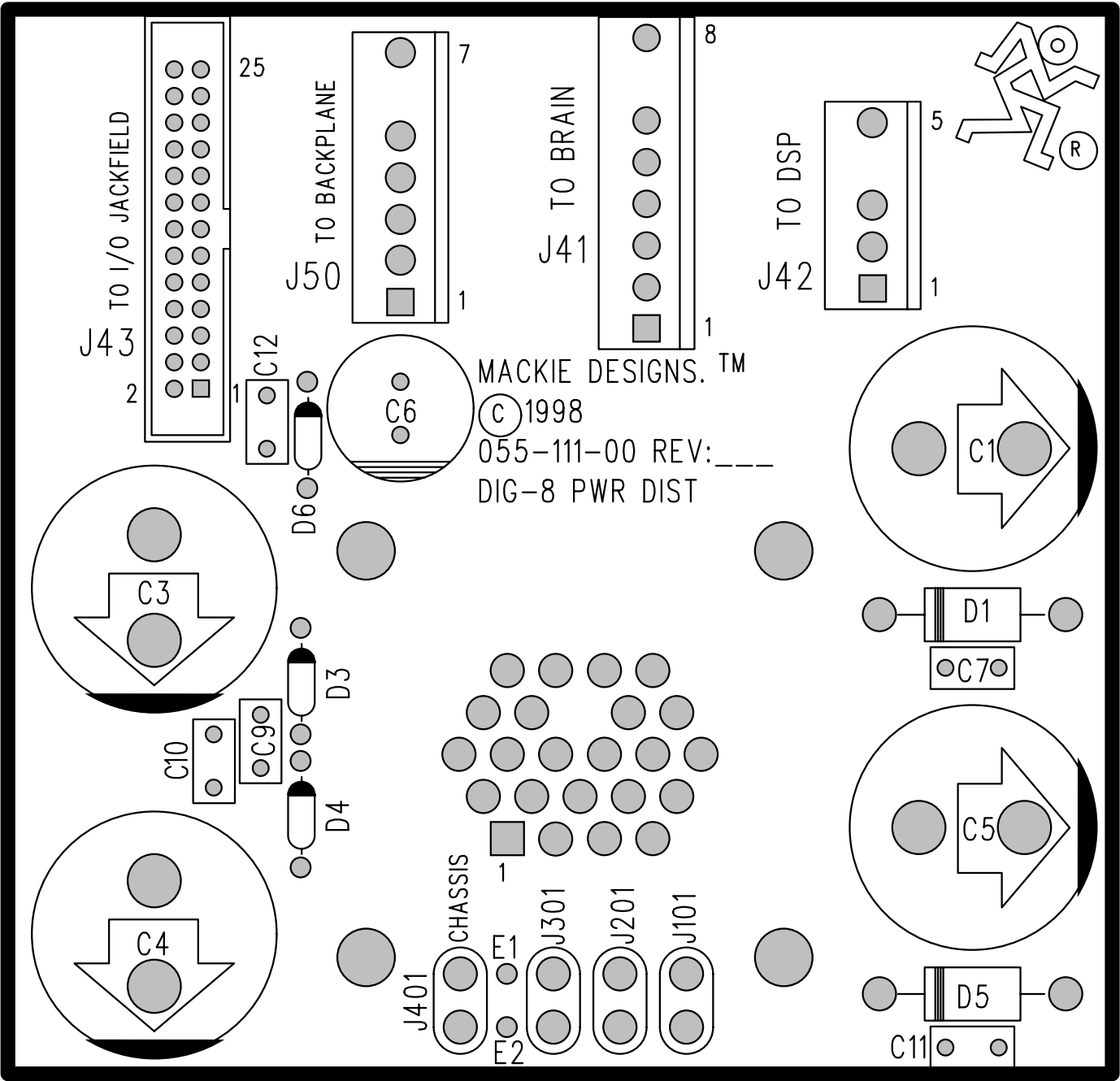




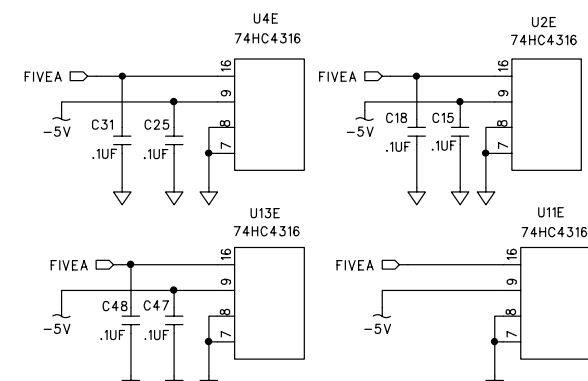
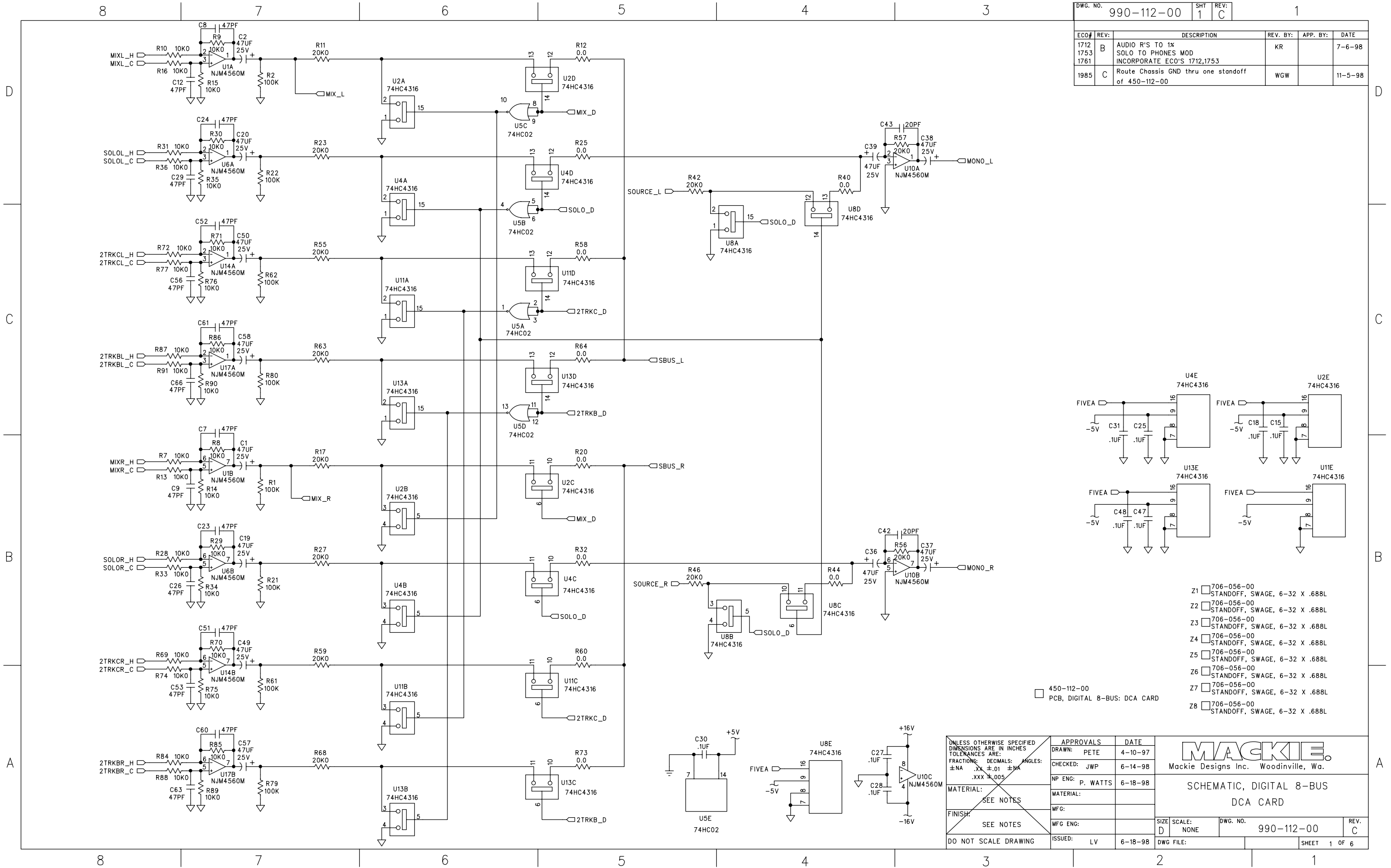


DWG. NO.	990-111-00	SHT	1	REV:	B	1	
REV:	ECO#	DESCRIPTION			REV. BY:	APP. BY:	DATE
B	1737 1760 1762	ORIENTATION INFO FOR RECEPTACLE MOVE CAPS FOR SWAGE CLEARANCE INCORPORATE ECO'S 1737,1760 BLOCK J1 PIN 18 ON PCB			KR		7-8-98





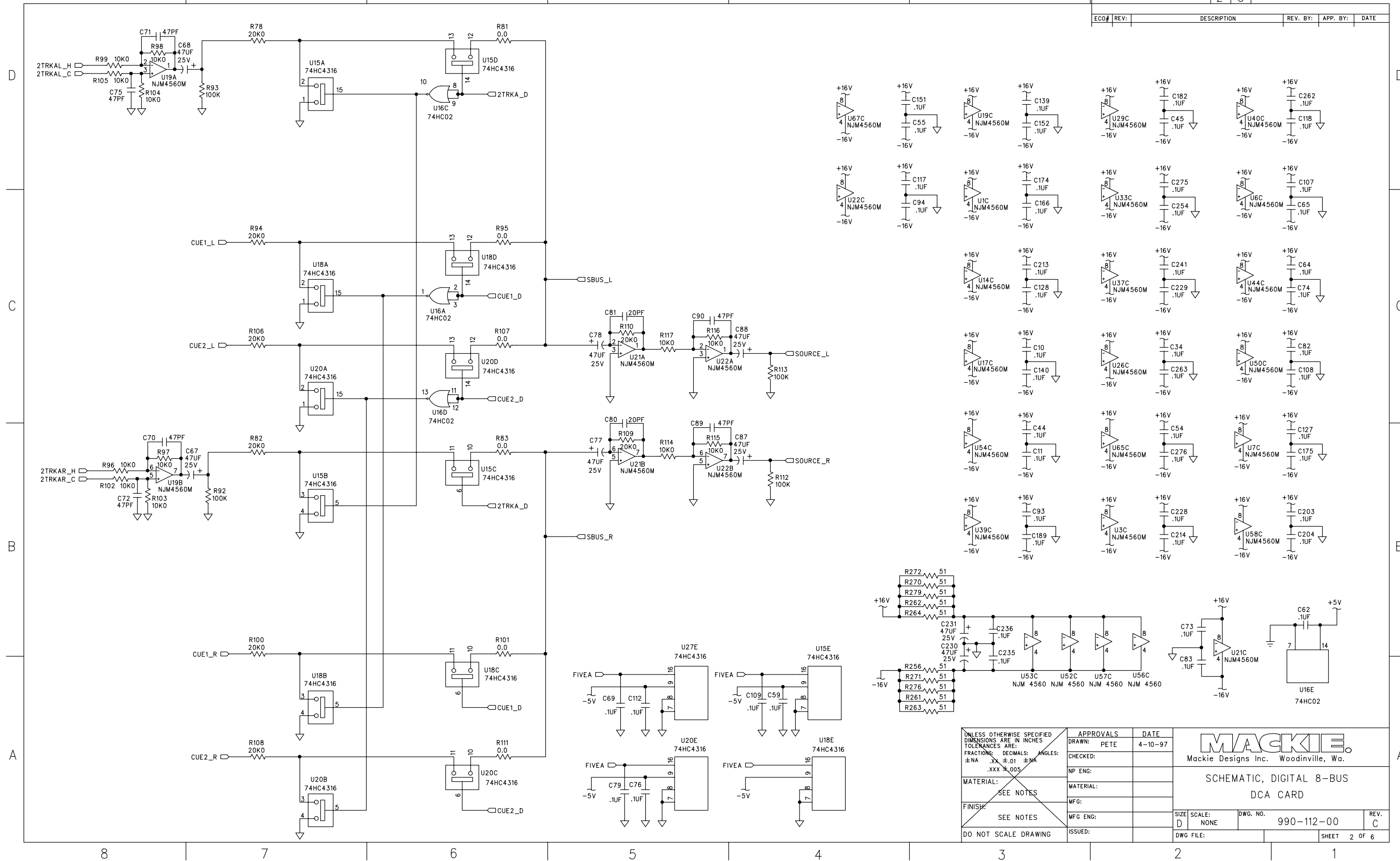
DWG. NO.	990-112-00	SHT	1	REV:	C	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	
1712	B	AUDIO R'S TO 1x	KR		7-6-98	
1753		SOLO TO PHONES MOD				
1761		INCORPORATE ECO'S 1712,1753				
1985	C	Route Chassis GND thru one standoff	WGW		11-5-98	
		of 450-112-00				

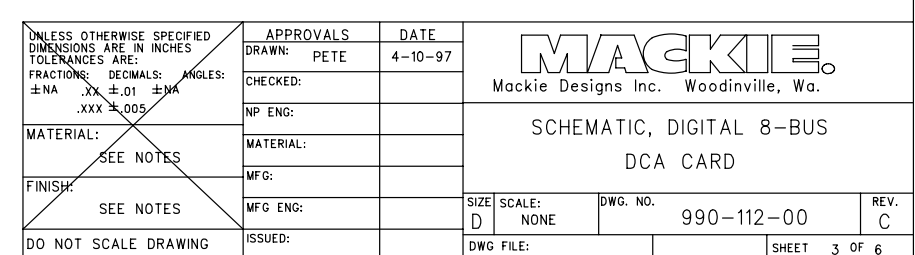


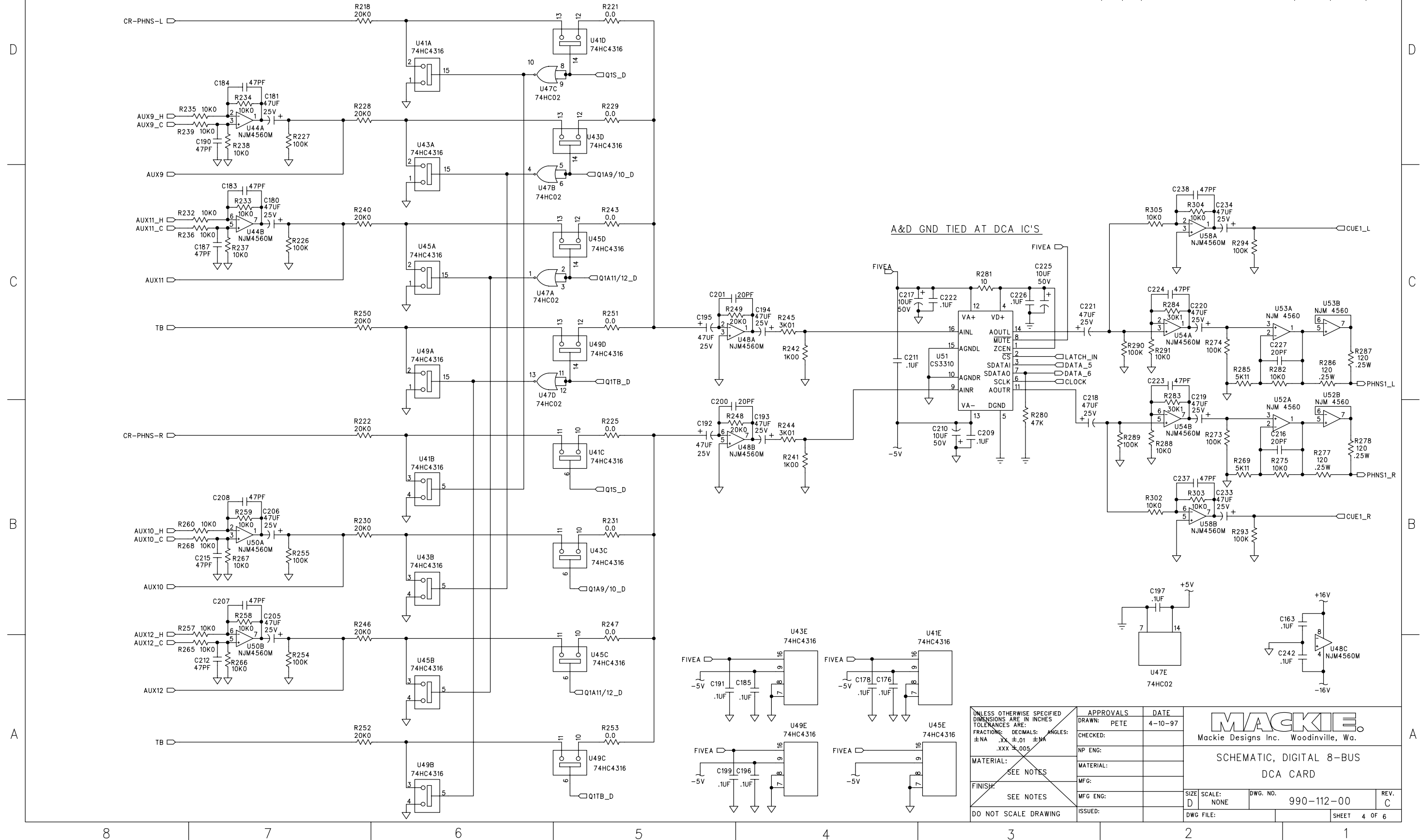
- Z1 706-056-00 STANDOFF, SWAGE, 6-32 X .688L
- Z2 706-056-00 STANDOFF, SWAGE, 6-32 X .688L
- Z3 706-056-00 STANDOFF, SWAGE, 6-32 X .688L
- Z4 706-056-00 STANDOFF, SWAGE, 6-32 X .688L
- Z5 706-056-00 STANDOFF, SWAGE, 6-32 X .688L
- Z6 706-056-00 STANDOFF, SWAGE, 6-32 X .688L
- Z7 706-056-00 STANDOFF, SWAGE, 6-32 X .688L
- Z8 706-056-00 STANDOFF, SWAGE, 6-32 X .688L

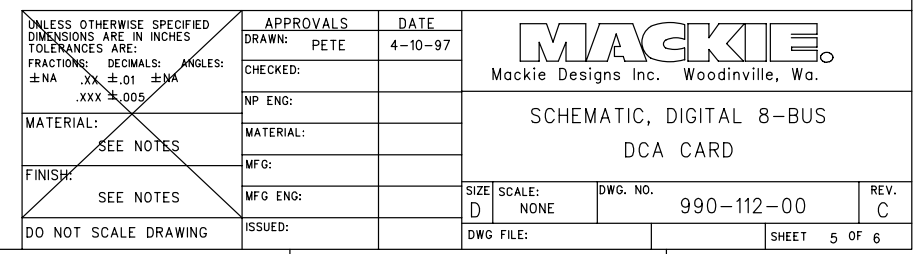
450-112-00
PCB, DIGITAL 8-BUS: DCA CARD

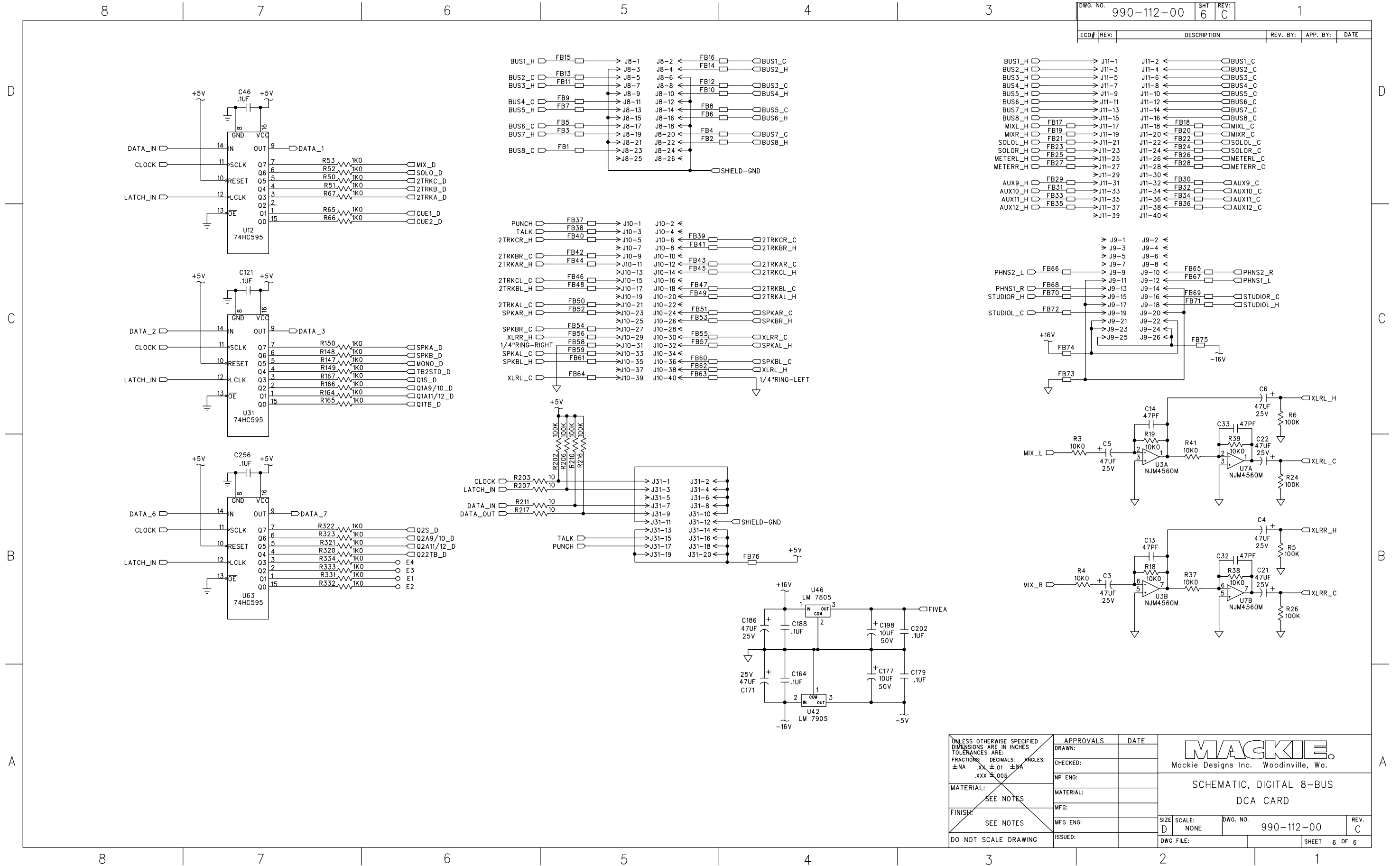
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: .XX ±.01 ±.02 DECIMALS: .XXX ±.005 ANGLES: ±.1° MATERIAL: SEE NOTES FINISH: SEE NOTES DO NOT SCALE DRAWING	APPROVALS DRAWN: PETE CHECKED: JWP NP ENG: P. WATTS MFG: MFG ENG: ISSUED: LV	DATE 4-10-97 6-14-98 6-18-98 6-18-98	MACKIE Mackie Designs Inc. Woodinville, Wa. SCHEMATIC, DIGITAL 8-BUS DCA CARD SIZE: D SCALE: NONE DWG. NO.: 990-112-00 REV.: C SHEET 1 OF 6
---	--	--	---

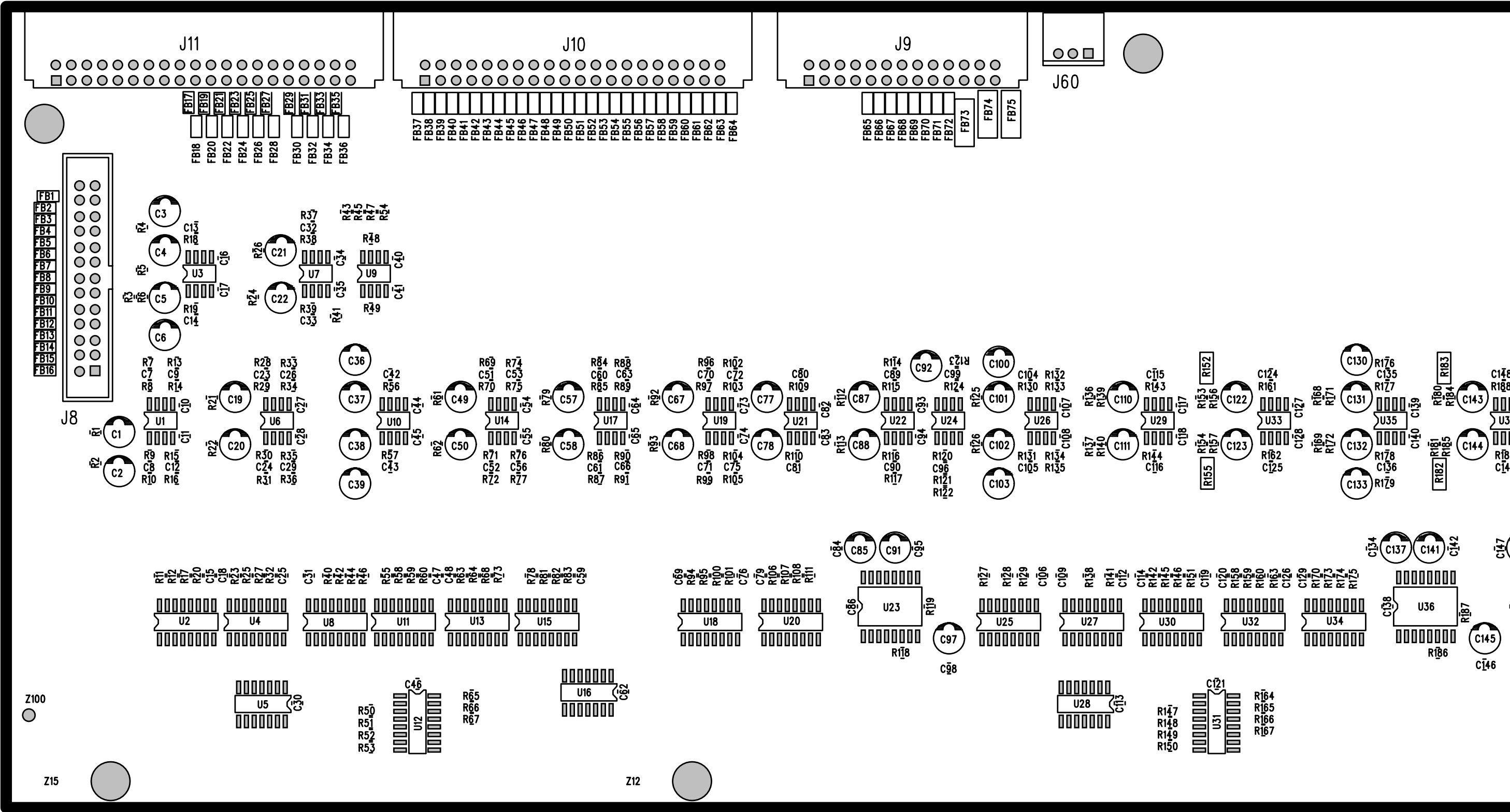


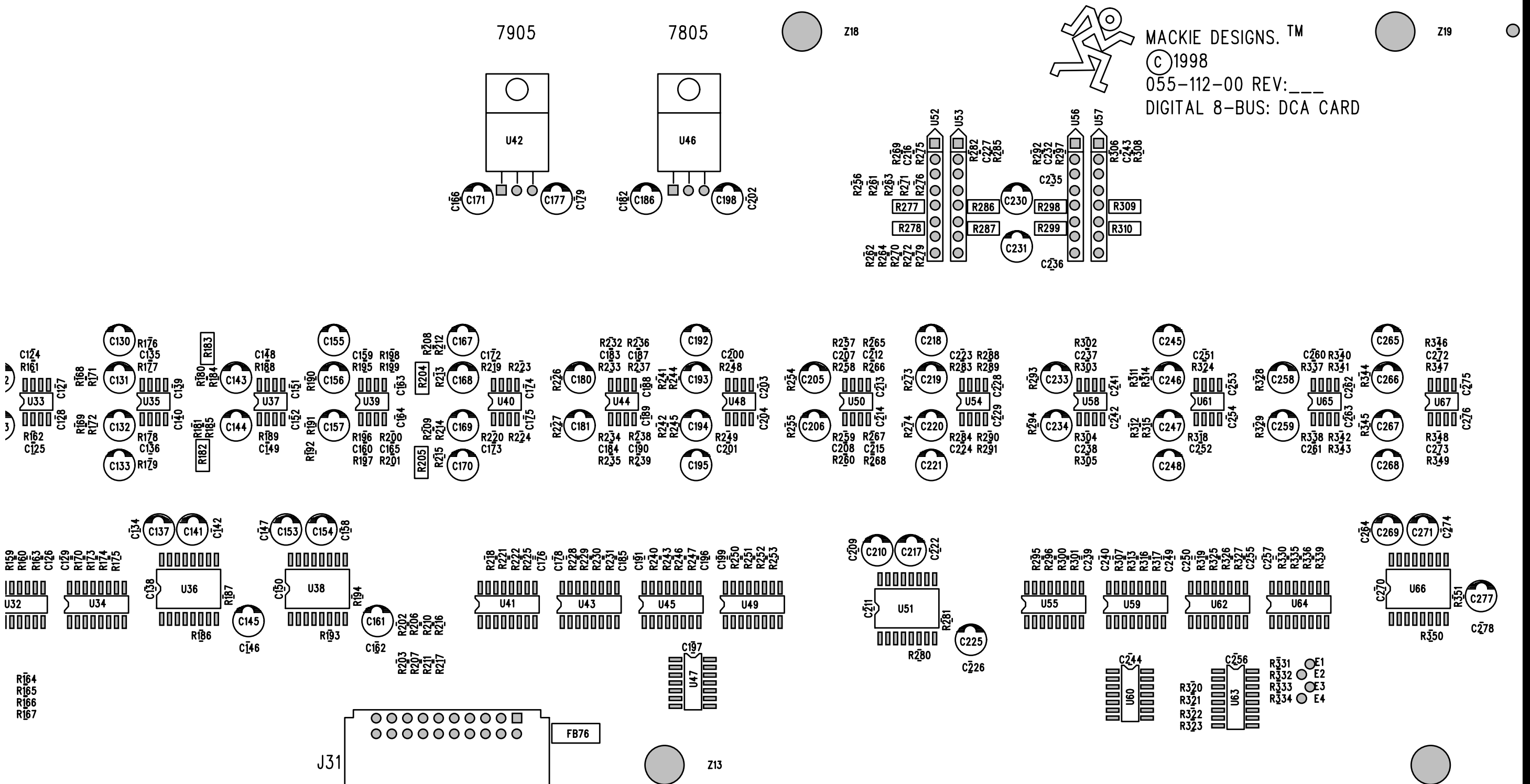












THIS CIRCUIT IS REPEATED 12 TIMES.
THE REF DESIGNATORS AND LABEL
DIFFERENCES BETWEEN THE CIRCUITS ARE
SHOWN IN THE TABLE BELOW

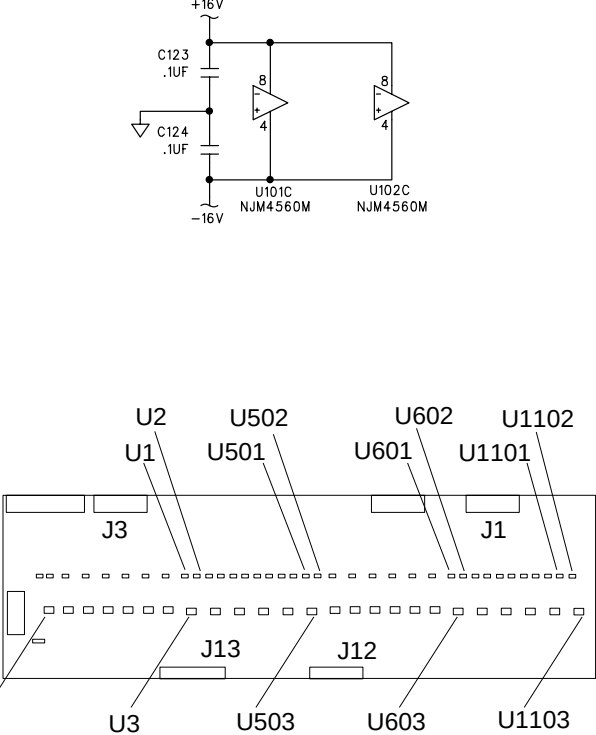
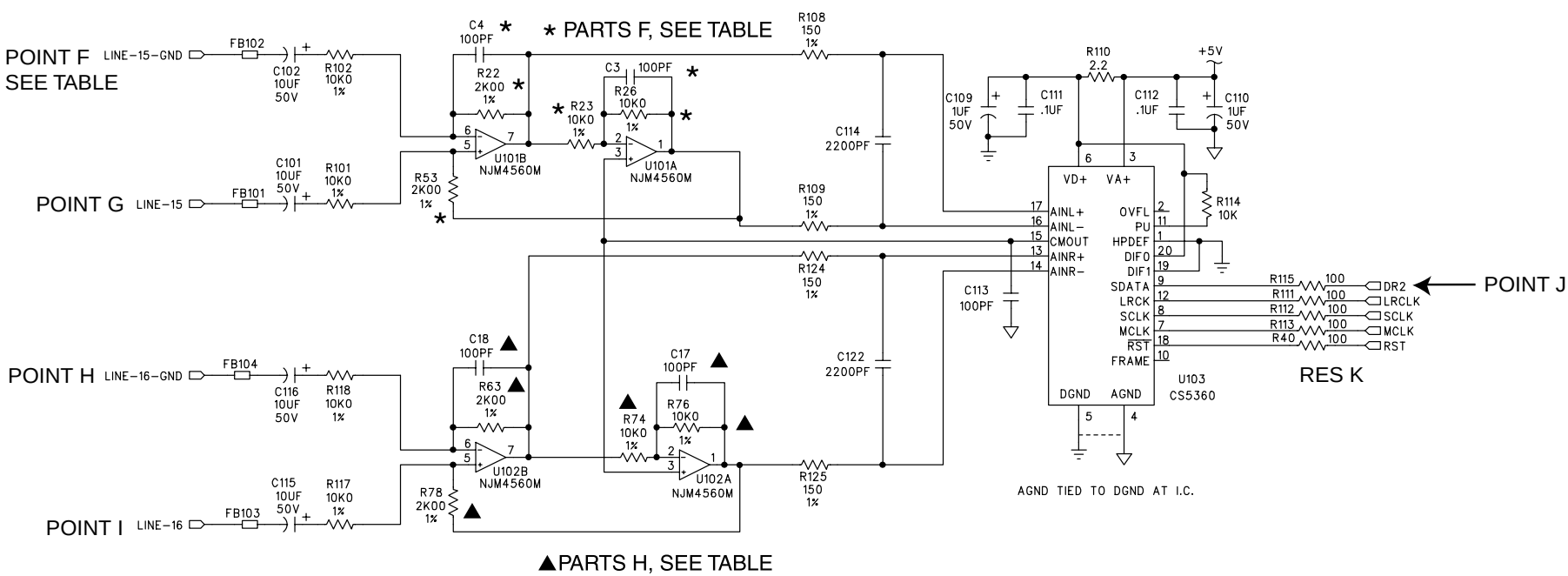


TABLE OF DIFFERENCES
WHERE THE CHANNELS ARE OTHERWISE IDENTICAL

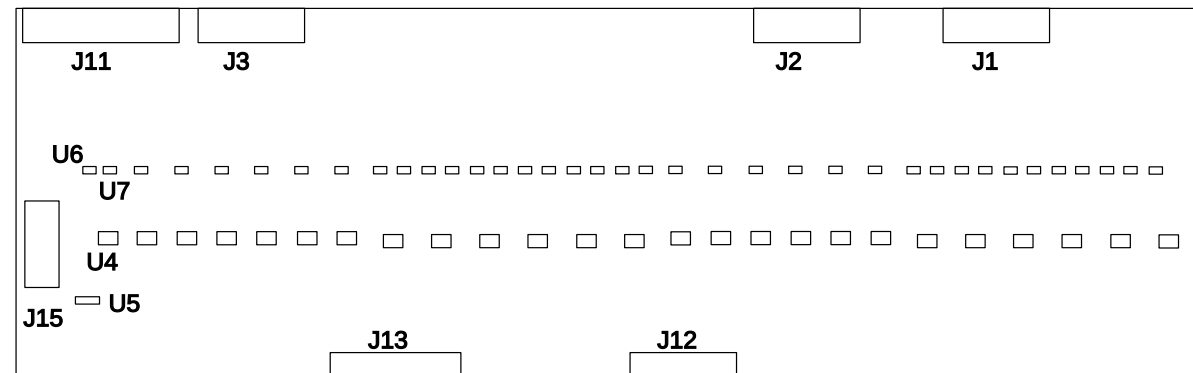
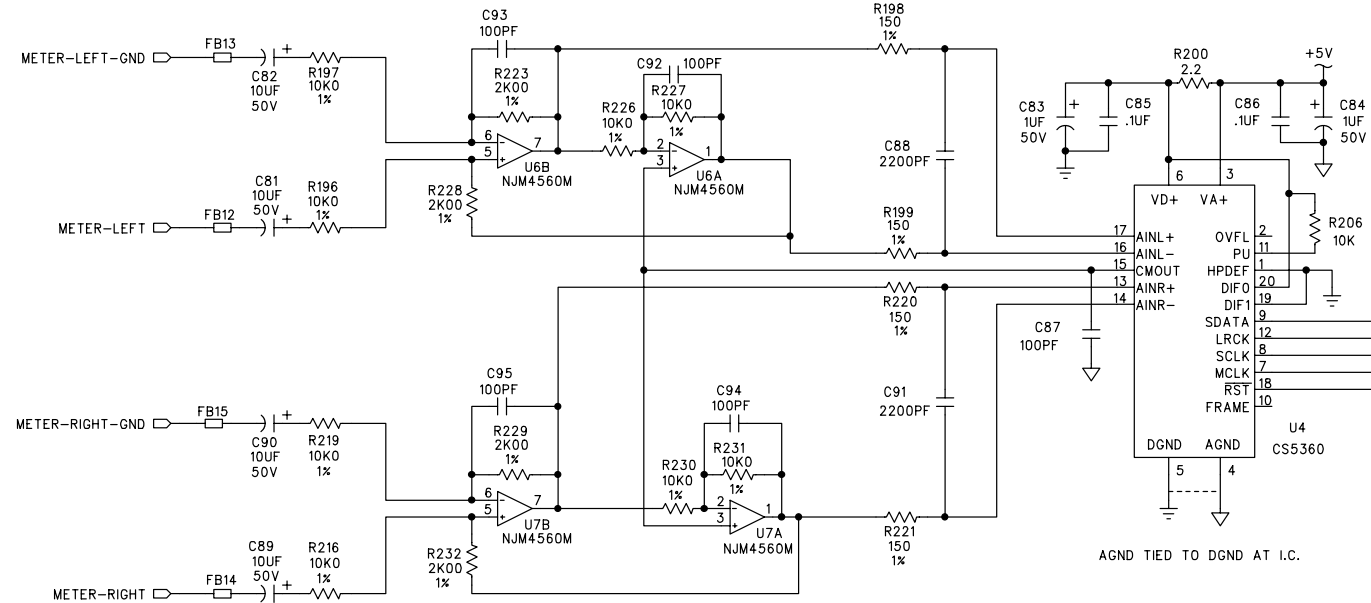
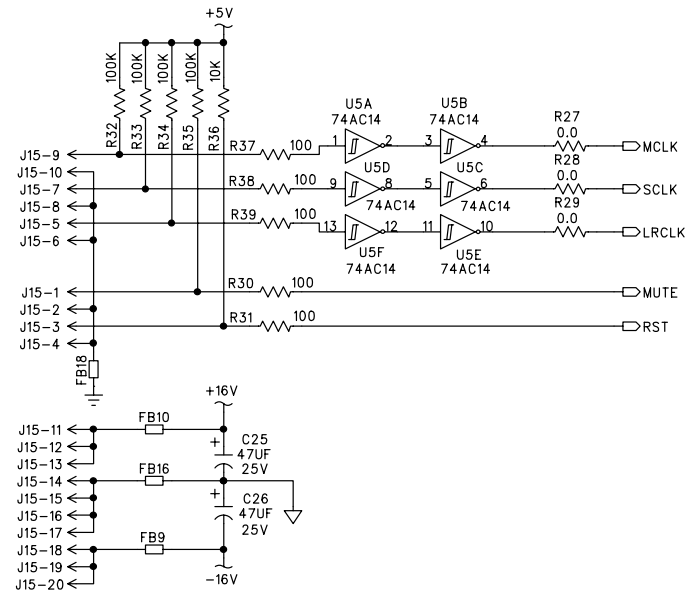
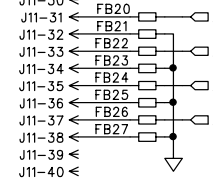
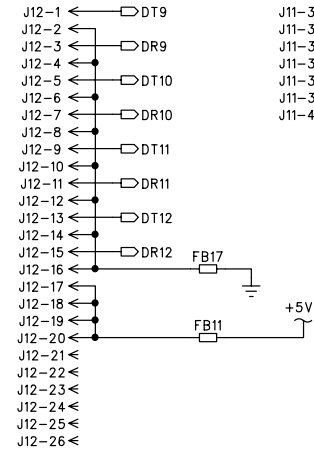
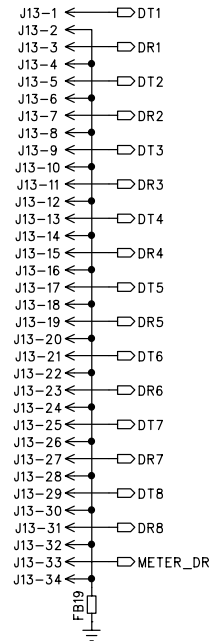
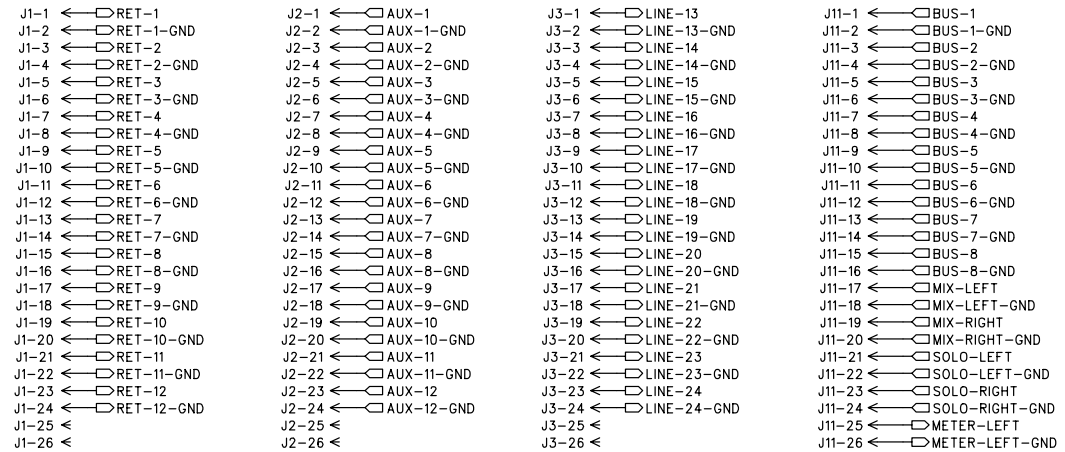
IC	PARTS RANGE	POINT F	POINT G	POINT H	POINT I	POINT J	PARTS F						PARTS H						RES K
							C6	C5	R3	R4	R5	R6	C8	C7	R7	R19	R20	R21	
U3	IN THE 10'S	LINE-13 GND	LINE-13	LINE-14 GND	LINE-14	DR1	C4	C3	R22	R23	R26	R53	C18	C17	R63	R74	R76	R78	R40
U103	IN THE 100'S	LINE-15 GND	LINE-15	LINE-16 GND	LINE-16	DR2	C20	C19	R79	R80	R81	R82	C28	C21	R83	R84	R85	R86	R41
U203	IN THE 200'S	LINE-17 GND	LINE-17	LINE-18 GND	LINE-18	DR3	C30	C29	R87	R88	R89	R90	C32	C31	R91	R92	R93	R94	R42
U303	IN THE 300'S	LINE-19 GND	LINE-19	LINE-20 GND	LINE-20	DR4	C34	C33	R95	R96	R97	R98	C36	C35	R99	R100	R103	R104	R43
U403	IN THE 400'S	LINE-21 GND	LINE-21	LINE-22 GND	LINE-22	DR5	C38	C37	R105	R106	R107	R116	C40	C39	R119	R120	R121	R122	R44
U503	IN THE 500'S	LINE-23 GND	LINE-23	LINE-24 GND	LINE-24	DR6	C42	C41	R123	R126	R127	R128	C44	C43	R129	R130	R131	R132	R45
U603	IN THE 600'S	RET-1 GND	RET-1	RET-2 GND	RET-2	DR7	C46	C45	R133	R134	R135	R136	C48	C47	R137	R138	R139	R140	R46
U703	IN THE 700'S	RET-3 GND	RET-3	RET-4 GND	RET-4	DR8	C50	C49	R141	R142	R143	R144	C66	C65	R145	R146	R147	R148	R47
U803	IN THE 800'S	RET-5 GND	RET-5	RET-6 GND	RET-6	DR9	C70	C68	R149	R150	R153	R163	C72	C71	R174	R176	R178	R179	R48
U903	IN THE 900'S	RET-7 GND	RET-7	RET-8 GND	RET-8	DR10	C74	C73	R180	R181	R182	R183	C76	C75	R184	R185	R186	R187	R49
U1003	IN THE 1000'S	RET-9 GND	RET-9	RET-10 GND	RET-10	DR11	C78	C77	R188	R189	R190	R191	C80	C79	R192	R193	R194	R195	R50
U1103	IN THE 1100'S	RET-11 GND	RET-11	RET-12 GND	RET-12	DR12	SEE SHEET 2						SEE SHEET 2						
U4	SEE SHEET 2	METER-L GND	METER-L	METER-R GND	METER-R	METER_DR	SEE SHEET 2						SEE SHEET 2						

NOTE: THE CIRCUIT FOR U4 (WHICH IS FOR METER-LEFT AND METER-RIGHT) HAS PART NUMBERS WHICH DO NOT FOLLOW THE NORMAL 100, 200, 300 MACKIE WAY, SO THIS PARTICULAR CIRCUIT IS SHOWN ON SHEET 2

NOTE: LINE-13 TO LINE-24 CONNECT TO J3
RET-1 TO RET-12 CONNECT TO J1
DR1 TO DR8, AND METER_DRV CONNECT TO J13
DR9 TO DR12 CONNECT TO J12
SEE SHEET 2 FOR CONNECTOR DETAILS

About this table:
The circuit is repeated 12 times on the CODEC board, so instead of wasting paper and disk space, this table was created. It shows the difference between the reference designators and the main points from one circuit to the next. In most case, the reference designators vary only in the hundreds, for example R103, R203, and R503 etc.
The "Parts H" and "Parts F" do not follow this rule, and the following example may help:
Using the U103 circuit shown, find C4 (circled under Parts F). The reference designator for the same part used on the U403 circuit is C34, and for the U703 circuit it is C46, reading in the column below C4.
Note that all the parts values remain the same from one circuit to the next, ohms, farads, pica-noodles, foot-lamberts etc.

APPROVALS	DATE	MACKIE. Mackie Designs Inc. Woodinville, Wa.	
DRAWN: KR	3-26-97		
		SCHEMATIC, DIGITAL 8-BUS A/D D/A "CODEC" CARD	
SIZE	SCALE:	DWG. NO.	REV.
D	NONE	990-113-00	B
DWG FILE:		Sheet 1 of 4	



- Z1 ☐ 706-055-00
STANDOFF, SWAGE, 6-32 X .500L

Z2 ☐ 706-055-00
STANDOFF, SWAGE, 6-32 X .500L

Z3 ☐ 706-055-00
STANDOFF, SWAGE, 6-32 X .500L

Z4 ☐ 706-055-00
STANDOFF, SWAGE, 6-32 X .500L

Z5 ☐ 706-055-00
STANDOFF, SWAGE, 6-32 X .500L

Z6 ☐ 706-055-00
STANDOFF, SWAGE, 6-32 X .500L

Z7 ☐ 706-055-00
STANDOFF, SWAGE, 6-32 X .500L

Z8 ☐ 706-055-00
STANDOFF, SWAGE, 6-32 X .500L
= STANDOFF Z8 GROUNDED FOR ESD

☐ 450-113-00
PCB, DIGITAL 8-BUS: "CODEC" CARD

APPROVAL
DRAWN: KR
CHECKED: J F
NP ENG: P W
MATERIAL:
MFG:
MFG ENG:
ISSUED:

APPROVALS	DATE				
DRAWN: KR	3-26-97				
CHECKED: J PACE	6-14-98	Mackie Designs Inc. Woodinville, Wa.			
NP ENG: P WATTS	6-18-98	SCHEMATIC, DIGITAL 8-BUS A/D D/A "CODEC" CARD			
MATERIAL:					
MFG:					
MFG ENG:					
ISSUED: LEIGH	6-18-98	SIZE D	SCALE: NONE	DWG. NO. 990-113-00	REV. B
		DWG FILE:		Sheet 2 of 4	

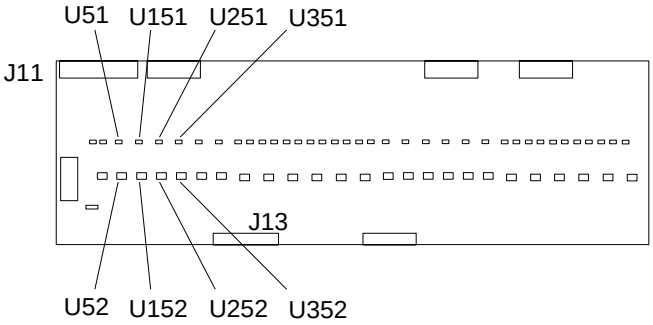
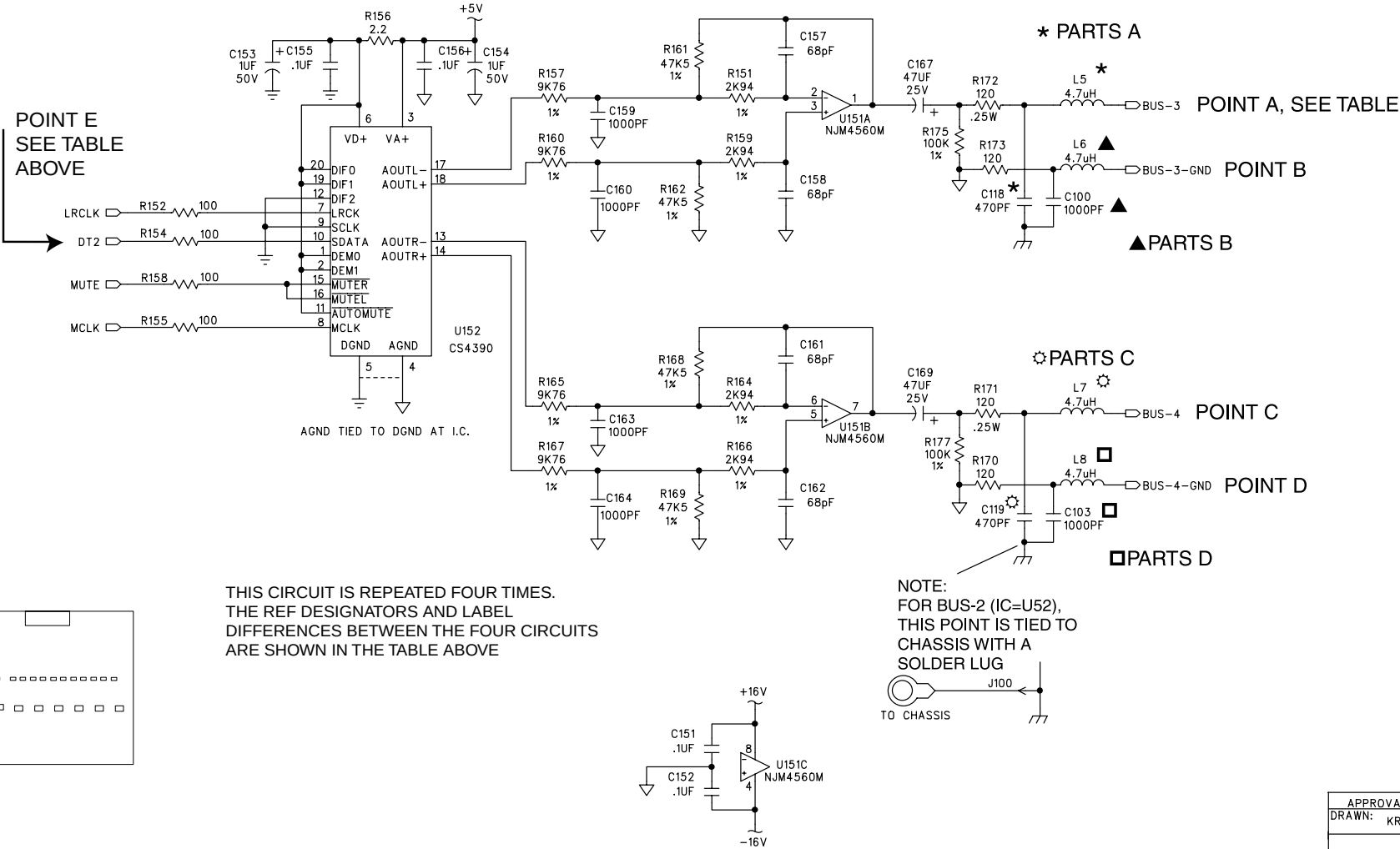
REFERENCE DESIGNATORS AND LABEL DIFFERENCES BETWEEN BUSSES

IC	PARTS RANGE	EXAMPLE	POINT A	POINT B	POINT C	POINT D	POINT E	PARTS A	PARTS B	PARTS C	PARTS D
U52	IN THE 10'S	R55, U54	BUS-1	BUS-1 GND	BUS-2	BUS-2 GND	DT1	L1, C108	L2, C98	L3, C117	L4, C99
U152	IN THE 100'S	R155, C154	BUS-3	BUS-3 GND	BUS-4	BUS-4 GND	DT2	L5, C118	L6, C100	L7, C119	L8, C103
U252	IN THE 200'S	R255, C254	BUS-5	BUS-5 GND	BUS-6	BUS-6 GND	DT3	L9, C120	L10, C104	L11, C121	L12, C105
U352	IN THE 300'S	R355, C354	BUS-7	BUS-7 GND	BUS-8	BUS-8 GND	DT4	L13, C125	L14, C106	L15, C126	L16, C107

Shown below

- J11-1 ← BUS-1
- J11-2 ← BUS-1-GND
- J11-3 ← BUS-2
- J11-4 ← BUS-2-GND
- J11-5 ← BUS-3
- J11-6 ← BUS-3-GND
- J11-7 ← BUS-4
- J11-8 ← BUS-4-GND
- J11-9 ← BUS-5
- J11-10 ← BUS-5-GND
- J11-11 ← BUS-6
- J11-12 ← BUS-6-GND
- J11-13 ← BUS-7
- J11-14 ← BUS-7-GND
- J11-15 ← BUS-8
- J11-16 ← BUS-8-GND

- J13-1 ← DT1
- J13-2 ← DR1
- J13-3 ← DT2
- J13-4 ← DR2
- J13-5 ← DT3
- J13-6 ← DR3
- J13-7 ← DT4
- J13-8 ← DR4
- J13-9 ← DT5
- J13-10 ← DR5
- J13-11 ← DT6
- J13-12 ← DR6
- J13-13 ← DT7
- J13-14 ← DR7
- J13-15 ← DT8
- J13-16 ← DR8
- J13-17 ← METER_DR
- J13-18 ← FIBER
- J13-19
- J13-20
- J13-21
- J13-22
- J13-23
- J13-24
- J13-25
- J13-26
- J13-27
- J13-28
- J13-29
- J13-30
- J13-31
- J13-32
- J13-33
- J13-34



THIS CIRCUIT IS REPEATED FOUR TIMES.
THE REF DESIGNATORS AND LABEL
DIFFERENCES BETWEEN THE FOUR CIRCUITS
ARE SHOWN IN THE TABLE ABOVE

NOTE:
FOR BUS-2 (IC=U52),
THIS POINT IS TIED TO
CHASSIS WITH A
SOLDER LUG

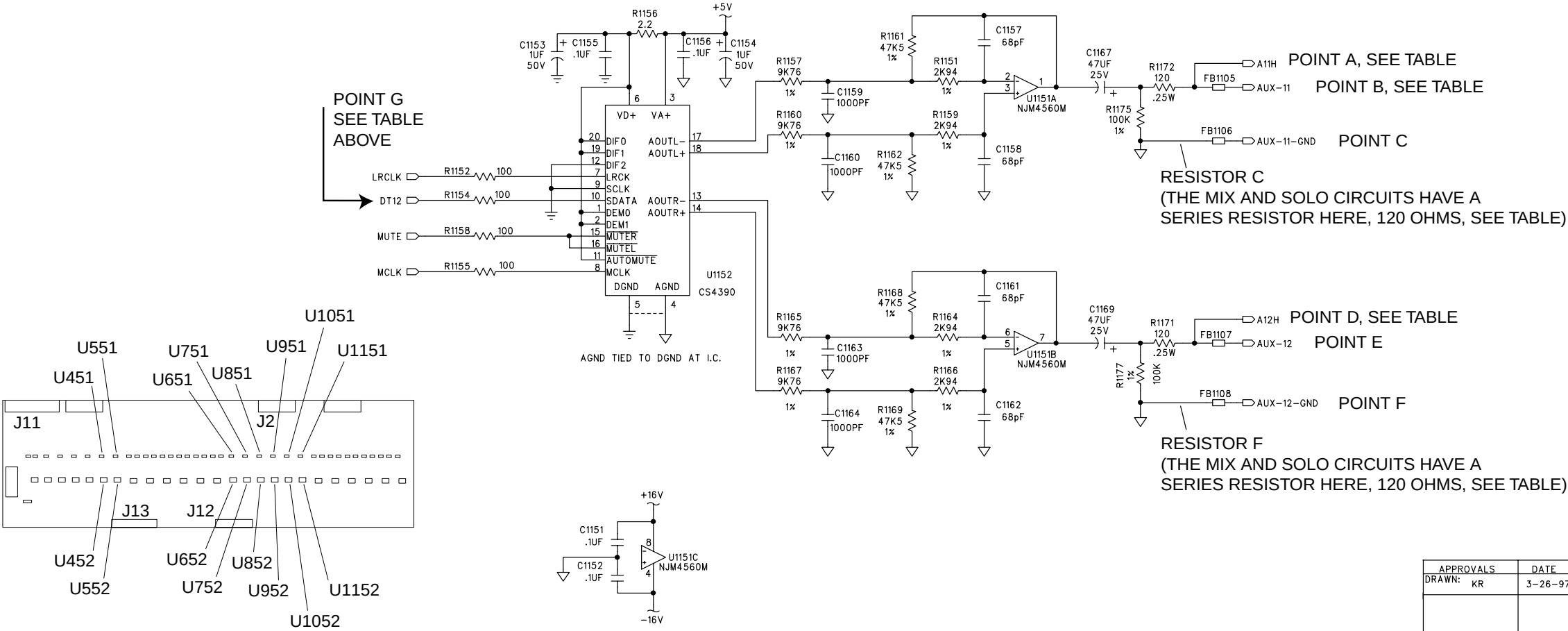
APPROVALS	DATE	MACKIE.	
DRAWN: KR	3-26-97	Mackie Designs Inc. Woodinville, Wa.	
SCHEMATIC, DIGITAL 8-BUS A/D D/A "CODEC" CARD			
SIZE D	SCALE: NONE	DWG. NO. 990-113-00	REV. B
DWG FILE:		Sheet 3 of 4	

TABLE OF DIFFERENCES
WHERE THE CHANNELS ARE OTHERWISE IDENTICAL

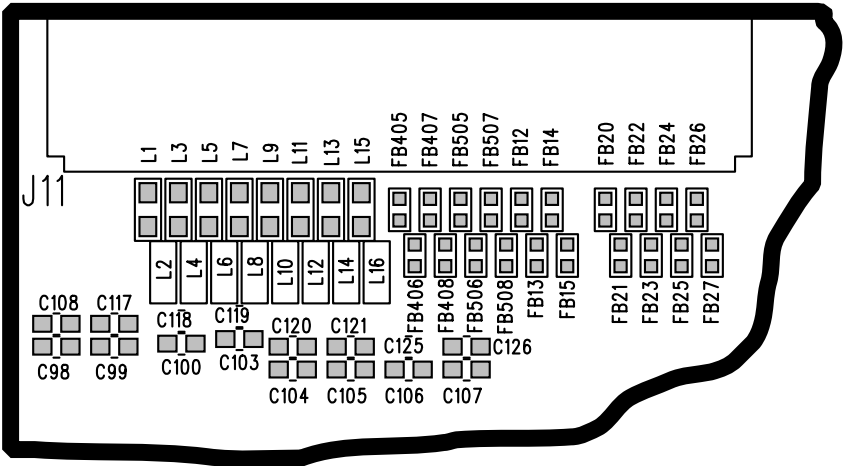
IC	PARTS RANGE	POINT A	POINT B	POINT C	POINT D	POINT E	POINT F	POINT G	RES C	RES F
U452	IN THE 400'S	NC	MIX-L	MIX-L GND	NC	MIX-R	MIX-R GND	DT5	R473	R470
U552	IN THE 500'S	NC	SOLO-L	SOLO-L GND	NC	SOLO-R	SOLO-R GND	DT6	R573	R570
U652	IN THE 600'S	NC	AUX-1	AUX-1 GND	NC	AUX-2	AUX-2 GND	DT7		
U752	IN THE 700'S	NC	AUX-3	AUX-3 GND	NC	AUX-4	AUX-4 GND	DT8		
U852	IN THE 800'S	NC	AUX-5	AUX-5 GND	NC	AUX-6	AUX-6 GND	DT9		
U952	IN THE 900'S	NC	AUX-7	AUX-7 GND	NC	AUX-8	AUX-8 GND	DT10		
U1052	IN THE 1000'S	A9H	AUX-9	AUX-9 GND	A10H	AUX-10	AUX-10 GND	DT11		
U1152	IN THE 1100'S	A11H	AUX-11	AUX-11 GND	A12H	AUX-12	AUX-12 GND	DT12		

Shown below

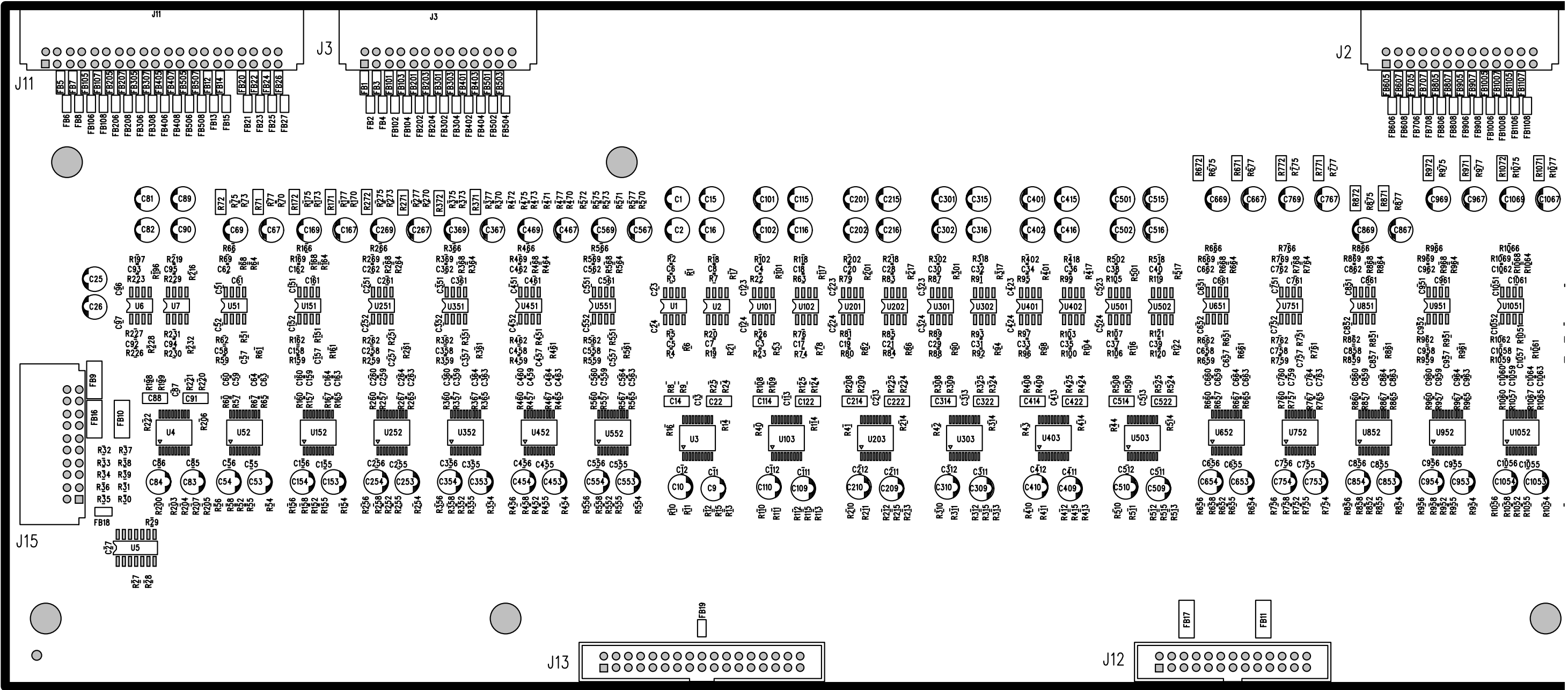
NOTE: AUX-1 TO AUX-12 CONNECT TO J2
SOLO AND MIX CONNECT TO J11
DT5 TO DT8 CONNECT TO J13
DT9 TO DT12 CONNECT TO J12
SEE SHEET 2 FOR CONNECTOR
PIN NUMBERS

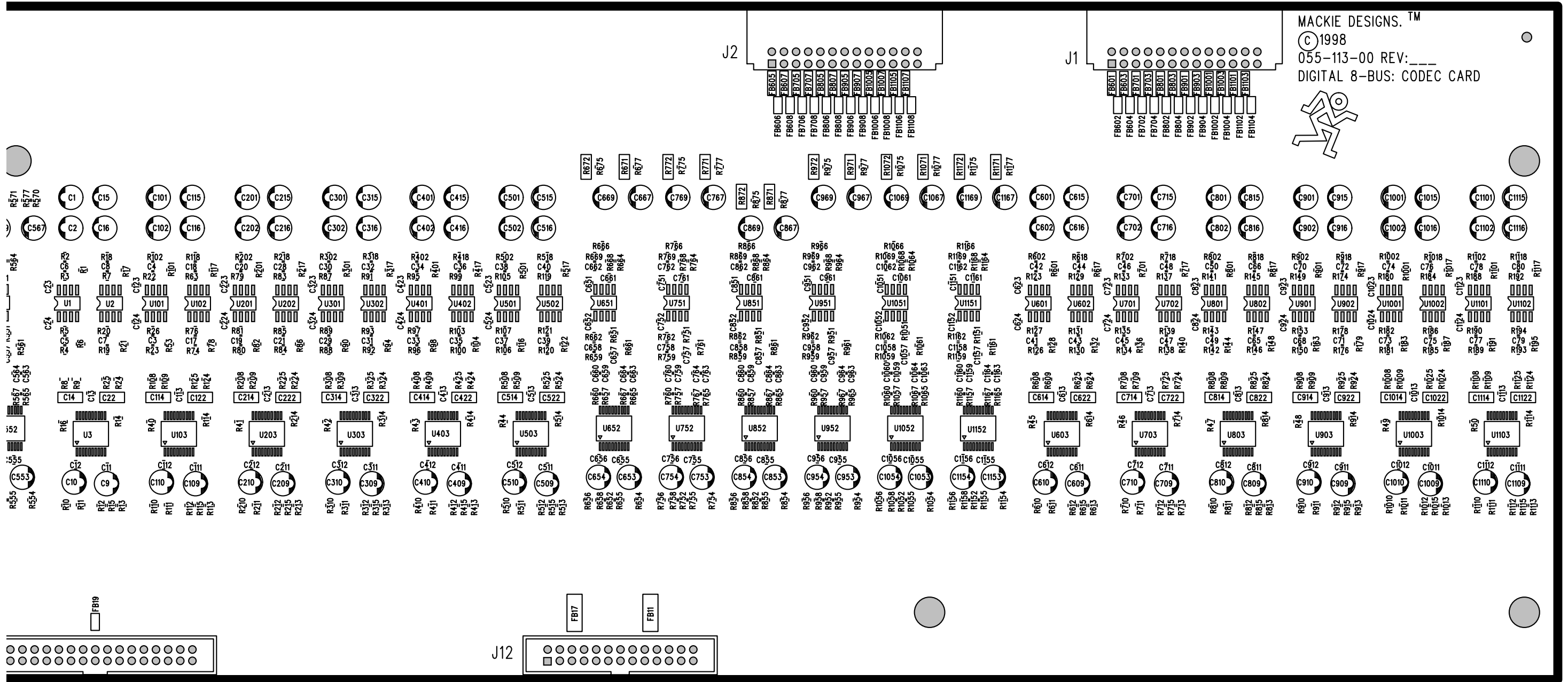


APPROVALS	DATE	Mackie. Mackie Designs Inc. Woodinville, Wa.	
DRAWN: KR	3-26-97	SCHEMATIC, DIGITAL 8-BUS A/D D/A "CODEC" CARD	
SIZE D	SCALE: NONE	DWG. NO. 990-113-00	REV. B
DWG FILE:		Sheet 4 of 4	

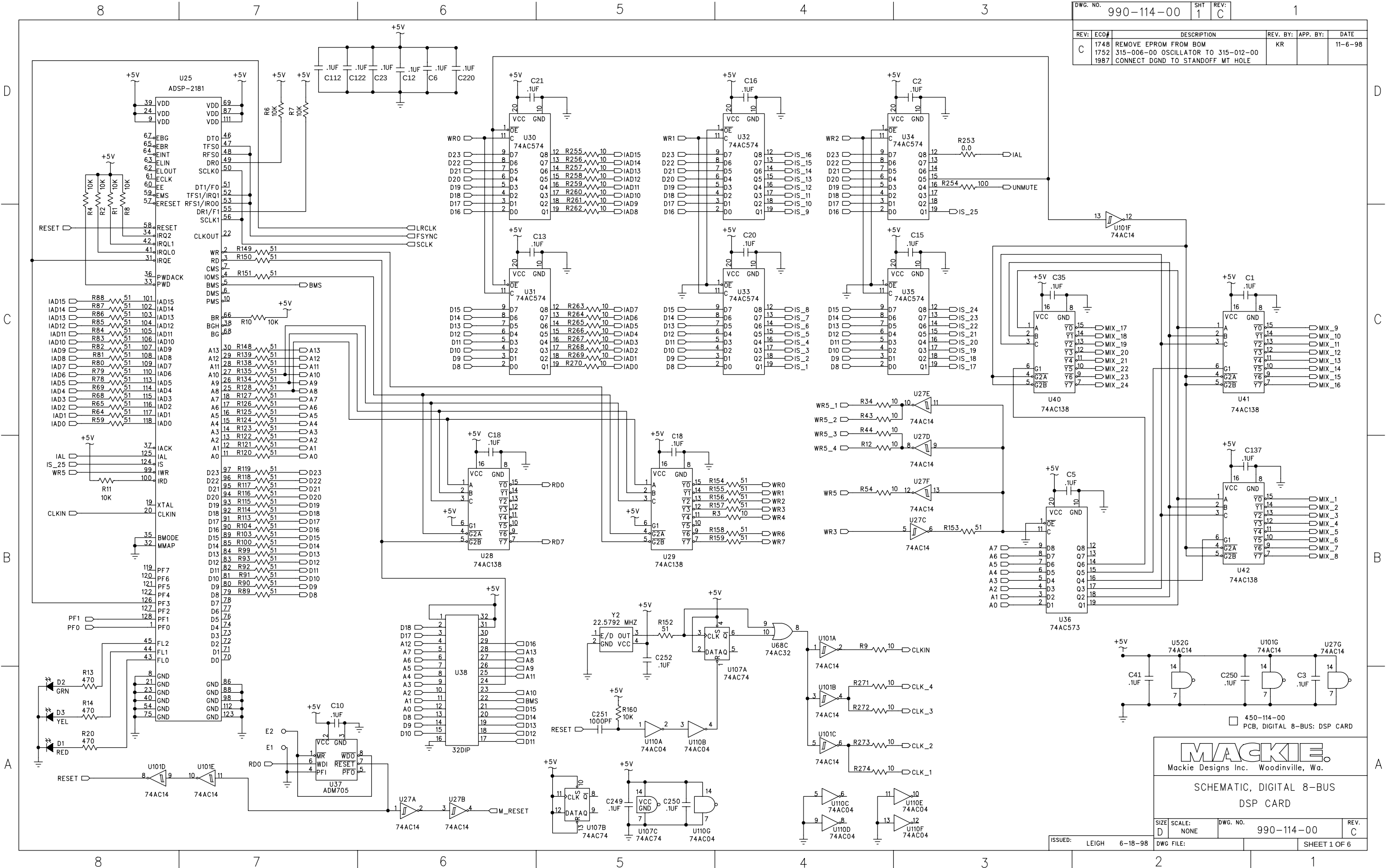


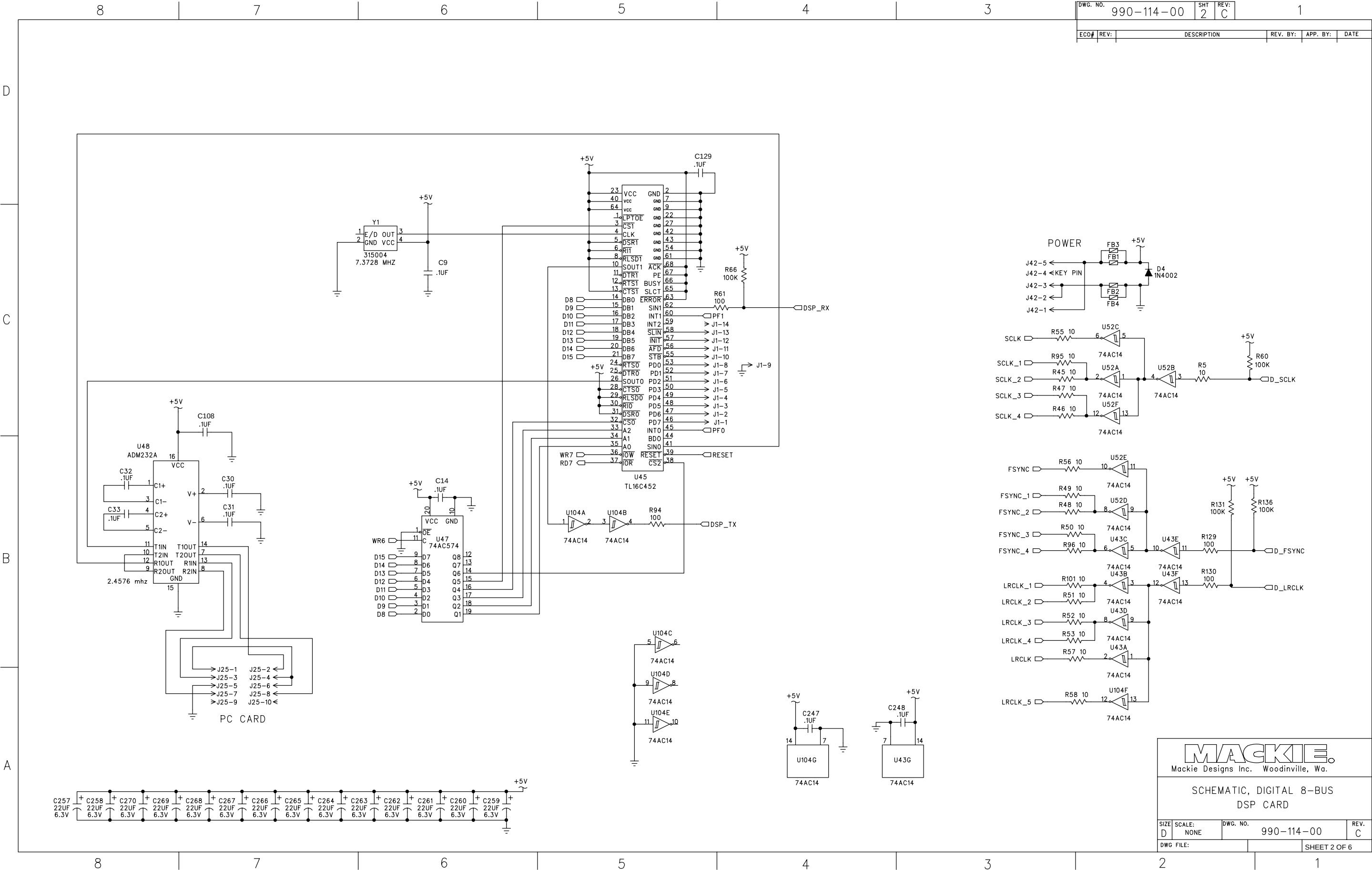
Rev B has these different parts, all other parts remain the same as Rev A.

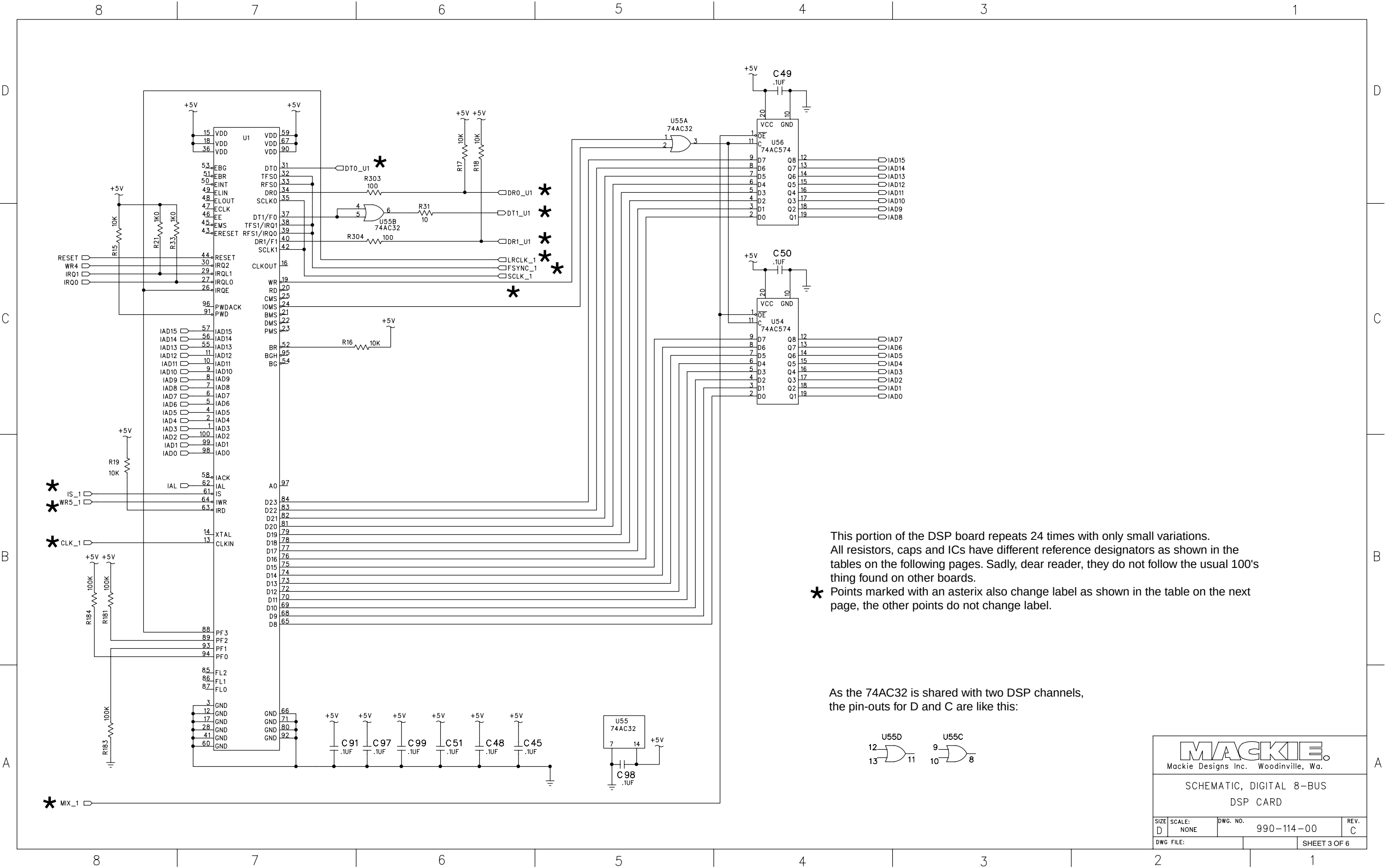




DWG. NO.	990-114-00	SHT	1	REV:	C	1
REV:	ECO#	DESCRIPTION	REV. BY:	APP. BY:	DATE	
C	1748	REMOVE EPROM FROM BOM	KR		11-6-98	
	1752	315-006-00 OSCILLATOR TO 315-012-00				
	1987	CONNECT DGND TO STANDOFF MT HOLE				







This table from Hull shows the difference in reference designators and labels between the DSP schematics. To use it, first look at the schematic showing U1 on the previous page and look for the component of interest. For example:

To find the resistor in the U17 circuit which does the same thing as R184 in the U1 circuit:
Look on the top row (U1) for R184 (circled) and then go down that column until you find the resistor for the U17 circuit, which is R623.

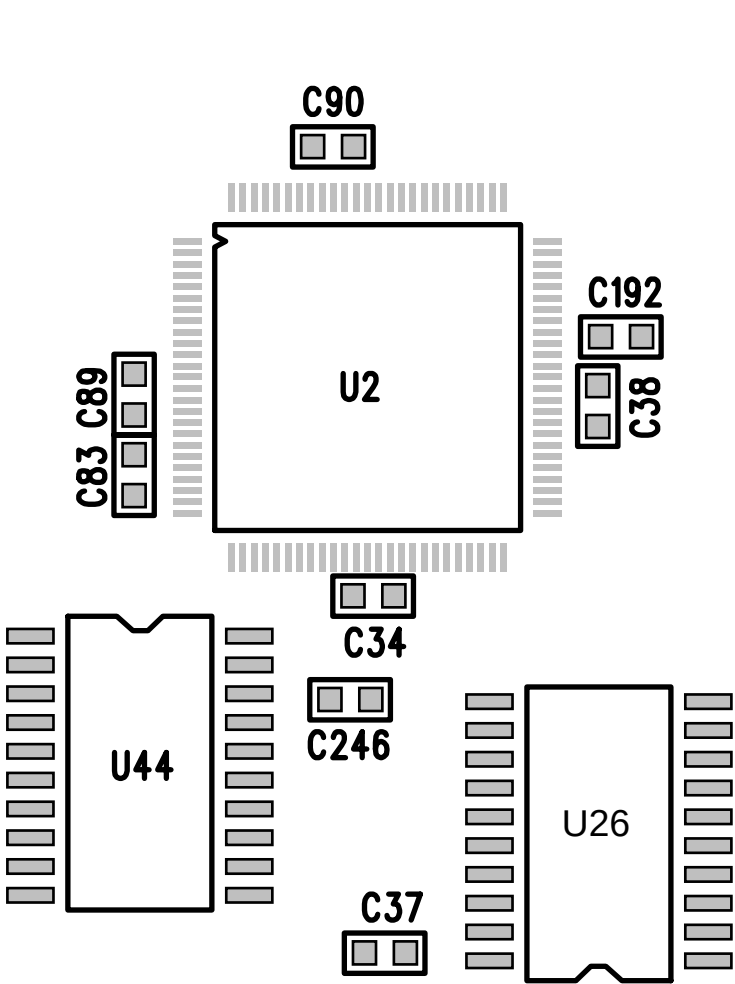
There are a few points:
Only the U1 circuit uses R21 and R33.
Only the U15 circuit has one less IC.
NC stands for No Connection, or not connected, or just plain not there.
NL stands for No Label, that is, the junction shown in the U1 schematic is still there but it has no label.

shown

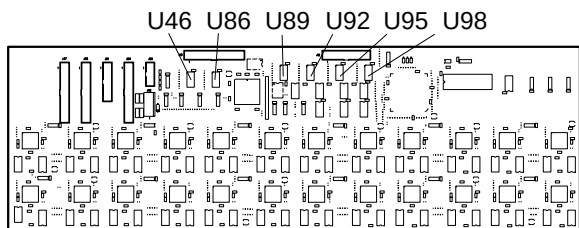
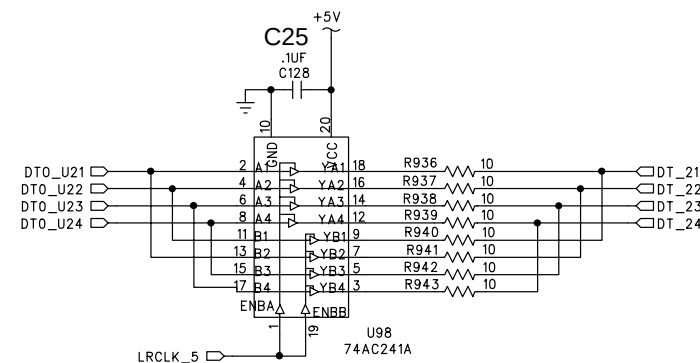
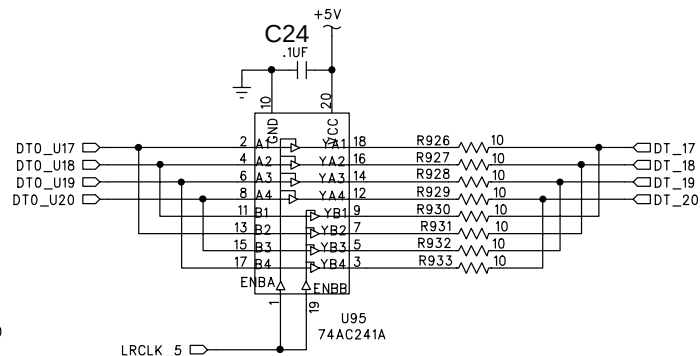
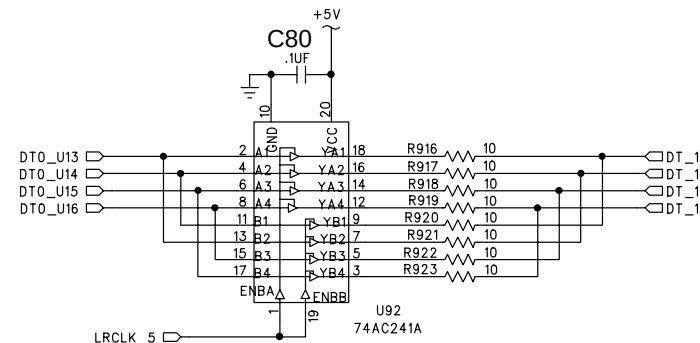
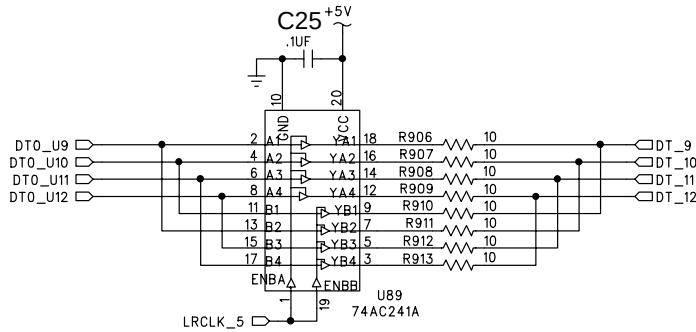
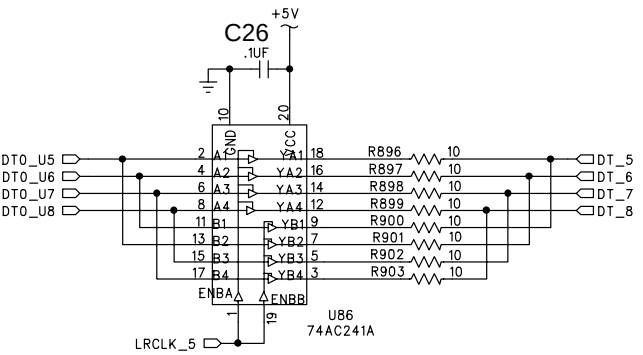
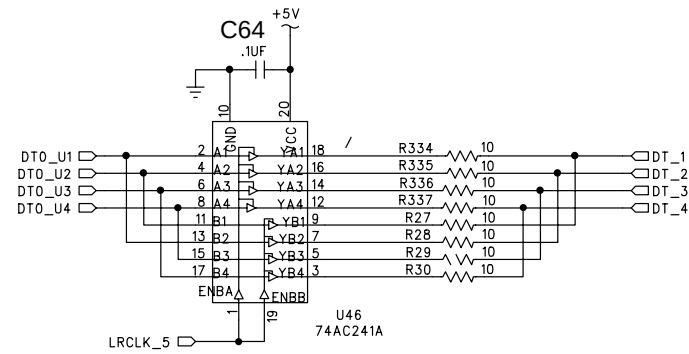
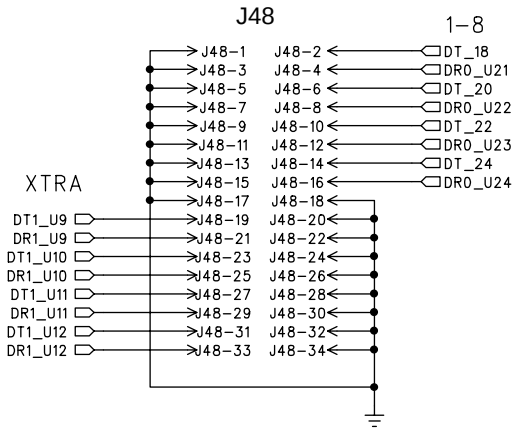
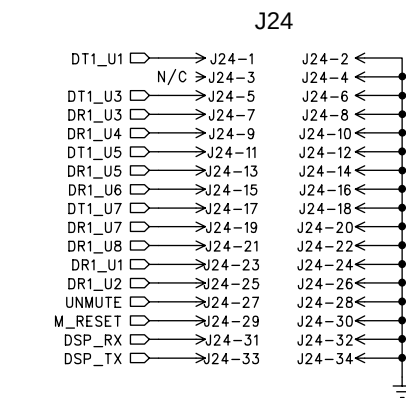
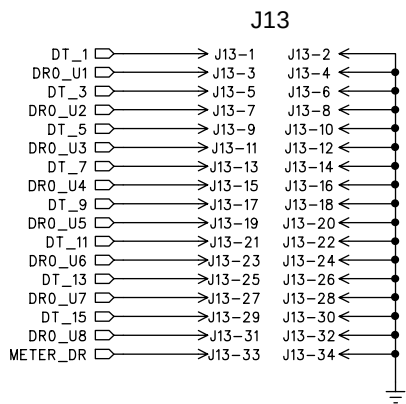
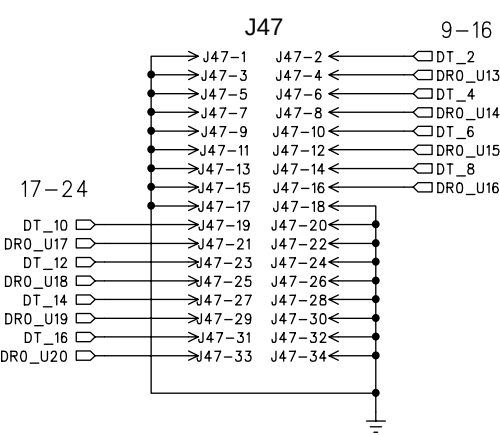
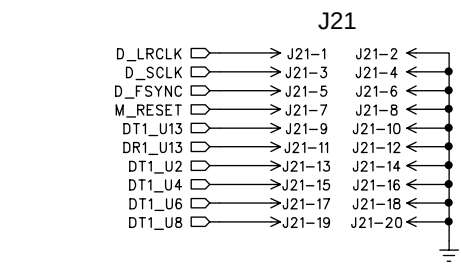
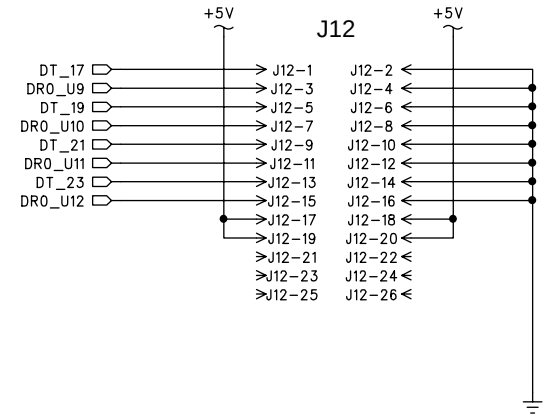
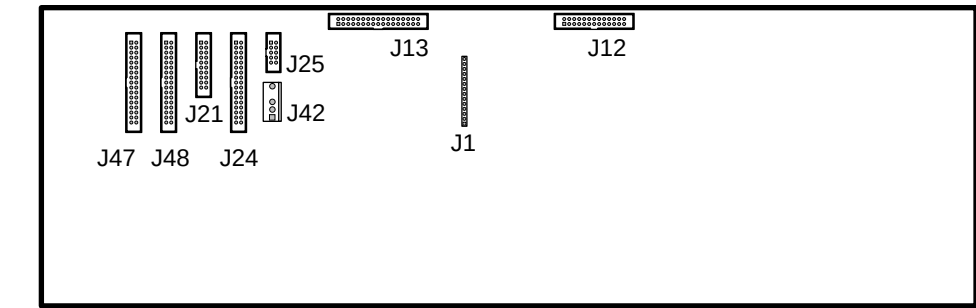
U1	U55B	U55A	U56	U54	R21	R33	R15	R19	R184	R181	R183	R303	R31	R304	R16	R17	R18	IS_1	WR5_1	CLK_1	MIX_1	DTO_U1	DRO_U1	DT1_U1	DR1_U1	LRCLK_1	FSYNC_1	SCLK_1
U2	U49A	U49B	U44	U26	NC	NC	R22	R26	R186	R182	R185	R327	R32	R328	R23	R24	R25	IS_2	"	"	MIX_2	DTO_U2	DRO_U2	DT1_U2	DR1_U2	"	"	"
U3	U55D	U55C	U50	U39	"	"	R35	R39	R42	R40	R41	R62	R67	R63	R36	R37	R38	IS_3	"	"	MIX_3	DTO_U3	DRO_U3	DT1_U3	DR1_U3	"	"	"
U4	U49C	U49D	U57	U51	"	"	R70	R74	R77	R75	R76	R97	R102	R98	R71	R72	R73	IS_4	"	"	MIX_4	DTO_U4	DRO_U4	DT1_U4	DR1_U4	"	"	"
U5	U53A	U53B	U60	U58	"	"	R105	R109	R112	R110	R111	R132	R137	R133	R106	R107	R108	IS_5	"	"	MIX_5	DTO_U5	DRO_U5	DT1_U5	DR1_U5	"	"	"
U6	U59B	U59A	U63	U61	"	"	R140	R144	R147	R145	R146	R167	R172	R168	R141	R142	R143	IS_6	"	"	MIX_6	DTO_U6	DRO_U6	DT1_U6	DR1_U6	"	"	"
U7	U53D	U53C	U66	U64	"	"	R175	R179	R188	R180	R187	R208	R213	R209	R176	R177	R178	IS_7	WR5_2	CLK_2	MIX_7	DTO_U7	DRO_U7	DT1_U7	DR1_U7	LRCLK_2	FSYNC_2	SCLK_2
U8	U59C	U59D	U69	U67	"	"	R216	R220	R223	R221	R222	R243	R248	R244	R217	R218	R219	IS_8	"	"	MIX_8	DTO_U8	DRO_U8	DT1_U8	DR1_U8	"	"	"
U9	U62A	U62B	U72	U70	"	"	R251	R340	R343	R341	R342	R363	R368	R364	R252	R338	R339	IS_9	"	"	MIX_9	DTO_U9	DRO_U9	DT1_U9	DR1_U9	"	"	"
U10	U65A	U65B	U75	U73	"	"	R371	R375	R378	R376	R377	R398	R403	R399	R372	R373	R374	IS_10	"	"	MIX_10	DTO_U10	DRO_U10	DT1_U10	DR1_U10	"	"	"
U11	U62C	U62D	U78	U76	"	"	R406	R410	R413	R411	R412	R433	R438	R434	R407	R408	R409	IS_11	"	"	MIX_11	DTO_U11	DRO_U11	DT1_U11	DR1_U11	"	"	"
U12	U65C	U65D	U81	U79	"	"	R441	R445	R448	R446	R447	R468	R473	R469	R442	R443	R444	IS_12	"	"	MIX_12	DTO_U12	DRO_U12	DT1_U12	DR1_U12	"	"	"
U13	U68A	U68B	U84	U82	"	"	R476	R480	R483	R481	R482	R503	R508	R504	R477	R478	R479	IS_13	WR5_3	CLK_3	MIX_13	DTO_U13	DRO_U13	DT1_U13	DR1_U13	LRCLK_3	FSYNC_3	SCLK_3
U14	U71A	U71B	U87	U85	"	"	R511	R515	R518	R516	R517	R538	R543	R539	R512	R513	R514	IS_14	"	"	MIX_14	DTO_U14	DRO_U14	NL	NL	"	"	"
U15	NC	U68D	U90	U88	"	"	R546	R550	R553	R551	R552	R573	NC	R574	R547	R548	R549	IS_15	"	"	MIX_15	DTO_U15	DRO_U15	NC	METER_DR	"	"	"
U16	U71C	U71D	U93	U91	"	"	R581	R585	R588	R586	R587	R608	R613	R609	R582	R583	R584	IS_16	"	"	MIX_16	DTO_U16	DRO_U16	NL	NL	"	"	"
U17	U74A	U74B	U96	U94	"	"	R616	R620	R623	R621	R622	R643	R648	R644	R617	R618	R619	IS_17	"	"	MIX_17	DTO_U17	DRO_U17	"	"	"	"	"
U18	U77A	U77B	U99	U97	"	"	R651	R655	R658	R656	R657	R678	R683	R679	R652	R653	R654	IS_18	"	"	MIX_18	DTO_U18	DRO_U18	"	"	"	"	"
U19	U74C	U74D	U102	U100	"	"	R686	R690	R693	R691	R692	R713	R718	R714	R687	R688	R689	IS_19	WR5_4	CLK_4	MIX_19	DTO_U19	DRO_U19	"	"	LRCLK_4	FSYNC_4	SCLK_4
U20	U77C	U77D	U105	U103	"	"	R721	R725	R728	R726	R727	R748	R753	R749	R722	R723	R724	IS_20	"	"	MIX_20	DTO_U20	DRO_U20	"	"	"	"	"
U21	U80A	U80B	U108	U106	"	"	R756	R760	R763	R761	R762	R783	R788	R784	R757	R758	R759	IS_21	"	"	MIX_21	DTO_U21	DRO_U21	"	"	"	"	"
U22	U83A	U83B	U111	U109	"	"	R791	R795	R798	R796	R797	R818	R823	R819	R792	R793	R794	IS_22	"	"	MIX_22	DTO_U22	DRO_U22	"	"	"	"	"
U23	U80C	U80D	U114	U112	"	"	R826	R830	R833	R831	R832	R853	R858	R854	R827	R828	R829	IS_23	"	"	MIX_23	DTO_U23	DRO_U23	"	"	"	"	"
U24	U83C	U83D	U117	U115	"	"	R861	R865	R868	R866	R867	R888	R893	R889	R862	R863	R864	IS_24	"	"	MIX_24	DTO_U24	DRO_U24	"	"	"	"	"

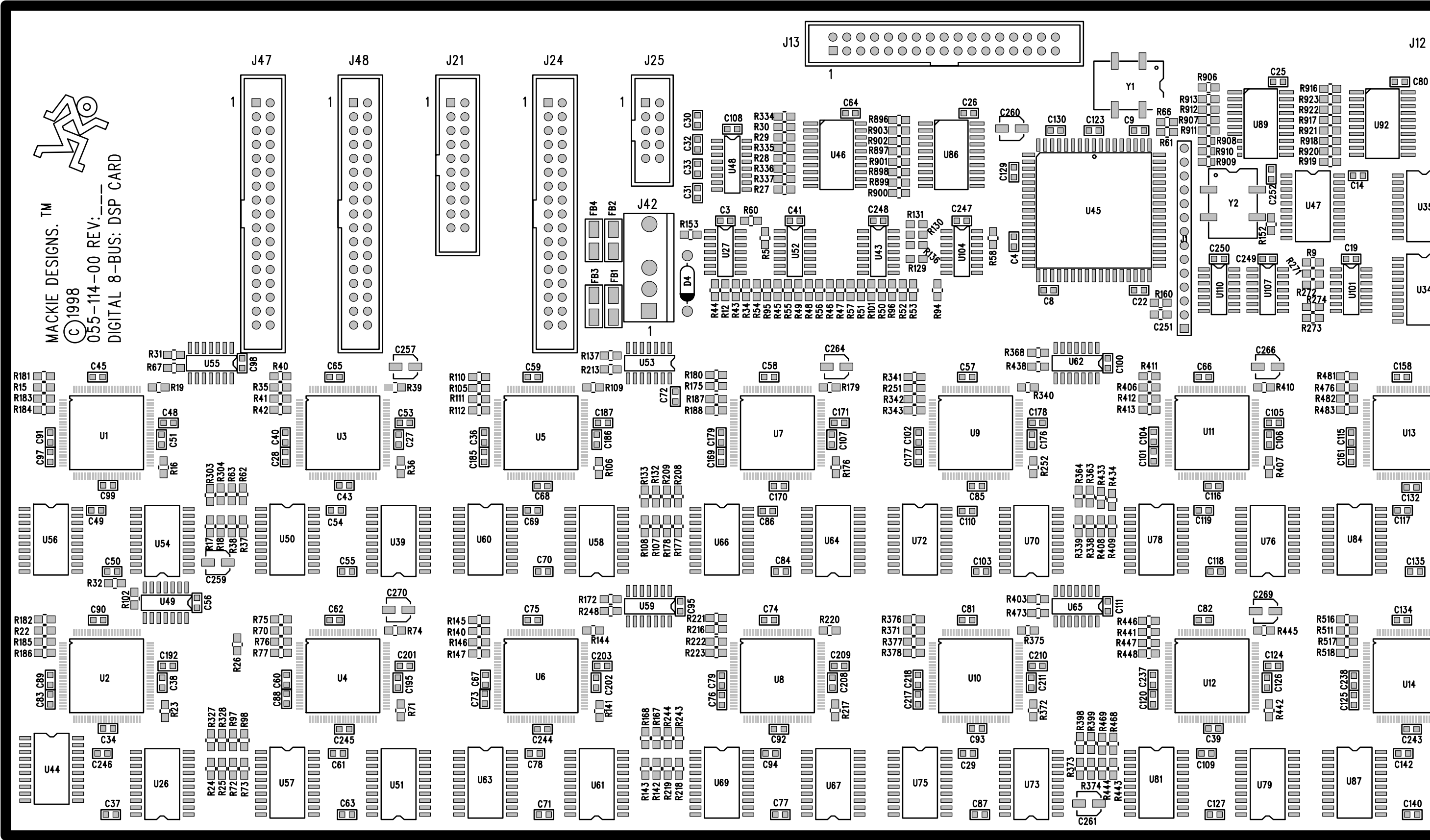
These are the bypass capacitors for each IC (reading along the row), connected between ground and +5volts. The schematic on sheet 3 shows the location of the caps for U1, U55, U56 and U54. The portion of the PCB shown on this page is for U2, U44 and U26. The caps are grouped in the same pattern for most of the 24 repeats. Look in the table to find the caps for other ICs. You can also see which ICs go together, for example, U1 is used with U55, U56 and U54, reading along the row.

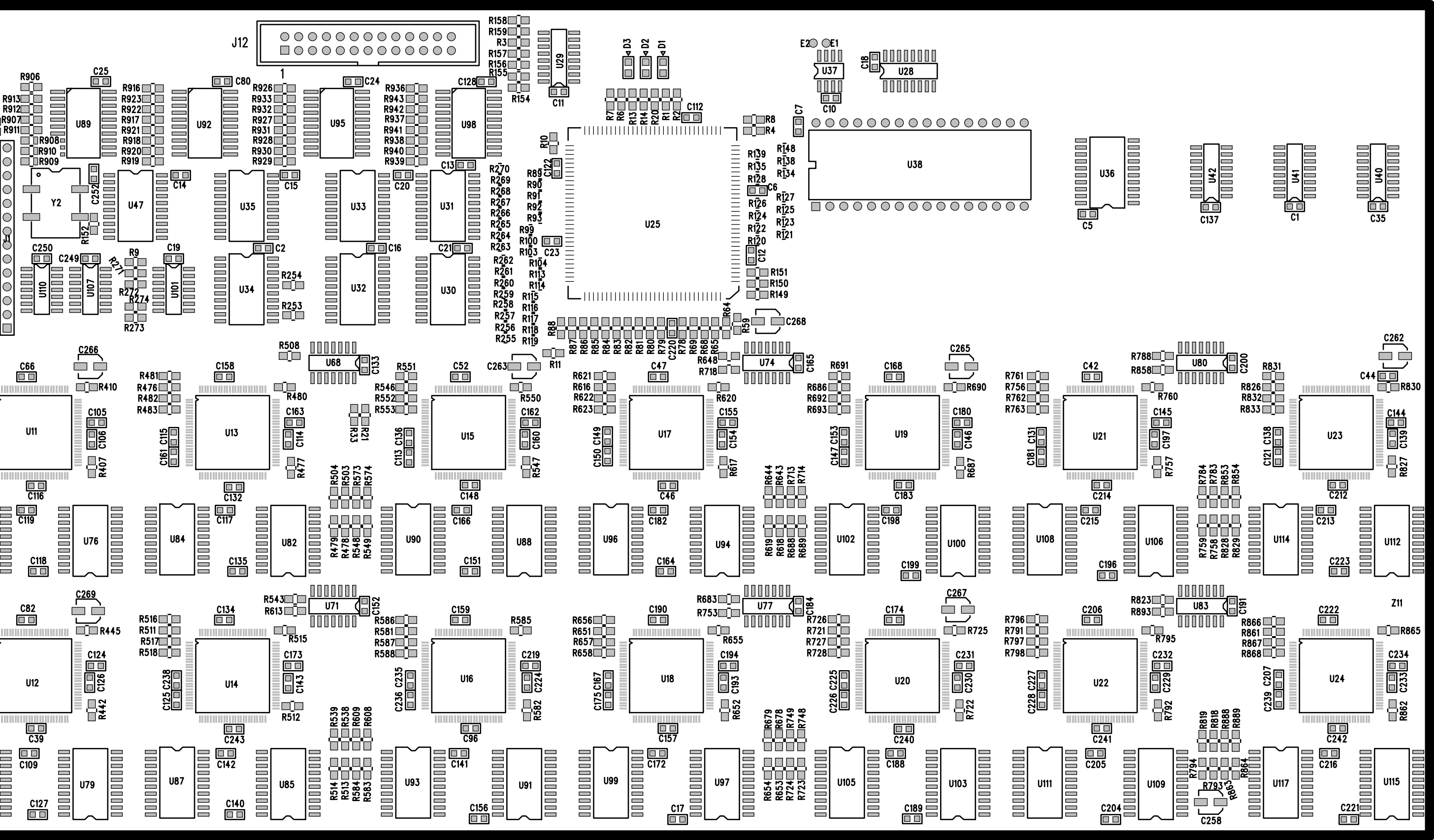
U1	C91	C97	C99	C51	C48	C45	U55	C98	U56	C49	U54	C50
U2	C89	C83	C34	C38	C192	C90	U49	C56	U44	C246	U26	C37
U3	C40	C28	C43	C27	C53	C65			U50	C54	U39	C55
U4	C60	C88	C245	C195	C201	C62			U57	C61	U51	C63
U5	C36	C185	C68	C186	C187	C59	U53	C72	U60	C69	U58	C70
U6	C67	C73	C244	C202	C203	C75	U59	C95	U63	C78	U61	C71
U7	C179	C169	C170	C107	C171	C58			U66	C86	U64	C84
U8	C79	C76	C92	C208	C209	C74			U69	C94	U67	C77
U9	C102	C177	C85	C176	C178	C57	U62	C100	U72	C110	U70	C103
U10	C218	C217	C93	C211	C210	C81	U65	C111	U75	C29	U73	C87
U11	C104	C101	C116	C106	C105	C66			U78	C119	U76	C118
U12	C237	C120	C39	C126	C124	C82			U81	C109	U79	C127
U13	C115	C161	C132	C114	C163	C158	U68	C133	U84	C117	U82	C135
U14	C238	C125	C243	C143	C173	C134	U71	C152	U87	C142	U85	C140
U15	C136	C113	C148	C160	C162	C52			U90	C166	U88	C151
U16	C235	C236	C96	C224	C219	C159			U93	C141	U91	C156
U17	C149	C150	C46	C154	C155	C47	U74	C165	U96	C182	U94	C164
U18	C167	C175	C157	C193	C194	C190	U77	C184	U99	C172	U97	C17
U19	C153	C147	C183	C146	C180	C168			U102	C198	U100	C199
U20	C225	C226	C240	C230	C231	C174			U105	C188	U103	C189
U21	C131	C181	C214	C197	C145	C42	U80	C200	U108	C215	U106	C196
U22	C227	C228	C241	C229	C232	C206	U83	C191	U111	C205	U109	C204
U23	C138	C121	C212	C139	C144	C44			U114	C213	U112	C223
U24	C207	C239	C242	C233	C234	C222			U117	C216	U115	C221
GND PIN	12	17	41	60	66	92	GND PIN	7	GND PIN	10	GND PIN	10
+5v PIN	15	18	36	59	67	90	+5v PIN	14	+5v PIN	20	+5v PIN	20



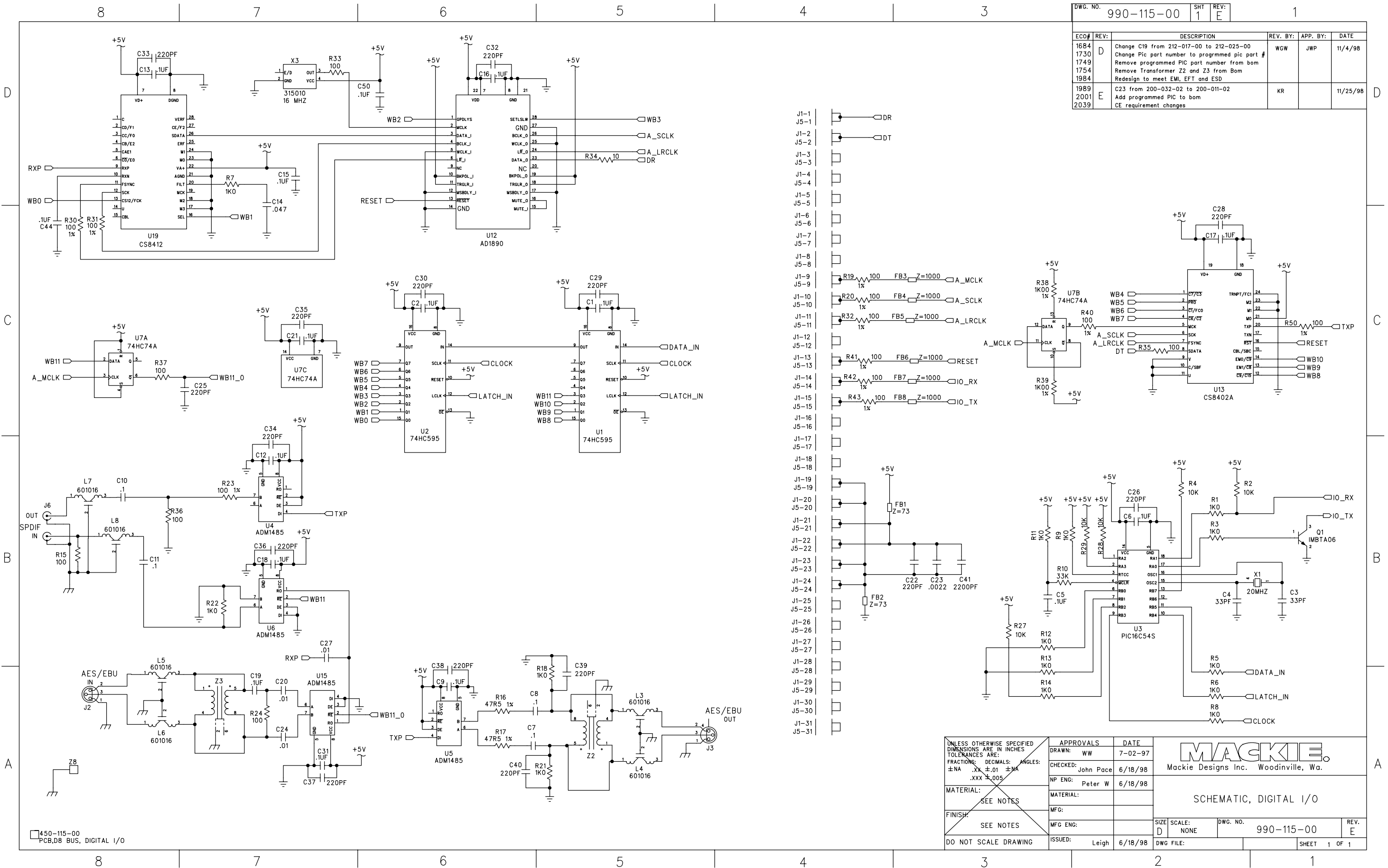
This pattern is repeated 24 times

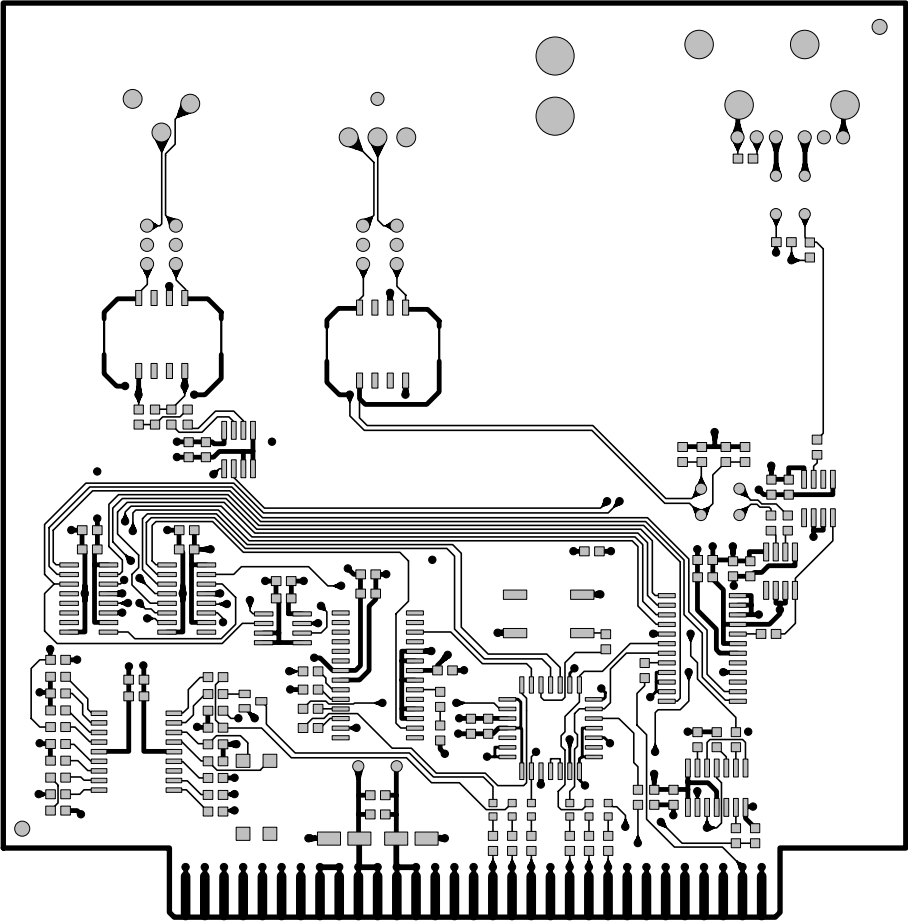
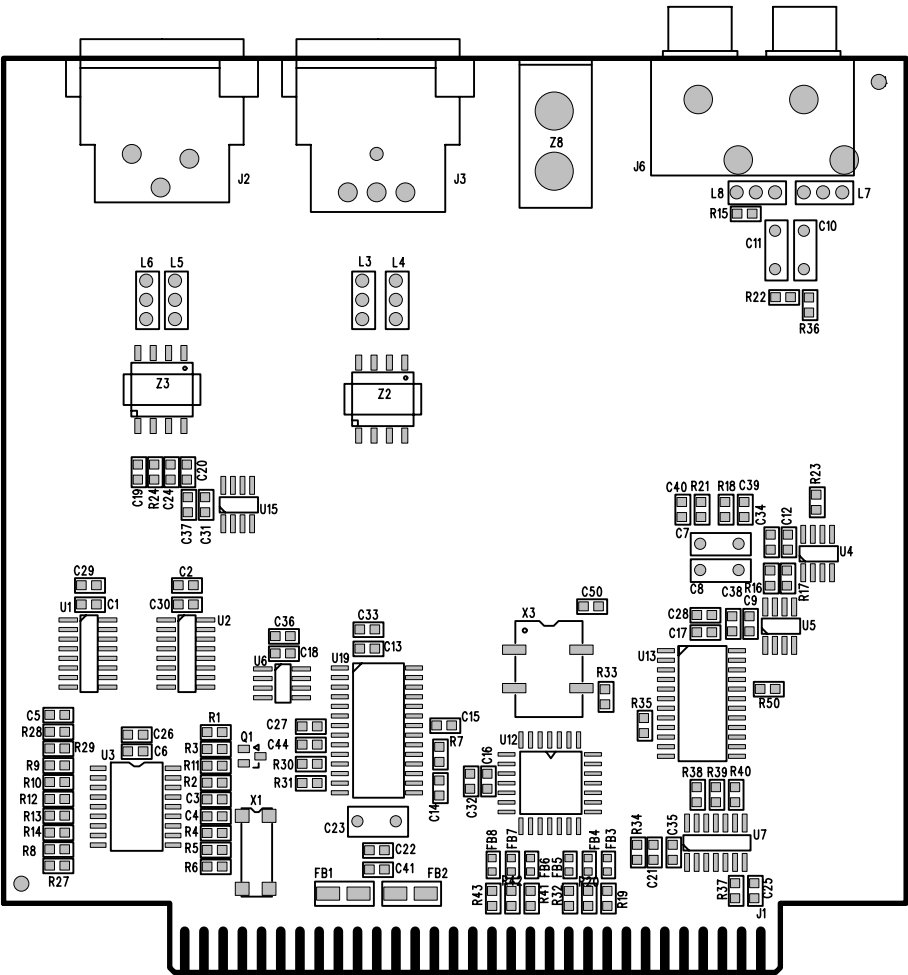




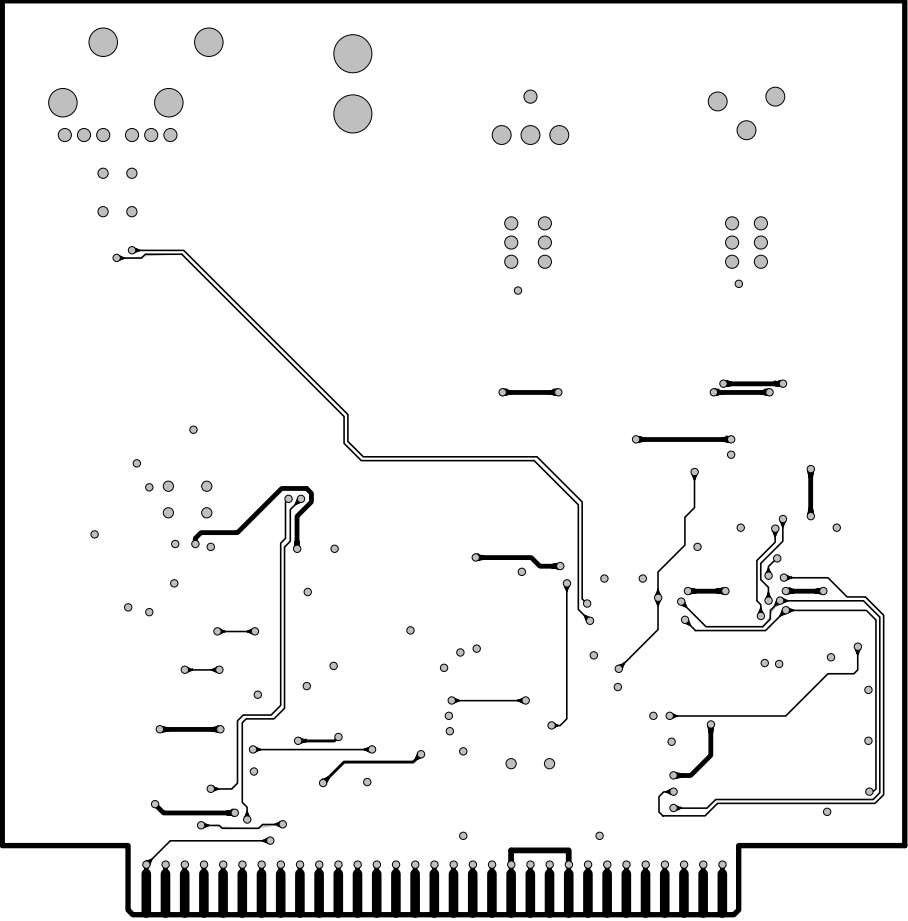


DWG. NO.		990-115-00		SHT	1	REV:	E	1			
ECO#		REV:				DESCRIPTION			REV. BY:	APP. BY:	DATE
1684		D	Change C19 from 212-017-00 to 212-025-00						WG	WJP	11/4/98
1730			Change Pic part number to programmed pic part #								
1749			Remove programmed PIC part number from bom								
1754			Remove Transformer Z2 and Z3 from Bom								
1984			Redesign to meet EMI, EFT and ESD								
1989		E	C23 from 200-032-02 to 200-011-02						KR		11/25/98
2001			Add programmed PIC to bom								
2039			CE requirement changes								



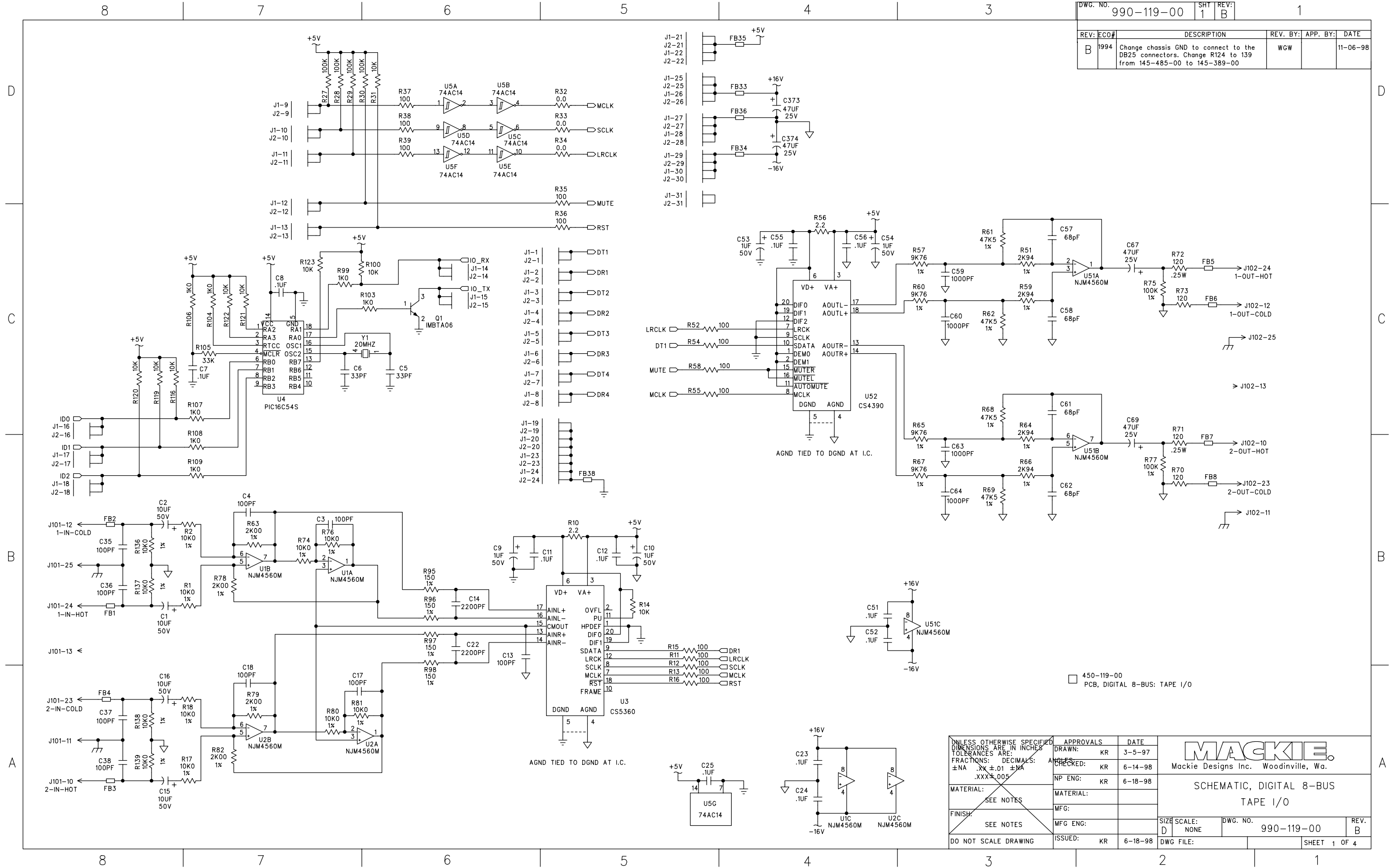


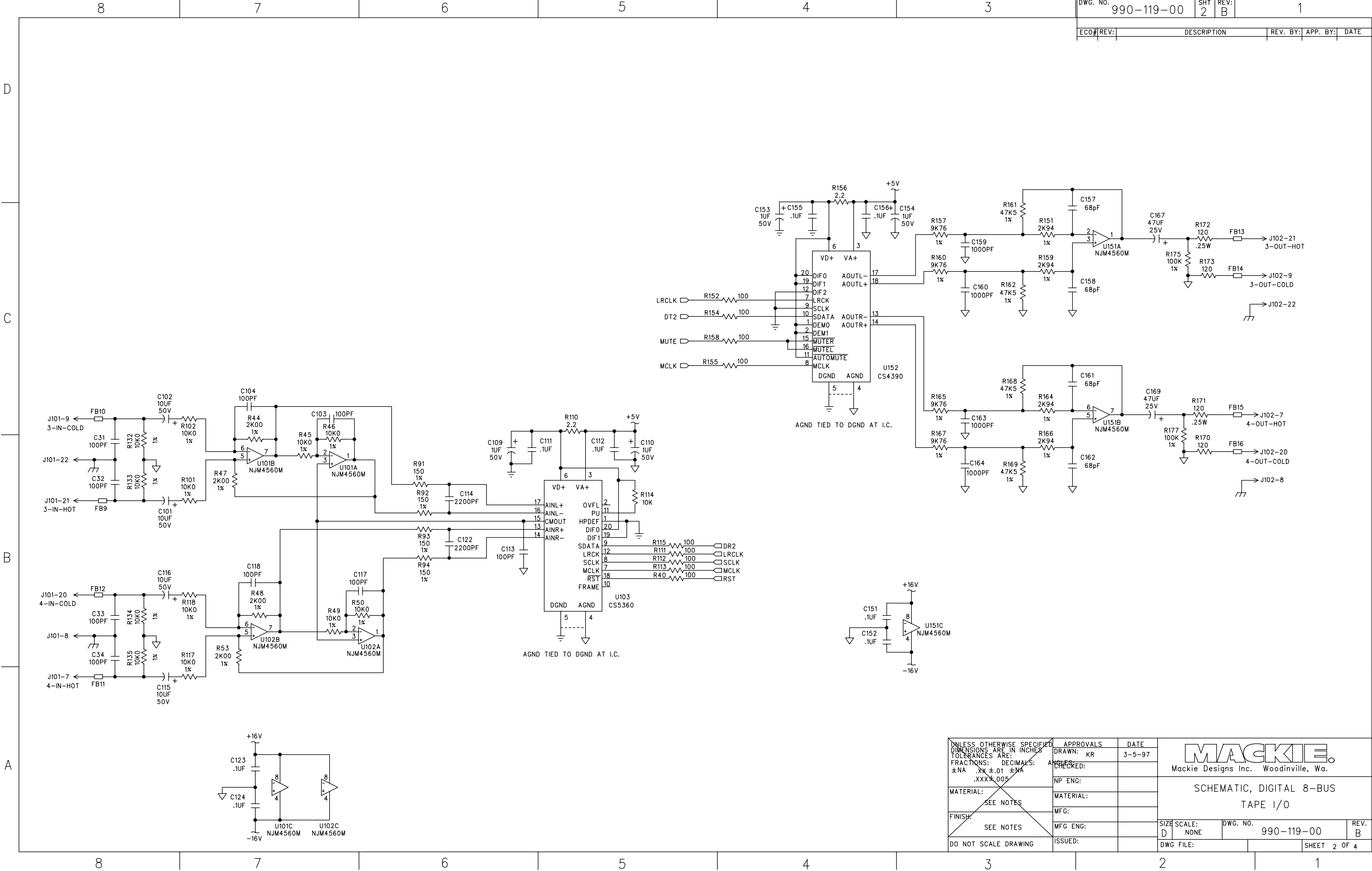
Top Traces



Bottom Traces

DWG. NO.	990-119-00	SHT	1	REV:	B	1
REV:	ECO#	DESCRIPTION	REV. BY:	APP. BY:	DATE	
B	1994	Change chassis GND to connect to the DB25 connectors. Change R124 to 139 from 145-485-00 to 145-389-00	WG		11-06-98	





UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±NA .XX ±.01 ±NA .XXX ±.005 MATERIAL: SEE NOTES FINISH: SEE NOTES DO NOT SCALE DRAWING		APPROVALS		DATE	
		DRAWN: KR		3-5-97	
		CHECKED:			
		NP ENG:			
		MATERIAL:			
		MFG:			
		MFG ENG:			
		ISSUED:			
MACKIE. Mackie Designs Inc. Woodinville, Wa. SCHEMATIC, DIGITAL 8-BUS TAPE I/O SIZE: D SCALE: NONE DWG. NO. 990-119-00 REV. B DWG FILE: SHEET 2 OF 4					

119-2 TAPE I/O BOARD 119 REV B

DWG. NO.	990-119-00	SHT	REV:	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:
				DATE

D

D

C

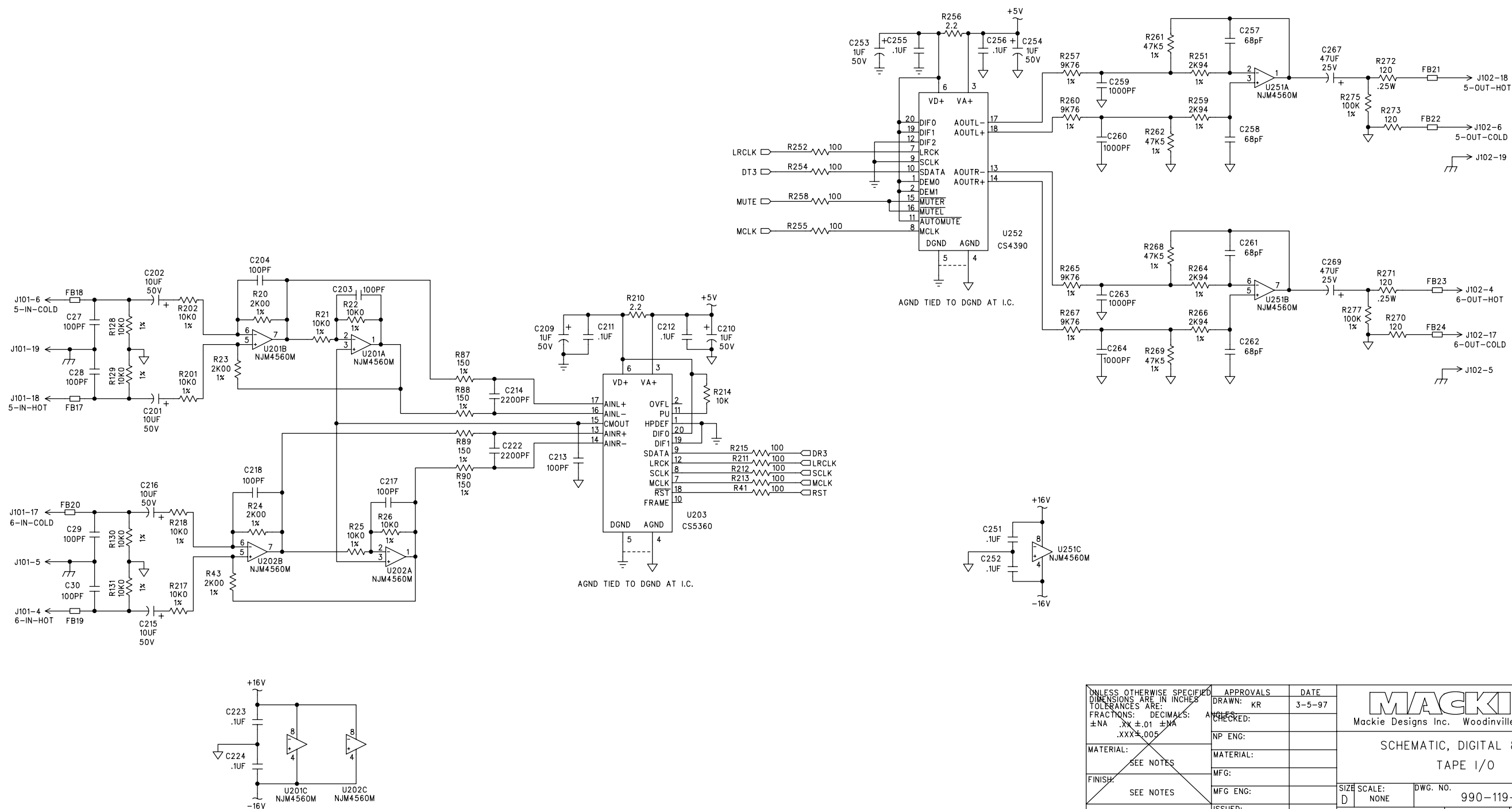
C

B

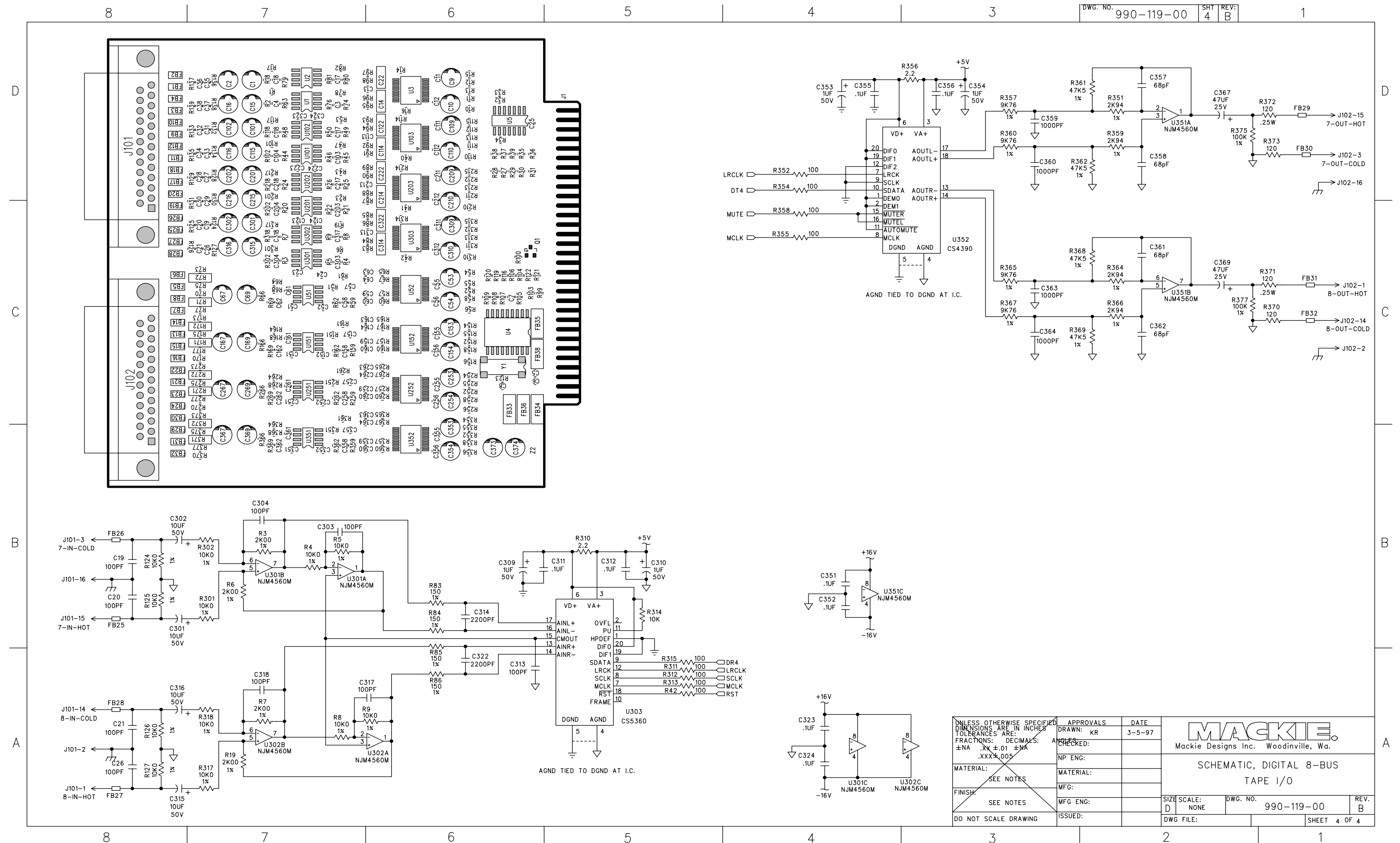
B

A

A



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±NA .XX ±.01 ±NA .XXX ±.005	APPROVALS DRAWN: KR CHECKED: NP ENG: MATERIAL: MFG: MFG ENG: ISSUED:	DATE 3-5-97	MACKIE. Mackie Designs Inc. Woodinville, Wa.
MATERIAL: SEE NOTES	MATERIAL: MFG: MFG ENG:	SIZE D	SCALE: NONE
FINISH: SEE NOTES	DO NOT SCALE DRAWING	DWG. NO. 990-119-00	REV. B
		DWG FILE:	SHEET 3 OF 4



CHANNELS 1 TO 12 ARE IDENTICAL EXCEPT FOR THE REFERENCE DESIGNATORS CHANGING BY 100'S AND THE LABELS CHANGING AS SHOWN IN THE TABLES.

REF DESIGNATOR DIFFERENCES BETWEEN THE CHANNELS

CHANNEL	PARTS RANGE	EXAMPLE
1	IN THE 100'S	R103, C102
2	IN THE 200'S	R203, C202
12	IN THE 1200'S	R1203, C1202

TABLE OF DIFFERENCES BETWEEN CHANNELS

CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	CHANNEL 7	CHANNEL 8	CHANNEL 9	CHANNEL 10	CHANNEL 11	CHANNEL 12
J4-4	J4-10	J4-16	J4-22	J4-28	J4-34	J5-4	J5-10	J5-16	J5-22	J5-28	J5-34
FB2	FB8	FB14	FB20	FB26	FB32	FB37	FB43	FB49	FB55	FB61	FB67
J4-1	J4-7	J4-13	J4-19	J4-25	J4-31	J5-1	J5-7	J5-13	J5-19	J5-25	J5-31
FB1	FB7	FB13	FB19	FB25	FB31	FB36	FB42	FB48	FB54	FB60	FB66
J4-5	J4-11	J4-17	J4-23	J4-29	J4-35	J5-5	J5-11	J5-17	J5-23	J5-29	J5-35
FB4	FB10	FB16	FB22	FB28	FB34	FB39	FB45	FB51	FB57	FB63	FB69
J4-2	J4-8	J4-14	J4-20	J4-26	J4-32	J5-2	J5-8	J5-14	J5-20	J5-26	J5-32
FB3	FB9	FB15	FB21	FB27	FB33	FB38	FB44	FB50	FB56	FB62	FB68

FB = FERRITE BEAD

4-4 TIP
-5 PIN 2
-2 RING
PIN 3

SW107A
1 2
3
LINE/MIC
4 5
6
SW107B

FB2
FB1
FB4
FB3
FB5
FB6
FB11
FB12
FB17
FB18
FB23
FB24
FB29
FB30
FB35
FB40
FB41
FB46
FB47
FB52
FB53
FB58
FB59
FB64
FB65
FB70

J4-3
J4-6
J4-9
J4-12
J4-15
J4-18
J4-21
J4-24
J4-27
J4-30
J4-33
J5-3
J5-6
J5-9
J5-12
J5-15
J5-18
J5-21
J5-24
J5-27
J5-30
J5-33

Q103 IMBT4403
Q104 IMBT4403
Q105 IMBT4403
Q101 2SA1084A
Q102 2SA1084A
Q106 NJM 2068
Q107 NJM 2068
Q108 NJM 2068
Q109 NJM 2068
Q110 NJM 2068
Q111 NJM 2068
Q112 NJM 2068
Q113 NJM 2068
Q114 NJM 2068
Q115 NJM 2068
Q116 NJM 2068
Q117 NJM 2068
Q118 NJM 2068
Q119 NJM 2068
Q120 NJM 2068
Q121 NJM 2068
Q122 NJM 2068
Q123 NJM 2068
Q124 NJM 2068
Q125 NJM 2068
Q126 NJM 2068
Q127 NJM 2068
Q128 NJM 2068
Q129 NJM 2068
Q130 NJM 2068
Q131 NJM 2068
Q132 NJM 2068
Q133 NJM 2068
Q134 NJM 2068
Q135 NJM 2068
Q136 NJM 2068
Q137 NJM 2068
Q138 NJM 2068
Q139 NJM 2068
Q140 NJM 2068
Q141 NJM 2068
Q142 NJM 2068
Q143 NJM 2068
Q144 NJM 2068
Q145 NJM 2068
Q146 NJM 2068
Q147 NJM 2068
Q148 NJM 2068
Q149 NJM 2068
Q150 NJM 2068
Q151 NJM 2068
Q152 NJM 2068
Q153 NJM 2068
Q154 NJM 2068
Q155 NJM 2068
Q156 NJM 2068
Q157 NJM 2068
Q158 NJM 2068
Q159 NJM 2068
Q160 NJM 2068
Q161 NJM 2068
Q162 NJM 2068
Q163 NJM 2068
Q164 NJM 2068
Q165 NJM 2068
Q166 NJM 2068
Q167 NJM 2068
Q168 NJM 2068
Q169 NJM 2068
Q170 NJM 2068
Q171 NJM 2068
Q172 NJM 2068
Q173 NJM 2068
Q174 NJM 2068
Q175 NJM 2068
Q176 NJM 2068
Q177 NJM 2068
Q178 NJM 2068
Q179 NJM 2068
Q180 NJM 2068
Q181 NJM 2068
Q182 NJM 2068
Q183 NJM 2068
Q184 NJM 2068
Q185 NJM 2068
Q186 NJM 2068
Q187 NJM 2068
Q188 NJM 2068
Q189 NJM 2068
Q190 NJM 2068
Q191 NJM 2068
Q192 NJM 2068
Q193 NJM 2068
Q194 NJM 2068
Q195 NJM 2068
Q196 NJM 2068
Q197 NJM 2068
Q198 NJM 2068
Q199 NJM 2068
Q200 NJM 2068
Q201 NJM 2068
Q202 NJM 2068
Q203 NJM 2068
Q204 NJM 2068
Q205 NJM 2068
Q206 NJM 2068
Q207 NJM 2068
Q208 NJM 2068
Q209 NJM 2068
Q210 NJM 2068
Q211 NJM 2068
Q212 NJM 2068
Q213 NJM 2068
Q214 NJM 2068
Q215 NJM 2068
Q216 NJM 2068
Q217 NJM 2068
Q218 NJM 2068
Q219 NJM 2068
Q220 NJM 2068
Q221 NJM 2068
Q222 NJM 2068
Q223 NJM 2068
Q224 NJM 2068
Q225 NJM 2068
Q226 NJM 2068
Q227 NJM 2068
Q228 NJM 2068
Q229 NJM 2068
Q230 NJM 2068
Q231 NJM 2068
Q232 NJM 2068
Q233 NJM 2068
Q234 NJM 2068
Q235 NJM 2068
Q236 NJM 2068
Q237 NJM 2068
Q238 NJM 2068
Q239 NJM 2068
Q240 NJM 2068
Q241 NJM 2068
Q242 NJM 2068
Q243 NJM 2068
Q244 NJM 2068
Q245 NJM 2068
Q246 NJM 2068
Q247 NJM 2068
Q248 NJM 2068
Q249 NJM 2068
Q250 NJM 2068
Q251 NJM 2068
Q252 NJM 2068
Q253 NJM 2068
Q254 NJM 2068
Q255 NJM 2068
Q256 NJM 2068
Q257 NJM 2068
Q258 NJM 2068
Q259 NJM 2068
Q260 NJM 2068
Q261 NJM 2068
Q262 NJM 2068
Q263 NJM 2068
Q264 NJM 2068
Q265 NJM 2068
Q266 NJM 2068
Q267 NJM 2068
Q268 NJM 2068
Q269 NJM 2068
Q270 NJM 2068
Q271 NJM 2068
Q272 NJM 2068
Q273 NJM 2068
Q274 NJM 2068
Q275 NJM 2068
Q276 NJM 2068
Q277 NJM 2068
Q278 NJM 2068
Q279 NJM 2068
Q280 NJM 2068
Q281 NJM 2068
Q282 NJM 2068
Q283 NJM 2068
Q284 NJM 2068
Q285 NJM 2068
Q286 NJM 2068
Q287 NJM 2068
Q288 NJM 2068
Q289 NJM 2068
Q290 NJM 2068
Q291 NJM 2068
Q292 NJM 2068
Q293 NJM 2068
Q294 NJM 2068
Q295 NJM 2068
Q296 NJM 2068
Q297 NJM 2068
Q298 NJM 2068
Q299 NJM 2068
Q300 NJM 2068
Q301 NJM 2068
Q302 NJM 2068
Q303 NJM 2068
Q304 NJM 2068
Q305 NJM 2068
Q306 NJM 2068
Q307 NJM 2068
Q308 NJM 2068
Q309 NJM 2068
Q310 NJM 2068
Q311 NJM 2068
Q312 NJM 2068
Q313 NJM 2068
Q314 NJM 2068
Q315 NJM 2068
Q316 NJM 2068
Q317 NJM 2068
Q318 NJM 2068
Q319 NJM 2068
Q320 NJM 2068
Q321 NJM 2068
Q322 NJM 2068
Q323 NJM 2068
Q324 NJM 2068
Q325 NJM 2068
Q326 NJM 2068
Q327 NJM 2068
Q328 NJM 2068
Q329 NJM 2068
Q330 NJM 2068
Q331 NJM 2068
Q332 NJM 2068
Q333 NJM 2068
Q334 NJM 2068
Q335 NJM 2068
Q336 NJM 2068
Q337 NJM 2068
Q338 NJM 2068
Q339 NJM 2068
Q340 NJM 2068
Q341 NJM 2068
Q342 NJM 2068
Q343 NJM 2068
Q344 NJM 2068
Q345 NJM 2068
Q346 NJM 2068
Q347 NJM 2068
Q348 NJM 2068
Q349 NJM 2068
Q350 NJM 2068
Q351 NJM 2068
Q352 NJM 2068
Q353 NJM 2068
Q354 NJM 2068
Q355 NJM 2068
Q356 NJM 2068
Q357 NJM 2068
Q358 NJM 2068
Q359 NJM 2068
Q360 NJM 2068
Q361 NJM 2068
Q362 NJM 2068
Q363 NJM 2068
Q364 NJM 2068
Q365 NJM 2068
Q366 NJM 2068
Q367 NJM 2068
Q368 NJM 2068
Q369 NJM 2068
Q370 NJM 2068
Q371 NJM 2068
Q372 NJM 2068
Q373 NJM 2068
Q374 NJM 2068

TABLE OF DIFFERENCES BETWEEN CHANNELS

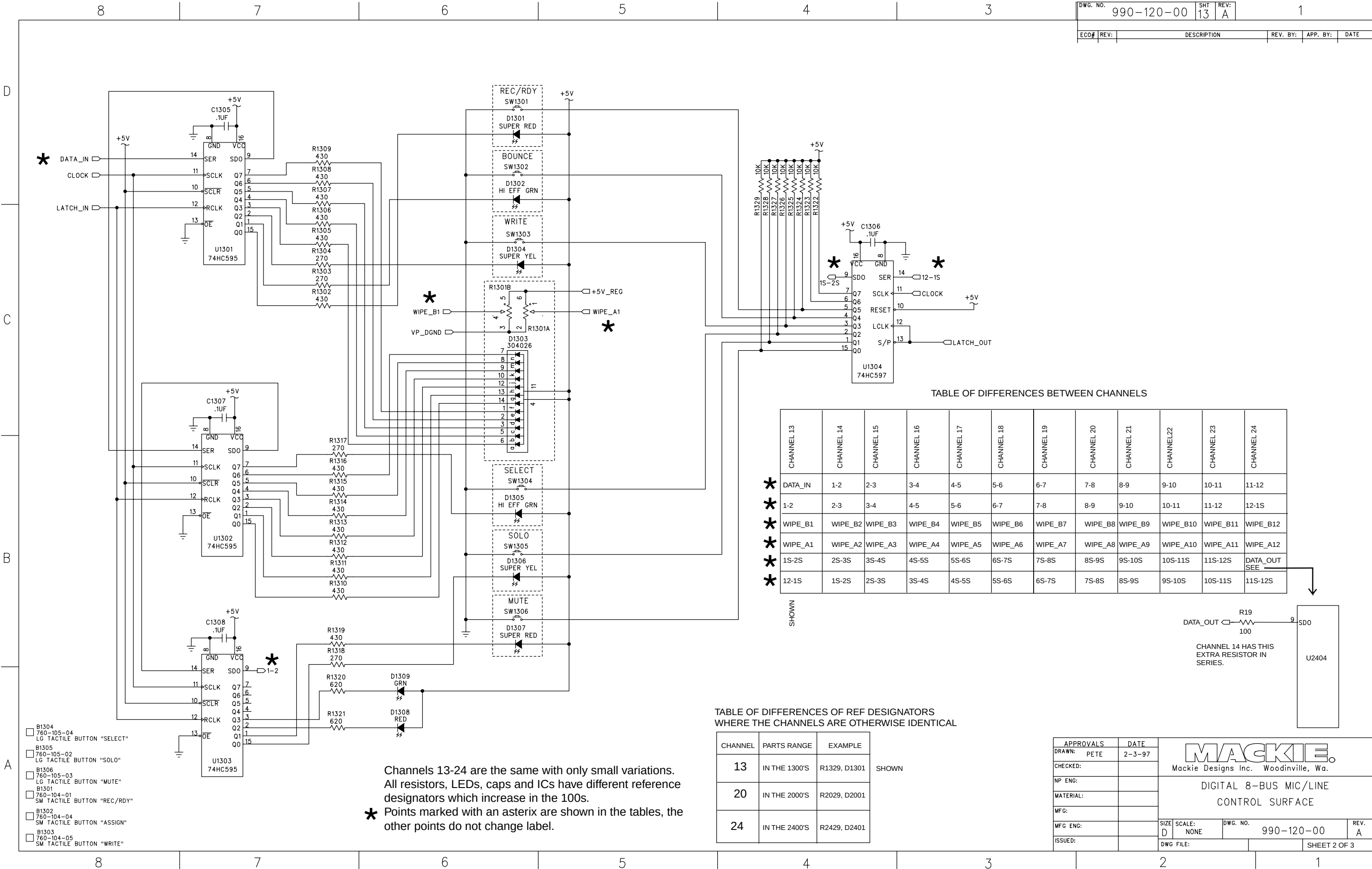
→	J7-1	J7-3	J7-5	J7-7	J7-9	J7-11	J7-13	J7-15	J7-17	J7-19	J7-21	J7-23
→	J7-2	J7-4	J7-6	J7-8	J7-10	J7-12	J7-14	J7-16	J7-18	J7-20	J7-22	J7-24
	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	CHANNEL 7	CHANNEL 8	CHANNEL 9	CHANNEL 10	CHANNEL 11	CHANNEL 12

SHC

QUANTITY

- | | | |
|----|--|------------------------------|
| 12 | ☐ 760-078-00
BUTTON, .58 X .32 MIC/LINE | |
| 12 | ☐ 706-033-01
STANDOFF, SWAGE, 4-40 X .542L | |
| 24 | ☐ 706-032-00
LED SPACER, NYLON .300 | |
| 12 | ☐ 760-063-00
KNOB, V-POT | |
| 12 | ☐ 760-064-00
LENS, V-POT DISPLAY | ☐ PCB |

☐ 450-120-00
PCB, DIGITAL 8-BUS: MIC/LINE CONTROL SURFACE



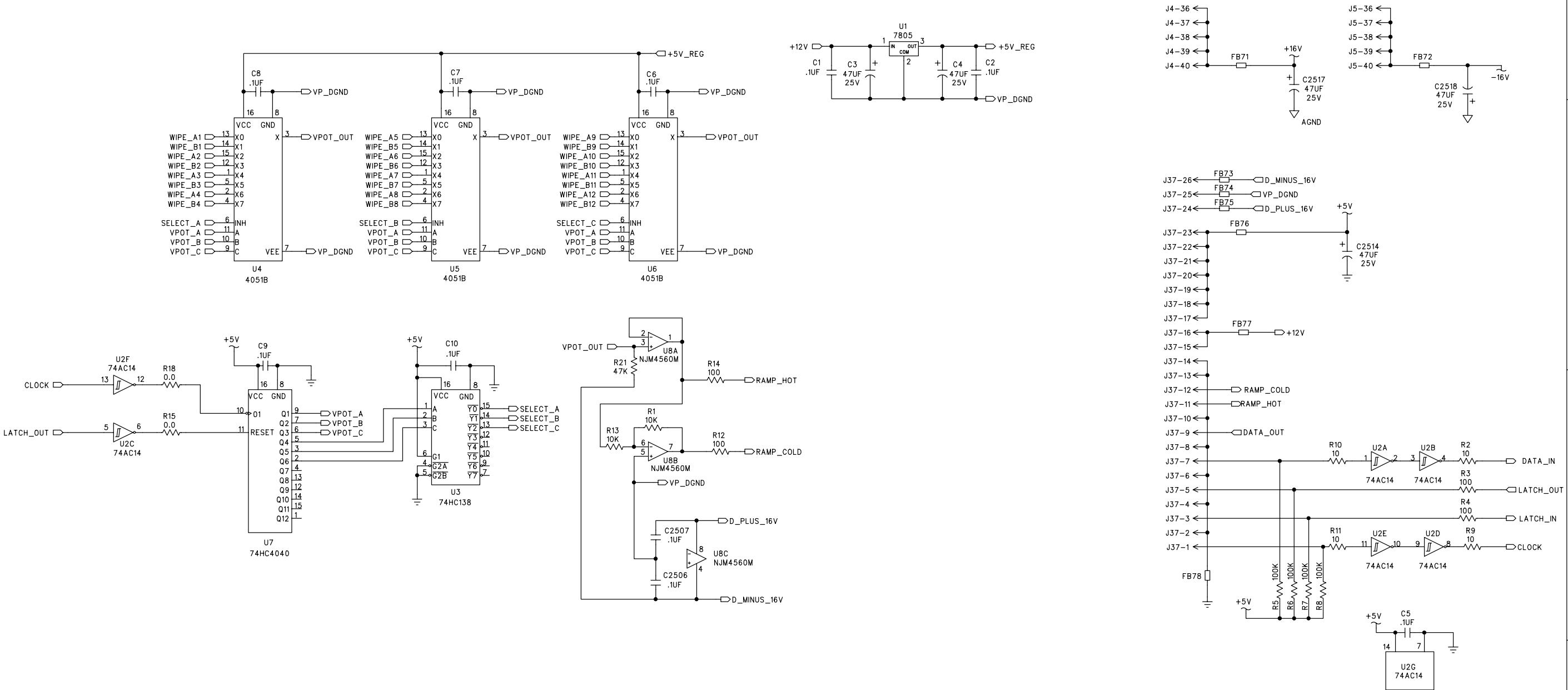
DWG. NO.	990-120-00	SHT	25	REV.	A	1
ECO#	REV.	DESCRIPTION	REV. BY:	APP. BY:	DATE	

D

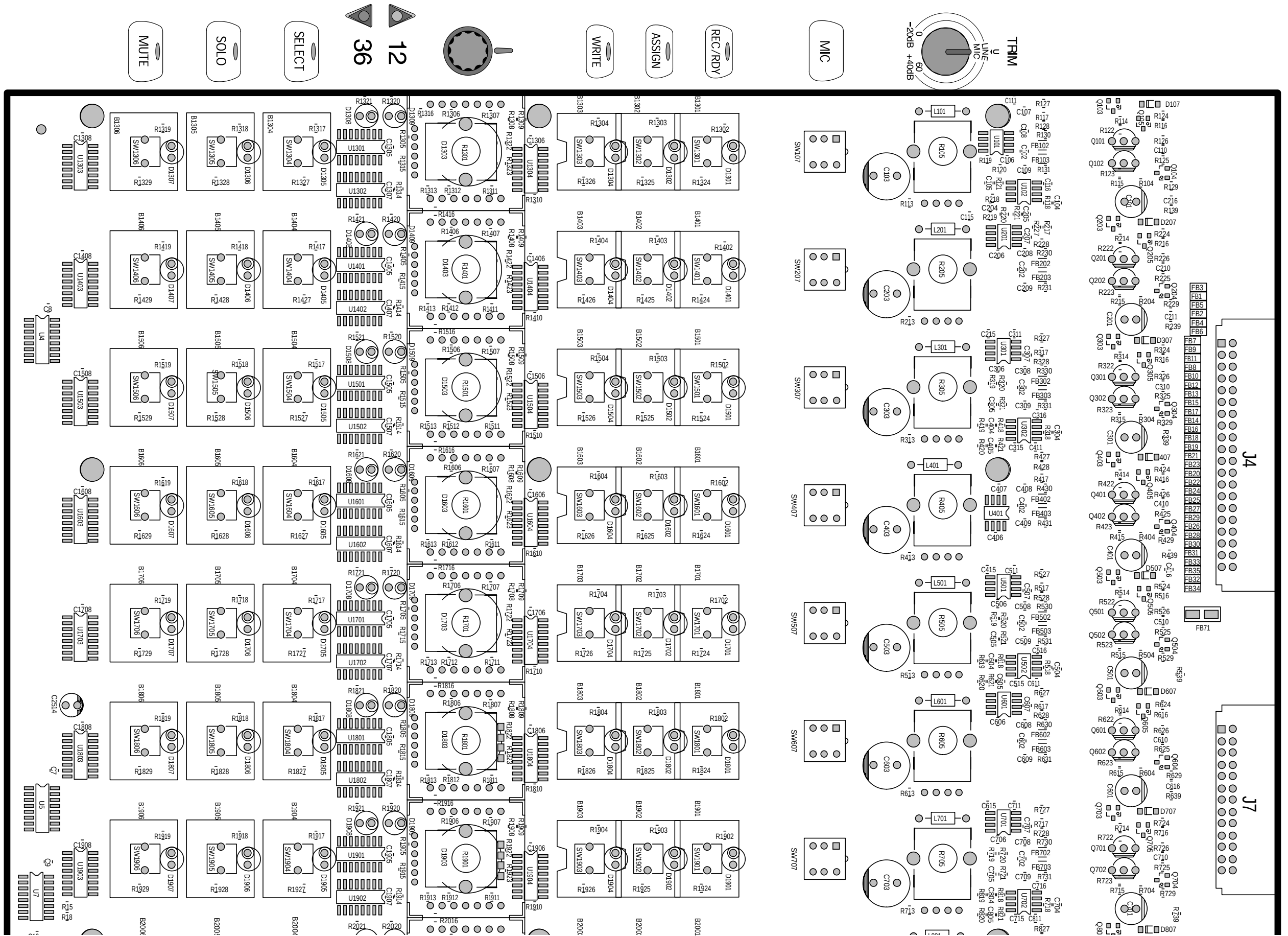
C

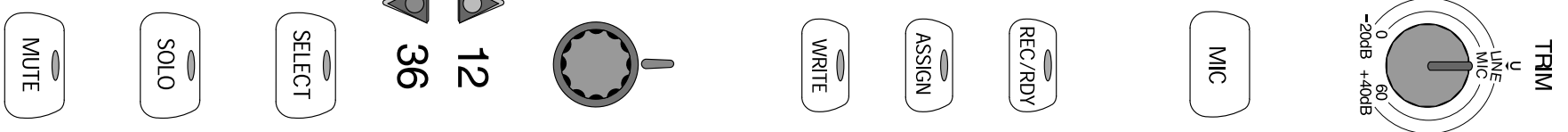
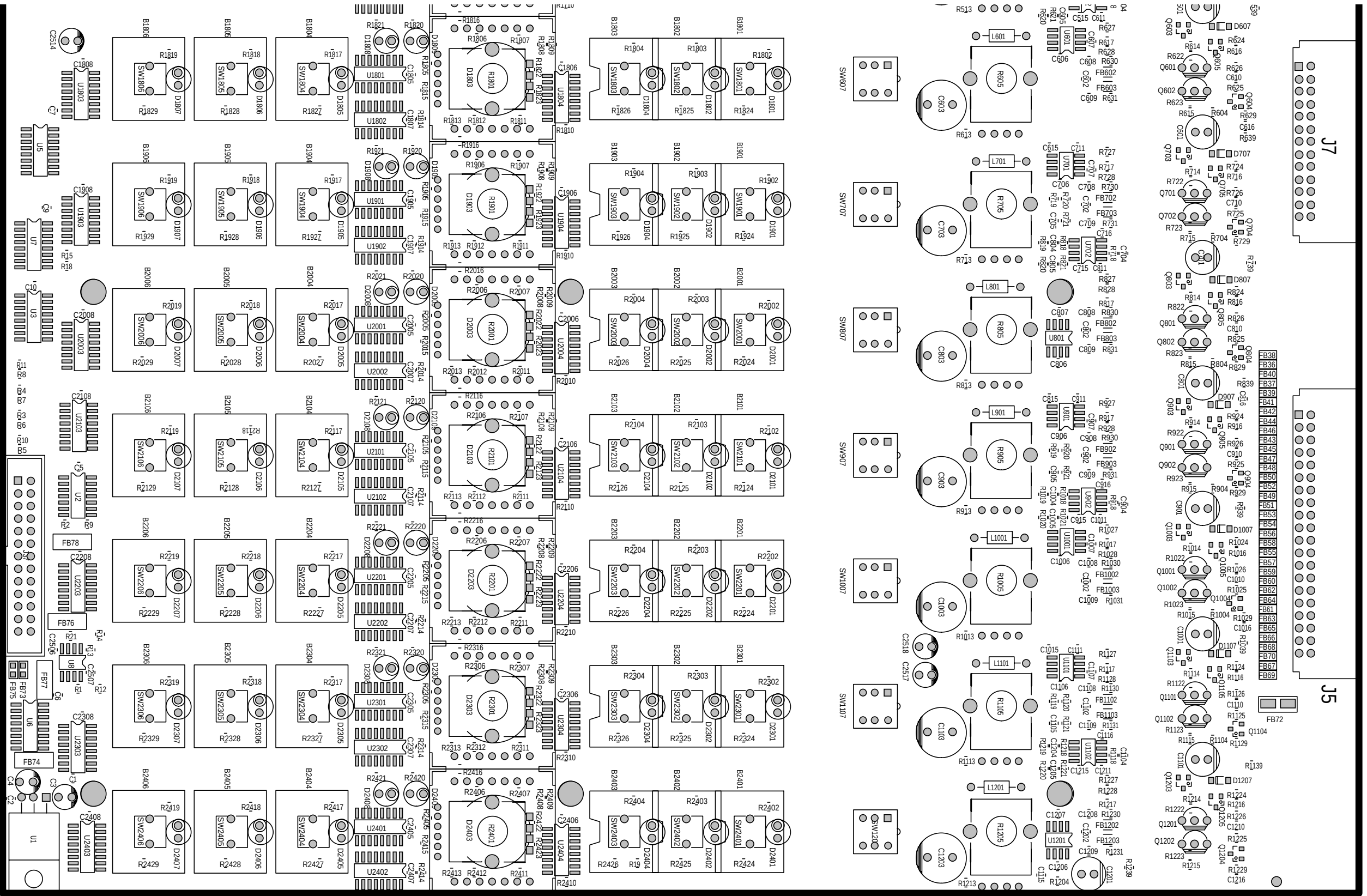
B

A



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±NA .XX ±.01 ±NA .XXX ±.005	APPROVALS	DATE	MACKIE Mackie Designs Inc. Woodinville, Wa. DIGITAL 8-BUS MIC/LINE CONTROL SURFACE		
	DRAWN: pete	2-3-97			
	CHECKED:				
	NP ENG:				
MATERIAL:	MATERIAL:		SIZE SCALE: DWG. NO. REV. D NONE 990-120-00 A		
FINISH:	MFG:				
DO NOT SCALE DRAWING	MFG ENG:				
	ISSUED:				
			DWG FILE:	SHEET 3 OF 3	





A blank page.

it couldn't be helped

DWG. NO.	990-121-00	SHT	1	REV:	A	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	

TABLE OF DIFFERENCES BETWEEN CHANNELS

CHANNEL 13	CHANNEL 14	CHANNEL 15	CHANNEL 16	CHANNEL 17	CHANNEL 18	CHANNEL 19	CHANNEL 20	CHANNEL 21	CHANNEL 22	CHANNEL 23	CHANNEL 24
J6-7	J6-10	J6-13	J6-16	J6-19	J6-22	J6-25	J6-28	J6-31	J6-34	J6-37	J6-40
FB1	FB3	FB5	FB7	FB9	FB11	FB13	FB15	FB17	FB19	FB21	FB23
J6-6	J6-9	J6-12	J6-15	J6-18	J6-21	J6-24	J6-27	J6-30	J6-33	J6-36	J6-39
FB2	FB4	FB6	FB8	FB10	FB12	FB14	FB16	FB18	FB20	FB22	FB24

SHOWN

CHANNEL 13

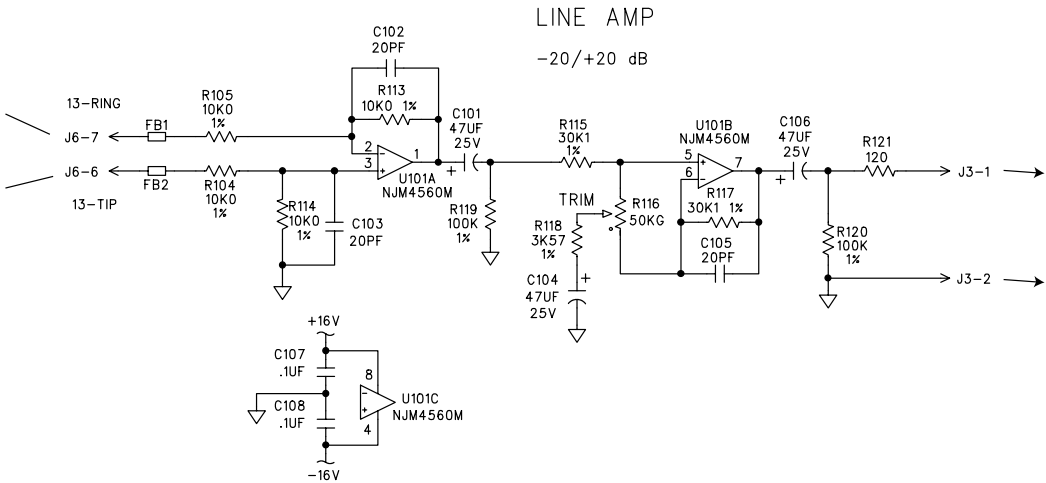


TABLE OF DIFFERENCES BETWEEN CHANNELS

CHANNEL 13	CHANNEL 14	CHANNEL 15	CHANNEL 16	CHANNEL 17	CHANNEL 18	CHANNEL 19	CHANNEL 20	CHANNEL 21	CHANNEL 22	CHANNEL 23	CHANNEL 24
J3-1	J3-3	J3-5	J3-7	J3-9	J3-11	J3-13	J3-15	J3-17	J3-19	J3-21	J3-23
J3-2	J3-4	J3-6	J3-8	J3-10	J3-12	J3-14	J3-16	J3-18	J3-20	J3-22	J3-24

SHOWN

THE CHANNELS 13 TO 24 ARE IDENTICAL EXCEPT FOR THE REFERENCE DESIGNATORS CHANGING BY 100'S AND THE LABELS CHANGING AS SHOWN IN THE TABLES.

REF DESIGNATOR DIFFERENCES BETWEEN CHANNELS

CHANNEL	PARTS RANGE	EXAMPLE
13	IN THE 100'S	R113, C102
14	IN THE 200'S	R213, C202
24	IN THE 1200'S	R1213, C1202

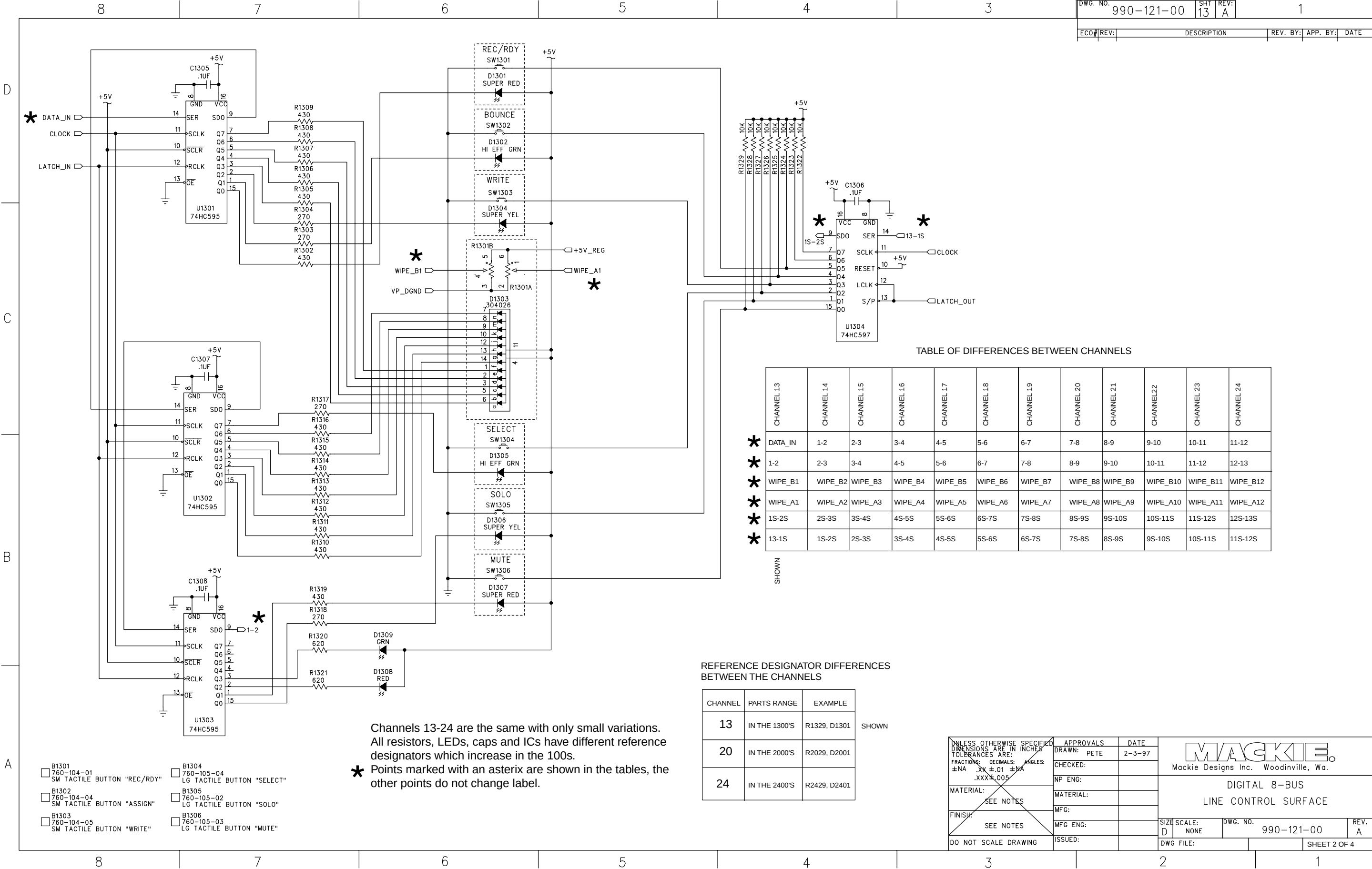
SHOWN

QUANTITY

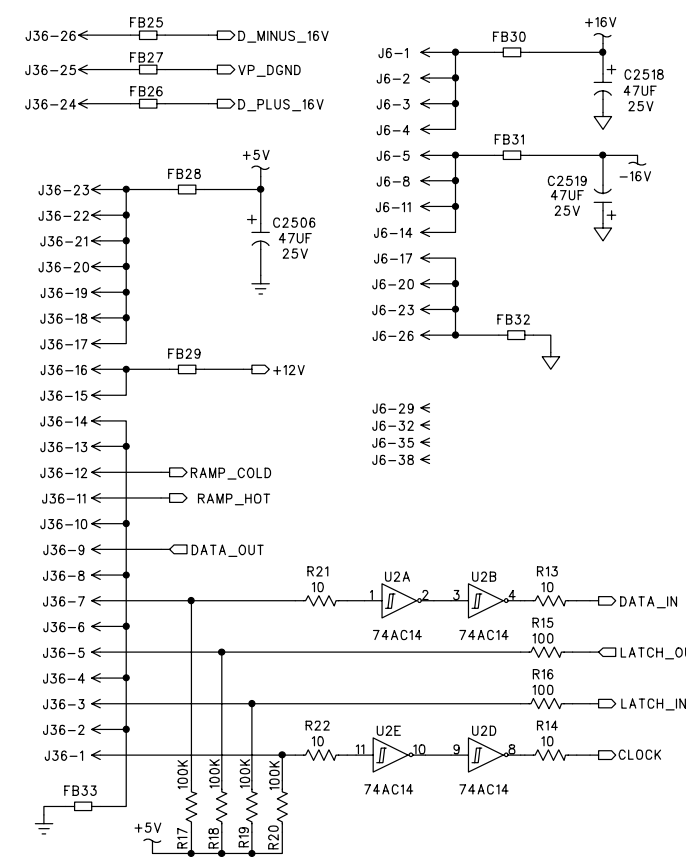
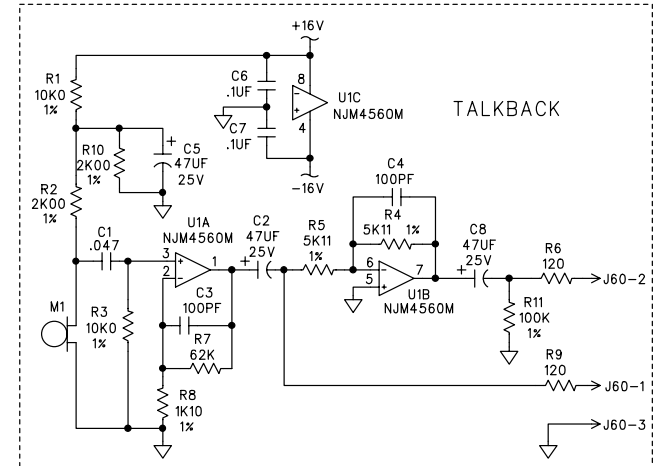
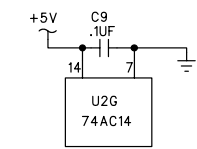
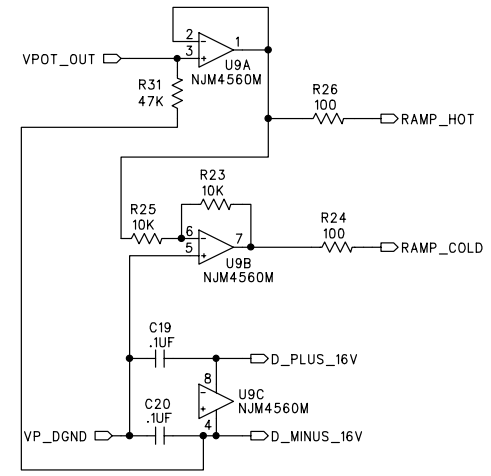
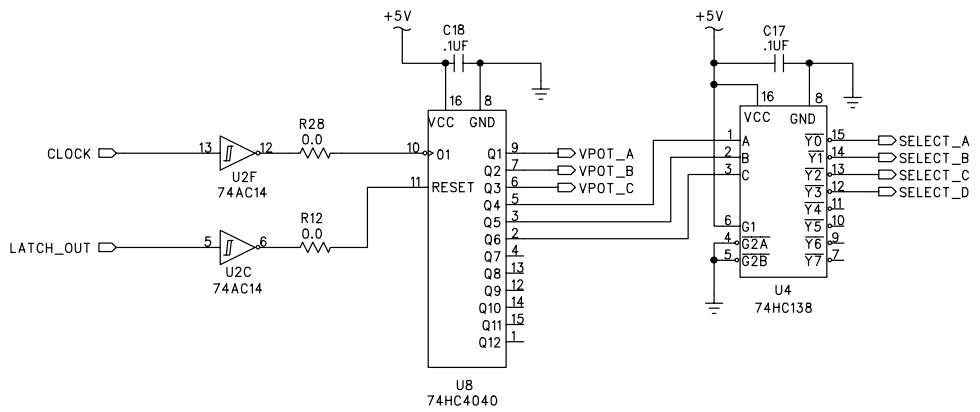
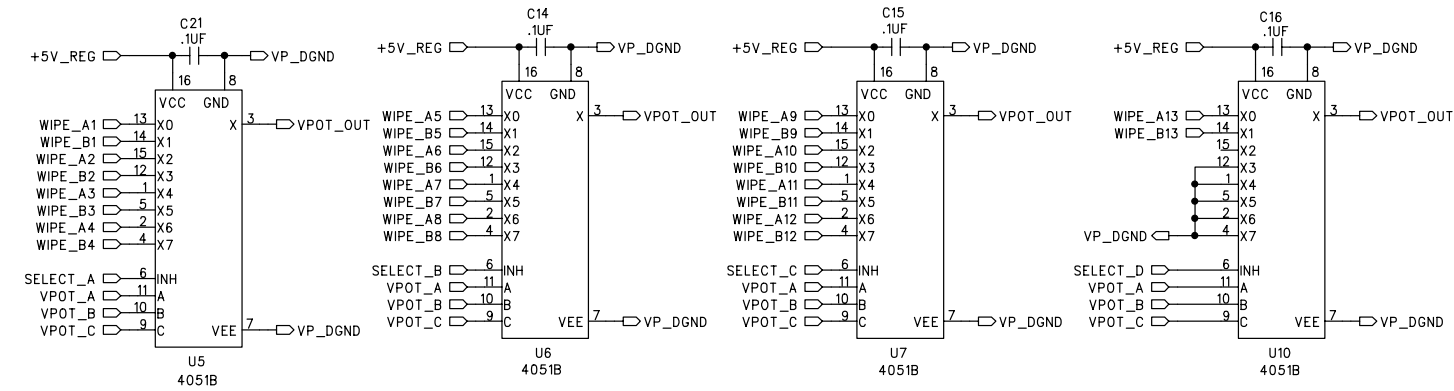
- 12 ☐ 706-033-01
STANDOFF, SWAGE, 4-40 X .542L
- 24 ☐ 706-032-00
LED SPACER, NYLON .300
- 12 ☐ 760-063-00
KNOB, V-POT
- 12 ☐ 760-064-00
LENS, V-POT DISPLAY

☐ 450-121-00
PCB, DIGITAL 8-BUS: LINE CONTROL SURFACE

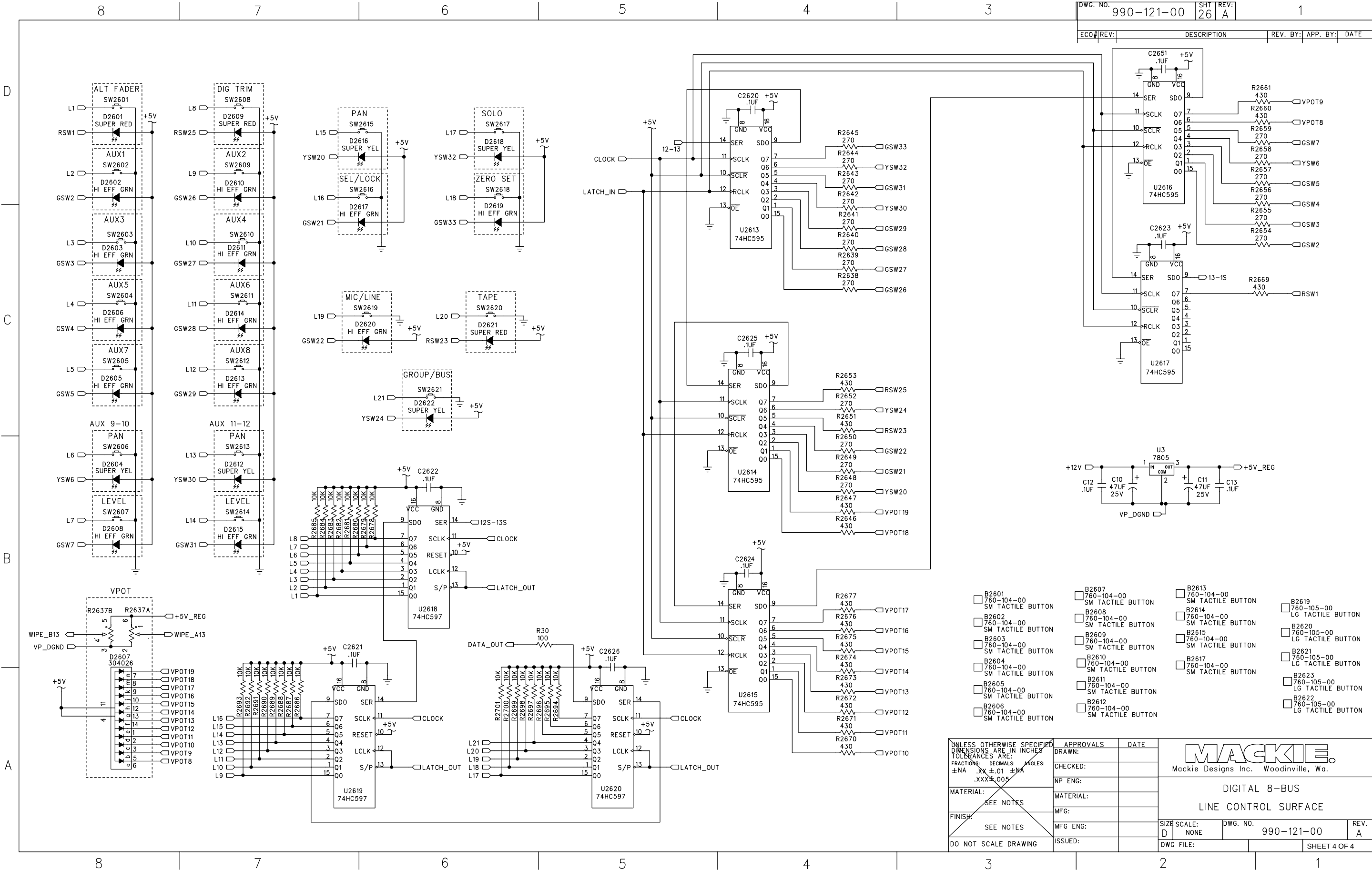
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±NA .XX ±.01 ±NA .XXX ±.005	APPROVALS	DATE	MACKIE. Mackie Designs Inc. Woodinville, Wa.			
	DRAWN: PETE	12-16-96				
	CHECKED:		DIGITAL 8-BUS LINE CONTROL SURFACE			
	NP ENG:					
	MATERIAL:					
SEE NOTES	MATERIAL:		SIZE: D SCALE: NONE DWG. NO. 990-121-00 REV. A			
FINISH:	MFG:					
SEE NOTES	MFG ENG:					
DO NOT SCALE DRAWING	ISSUED:		DWG FILE:		SHEET 1 OF 4	

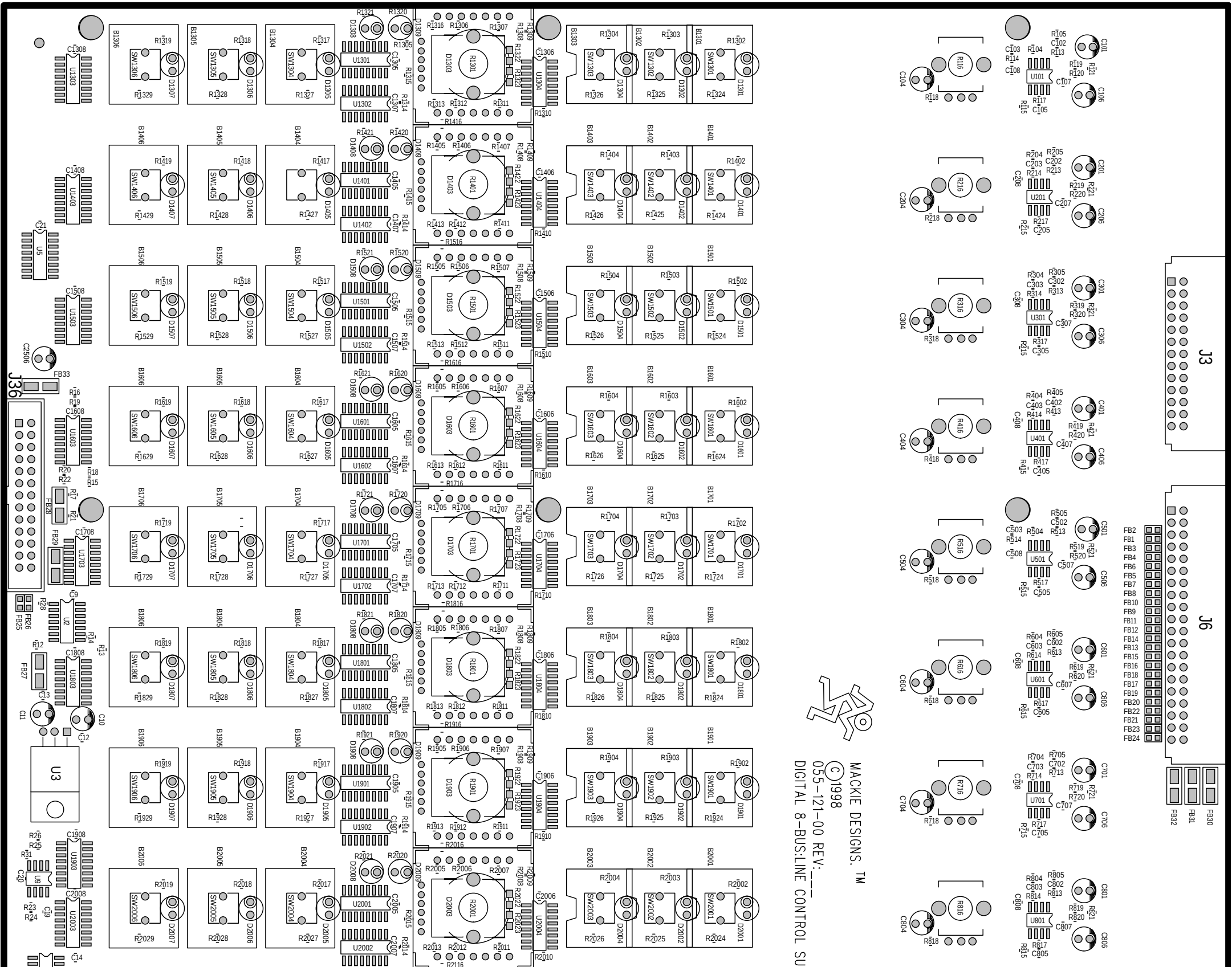


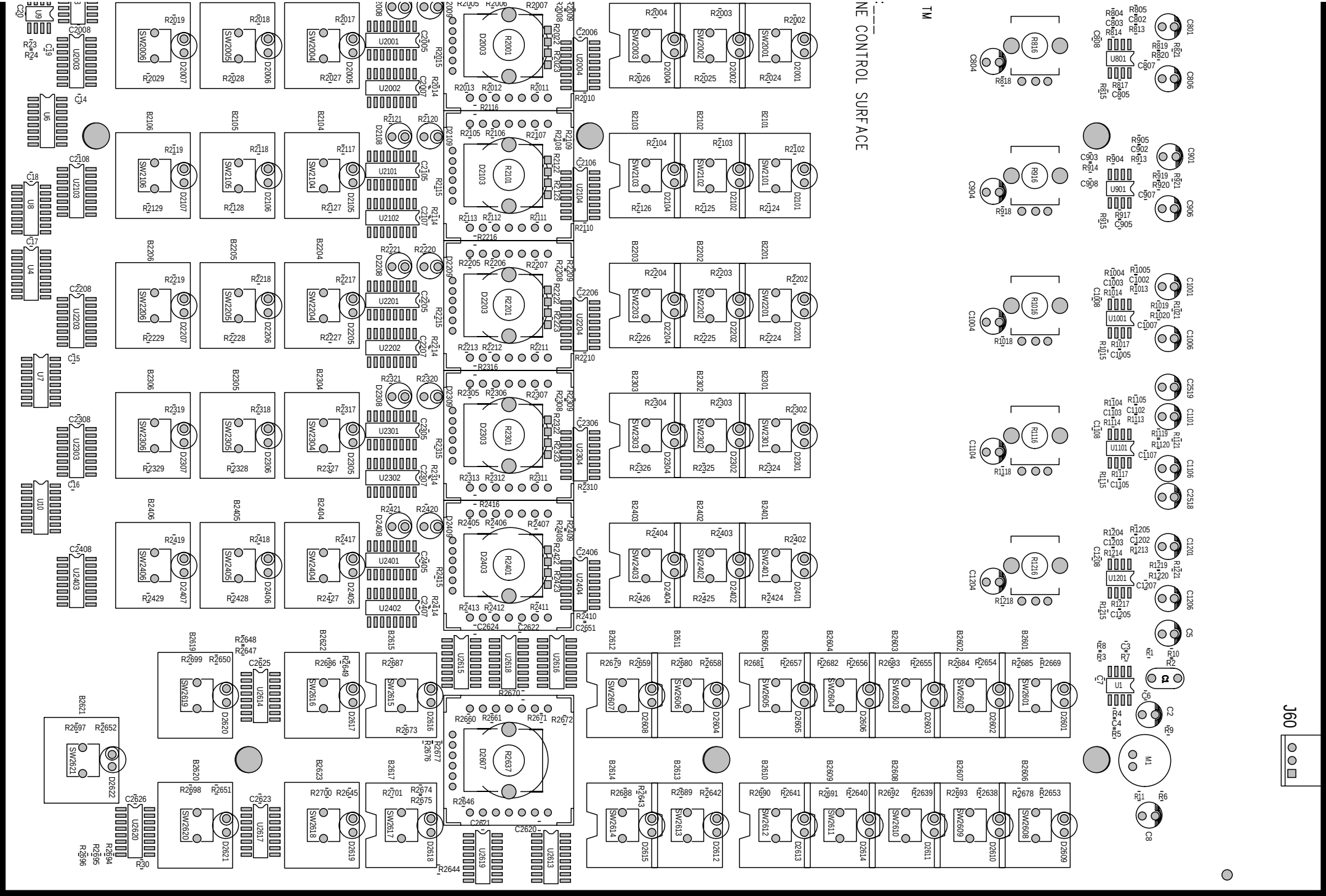
DWG. NO.	990-121-00	SHT	REV:	25	A	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±.01 ±.01 ±.01 ±.005 ±.005 ±.005	APPROVALS DRAWN: CHECKED: NP ENG: MATERIAL: MFG: MFG ENG: ISSUED:	DATE	MACKIE. Mackie Designs Inc. Woodinville, Wa.	DIGITAL 8-BUS LINE CONTROL SURFACE	SIZE: D SCALE: NONE DWG. NO. 990-121-00 REV. A
--	--	------	---	---------------------------------------	---



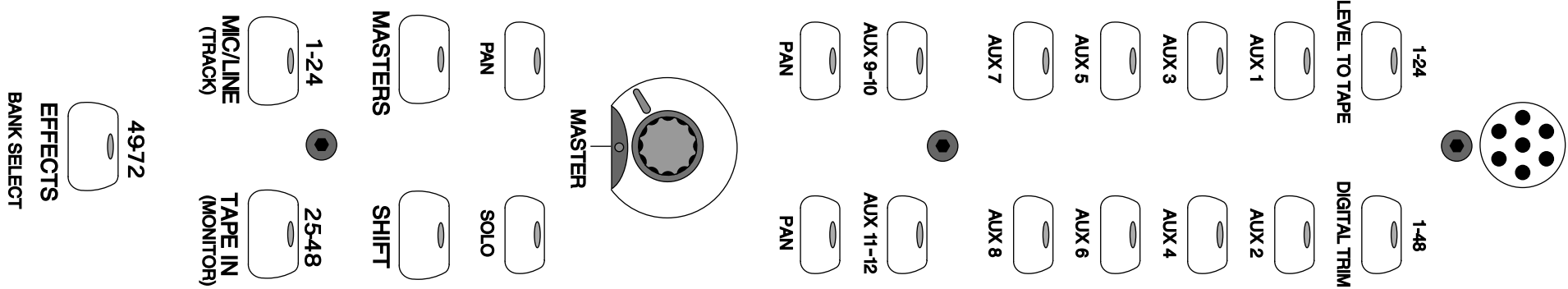




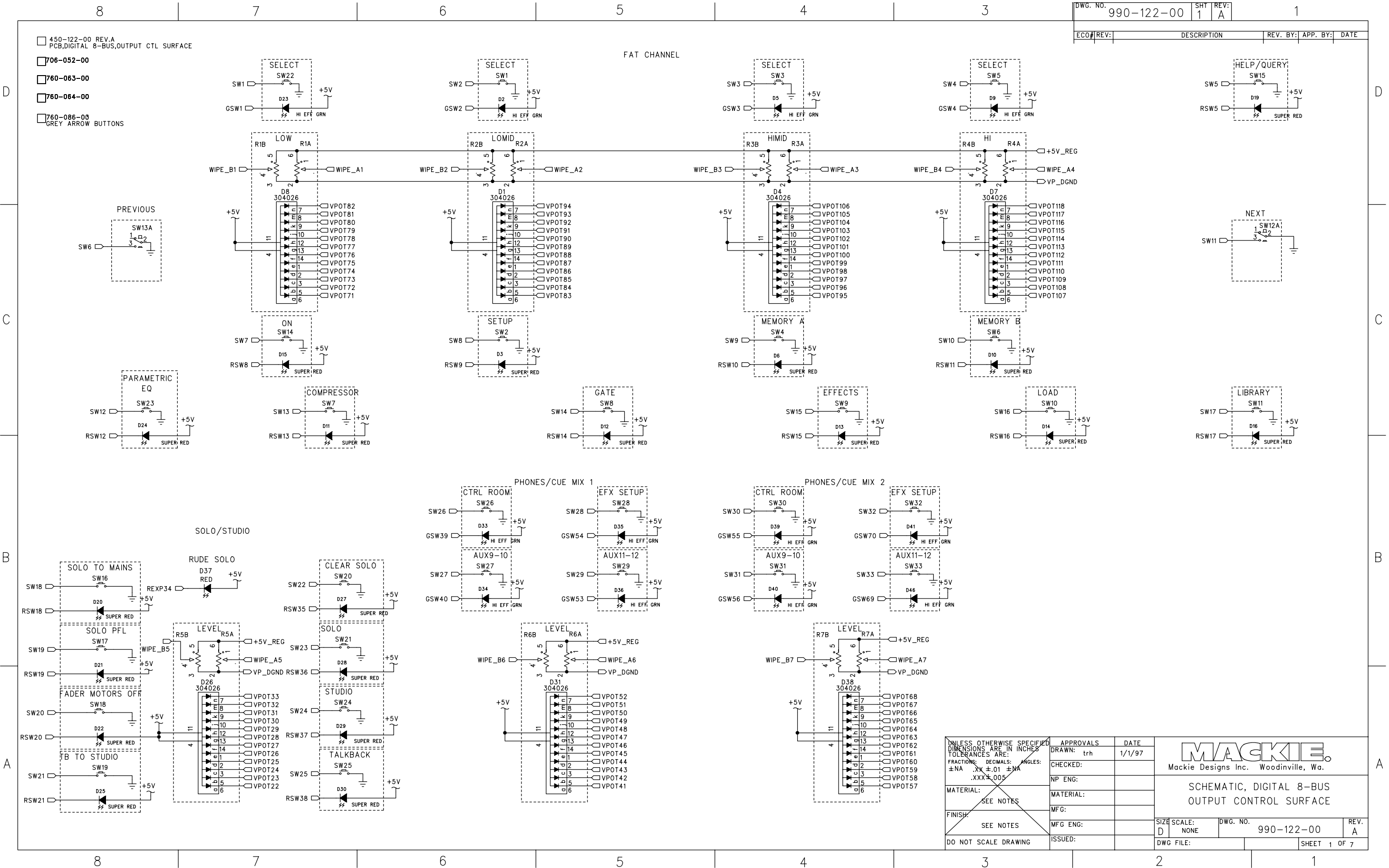
NE CONTROL SURFACE

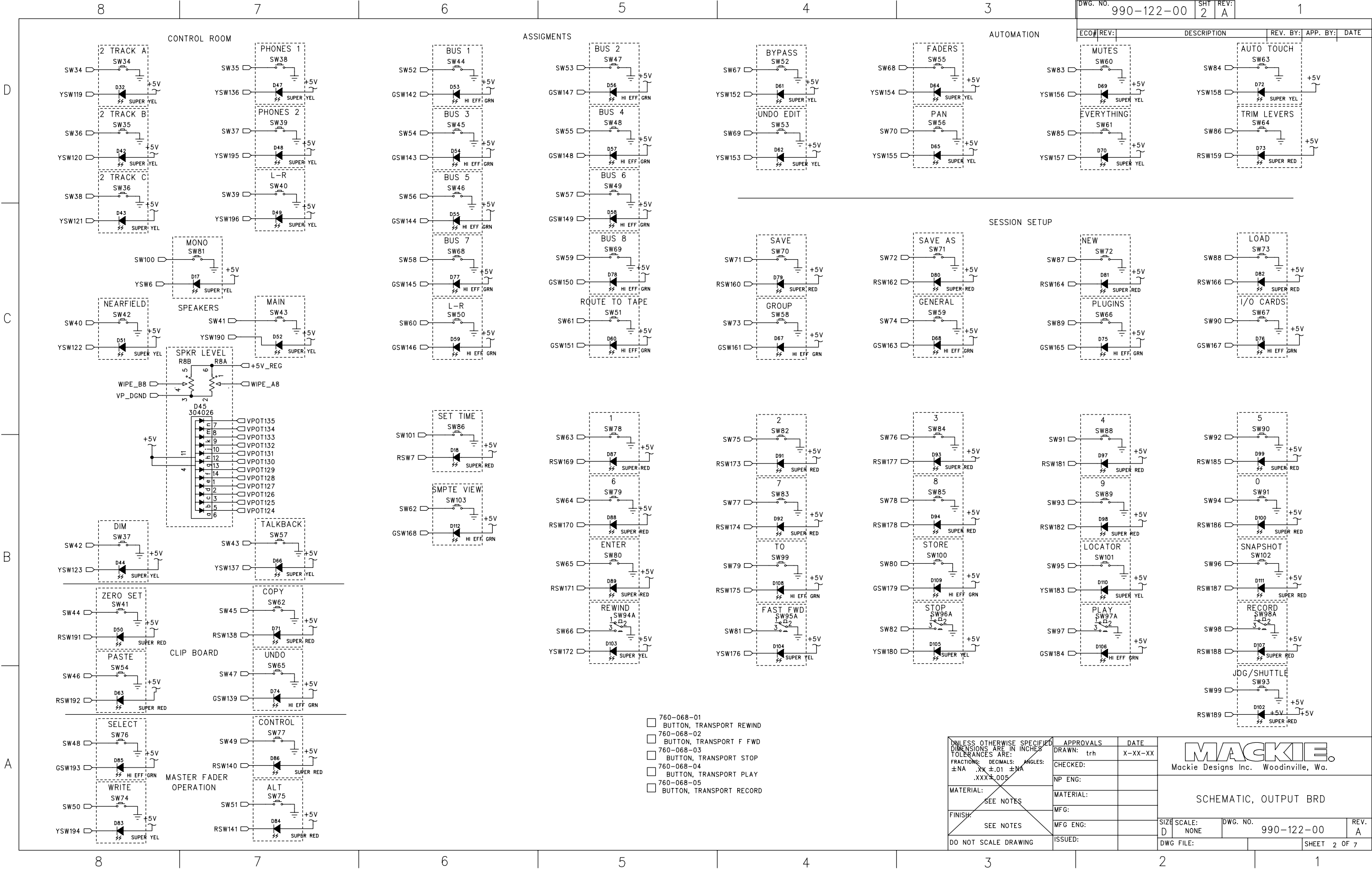
TM

J60

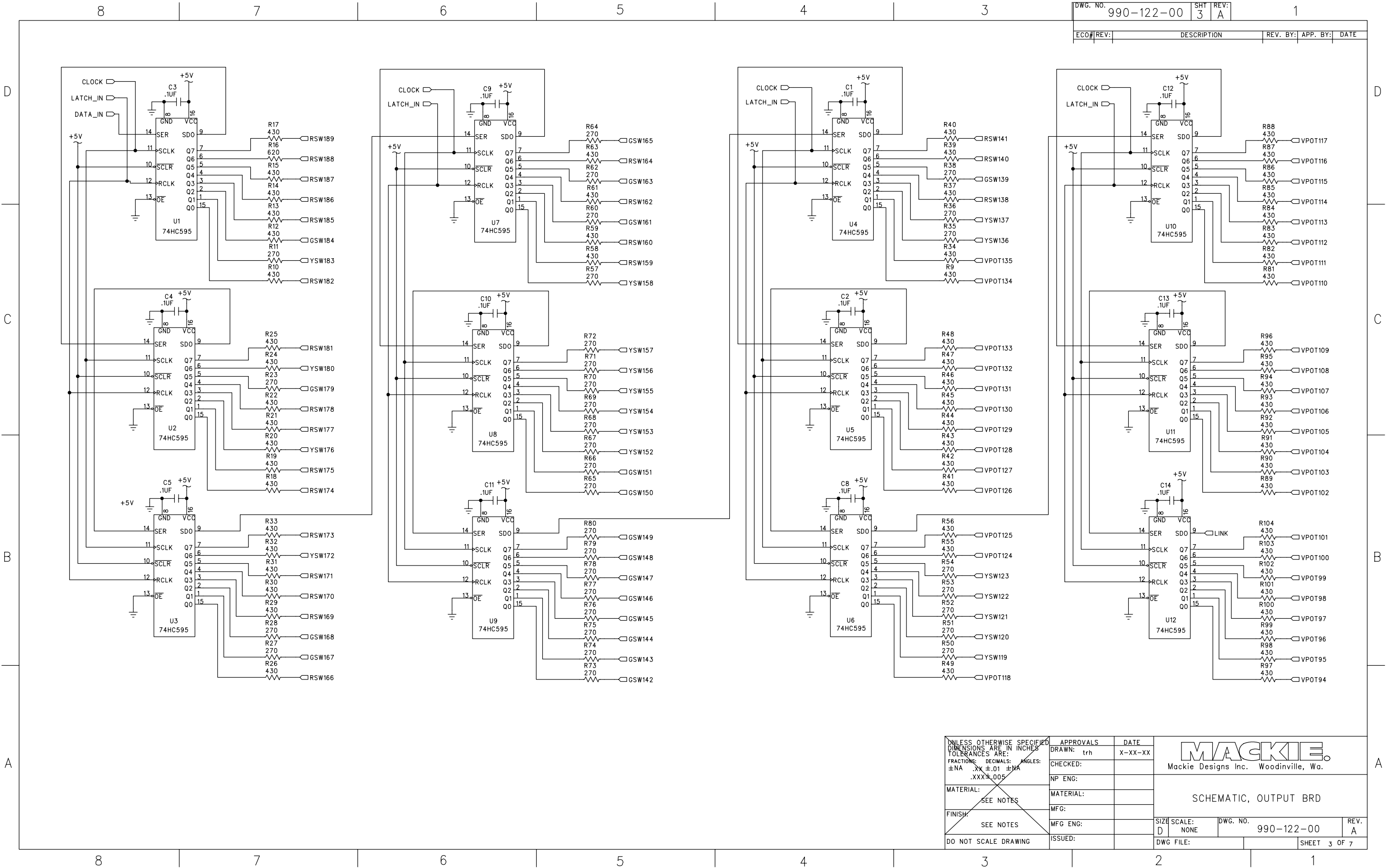


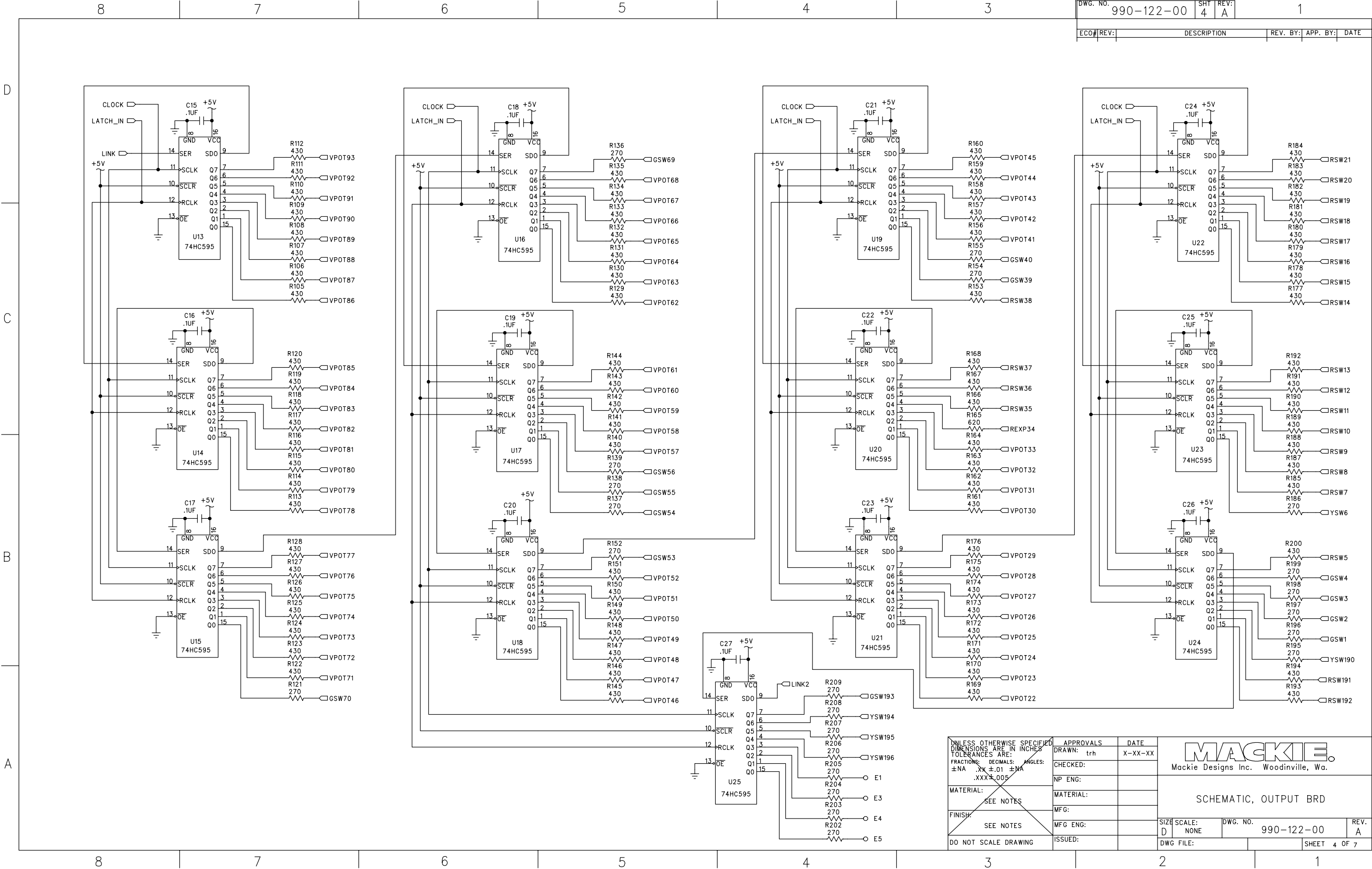
DWG. NO.	990-122-00	SHT	1	REV:	A	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	

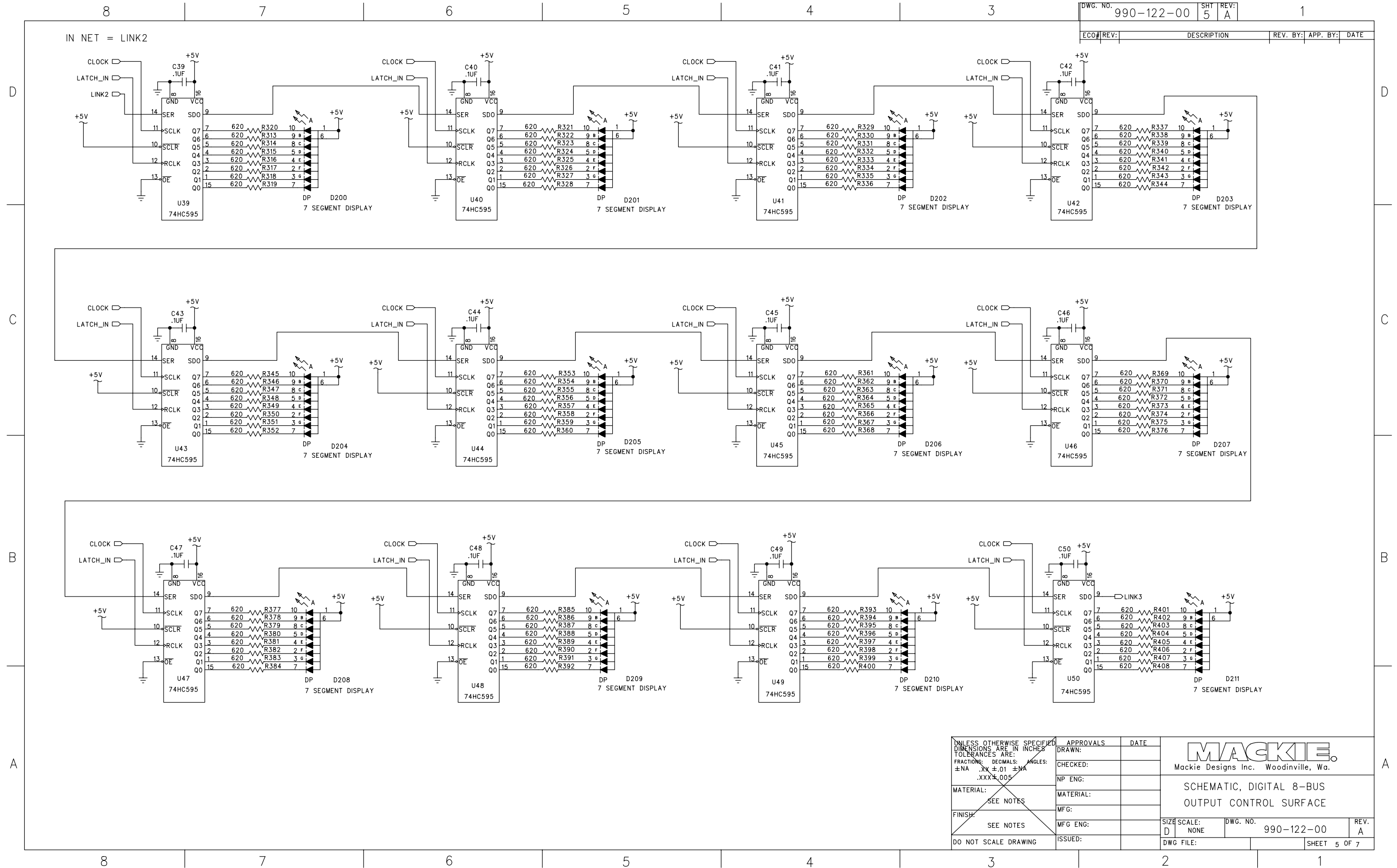


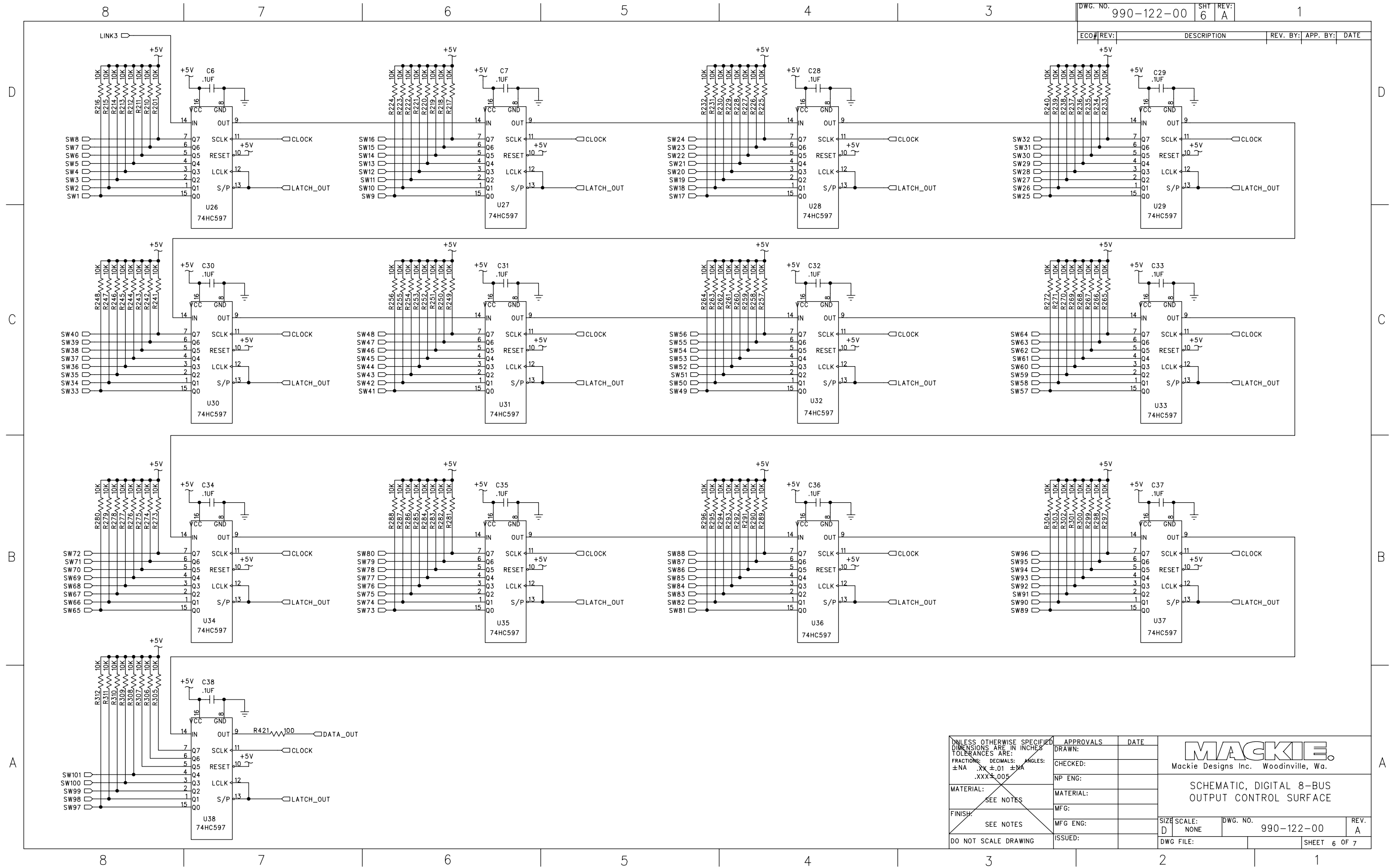


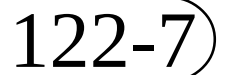
DWG. NO.	990-122-00	SHT	3	REV:	A	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	

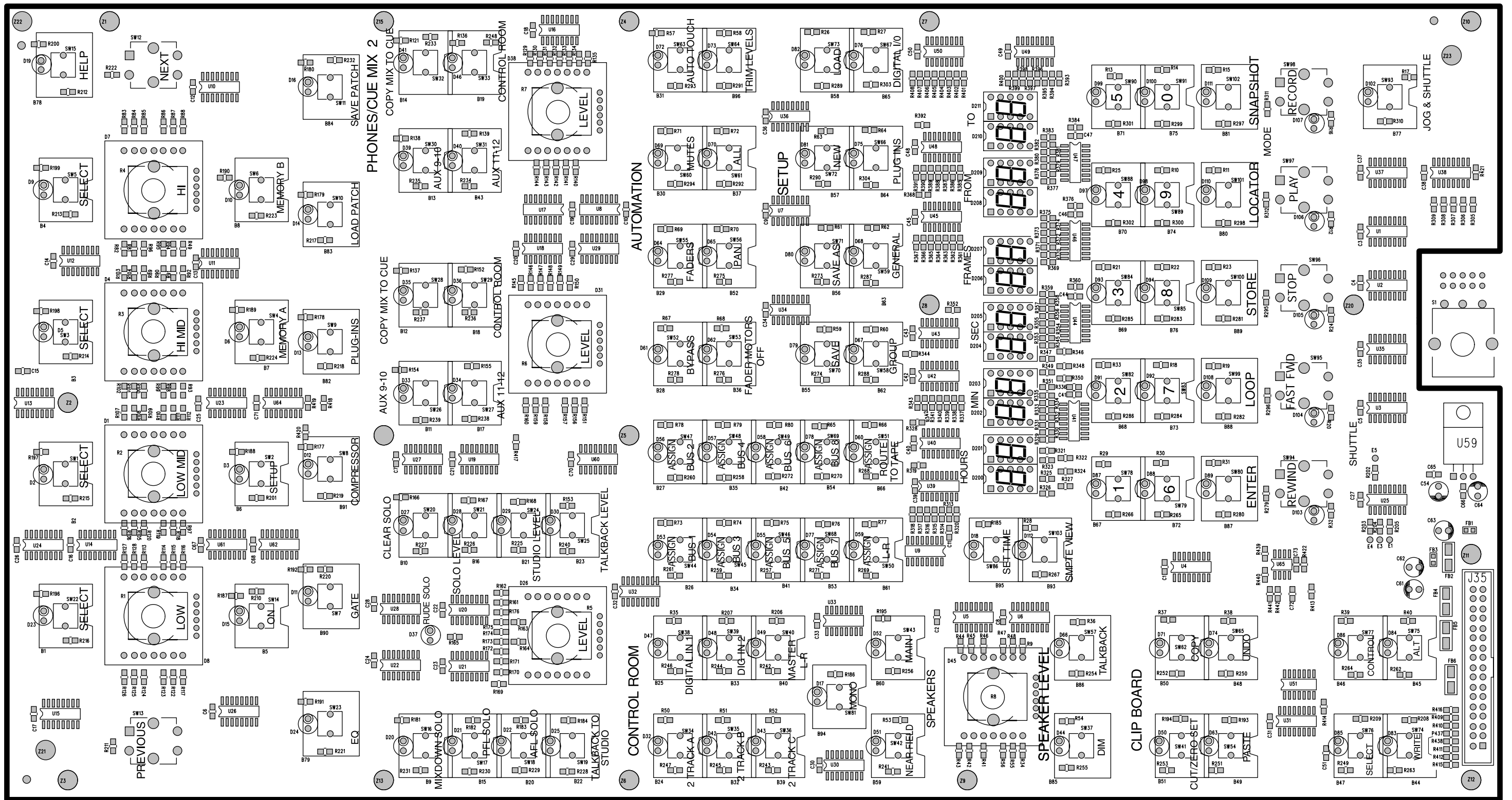




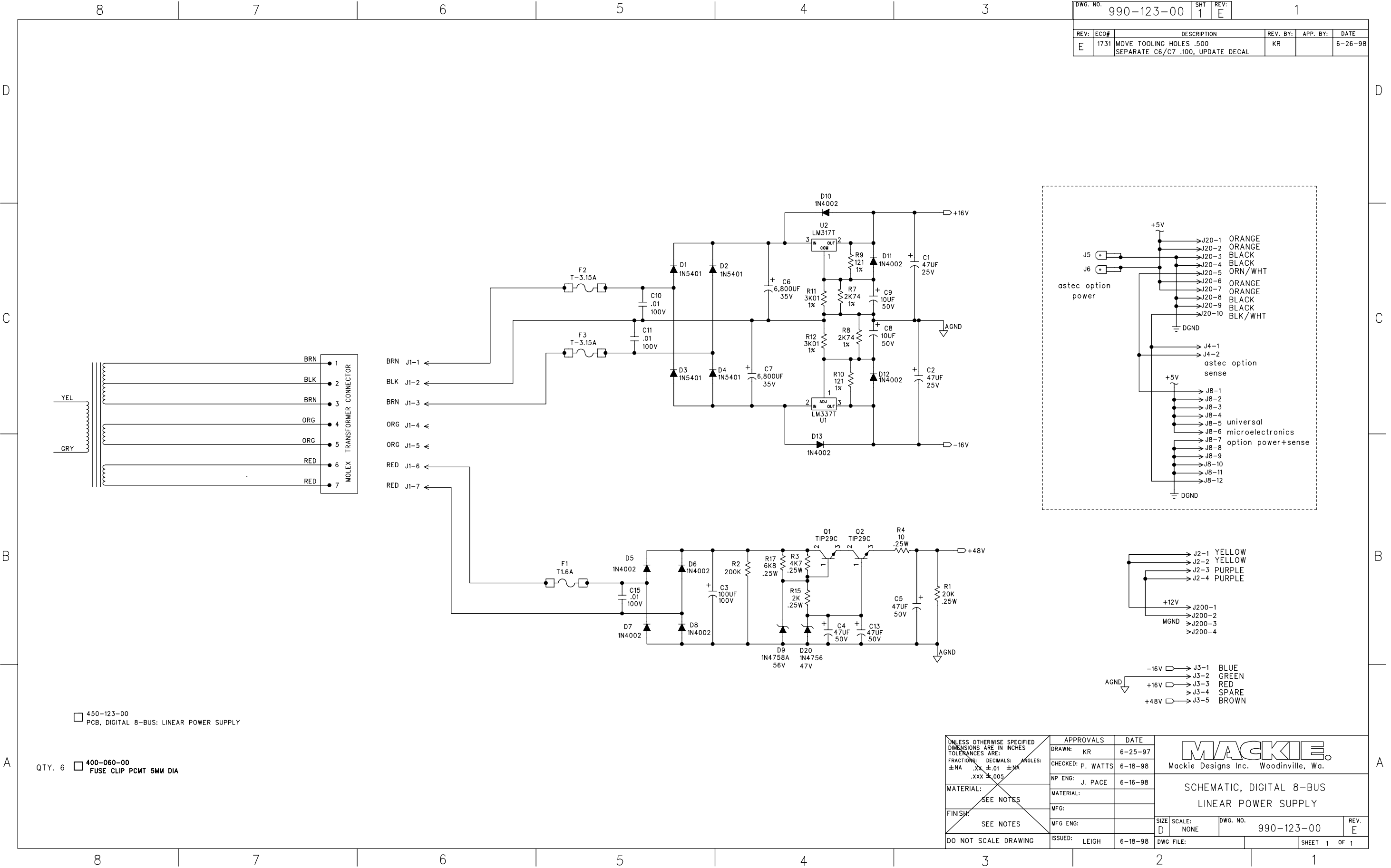








DWG. NO.	990-123-00		SHT	1	REV:	E	1	
REV:	ECO#	DESCRIPTION				REV. BY:	APP. BY:	DATE
E	1731	MOVE TOOLING HOLES .500 SEPARATE C6/C7 .100, UPDATE DECAL				KR		6-26-98



blank page

DWG. NO.	990-124-00	SHT	1	REV:	3	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	

* Points marked with an asterisk are shown in the table, the other reference designators change by 100's

* TABLE OF DIFFERENCES BETWEEN FADERS

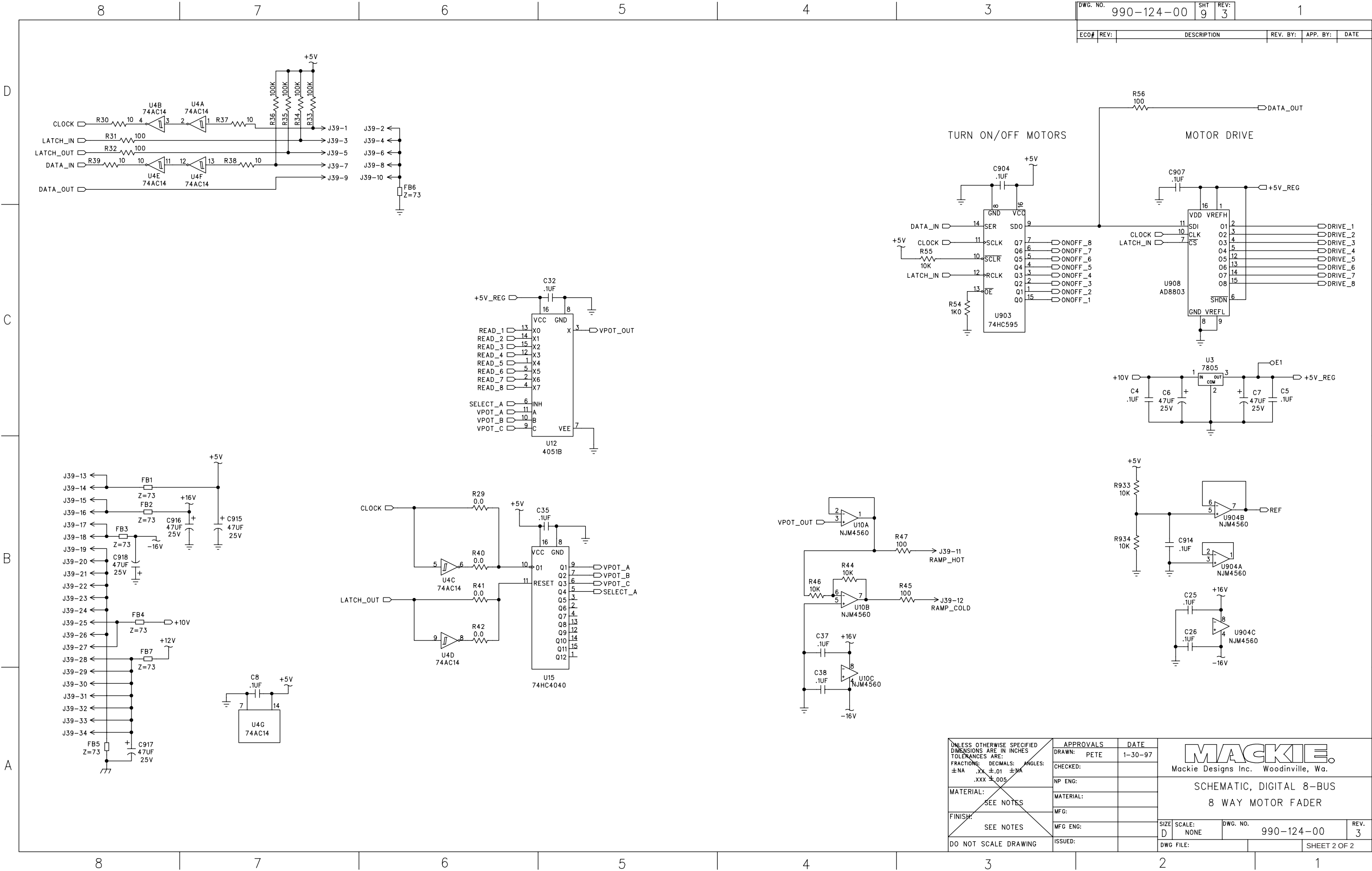
FADER 1	FADER 2	FADER 3	FADER 4	FADER 5	FADER 6	FADER 7	FADER 8
R11	R15	R20	R23	R27	R48	R50	R52
R14	R18	R22	R26	R43	R49	R51	R53
DRIVE_1	DRIVE_2	DRIVE_3	DRIVE_4	DRIVE_5	DRIVE_6	DRIVE_7	DRIVE_8
READ_1	READ_2	READ_3	READ_4	READ_5	READ_6	READ_7	READ_8
ON/OFF_1	ON/OFF_2	ON/OFF_3	ON/OFF_4	ON/OFF_5	ON/OFF_6	ON/OFF_7	ON/OFF_8
R13	R16	R17	R19	R21	R24	R25	R28
D6	D7	D8	D9	D10	D11	D12	D13
Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
D40	D38	D36	D34	D32	D30	D29	D26
D2	D4	D14	D16	D18	D20	D22	D24
D41	D39	D37	D35	D33	D31	D28	D27
D3	D5	D15	D17	D19	D21	D23	D25

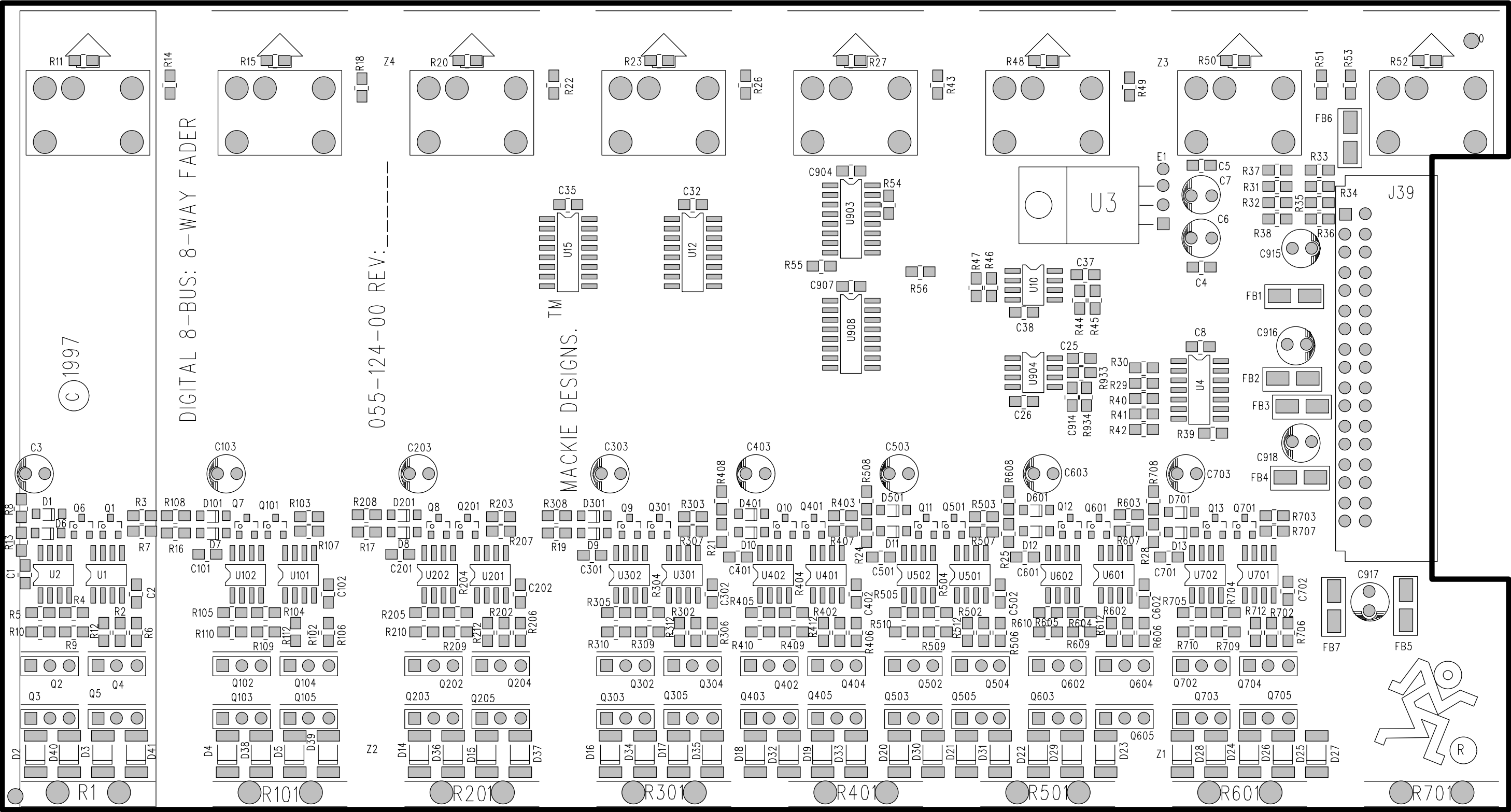
FADER	PARTS RANGE	EXAMPLE
1	IN THE 100'S	R3, C3
2	IN THE 200'S	R203, C203
8	IN THE 800'S	R803, C803

SHOWN

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±.NA .XX ±.01 ±.NA .XXX ±.005	APPROVALS	DATE	MACKIE. Mackie Designs Inc. Woodinville, Wa.			
	DRAWN: PETE	1-30-97				
	CHECKED:		SCHEMATIC, DIGITAL 8-BUS 8 WAY MOTOR FADER			
	NP ENG:					
	MATERIAL:					
MFG:						
FINISH:	MFG ENG:	SIZE D	SCALE: NONE	DWG. NO.	990-124-00	REV. 3
DO NOT SCALE DRAWING	ISSUED:	DWG FILE:		SHEET 1 OF 2		

450-124-00
PCB, DIGITAL 8-BUS: 8-WAY FADER

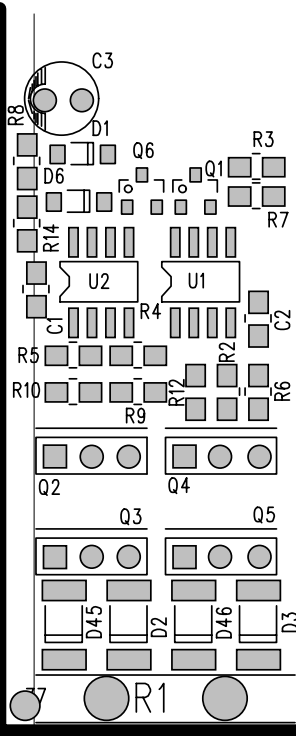
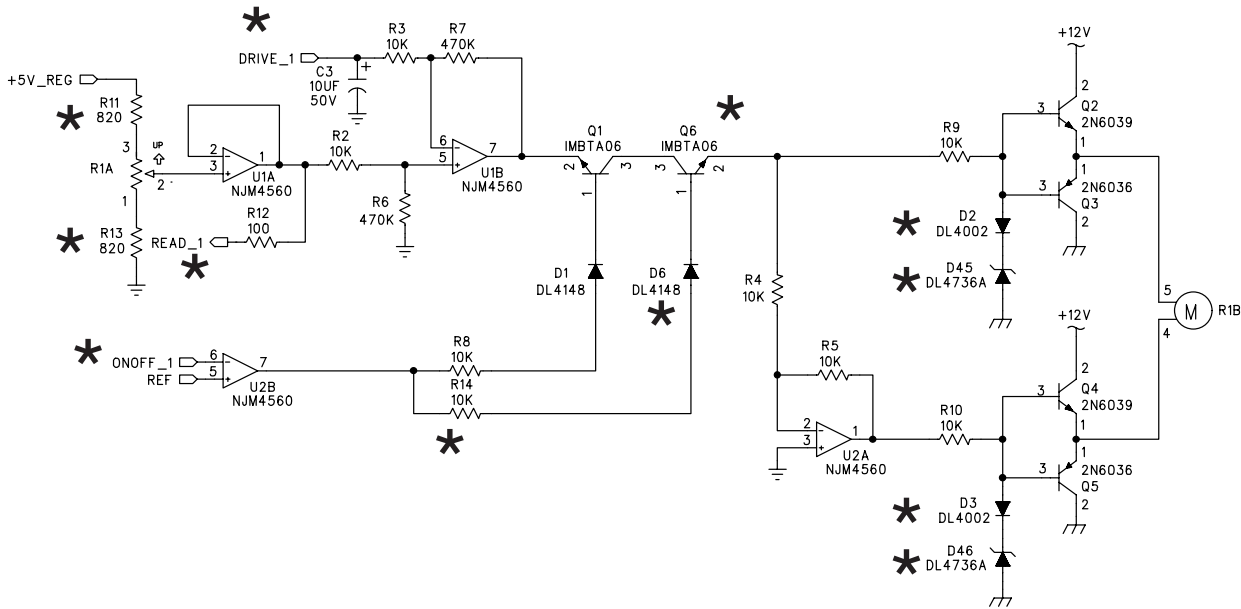




blank page

DWG. NO.	990-125-00	SHT	1	REV:	3	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	

* Points marked with an asterisk are shown in the table, the other reference designators change by 100's



* TABLE OF DIFFERENCES BETWEEN FADERS

FADER 1	FADER 2	FADER 3	FADER 4	FADER 5	FADER 6	FADER 7	FADER 8	FADER 9
R11	R15	R19	R23	R27	R49	R51	R53	R55
R13	R17	R21	R25	R29	R50	R52	R54	R56
DRIVE_1	DRIVE_2	DRIVE_3	DRIVE_4	DRIVE_5	DRIVE_6	DRIVE_7	DRIVE_8	DRIVE_9
READ_1	READ_2	READ_3	READ_4	READ_5	READ_6	READ_7	READ_8	READ_9
ON/OFF_1	ON/OFF_2	ON/OFF_3	ON/OFF_4	ON/OFF_5	ON/OFF_6	ON/OFF_7	ON/OFF_8	ON/OFF_9
R14	R16	R18	R20	R22	R24	R26	R28	R30
D6	D7	D8	D9	D10	D11	D12	D13	D14
Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14
D2	D4	D15	D17	D19	D21	D23	D25	D27
D45	D43	D41	D39	D37	D35	D33	D31	D29
D3	D5	D16	D18	D20	D22	D24	D26	D28
D46	D44	D42	D40	D38	D36	D34	D32	D30

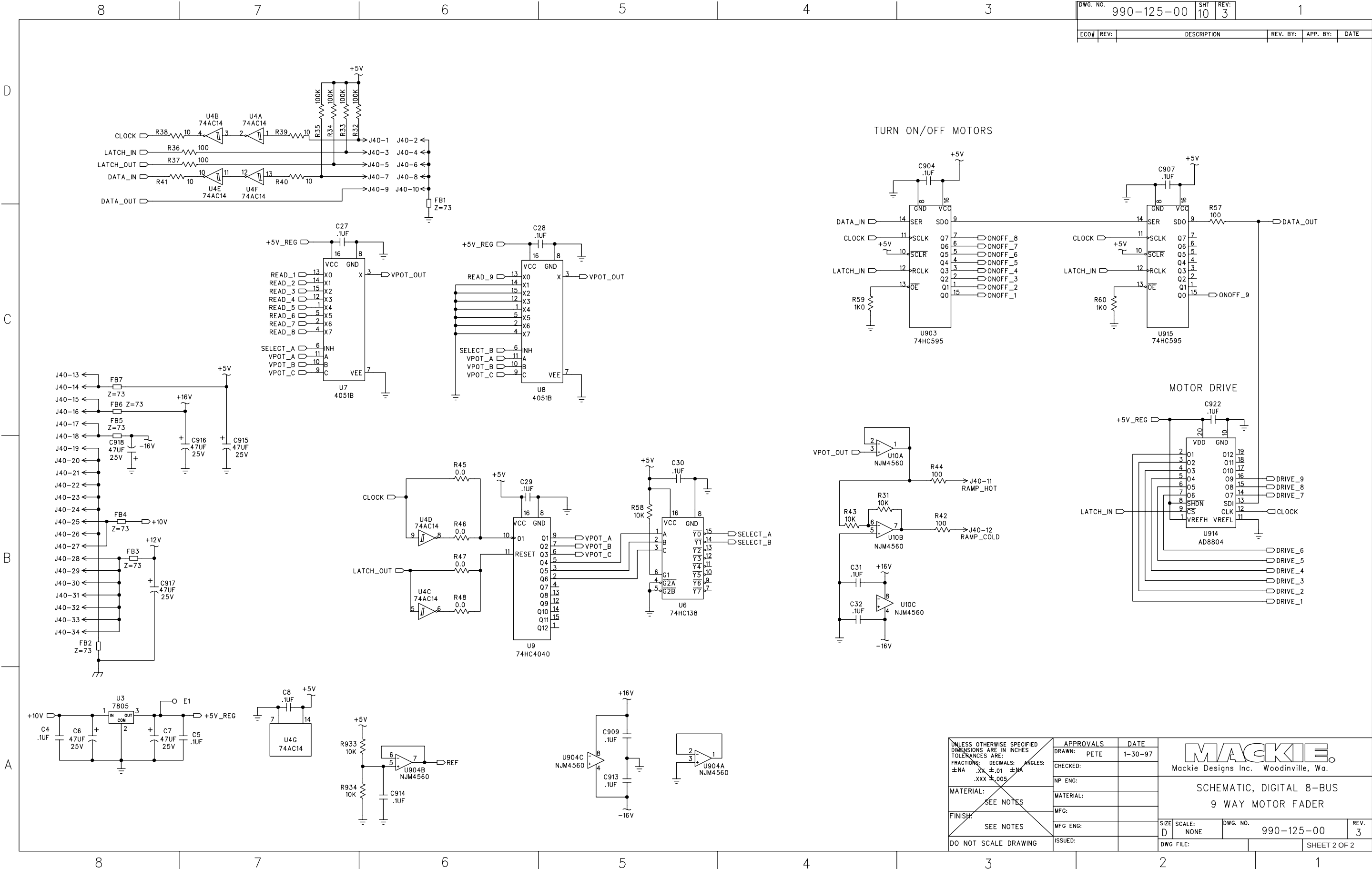
SHOWN

FADER	PARTS RANGE	EXAMPLE
1	IN THE 100'S	R3, C3
2	IN THE 200'S	R203, C203
8	IN THE 800'S	R803, C803

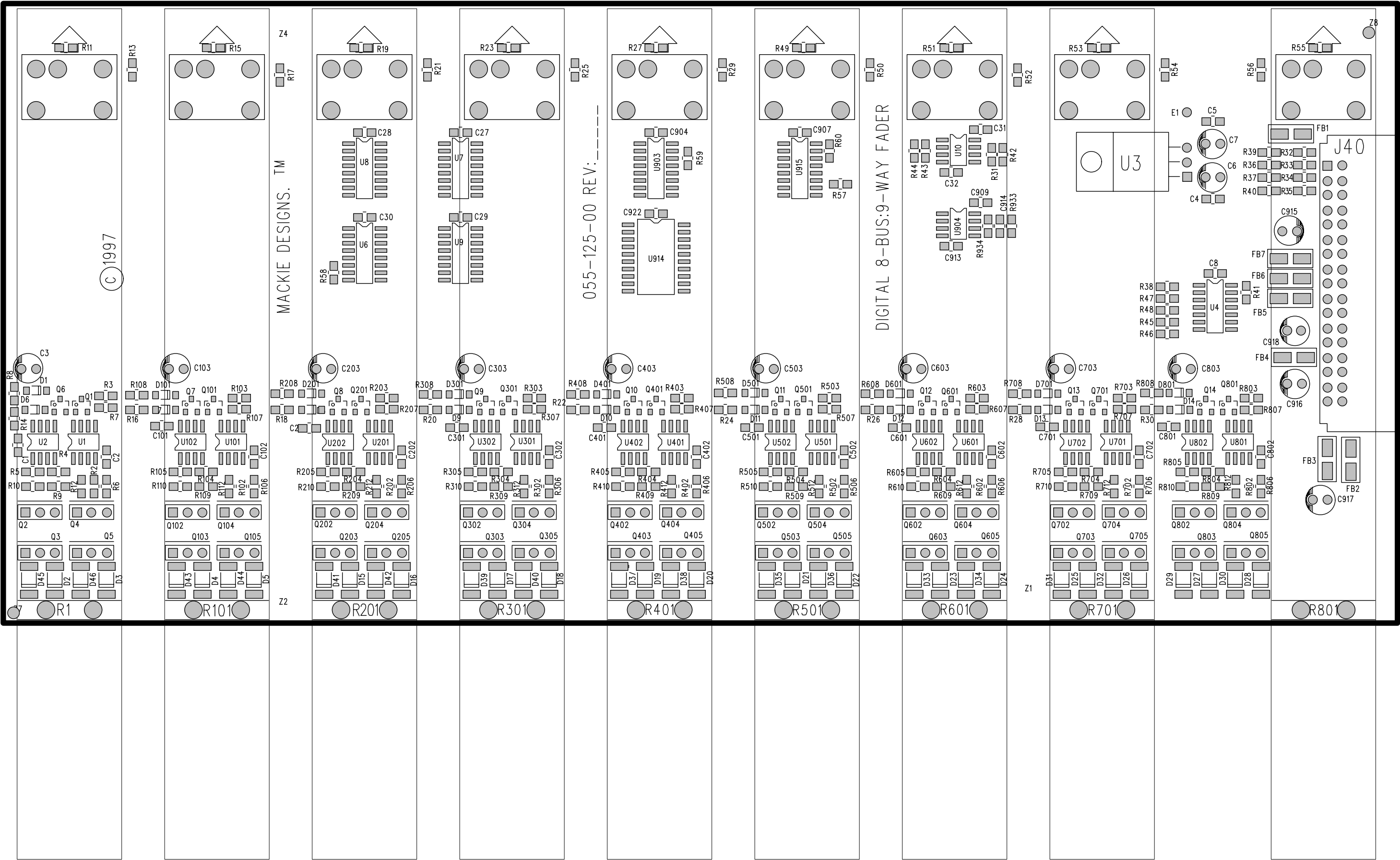
SHOWN

450-125-00
PCB, DIGITAL 8-BUS: 9-WAY FADER

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: .XX ±.01 DECIMALS: .XXX ±.005 ANGLES: ±NA MATERIAL: SEE NOTES FINISH: SEE NOTES DO NOT SCALE DRAWING	APPROVALS DRAWN: PETE CHECKED: MP ENG:	DATE 1-30-97	MACKIE. Mackie Designs Inc. Woodinville, Wa. SCHEMATIC, DIGITAL 8-BUS 9 WAY MOTOR FADER SIZE: D SCALE: NONE DWG. NO.: 990-125-00 REV.: 3 DWG FILE: SHEET 1 OF 2
	MATERIAL:		
	MFG:		
	MFG ENG:		

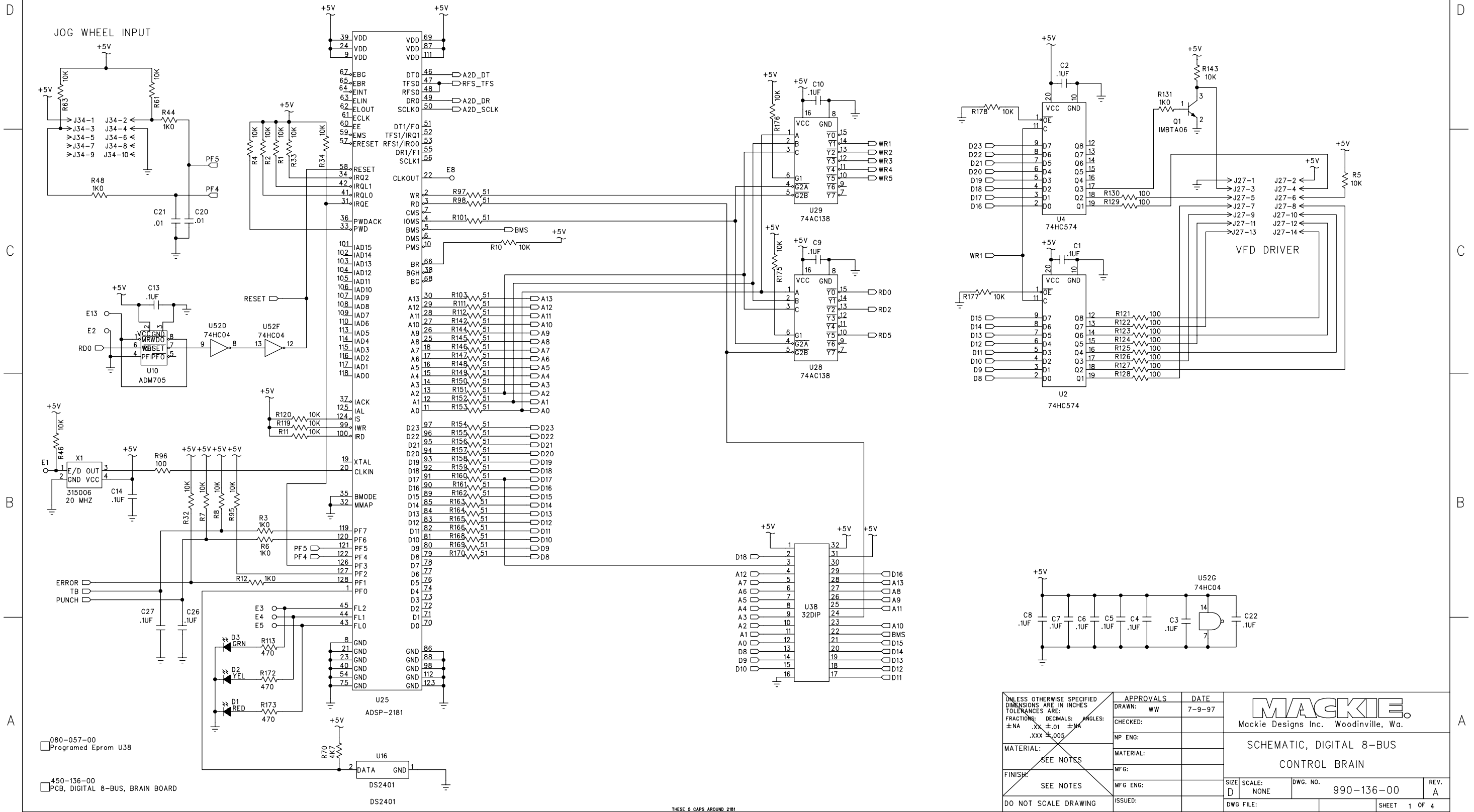


UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±.NA .XX ±.01 ±.NA .XXX ±.005	APPROVALS		DATE			
	DRAWN: PETE		1-30-97			
	CHECKED:					
	NP ENG:					
MATERIAL: SEE NOTES	MATERIAL:		MACKIE. Mackie Designs Inc. Woodinville, Wa. SCHEMATIC, DIGITAL 8—BUS 9 WAY MOTOR FADER			
	MFG:					
	MFG ENG:					
FINISH: SEE NOTES			SIZE	SCALE:	DWG. NO.	REV.
			D	NONE	990-125-00	3
DO NOT SCALE DRAWING	ISSUED:		DWG. FILE:			SHEET 2 OF 2

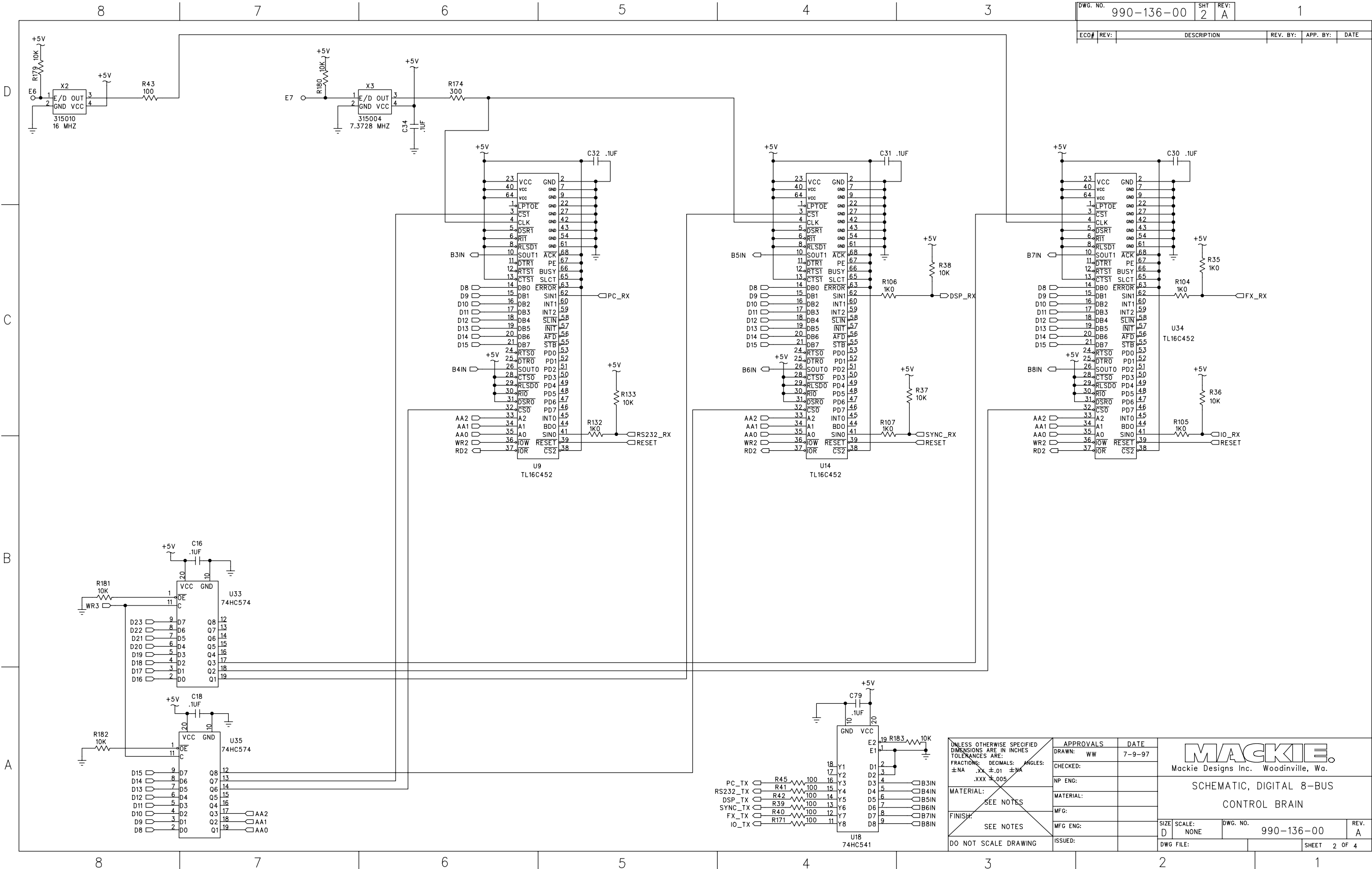


blank page

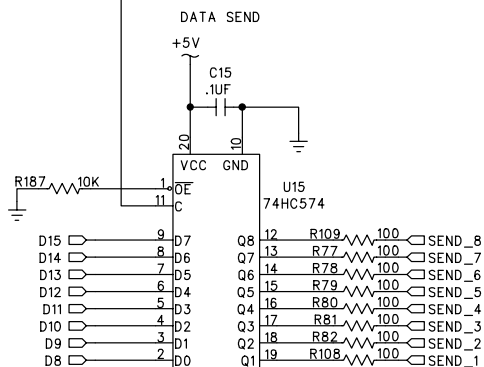
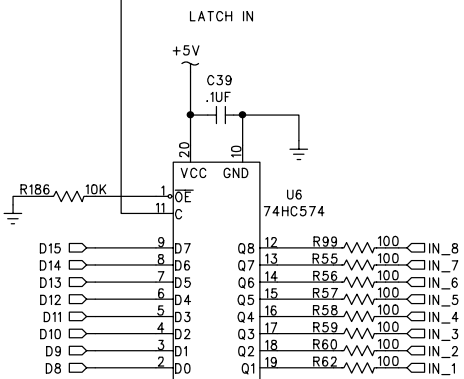
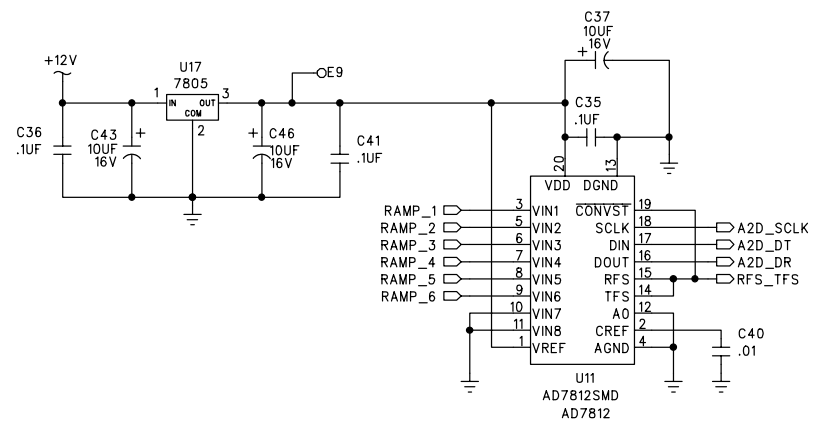
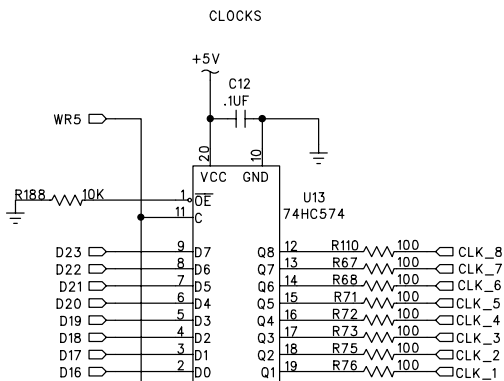
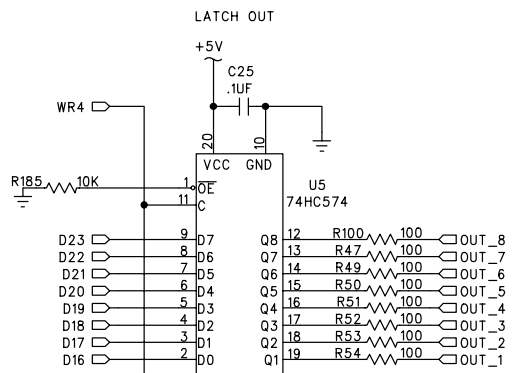
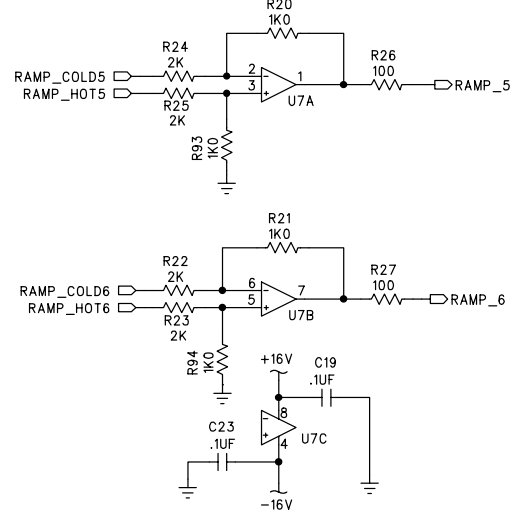
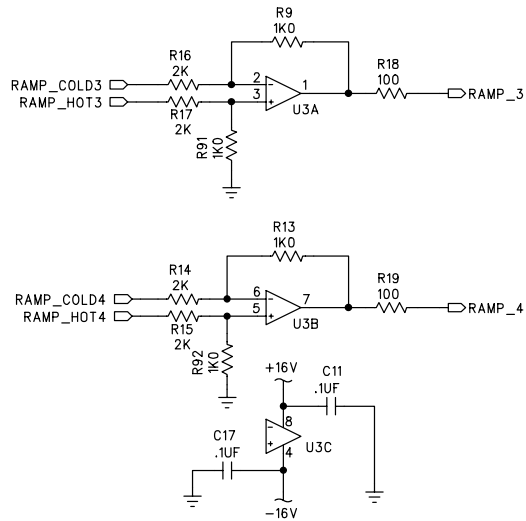
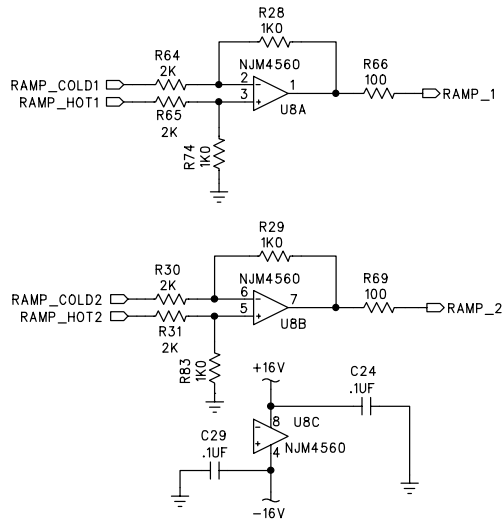
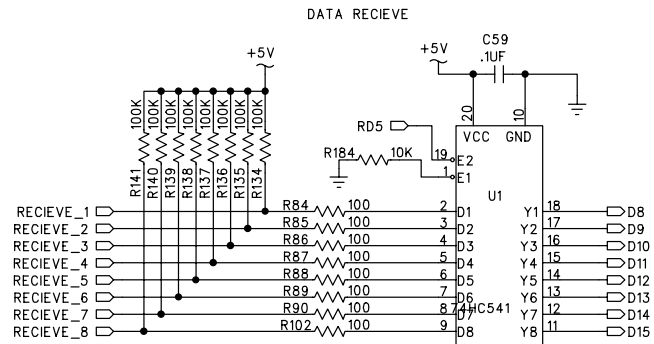
DWG. NO.	990-136-00	SHT	1	REV:	A	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	



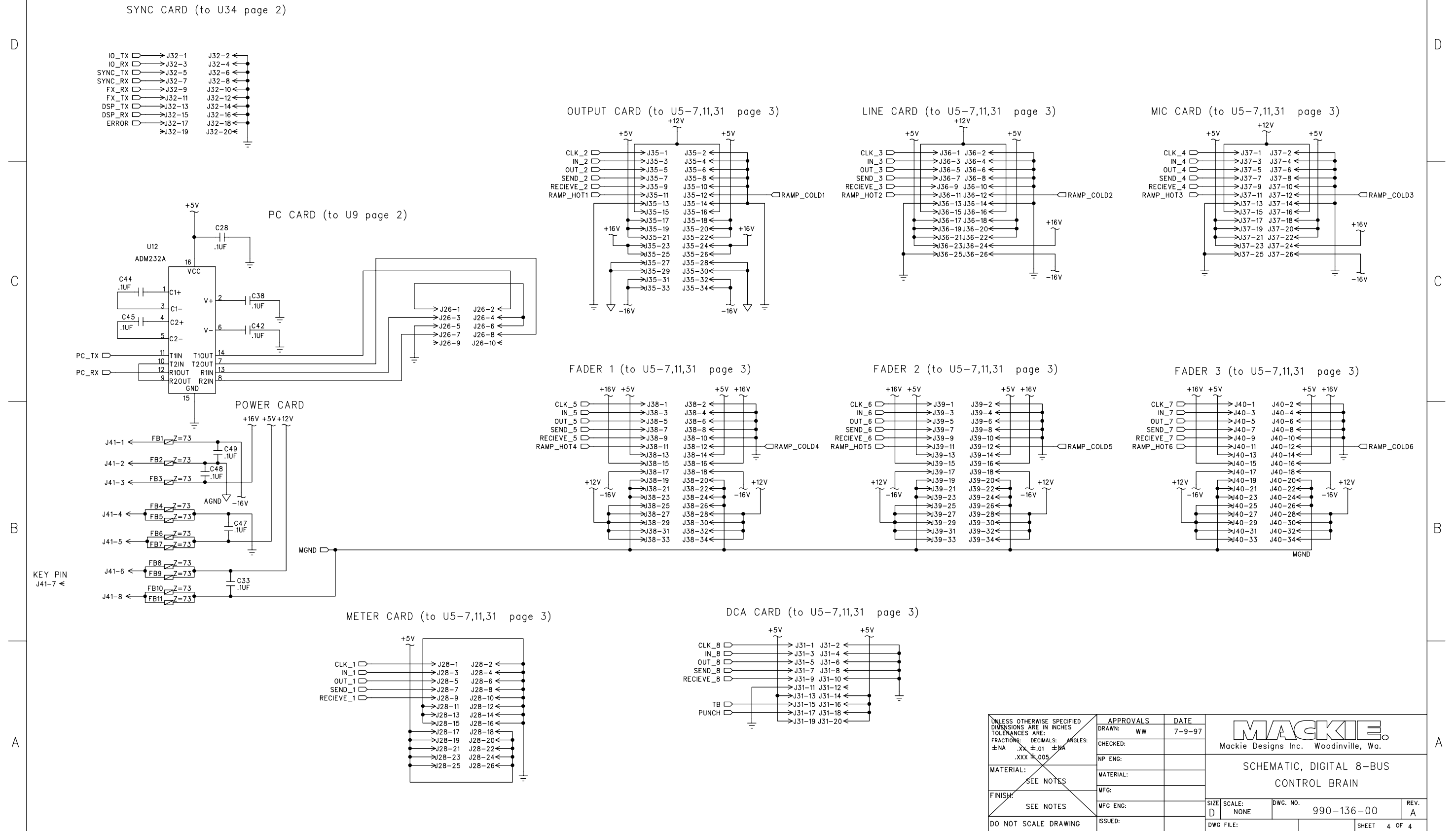
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±.NA .XX ±.01 ±.NA .XXX ±.005 MATERIAL: FINISH: DO NOT SCALE DRAWING	APPROVALS	DATE	MACKIE. Mackie Designs Inc. Woodinville, Wa.				
	DRAWN: WW	7-9-97					
	CHECKED:		SCHEMATIC, DIGITAL 8-BUS CONTROL BRAIN				
	NP ENG:						
	MATERIAL:						
	MFG:						
	SEE NOTES	MFG ENG:	SIZE D	SCALE: NONE	DWG. NO.	990-136-00	REV. A
	SEE NOTES	ISSUED:	DWG FILE:		SHEET 1 OF 4		

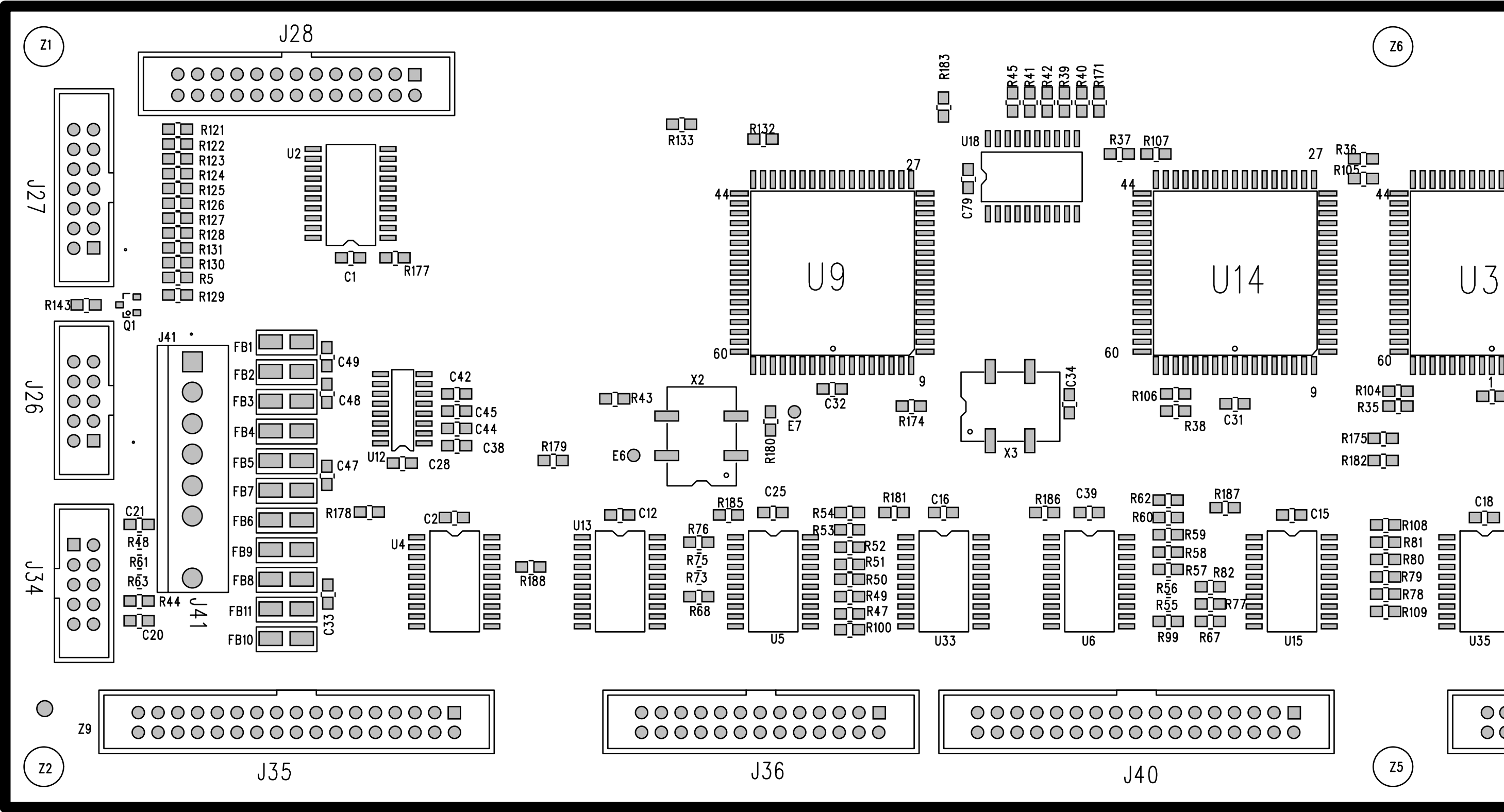


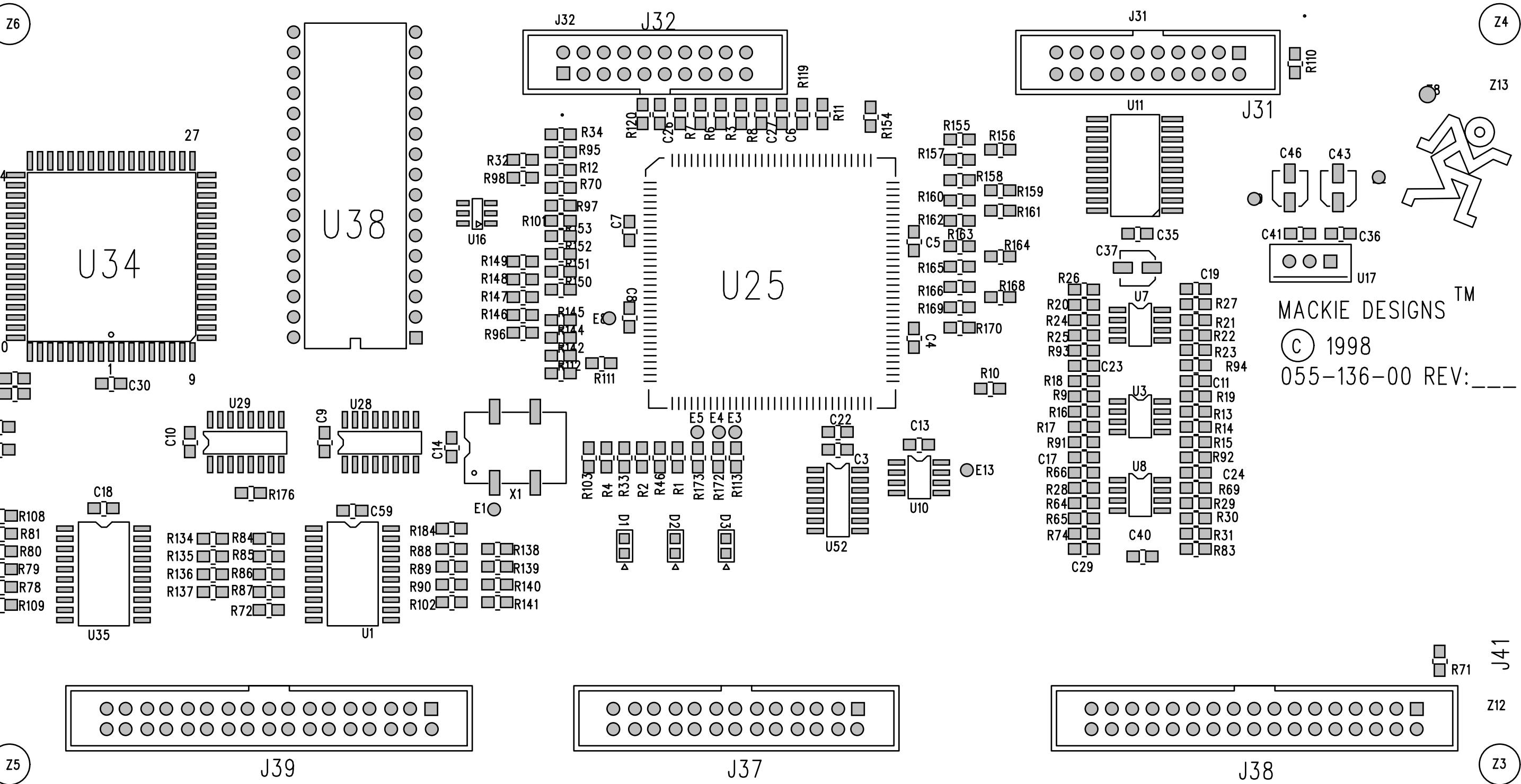
DWG. NO.	990-136-00	SHT	3	REV:	A	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	

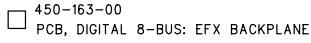


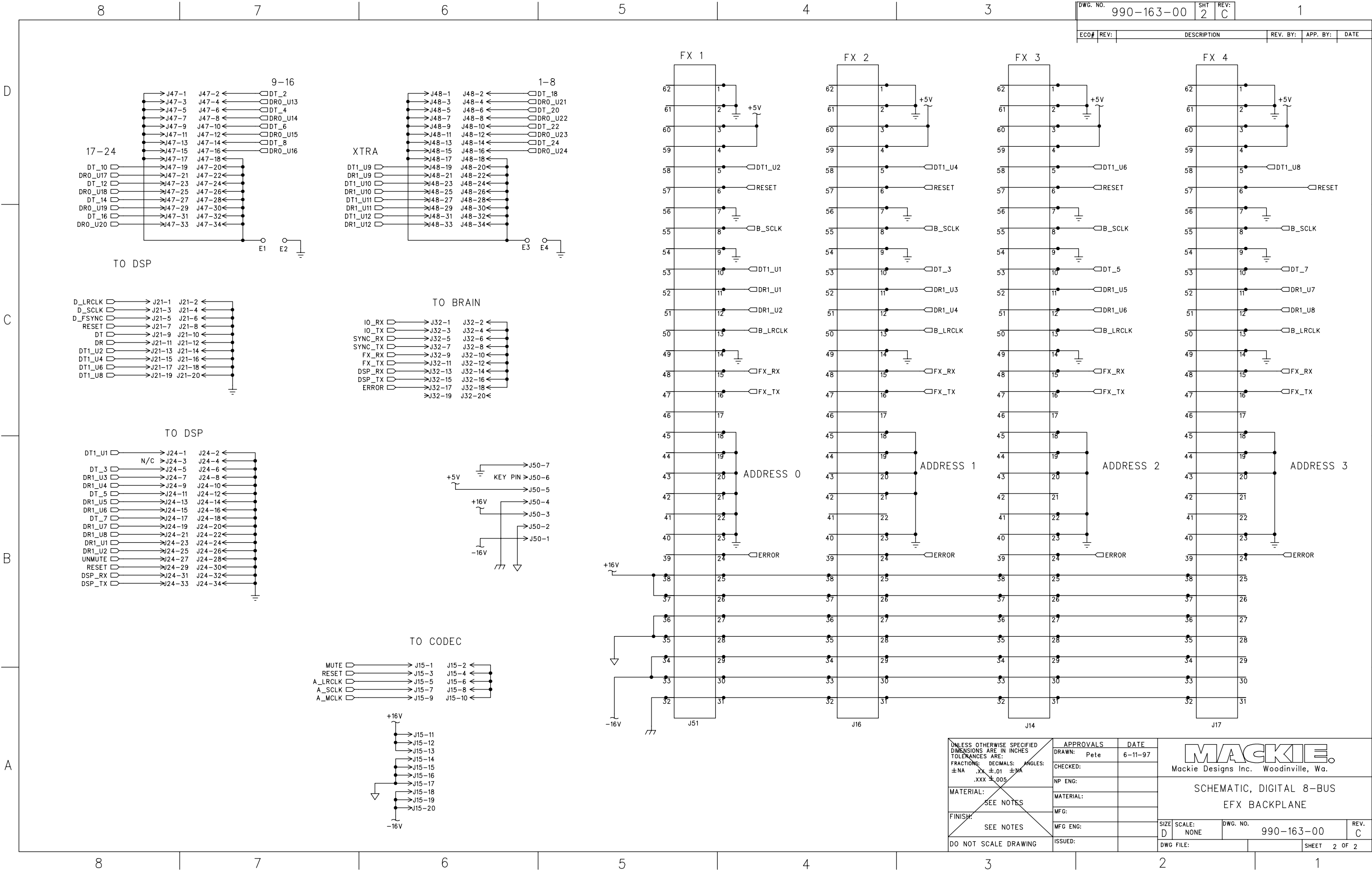
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±NA .XX ±.01 ±NA .XXX ±.005	APPROVALS	DATE	MACKIE. Mackie Designs Inc. Woodinville, Wa.
	DRAWN: WW	7-9-97	
	CHECKED:		
	NP ENG:		
MATERIAL:	MATERIAL:		SCHEMATIC, DIGITAL 8-BUS CONTROL BRAIN
SEE NOTES	MFG:		
FINISH:	MFG ENG:		
DO NOT SCALE DRAWING	ISSUED:		SIZE SCALE: DWG. NO. 990-136-00 REV. A
			DWG FILE: SHEET 3 OF 4

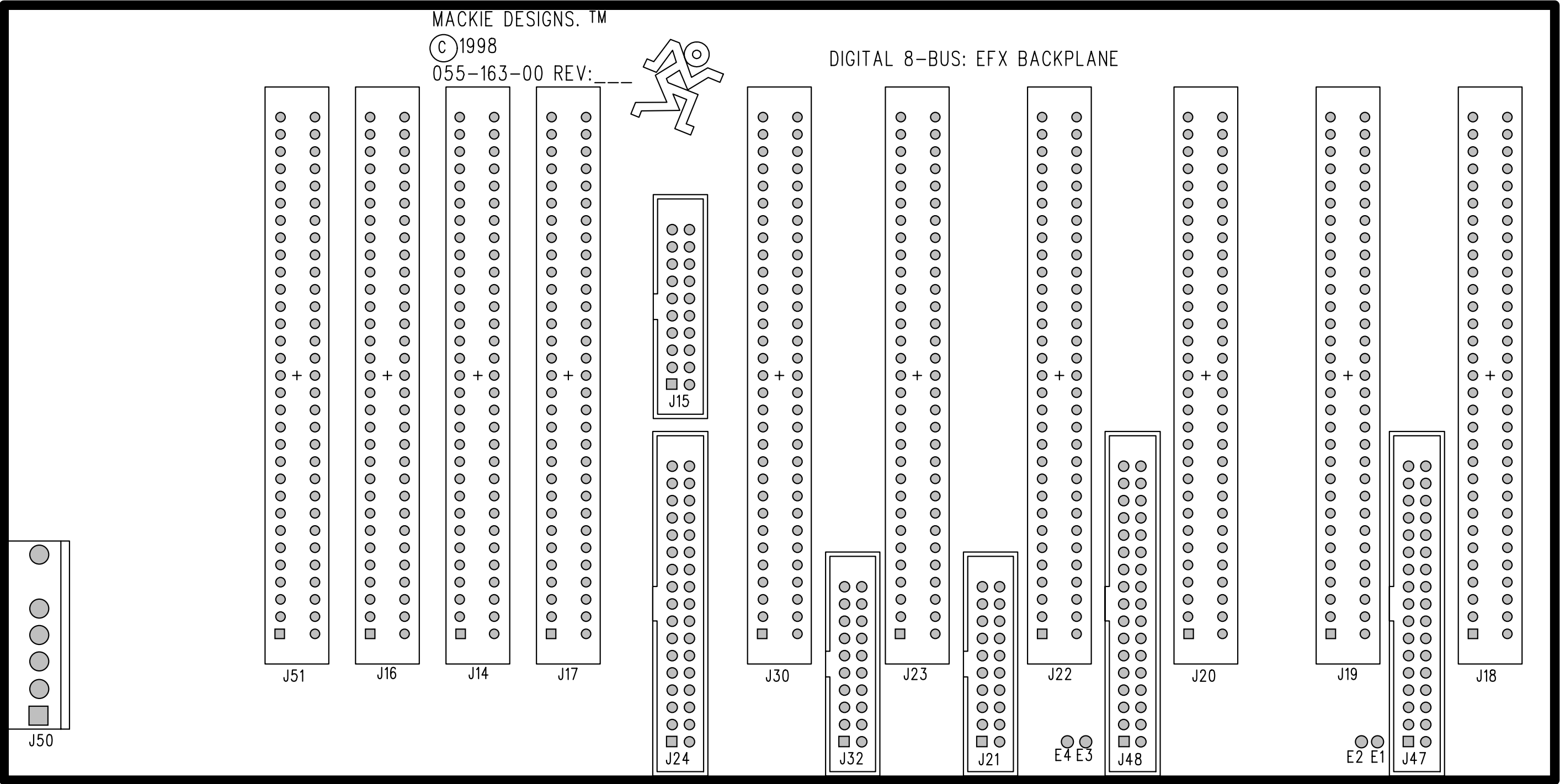






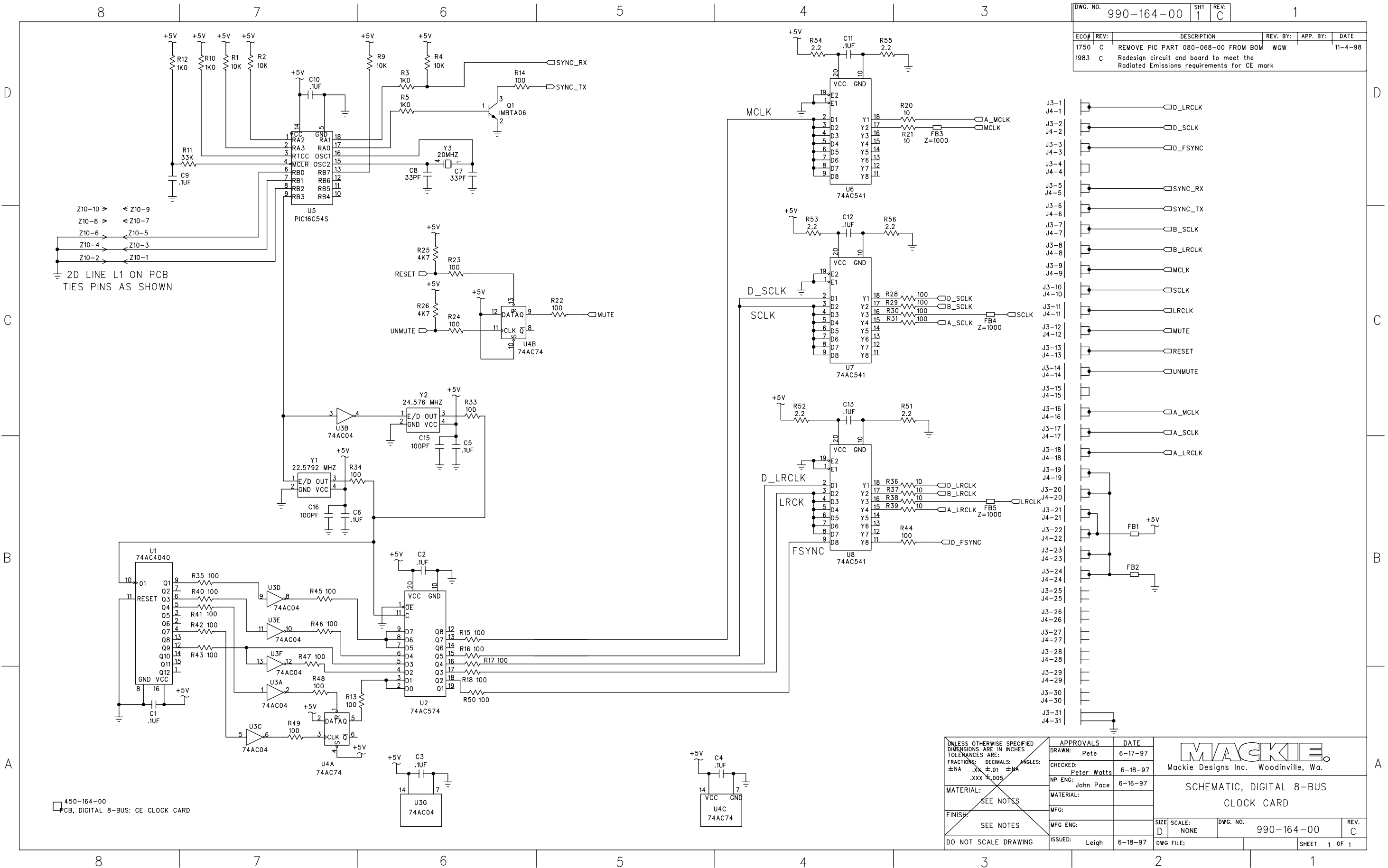






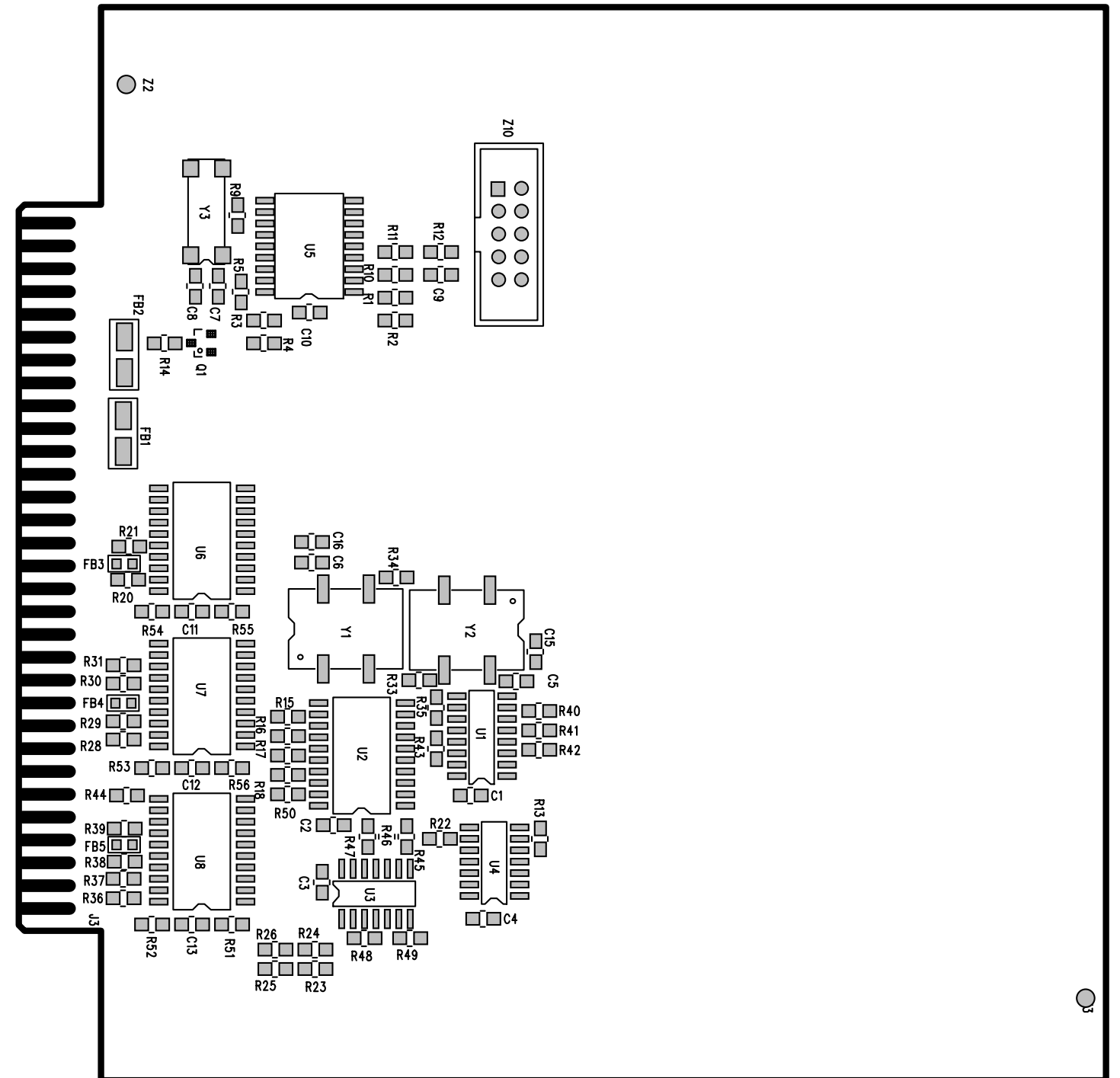
blank page

DWG. NO.	990-164-00	SHT	1	REV:	C	1
ECO#	REV:	DESCRIPTION	REV. BY:	APP. BY:	DATE	
1750	C	REMOVE PIC PART 080-068-00 FROM BOM	WGW		11-4-98	
1983	C	Redesign circuit and board to meet the Radiated Emissions requirements for CE mark				

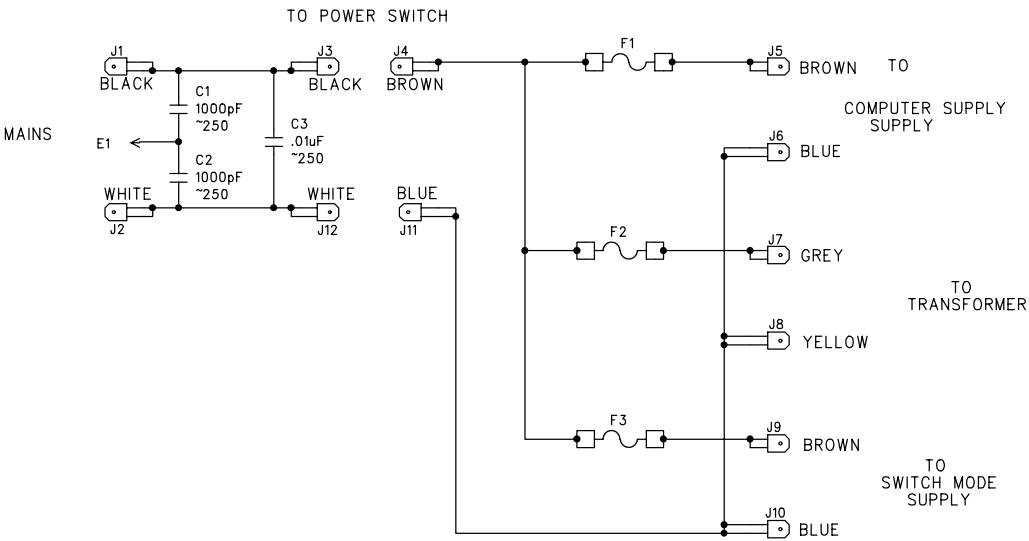


J3-1	J4-1	D_LRCLK
J3-2	J4-2	D_SCLK
J3-3	J4-3	D_FSYNC
J3-4	J4-4	
J3-5	J4-5	SYNC_RX
J3-6	J4-6	SYNC_TX
J3-7	J4-7	B_SCLK
J3-8	J4-8	B_LRCLK
J3-9	J4-9	MCLK
J3-10	J4-10	SCLK
J3-11	J4-11	LRCLK
J3-12	J4-12	MUTE
J3-13	J4-13	RESET
J3-14	J4-14	UNMUTE
J3-15	J4-15	
J3-16	J4-16	A_MCLK
J3-17	J4-17	A_SCLK
J3-18	J4-18	A_LRCLK
J3-19	J4-19	
J3-20	J4-20	
J3-21	J4-21	
J3-22	J4-22	
J3-23	J4-23	
J3-24	J4-24	
J3-25	J4-25	
J3-26	J4-26	
J3-27	J4-27	
J3-28	J4-28	
J3-29	J4-29	
J3-30	J4-30	
J3-31	J4-31	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: .XX ±.01 DECIMALS: .XXX ±.005 ANGLES: ±.1° MATERIAL: SEE NOTES FINISH: SEE NOTES DO NOT SCALE DRAWING	APPROVALS	DATE	MACKIE. Mackie Designs Inc. Woodinville, Wa. SCHEMATIC, DIGITAL 8-BUS CLOCK CARD SIZE: D SCALE: NONE DWG. NO. 990-164-00 REV. C DWG FILE: SHEET 1 OF 1
	DRAWN: Pete	6-17-97	
	CHECKED: Peter Watts	6-18-97	
	NP ENG: John Pace	6-16-97	
	MFG:		
	MFG ENG:		
	ISSUED: Leigh	6-18-97	



DWG. NO.	990-201-00	SHT	1	REV:	A	1	
ECO#	REV:	DESCRIPTION			REV. BY:	APP. BY:	DATE



040-135-00 DIS 18ga. GRNYL 4" LGTH

- 400-060-00 FUSE CLIP 5X20
- 400-060-00 FUSE CLIP 5X20
- 400-060-00 FUSE CLIP 5X20
- 400-060-00 FUSE CLIP 5X20
- 400-060-00 FUSE CLIP 5X20
- 400-060-00 FUSE CLIP 5X20

450-201-00 FUSE BOARD REV.A

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: ±NA .XX ±.01 ±NA .XXX ±.005	APPROVALS	DATE	MACKIE. Mackie Designs Inc. Woodinville, Wa. SCHEMATIC POWER DISTRIBUTION DIGITAL 8 BUS POWER SUPPLY			
	DRAWN: WGW	6-12-98				
	CHECKED:					
	NP ENG:					
	MATERIAL:					
MATERIAL: SEE NOTES	MATERIAL:		SIZE SCALE: DWG. NO. REV. D NONE 990-201-00 A			
FINISH: SEE NOTES	MFG:					
DO NOT SCALE DRAWING	MFG ENG:		DWG FILE: SHEET 1 OF 1			
	ISSUED:					

Another one of those blank pages. Actually, they serve a purpose, which is to make the beginning of each new board chapter start on a right hand page.