



## Schematic Set

### For XR-20 and XR-24 Rack-Mount Mixers

XR-20

12 Mono Inputs • 4 Stereo Inputs

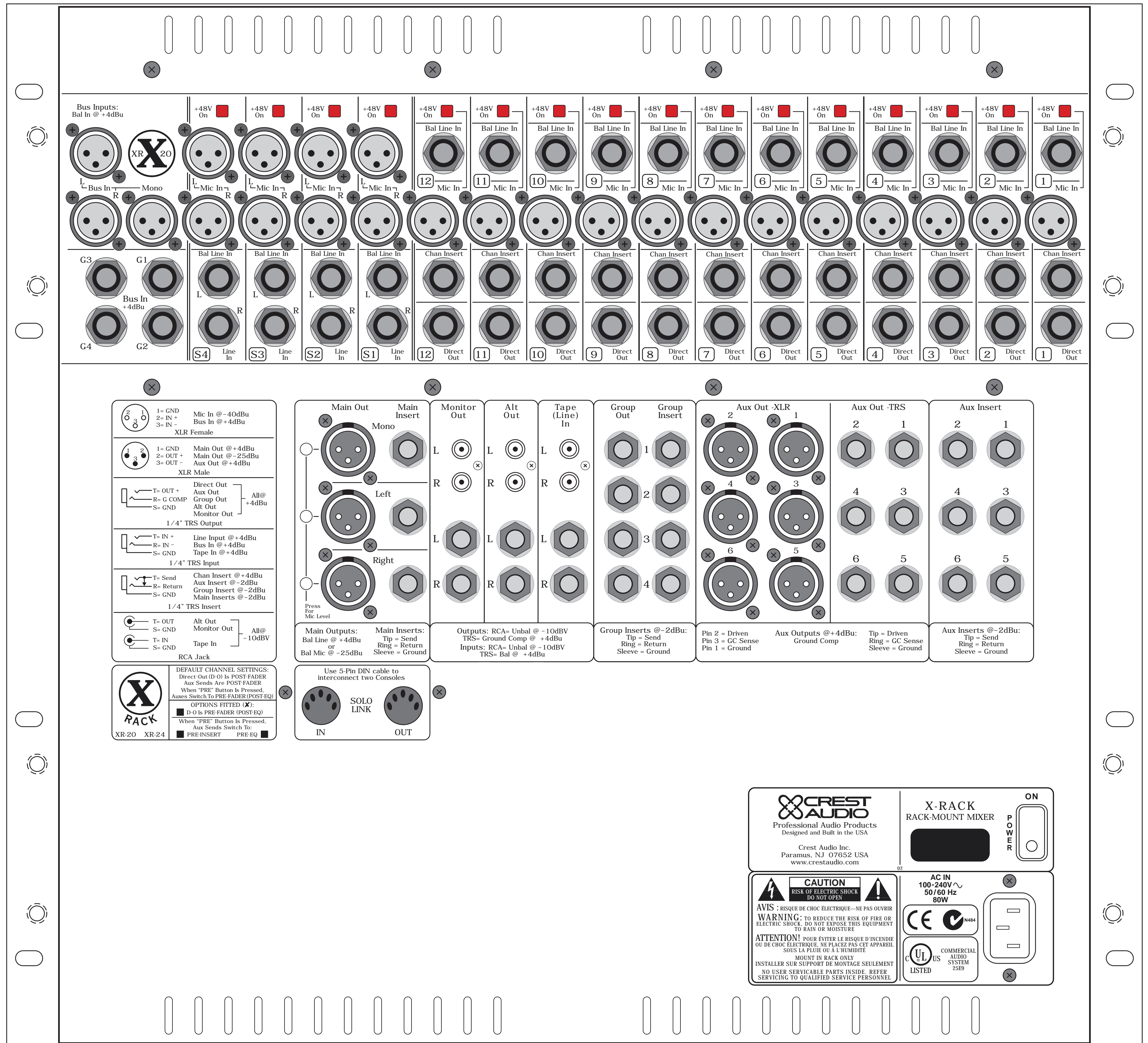
XR-24

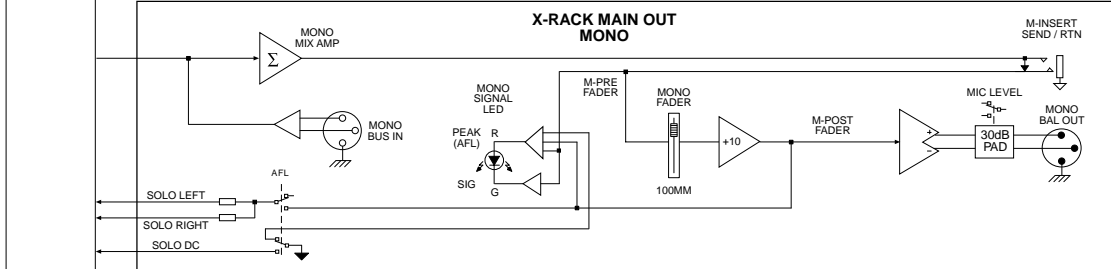
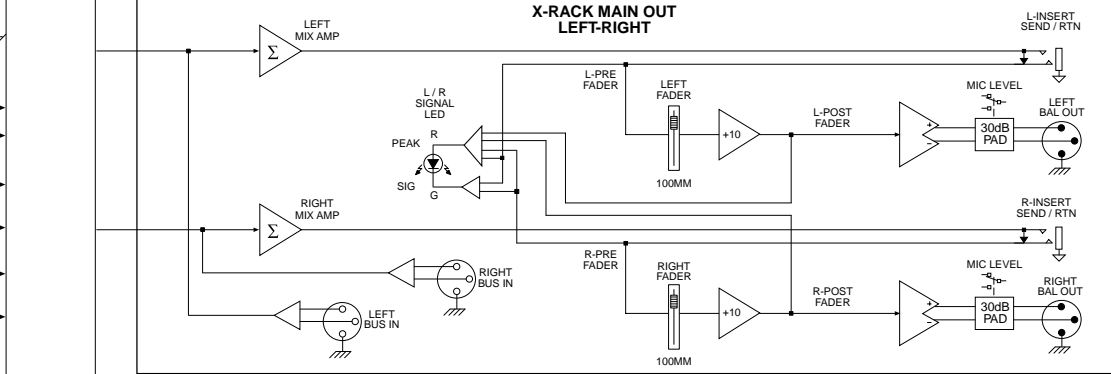
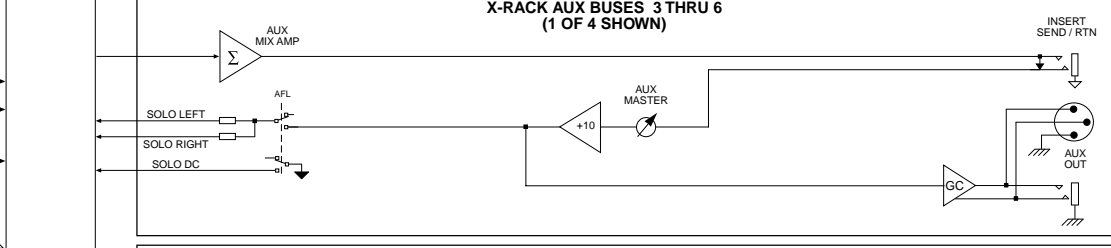
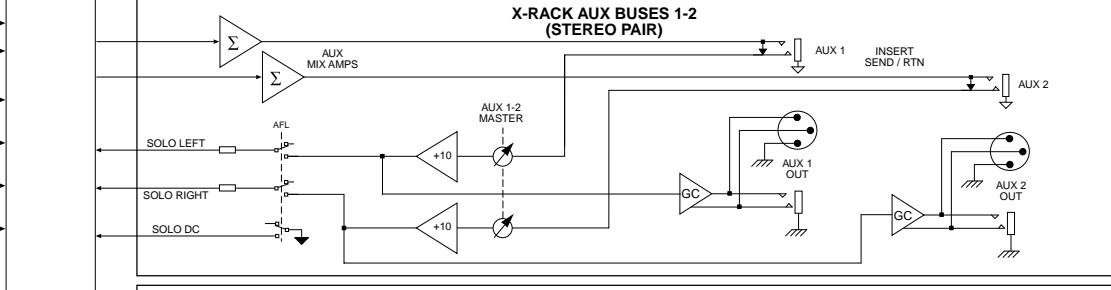
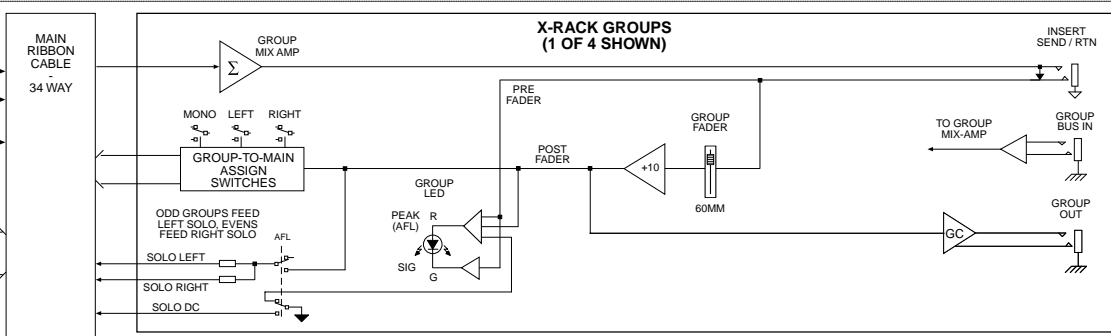
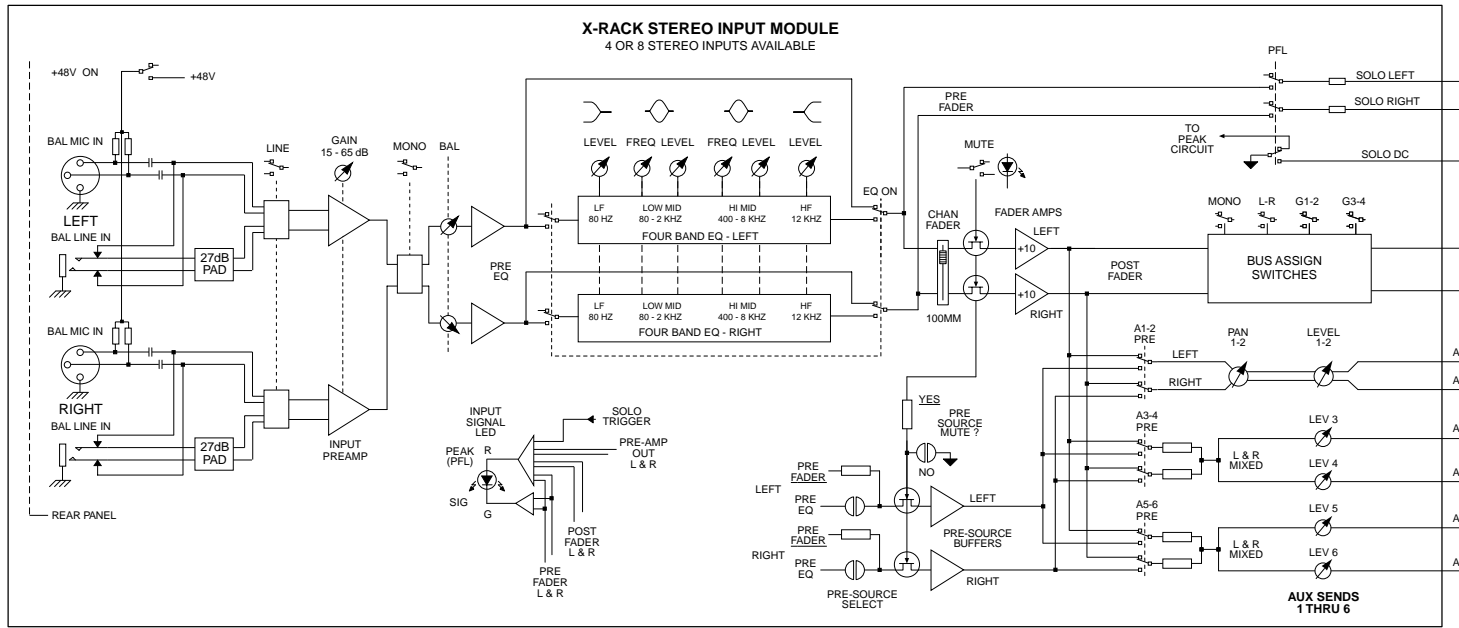
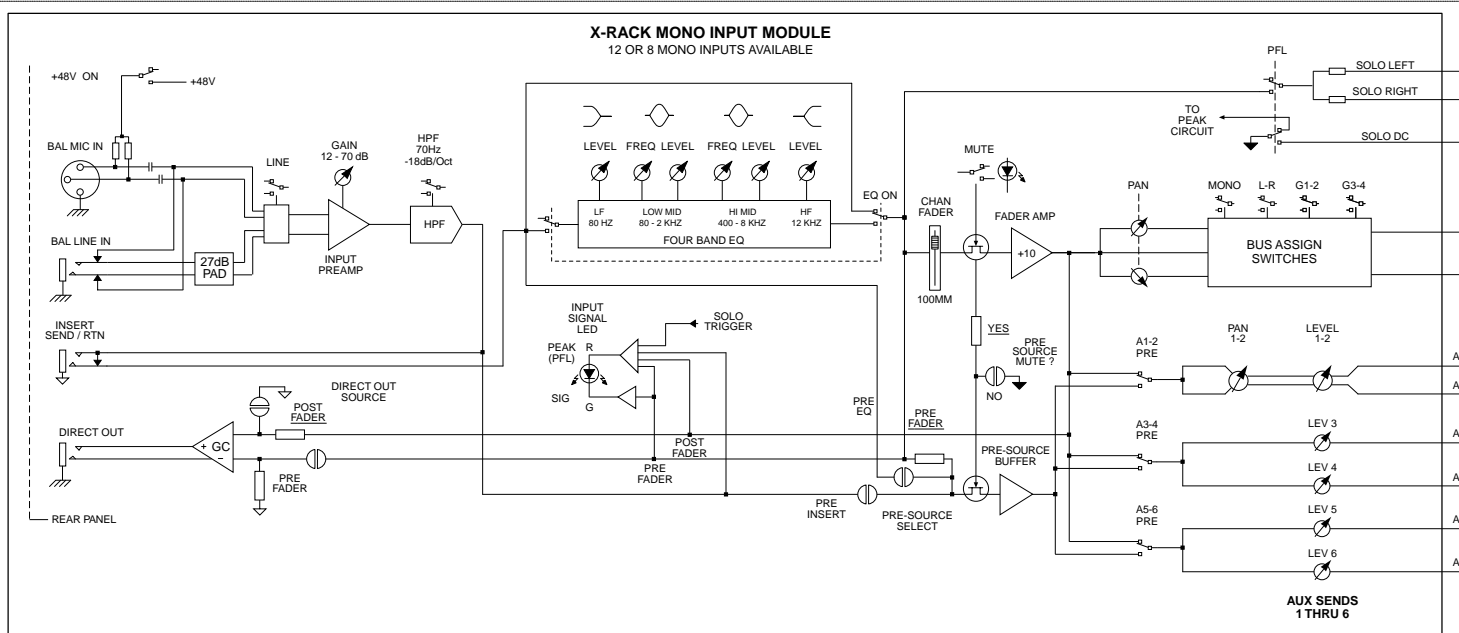
8 Mono Inputs • 8 Stereo Inputs

CREST AUDIO

This control panel is organized into several functional rows:

- Input Section:** Features 12 channels of input, each with a 30dB gain knob (10-70) and a LO CUT filter. Channels 1-12 are labeled with EQ ON buttons (1-12). Channels 13-16 are stereo line inputs with 30dB gain knobs (15-60) and SUM INPUTS buttons.
- EQ Section:** Each channel has a 3-band EQ with HF, LM, and LF frequency sliders. The HF section includes a 0-8 Hz filter and a 15-15 kHz filter. The LM section has a 100-2K Hz filter. The LF section has a 15-15 Hz filter.
- Aux Sends Section:** Each channel has four aux send knobs (AUX 1-2, 3-4, 5-6) with PRE and LEVEL controls, and a PAN knob.
- Fader Section:** Each channel has a vertical fader with a MUTE button and a BUS ASSIGN knob. The faders are numbered 1-12, S1-S3, and S4.
- Master Section:** Includes a 12V LAMP indicator, a 0-10 dB SOLO OFF knob, a 0-10 dB FROM MONITOR knob, a 0-10 dB TAPE IN knob, and a 0-10 dB ADD MONO TO PHONES & ALT OUT knob. It also features a 0-10 dB AFL knob for each channel and a 0-10 dB AFL knob for the master.
- Group Masters Section:** Includes a 0-10 dB XR-20 knob, a 0-10 dB GROUP ASSIGN TO MAINS knob, and a 0-10 dB GROUP MASTERS knob.
- Monitoring Section:** Includes a 0-10 dB SOURCE IS PRE FADER knob, a 0-10 dB MONITOR knob, and a 0-10 dB ALT OUT (L-R) knob.





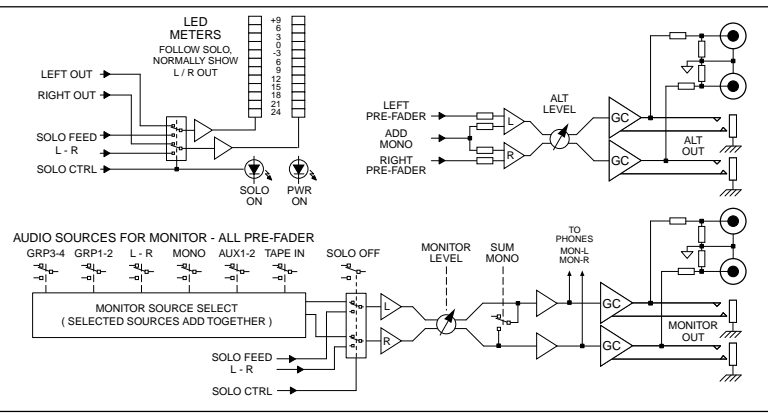
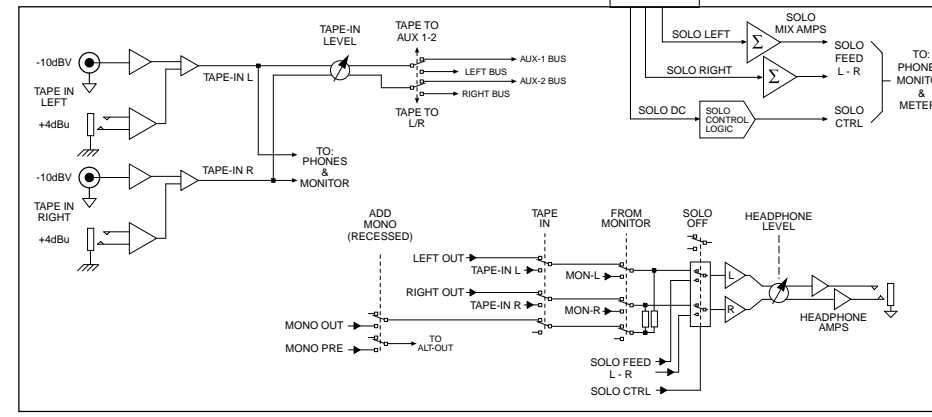
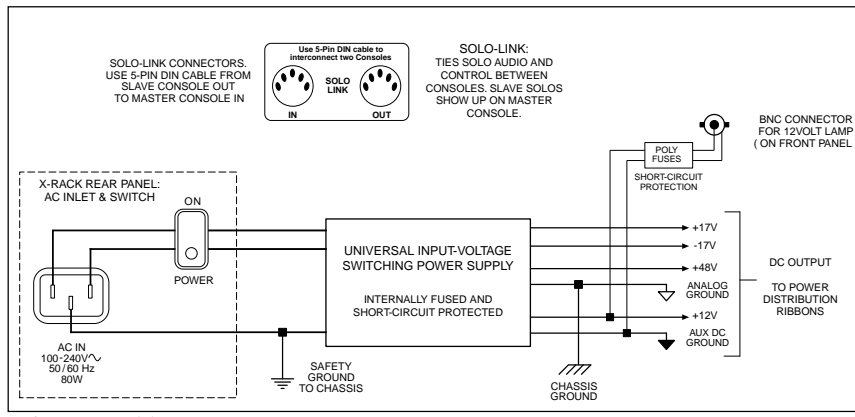
**X-RACK Block Diagram**

FOR MODELS:  
XR-20 : 12 MONO / 4 STEREO  
XR-24 : 8 MONO / 8 STEREO

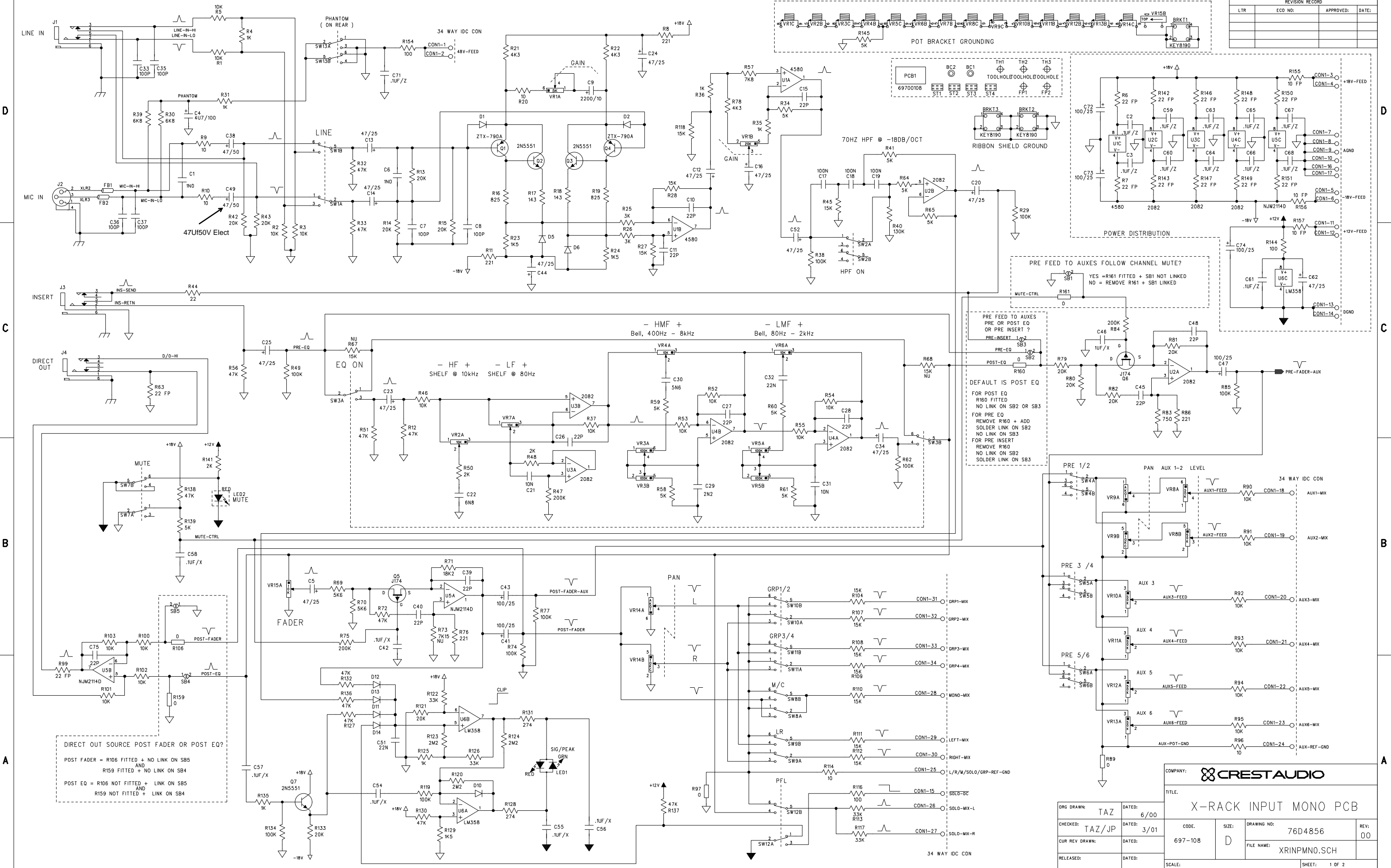
ROTARY POT  
 FADER  
 PAD  
 LED  
 BICOLOR LED  
 GROUND COMP DRIVER  
 BALANCED DRIVER  
 AMP  
 PANEL SWITCH  
 FITTED LINK  
 SOLDER BLOB  
 USER OPTIONS  
 FET SWITCH  
 ELECT SWITCH  
 1/4" TRS JACK  
 RCA JACK  
 XLR JACK  
 OBE FRANK

ALL SWITCHES SHOWN IN THE UP (DESELECTED) POSITION  
AMP(LIFIER) GAIN SHOWN IN DB WHEN NEEDED  
WHEN SHOWN: 1/4" TRS SWITCHING JACKS HAVE NORMALLY CLOSED CONTACTS  
USER OPTIONS IMPLEMENTED WITH REMOVABLE LINKS AND SOLDER BLOBS  
DEFAULT OPTION POSITION SHOWN UNDERLINED

STANDARD OUTPUT LEVEL IS +4 dBu AT 0 VU  
PIN 2 HOT ON ALL BALANCED INPUTS AND OUTPUTS (XLR JACKS)  
FOR UNBALANCED OPERATION:  
TIE PIN 3 TO PIN 1, USE PIN 2 FOR OUTPUT, PIN 1 FOR GND  
⊗ SYMBOL INDICATES POLARITY REVERSE



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LTR	ECO NO:	APPROVED:	DATE:



PRE FEED TO AUXES FOLLOW CHANNEL MUTE?  
 YES = R161 FITTED + SB1 NOT LINKED  
 NO = REMOVE R161 + SB1 LINKED

PRE FEED TO AUXES  
 PRE OR POST EQ  
 PRE-INSERT  
 PRE-EQ  
 POST-EQ

DEFAULT IS POST EQ  
 FOR POST EQ  
 R160 FITTED  
 NO LINK ON SB2 OR SB3  
 FOR PRE EQ  
 REMOVE R160 + ADD  
 SOLDER LINK ON SB2  
 NO LINK ON SB3  
 FOR PRE INSERT  
 REMOVE R160  
 NO LINK ON SB2  
 SOLDER LINK ON SB3

DIRECT OUT SOURCE POST FADER OR POST EQ?  
 POST FADER = R106 FITTED + NO LINK ON SB5  
 AND  
 R159 FITTED + NO LINK ON SB4  
 POST EQ = R106 NOT FITTED + LINK ON SB5  
 AND  
 R159 NOT FITTED + LINK ON SB4

COMPANY: **CRESTAUDIO**

TITLE: **X-RACK INPUT MONO PCB**

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CHECKED: TAZ/JP	DATED: 3/01	CODE: 697-108	SIZE: D	FILE NAME: XRINPMNO.SCH
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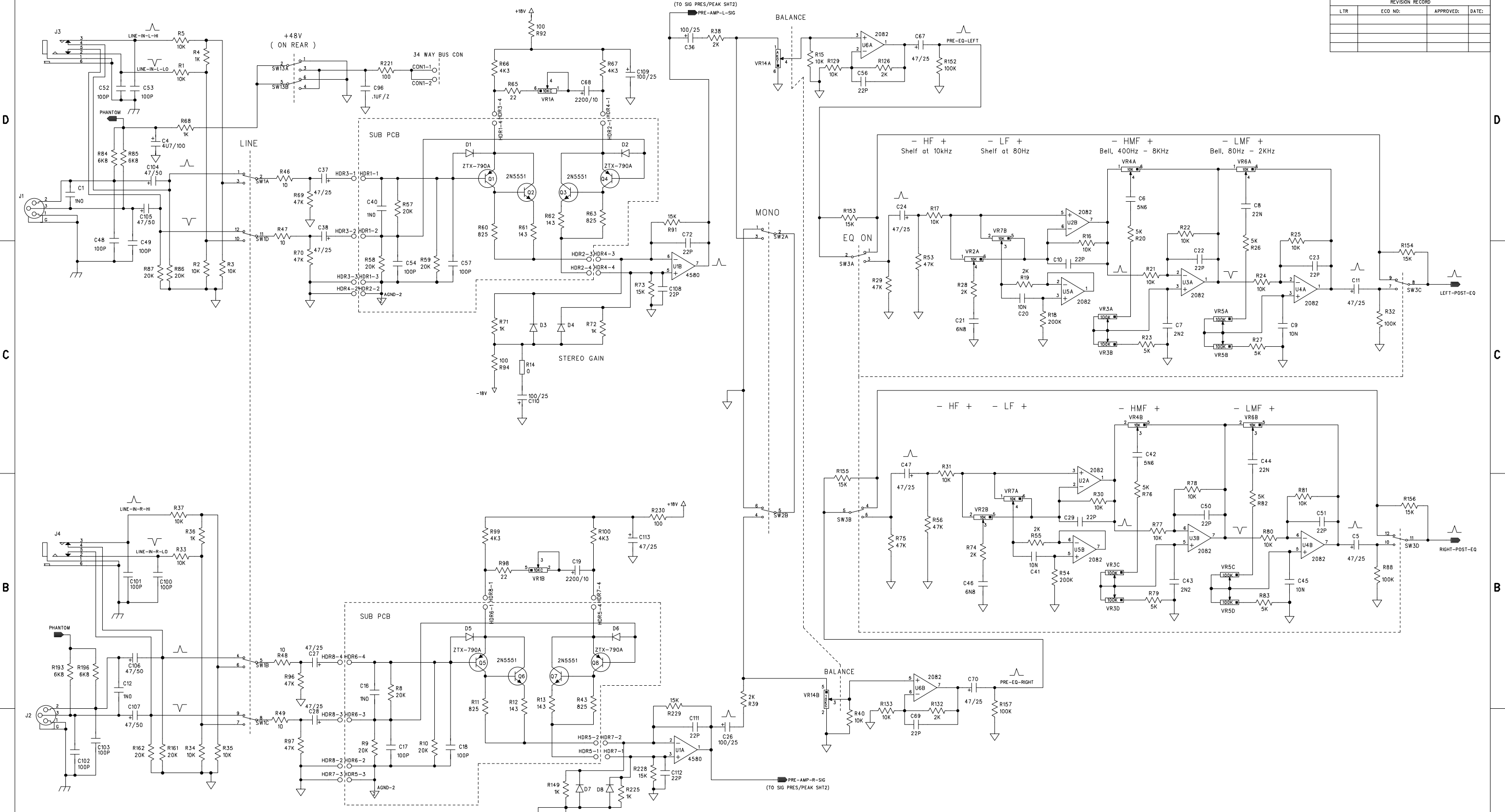
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: **CRESTAUDIO**

TITLE: **X-RACK STEREO INPUT MAIN PCB**

ORG DRAWN: TAZ	DATED: 2/01	CREST P/N: 697-109	SIZE: D	DRAWING NO: 76D4857	REV: 00
CUR REV DRAWN: TAZ	DATED: 3/12/01			FILE NAME: KRISTMNO.SCH	
RELEASED:	DATED:	SCALE:		SHEET: 1 OF 3	

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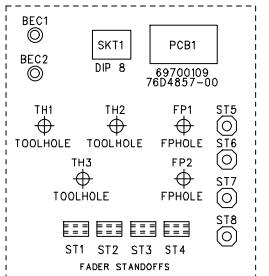
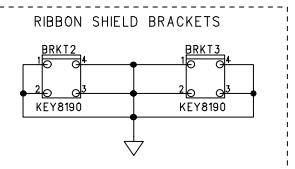
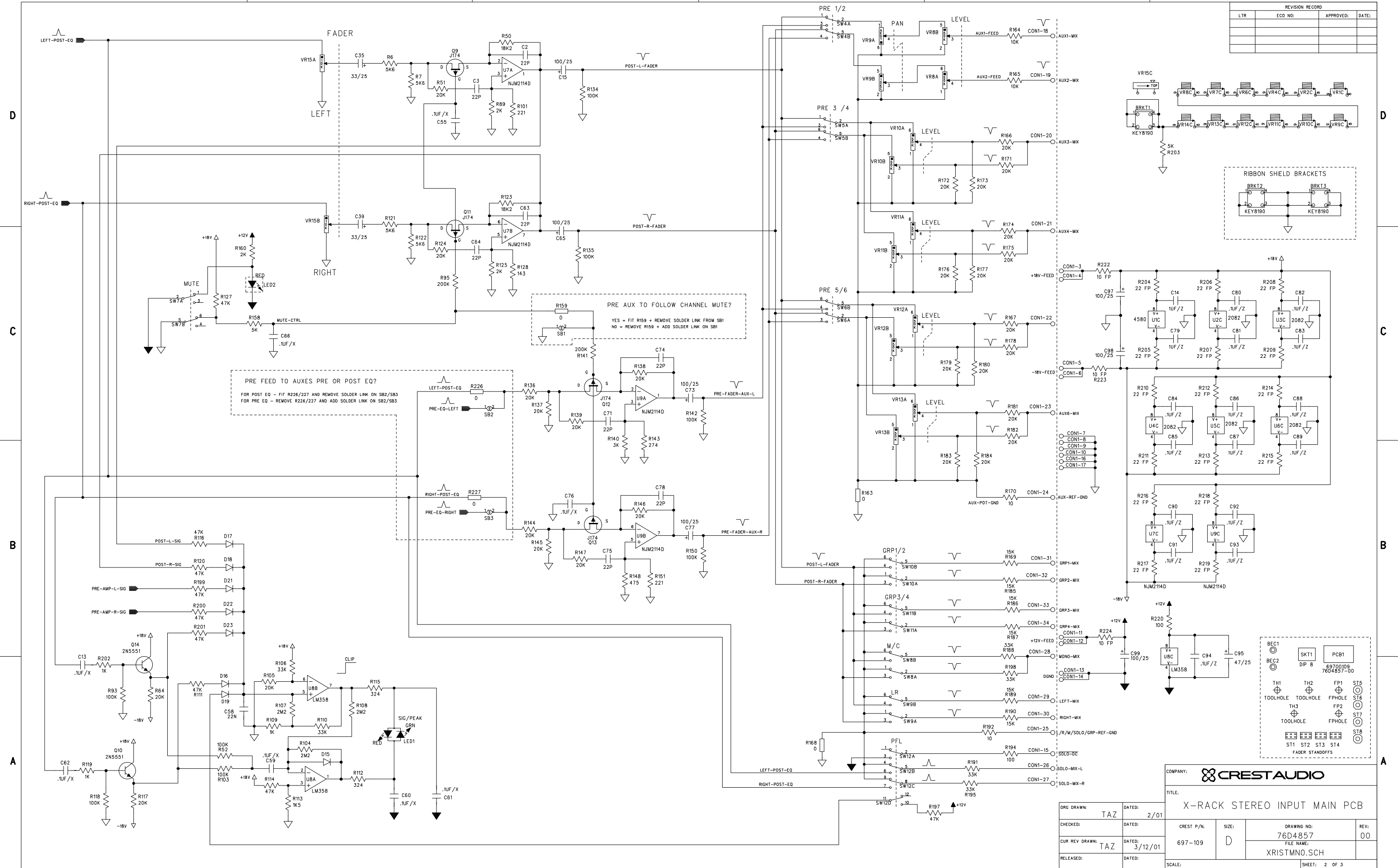
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REVISION RECORD			
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COMPANY: **CRESTAUDIO**

TITLE: **X-RACK STEREO INPUT MAIN PCB**

ORG DRAWN: TAZ DATED: 2/01

CHECKED: DATED:

CUR REV DRAWN: TAZ DATED: 3/12/01

RELEASED: DATED:

CREST P/N: 697-109

SIZE: D

DRAWING NO: 76D4857

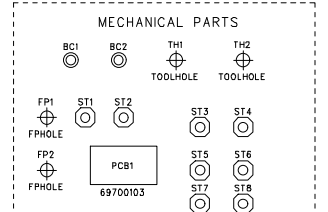
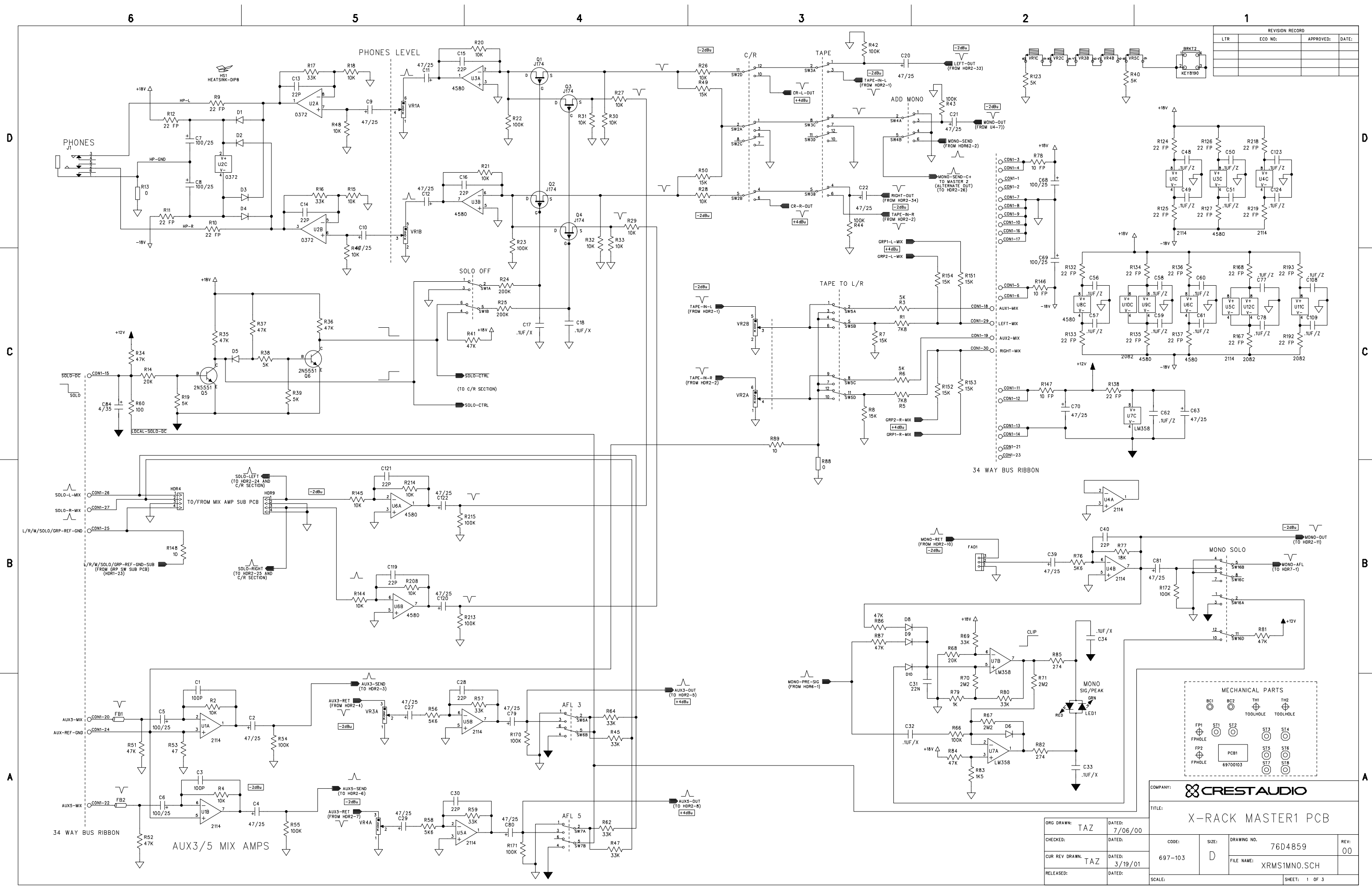
FILE NAME: XRISTMNO.SCH

REV: 00

SCALE:

SHEET: 2 OF 3

REVISION RECORD			
LTR	ECD NO:	APPROVED:	DATE:



COMPANY: **CRESTAUDIO**

TITLE: **X-RACK MASTER1 PCB**

ORD DRAWN: TAZ	DATED: 7/06/00	CODE: 697-103	SIZE: D	DRAWING NO. 76D4859	REV: 00
CUR REV DRAWN: TAZ	DATED: 3/19/01	FILE NAME: XRMS1MN0.SCH	SHEET: 1 OF 3		

ORD DRAWN: TAZ	DATED: 7/06/00
CUR REV DRAWN: TAZ	DATED: 3/19/01



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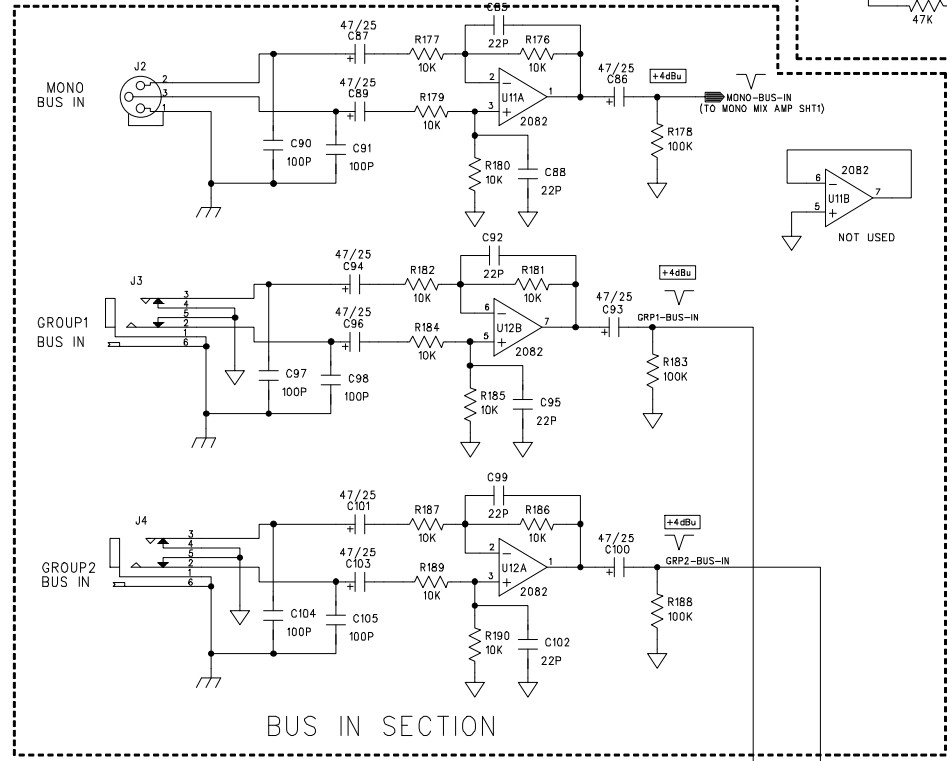
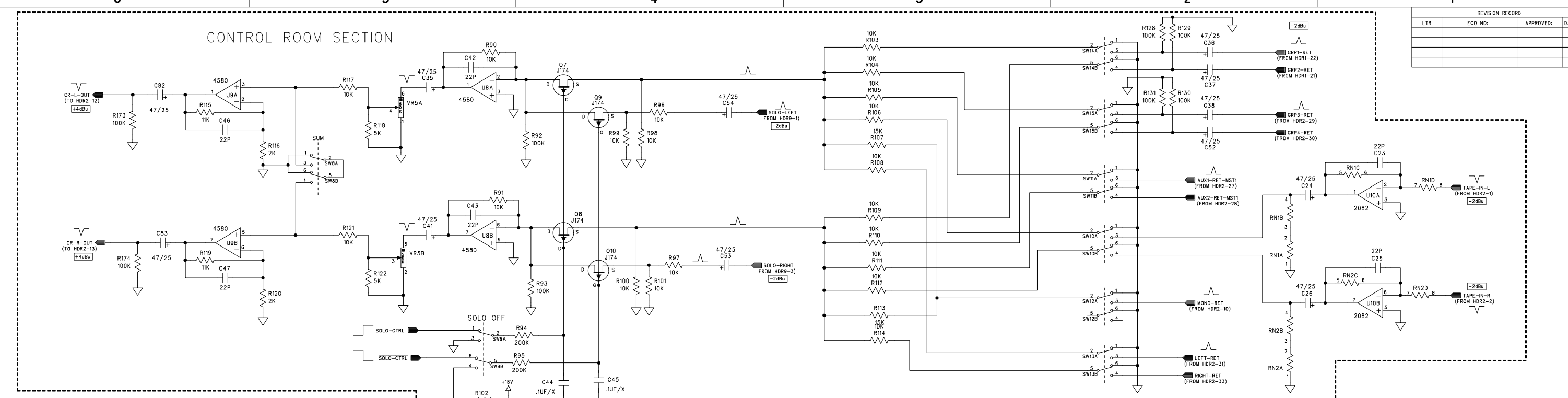
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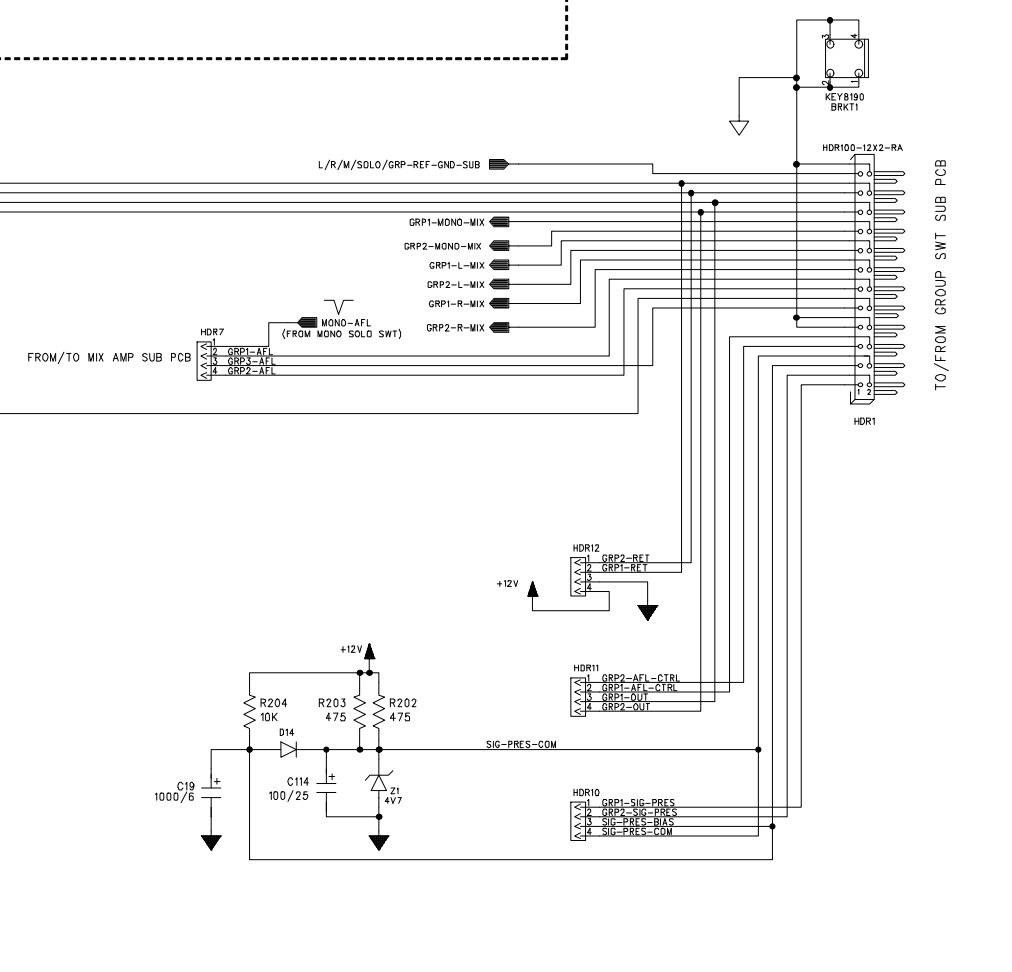
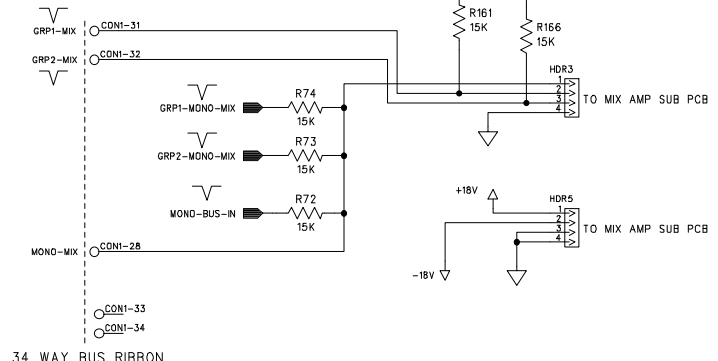
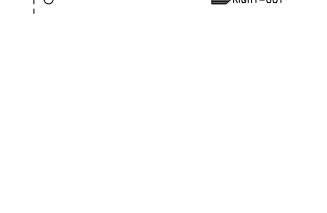
### CONTROL ROOM SECTION

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LTR	ECO NO:	APPROVED:	DATE:



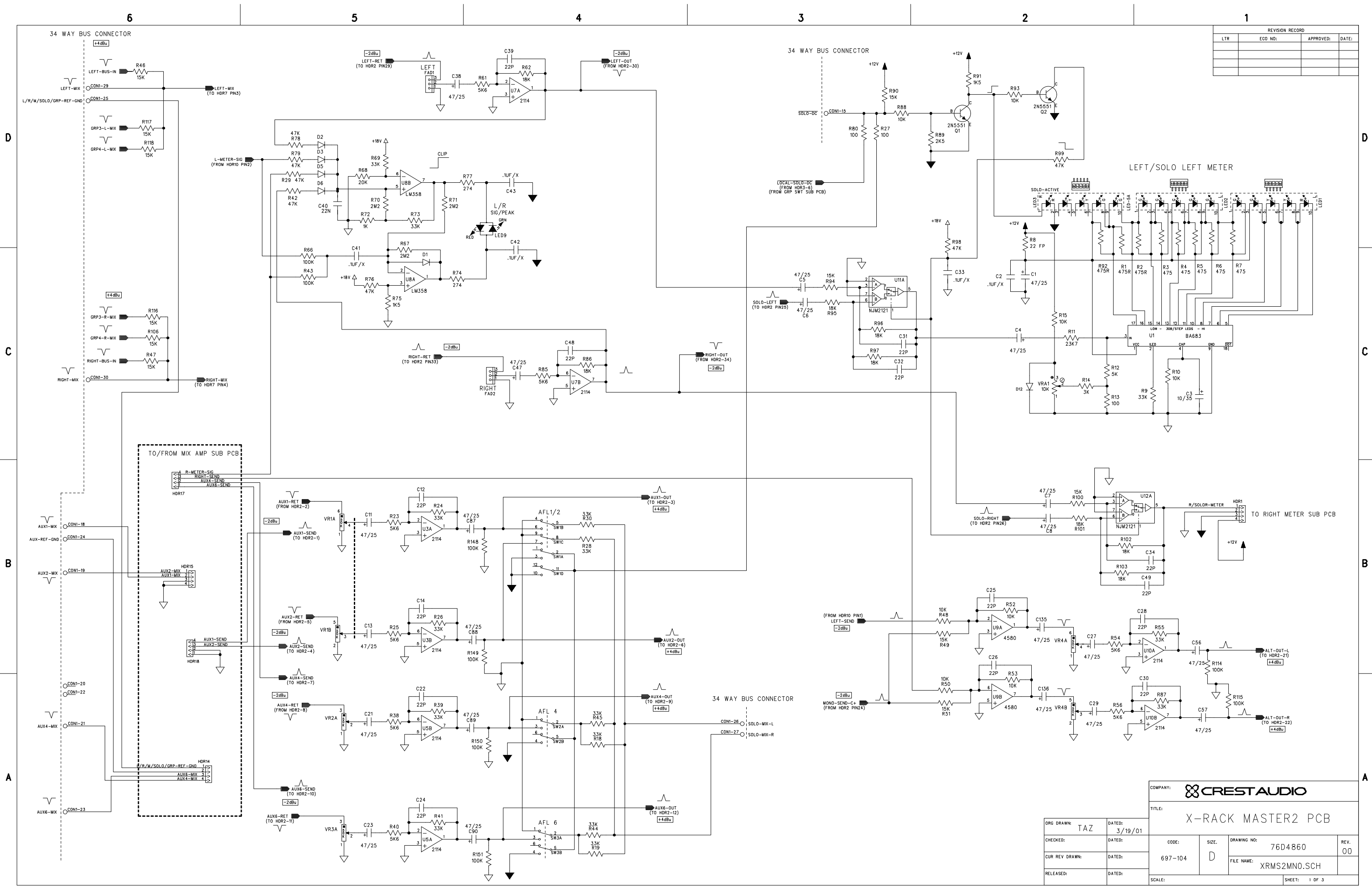
### 34 WAY TO O/P CON PANEL

- HDR2-1 TAPE-IN-L
- HDR2-2 TAPE-IN-R
- HDR2-3 AUX3-SEND
- HDR2-4 AUX3-RET
- HDR2-5 AUX3-OUT
- HDR2-6 AUX5-SEND
- HDR2-7 AUX5-RET
- HDR2-8 AUX5-OUT
- HDR2-9 MONO-RET
- HDR2-10 MONO-OUT
- HDR2-11 CR-L-OUT
- HDR2-12 CR-R-OUT
- HDR2-13
- HDR2-14
- HDR2-15 GRP1-RET
- HDR2-16 GRP1-OUT
- HDR2-17
- HDR2-18 GRP2-RET
- HDR2-19 GRP2-OUT
- HDR2-20
- HDR2-21 SOLO-DC
- HDR2-22
- HDR2-23
- HDR2-24 SOLO-LEFT
- HDR2-25 SOLO-RIGHT
- HDR2-26 MONO-SEND-C+
- HDR2-27 AUX1-RET-MST1
- HDR2-28 AUX2-RET-MST1
- HDR2-29 GRP3-RET
- HDR2-30 GRP4-RET
- HDR2-31 LEFT-RET
- HDR2-32 LEFT-OUT
- HDR2-33 RIGHT-RET
- HDR2-34 RIGHT-OUT



COMPANY: <b>CRESTAUDIO</b>		TITLE: <b>X-RACK MASTER1 PCB</b>	
ORG DRAWN: TAZ	DATED: 7/06/00	CODE: 697-103	SIZE: D
CHECKED: TAZ	DATED: 3/19/01	DRAWING NO: 76D4859	REV: 00
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RELEASED:	DATED:	SCALE:	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: **CRESTAUDIO**

TITLE: **X-RACK MASTER2 PCB**

ORG DRAWN: TAZ	DATED: 3/19/01	CODE: 697-104	SIZE: D	DRAWING NO: 76D4860	REV: 00
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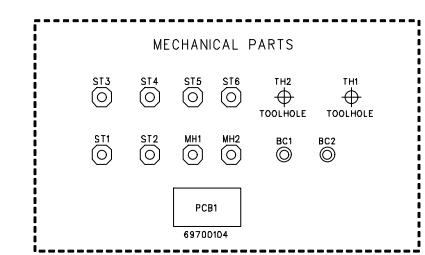
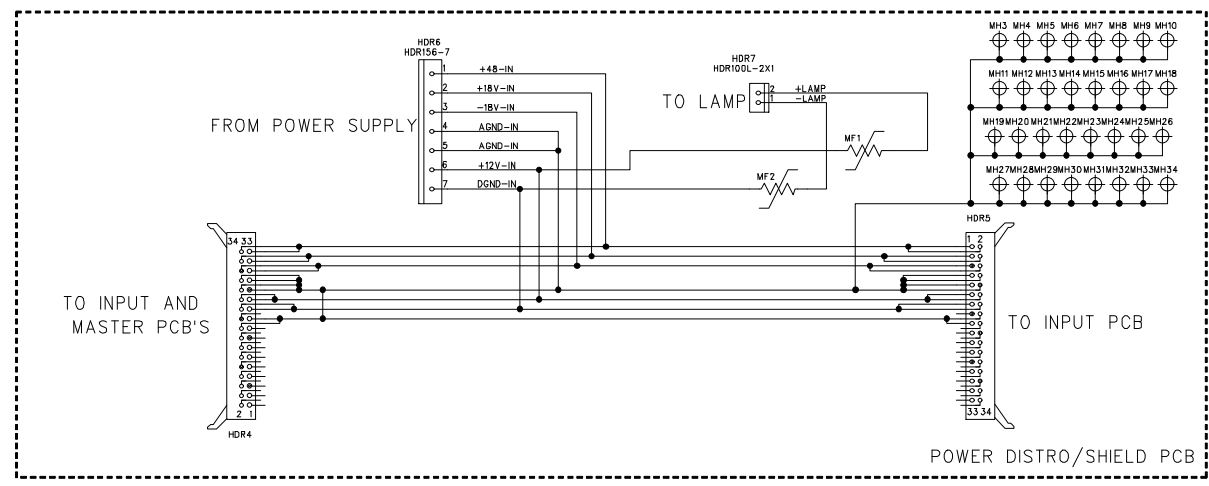
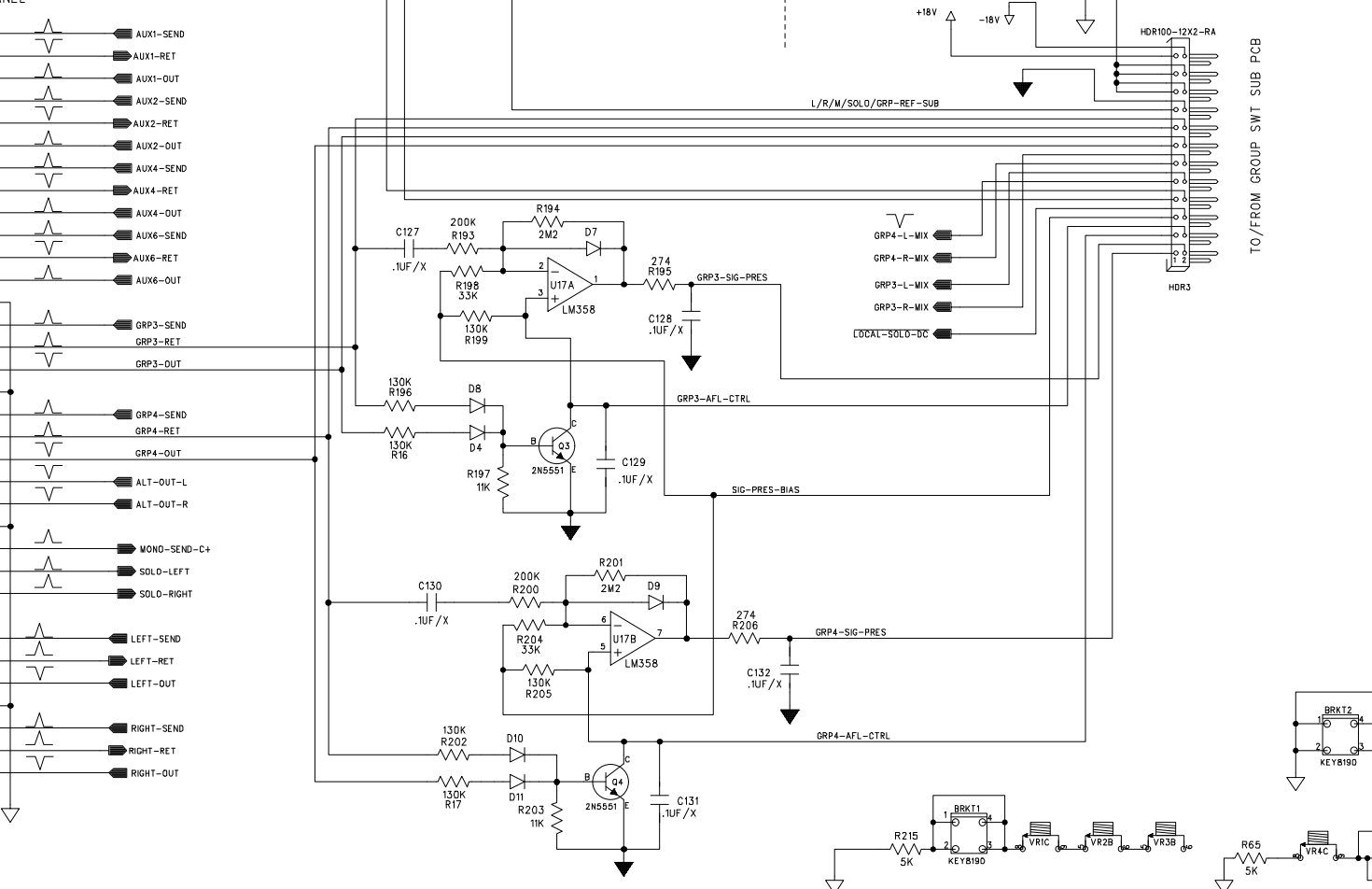
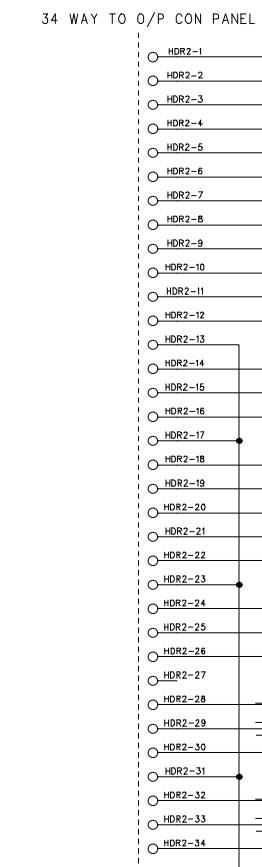
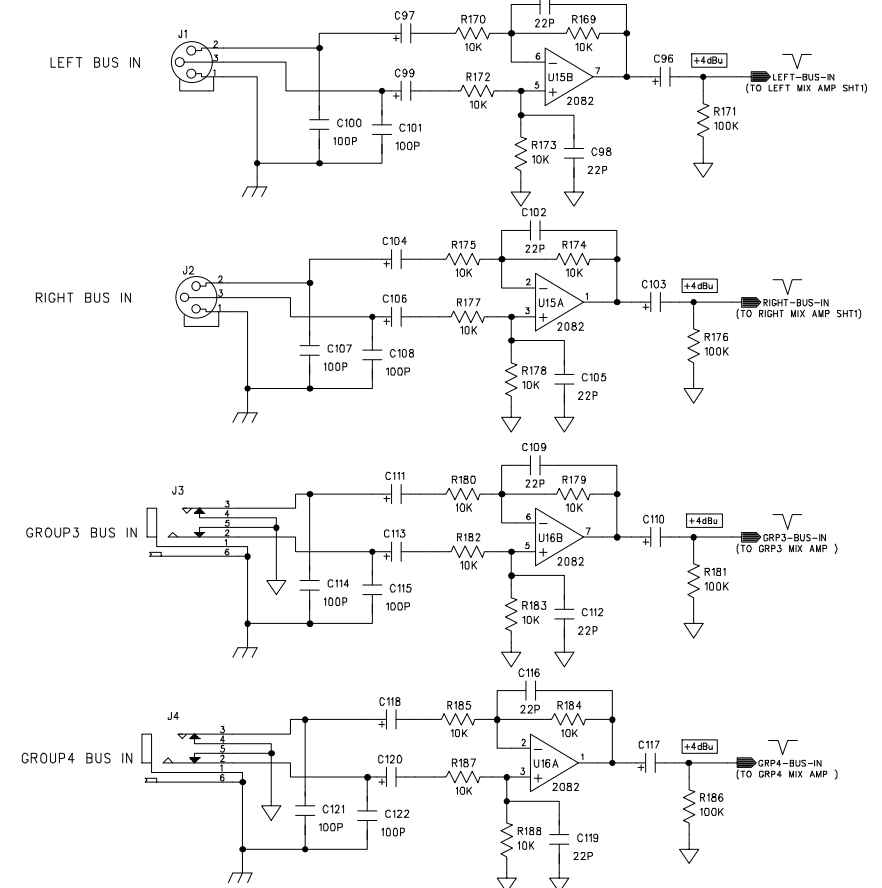
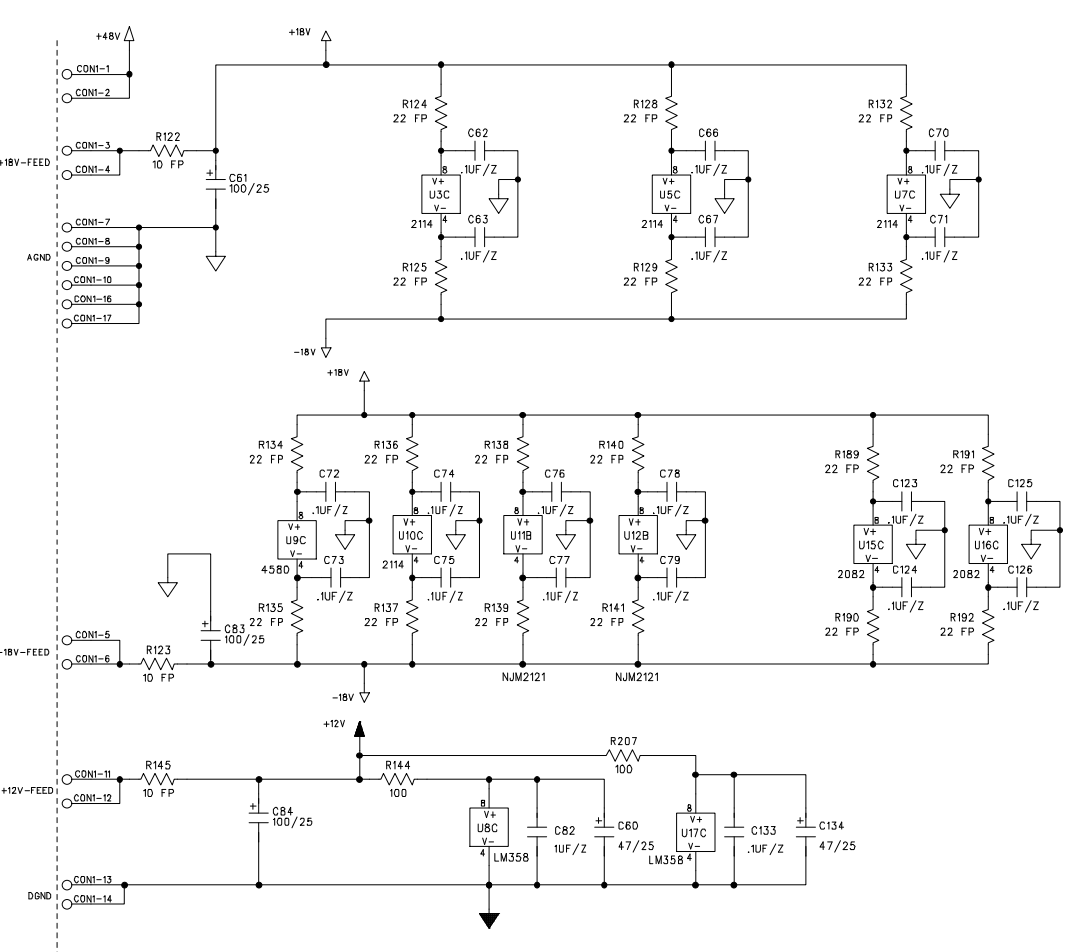
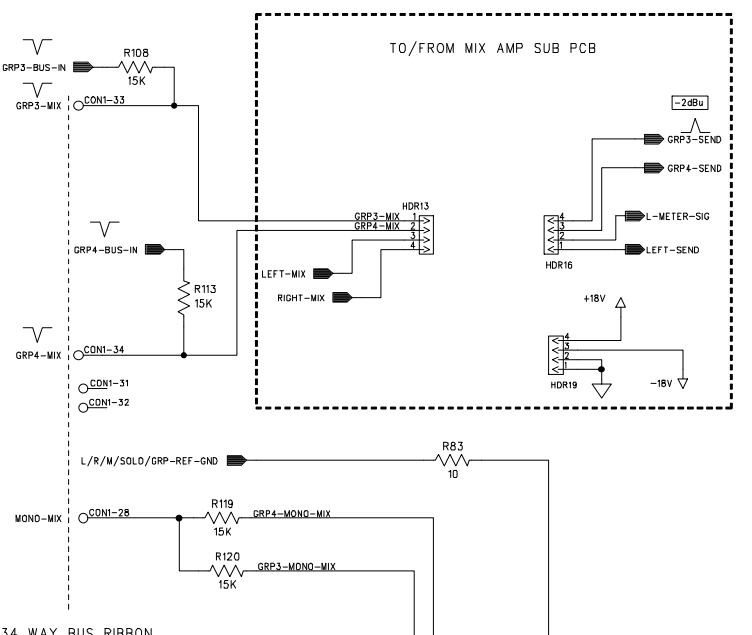
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: <b>CRESTAUDIO</b>		TITLE: <b>X-RACK MASTER2 PCB AND POWER DISTR/O SHIELD PCB</b>	
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CHECKED:	DATED:	DRAWING NO: 76D4860	REV: 00
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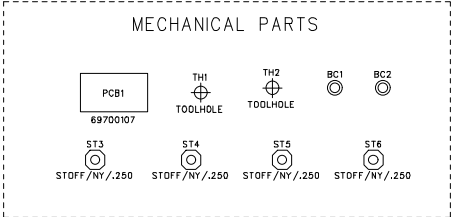
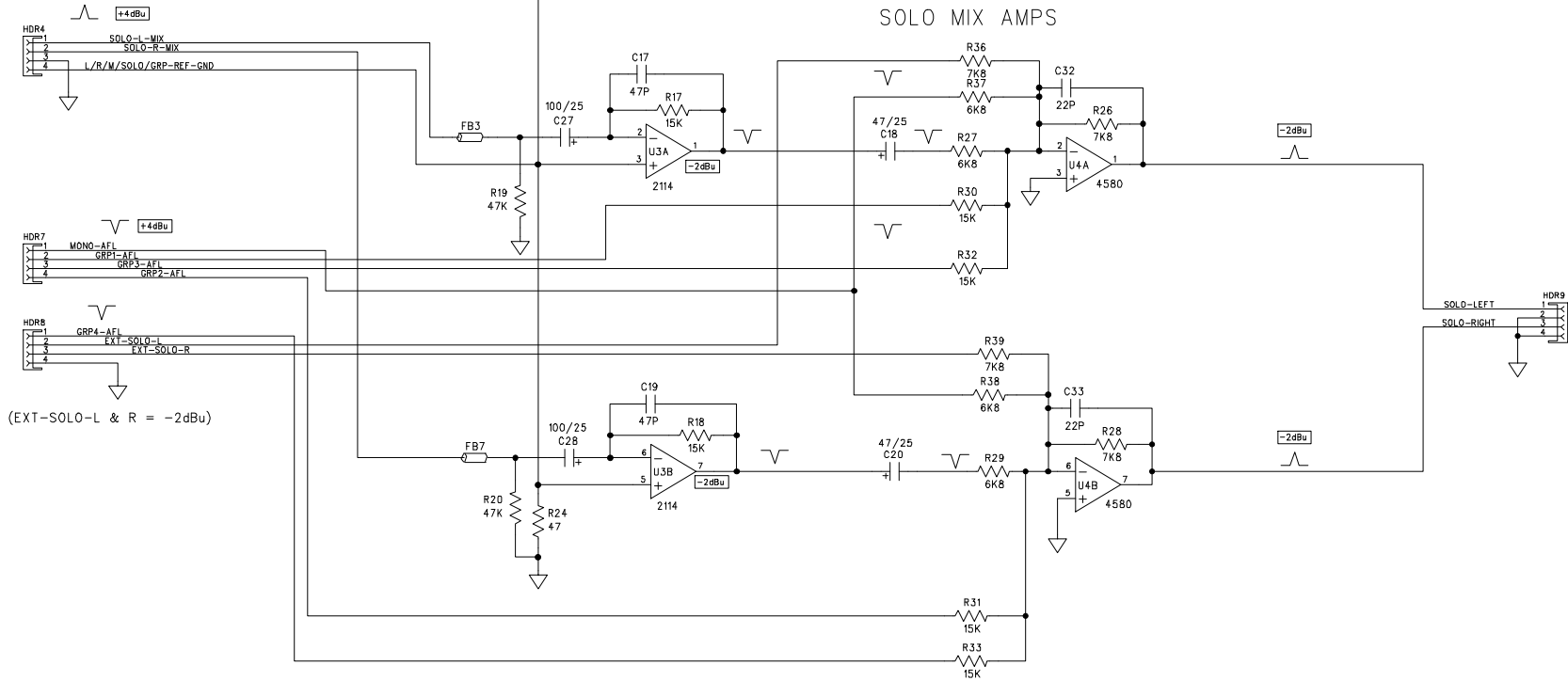
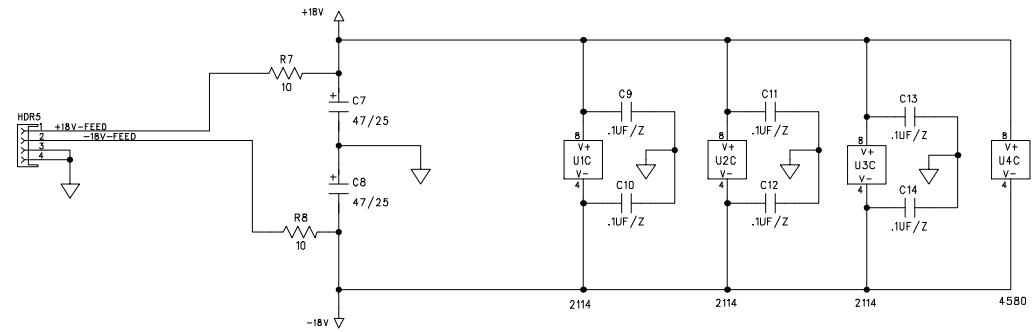
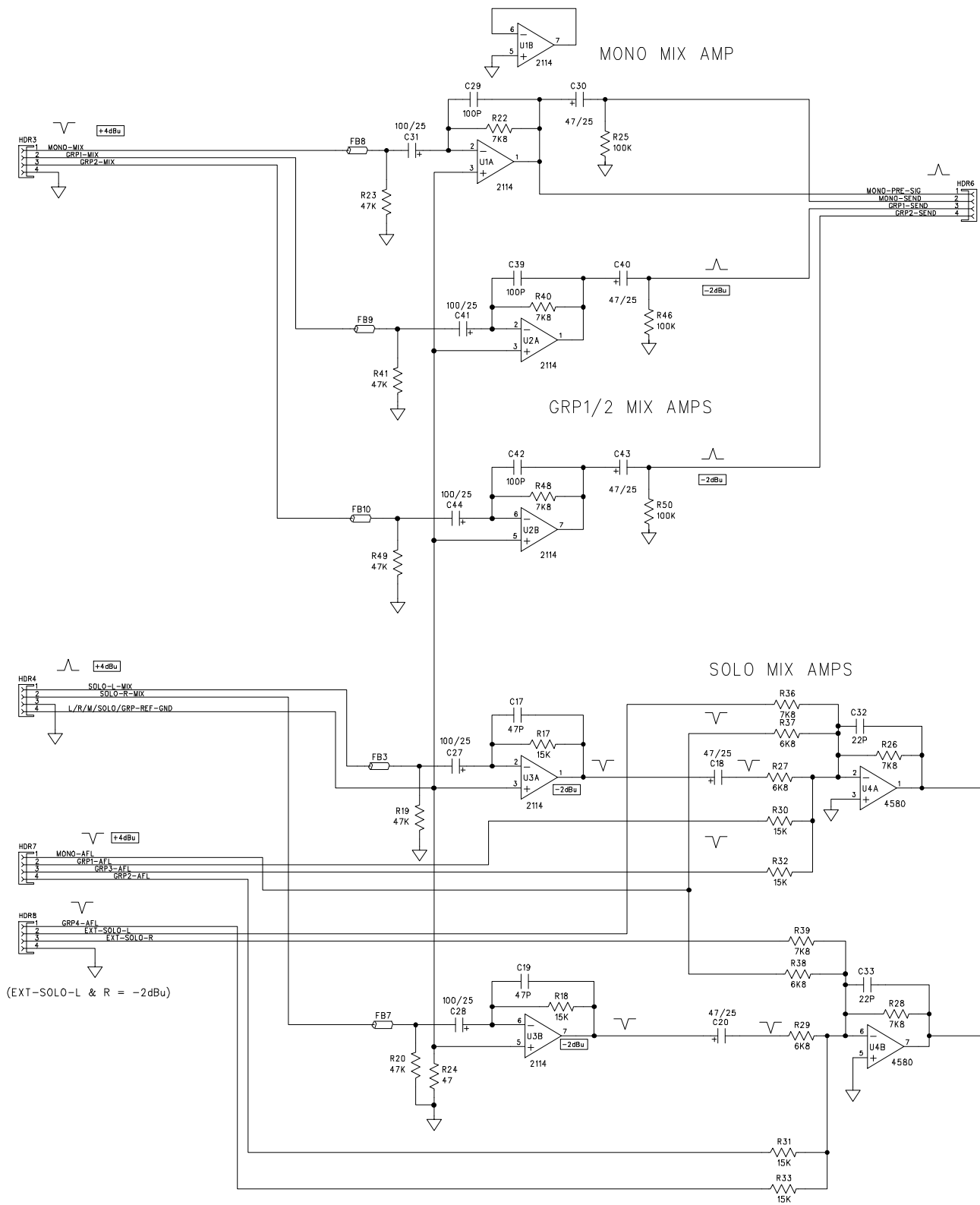
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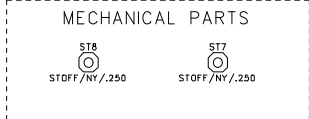
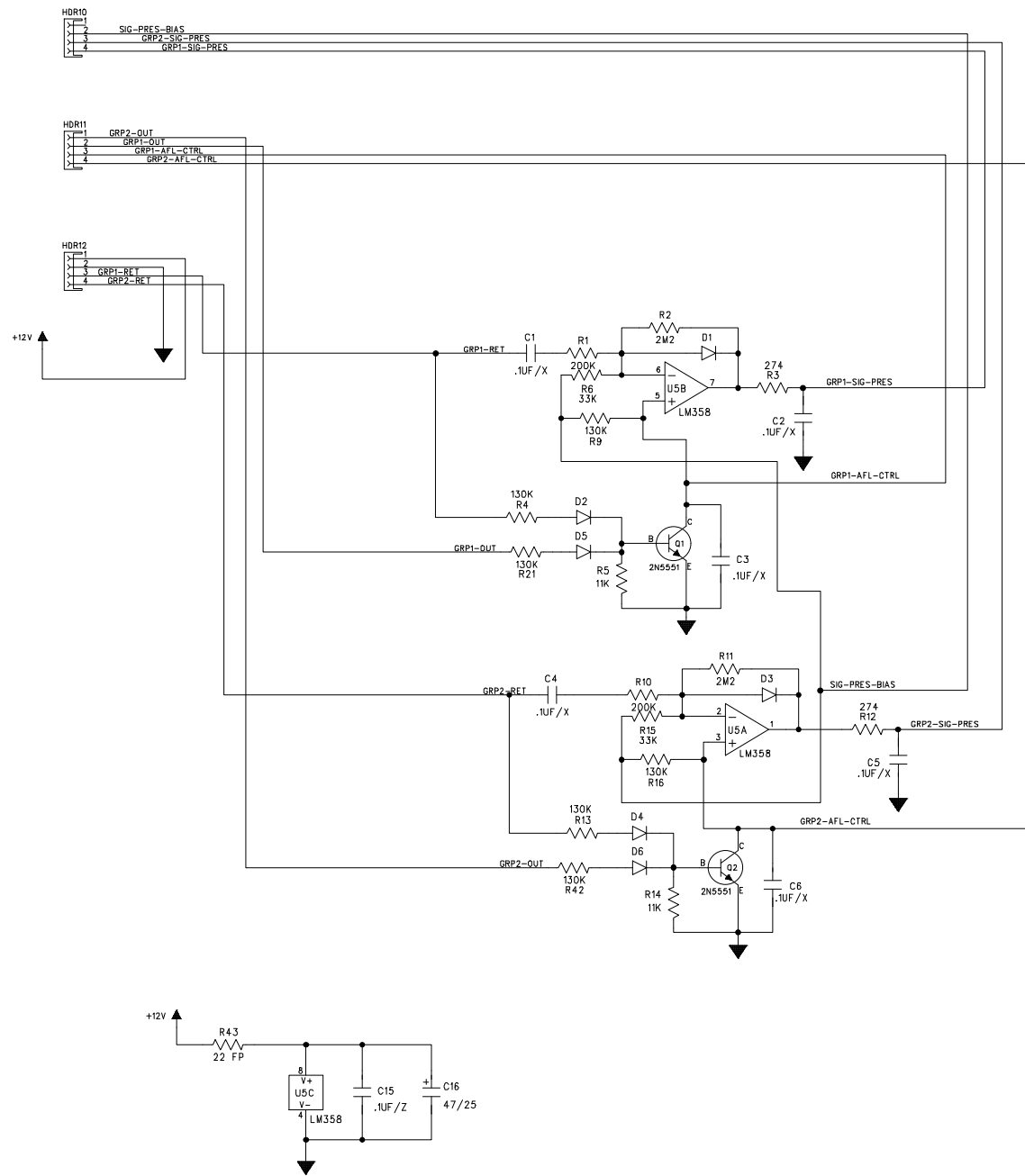
COMPANY: **CRESTAUDIO**

TITLE: X-RACK MASTER SUB PCB'S  
MASTER1 MIX SUB PCB

ORG DRAWN: TAZ	DATED: 3/19/01
CHECKED:	DATED:
CUR REV DRAWN:	DATED:
RELEASED:	DATED:

CODE: 697-107	SIZE: D	DRAWING NO: 76D4863	REV: 00
SCALE:		FILE NAME: XRMS1MN0.SCH	SHEET: 1 OF 3

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: **CRESTAUDIO**

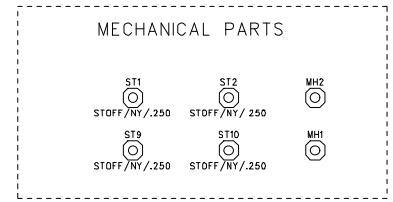
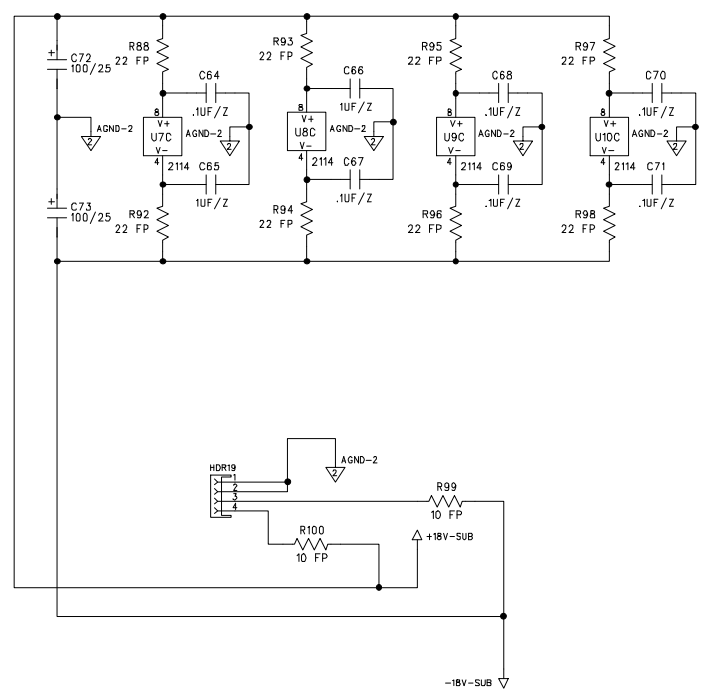
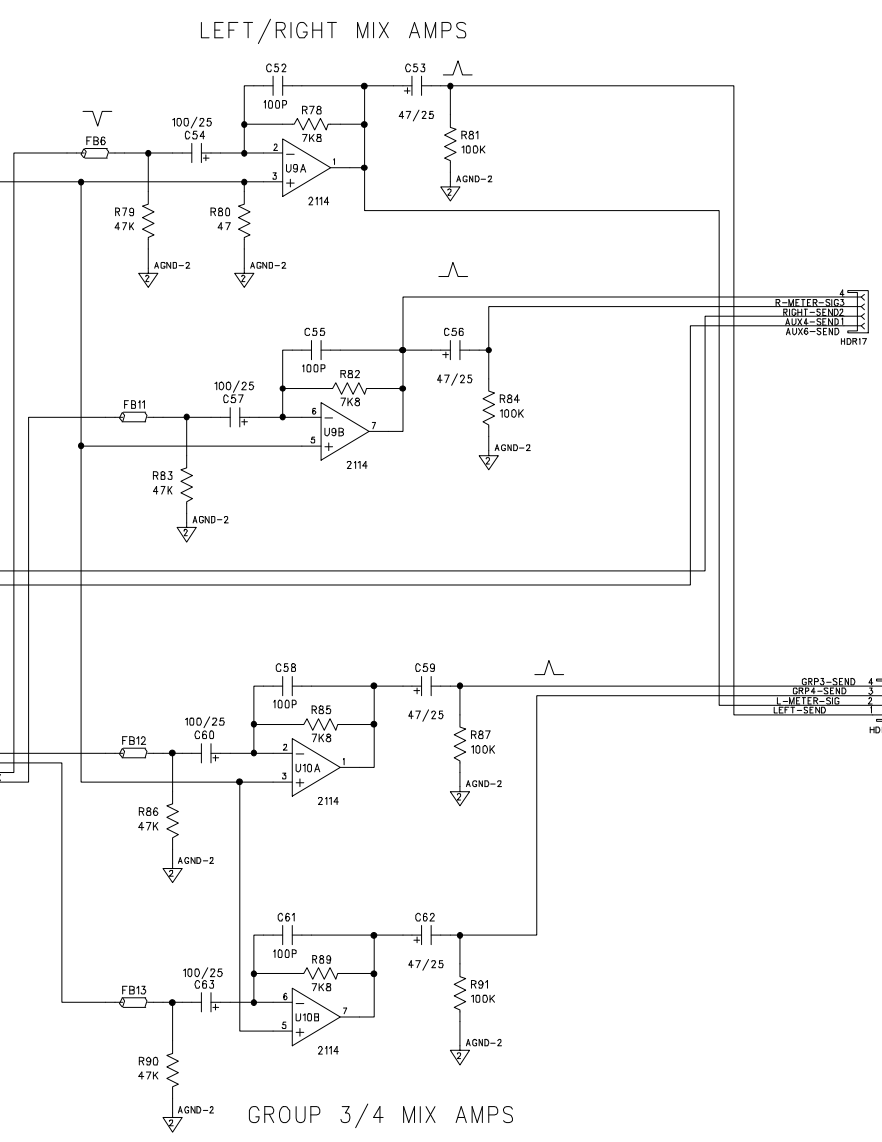
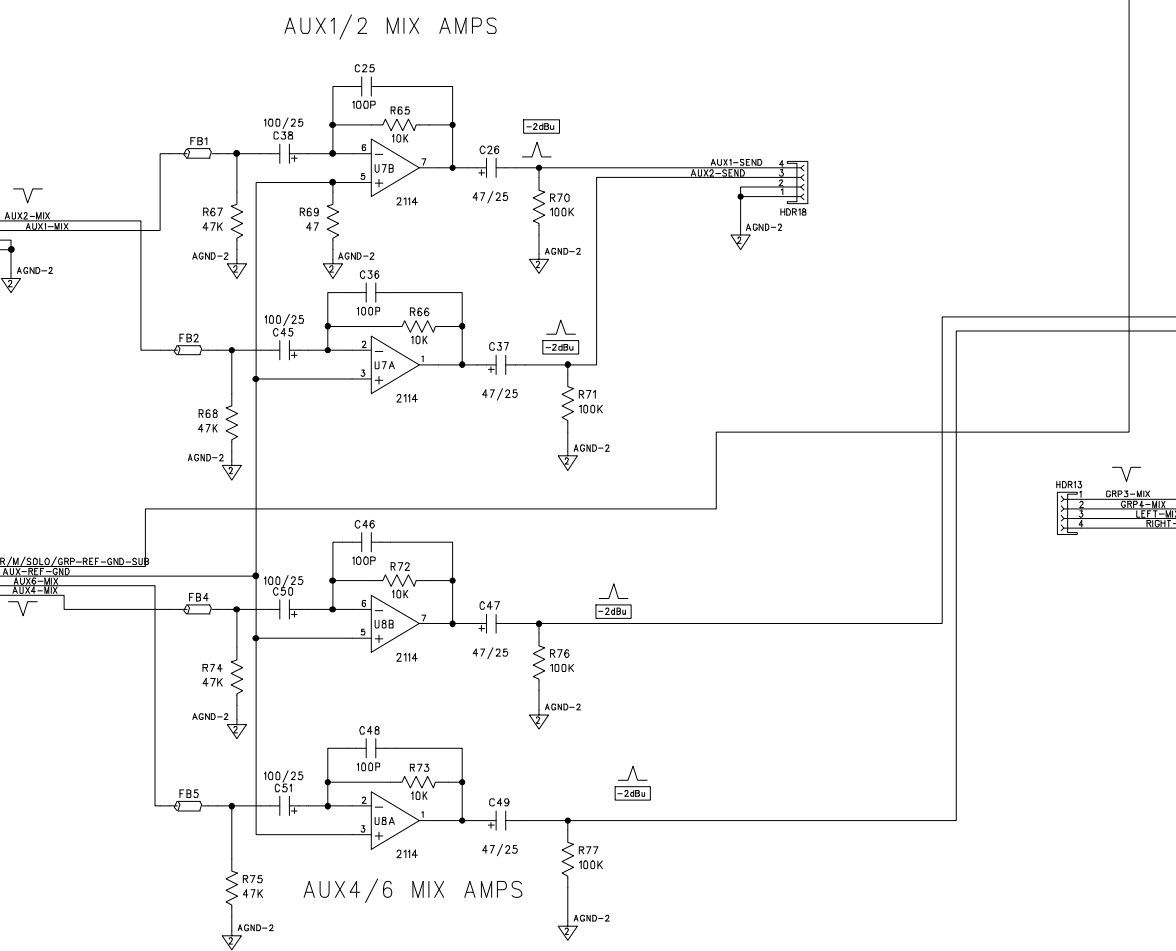
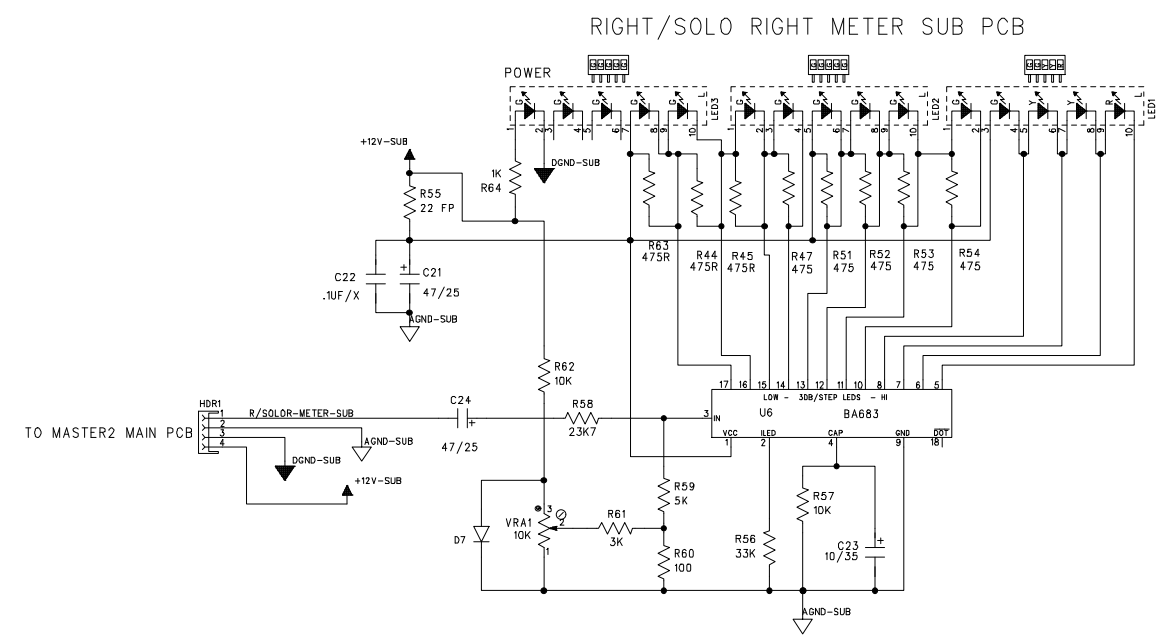
TITLE: X-RACK MASTER SUB PCB'S  
X-RACK MASTER1 SIG PRES SUB PCB

ORG DRAWN:	TAZ	DATED:	3/19/01
CHECKED:		DATED:	
CUR REV DRAWN:		DATED:	
RELEASED:		DATED:	

CODE:	697-107	SIZE:	D	DRAWING NO:	76D4863	REV:	00
FILE NAME:				XRMSMSB0.SCH			
SCALE:						SHEET: 2 OF 3	

REVISION RECORD			
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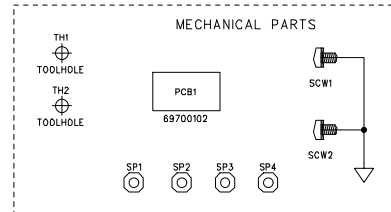
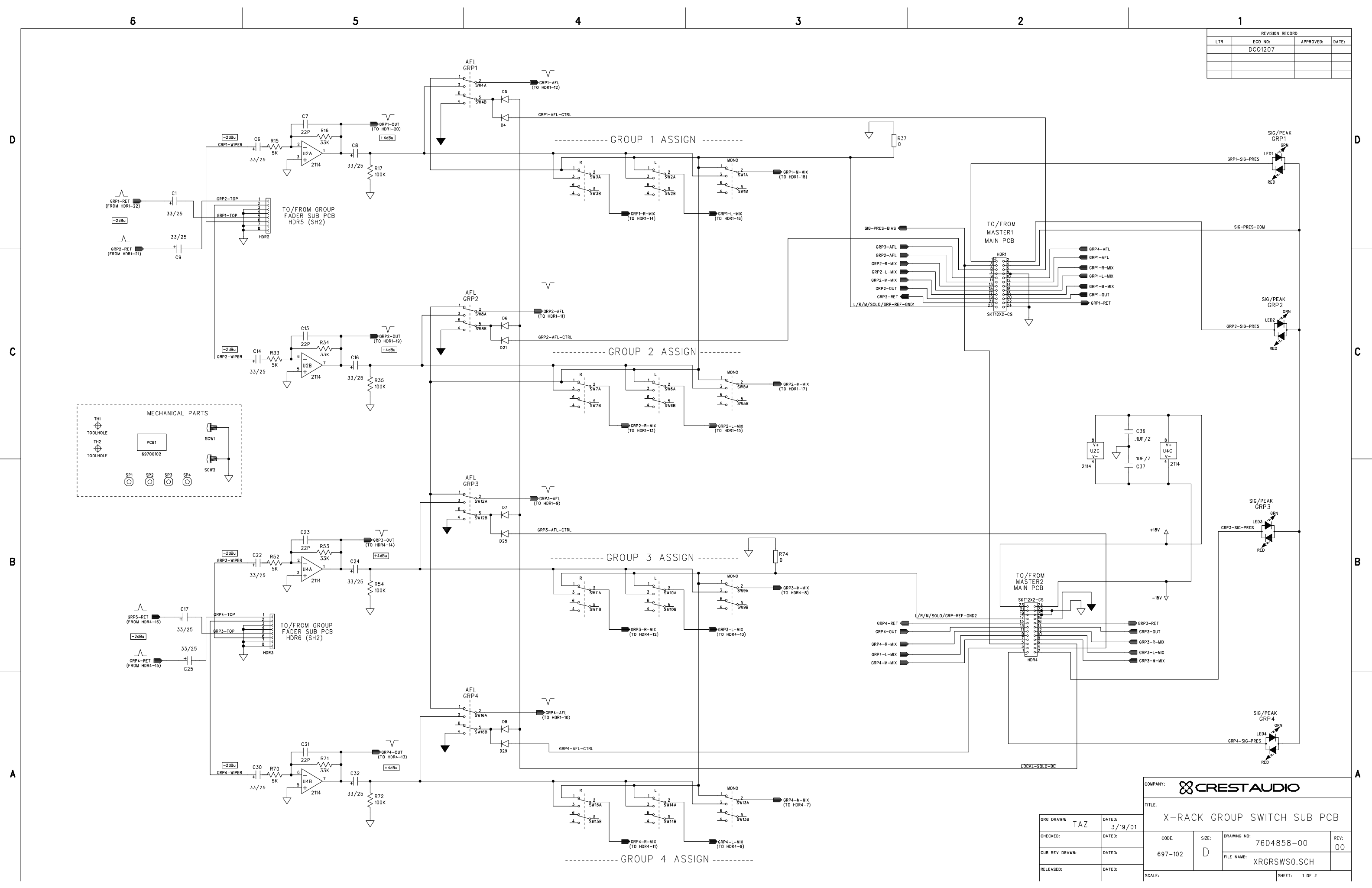
REVISION RECORD					
REV LEVEL	ASMBLY LEVEL	DATE	ECO	ENG.	DESCRIPTION
A	A	09/00		TAZ	PROTOTYPE BUY
A	B	12/1/00	DCO 1217	TAZ	CHANGE TO PROTOTYPE CHANGE R37,R38, FROM 15K0 TO 6K81 CHANGE R27,R29, FROM 7K15 TO 6K81 REPLACE C34, C35 WITH LINK REMOVE R34, R35 CHANGE R1, R10 FROM 100K0 TO 200K0 CHANGE R59 FROM 3K01 TO 4K99 CHANGE C31,C41,C44,C27,C28,C38,C45,C50,C51,C54,C57,C60,C63 FROM 1000U/6V TO 100U/25-UM
B	A	12/1/00	1218	TAZ	NEW REV PCB TO FIX PITCH ON 100U/25-UM CAPS
00	A	3/19/01	ECO 4246	TAZ	NEW REV PCB FOR PRODUCTION RELEASE CHANGED FABRICATION INFO (ADDED MANUF LOT #/NO "X" OUTS.



COMPANY: <b>CRESTAUDIO</b>		TITLE: X-RACK MASTER SUB PCB'S (MASTER2 MIX/DSPLY PCB)	
ORG DRAWN: TAZ	DATED: 3/19/01	CODE: 697-107	SIZE: D
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RELEASED:	DATED:	FILE NAME: XRMSMSB0.SCH	SHEET: 3 OF 3

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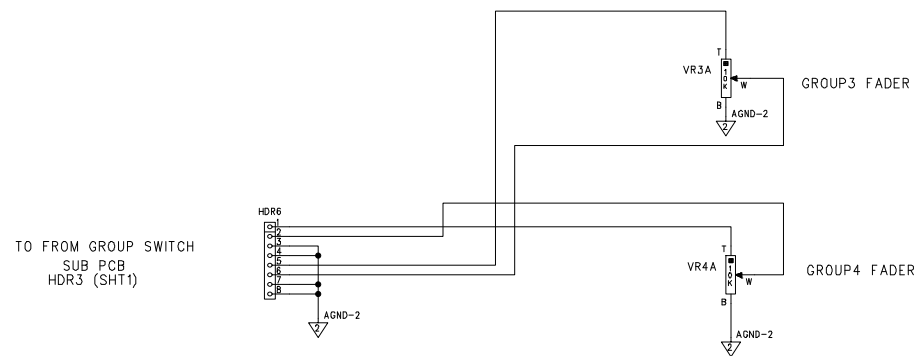
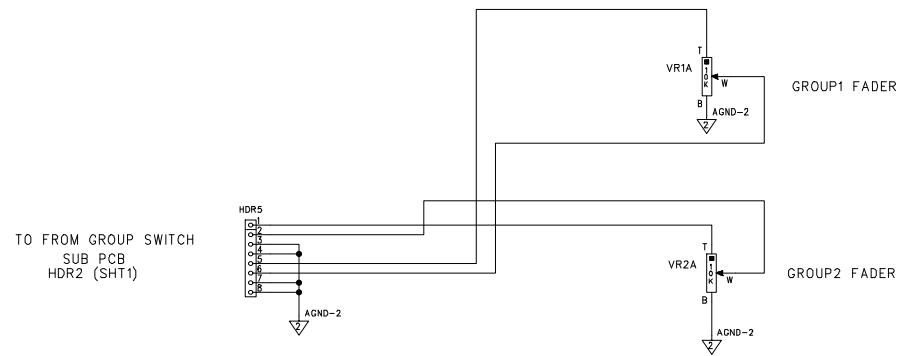
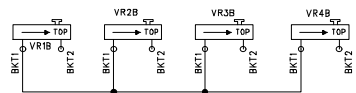
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	DC01207		



COMPANY: <b>CRESTAUDIO</b>		TITLE: <b>X-RACK GROUP SWITCH SUB PCB</b>	
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CHECKED:	DATED:	DRAWING NO: 76D4858-00	REV: 00
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RELEASED:	DATED:	SCALE:	SHEET: 1 OF 2

ORG DRAWN: TAZ	DATED: 3/19/01
CHECKED:	DATED:
CUR REV DRAWN:	DATED:
RELEASED:	DATED:

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



REVISION RECORD					
REV LEVEL	ASMBLY LEVEL	DATE	ECO	ENG.	DESCRIPTION
A	A	9/00		TAZ	
A	B	11/27/00		TAZ	MISSING AGND ON FADER BOTTOMS, FLOOD IS BROKEN. HAND MOD
B	A	11/27/00	DCO 1210	TAZ	NEW REV PCB GROUP OUT FEEDS ARE FED PRE O/P CAP, REDUCE SIG PRES DIST CHASSIS GROUND FOR FADERS LINKED ONLY TO ONE PIN FOR ROUTING .
B	B	12/20/00	DCO 1226	TAZ	CHANGED LED SPACERS SP1 -SP4 FROM 5/8 TO 13MM
B	C	12/20/00	DCO 1226	TAZ	CHANGED LED SPACERS SP1 -SP4 FROM 13MM TO 15MM
B	A	12/20/00	ECO 4246	TAZ	NEW REV PCB FOR RELEASE TO PRODUCTION CHANGED FABRICATION INFO (ADDED MANUF LOT NUMBER/NO "X"OUTS)

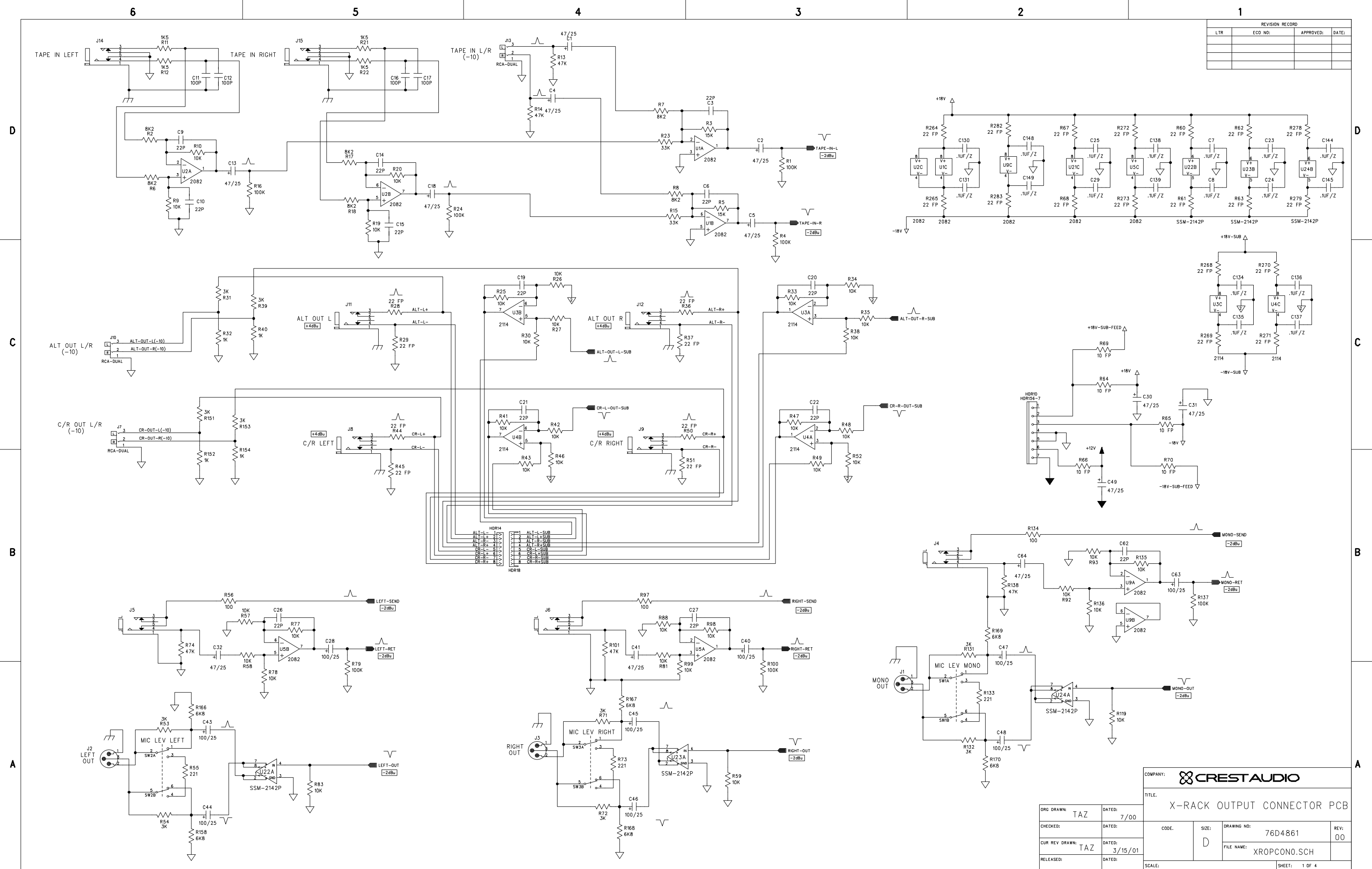
COMPANY: CRESTAUDIO

TITLE: X-RACK GROUP SUB PCB (FADER PCB)

ORG DRAWN: TAZ	DATED: 3/19/01	CODE: 697-102	SIZE: D	DRAWING NO: 76D4858	REV: 00
CHECKED:	DATED:	FILE NAME: XRGRWS0.SCH			
CUR REV DRAWN:	DATED:				
RELEASED:	DATED:				



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

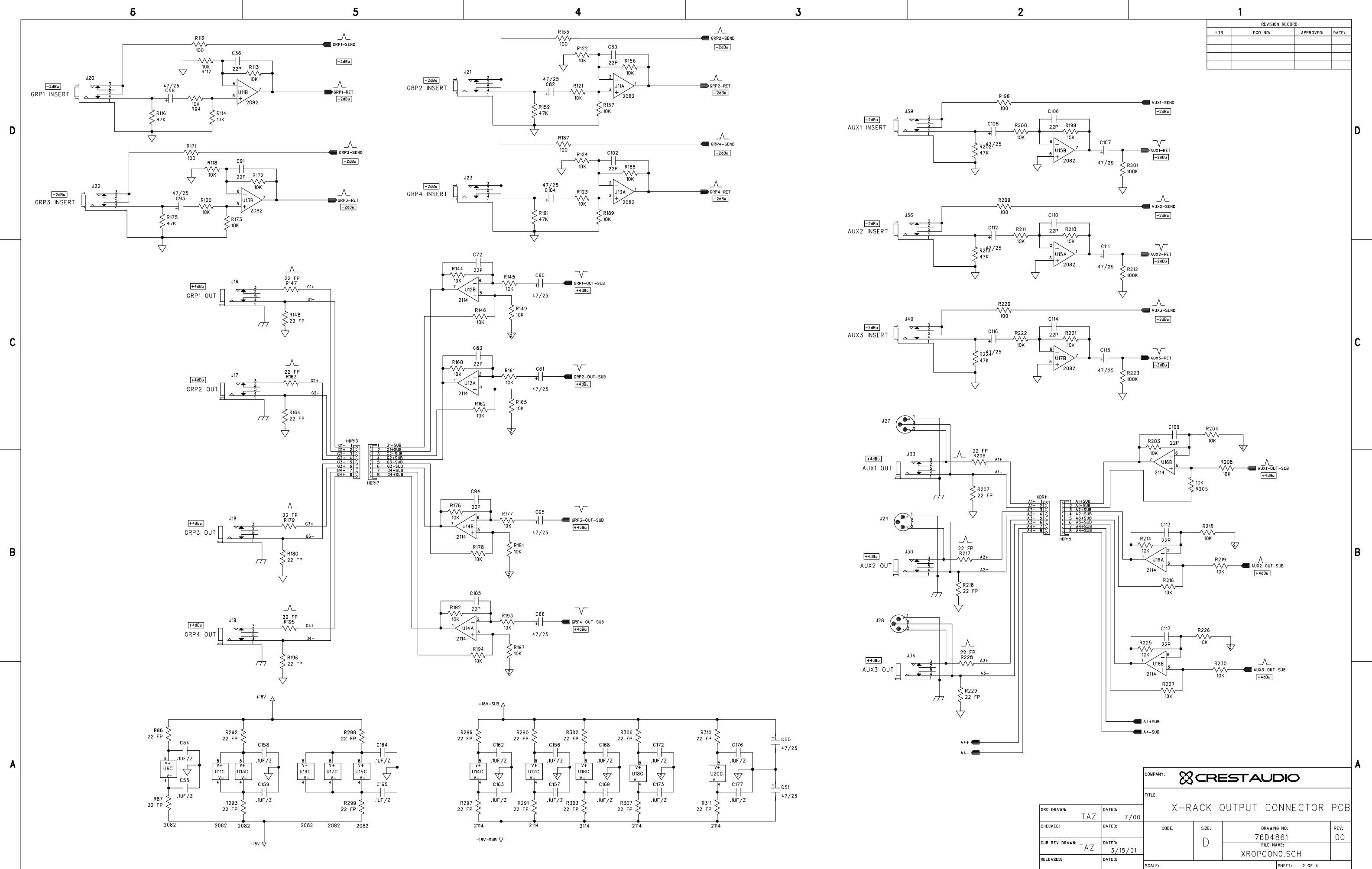


COMPANY: **CRESTAUDIO**

TITLE: **X-RACK OUTPUT CONNECTOR PCB**

ORG DRAWN: TAZ	DATED: 7/00	CODE: D	SIZE: D	DRAWING NO: 76D4861	REV: 00
CUR REV DRAWN: TAZ	DATED: 3/15/01			FILE NAME: XROPCON0.SCH	
RELEASED:	DATED:	SCALE:		SHEET: 1 OF 4	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: **CRESTAUDIO**

TITLE: **X-RACK OUTPUT CONNECTOR PCB**

ORG DRAWN: TAZ	DATED: 7/00	DRAWING NO: 76D4861	REV: 00
CHECKED: TAZ	DATED: 3/15/01		
CUR REV DRAWN: TAZ	DATED: 3/15/01	FILE NAME: XROPCON0.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 2 OF 4

6

5

4

3

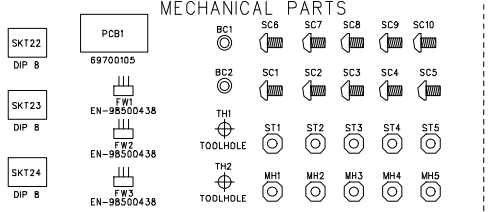
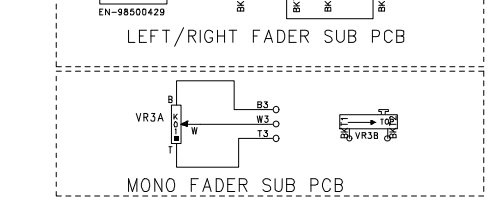
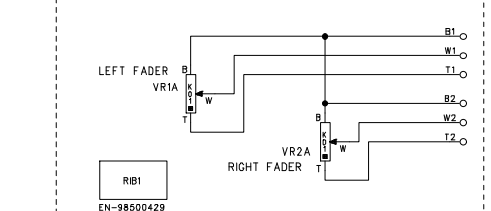
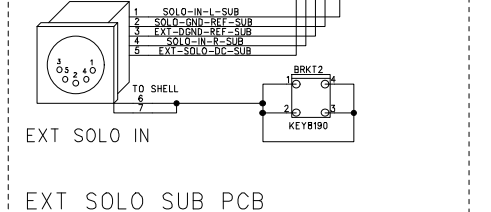
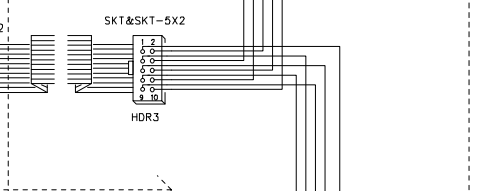
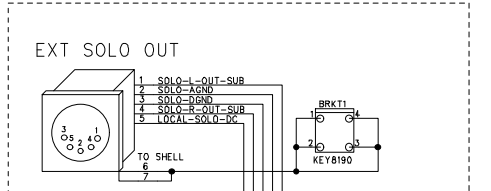
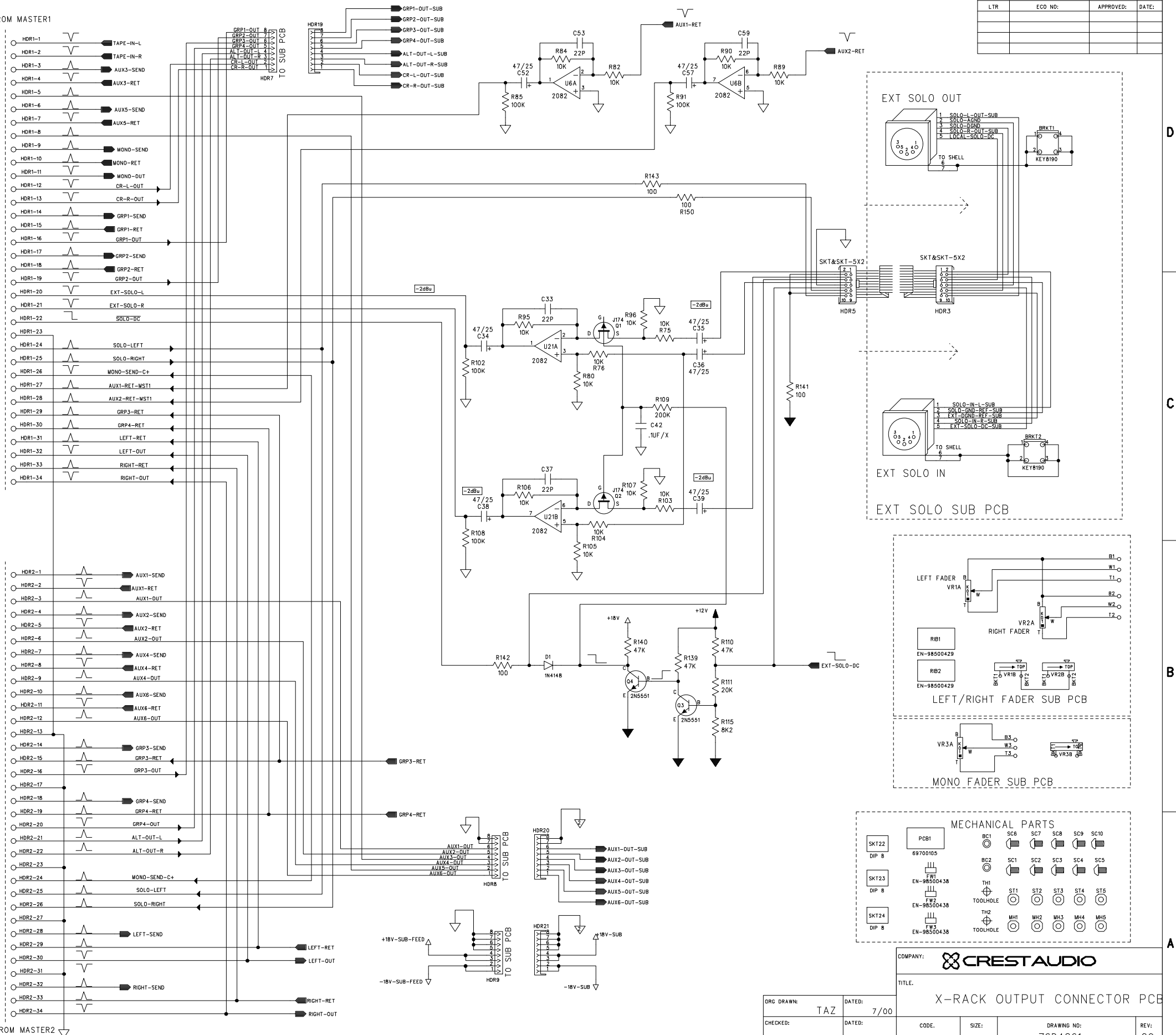
2

1

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

34 WAY FROM MASTER1

34 WAY FROM MASTER2



COMPANY: <b>CRESTAUDIO</b>		TITLE: <b>X-RACK OUTPUT CONNECTOR PCB</b>	
ORG DRAWN: TAZ	DATED: 7/00	CODE: D	SIZE: 76D4861
CHECKED: TAZ	DATED: 3/15/01	DRAWING NO: 76D4861	REV: 00
CUR REV DRAWN: TAZ	DATED: 3/15/01	FILE NAME: XROPCON0.SCH	SCALE: 3 OF 4
RELEASED:	DATED:		

D

C

B

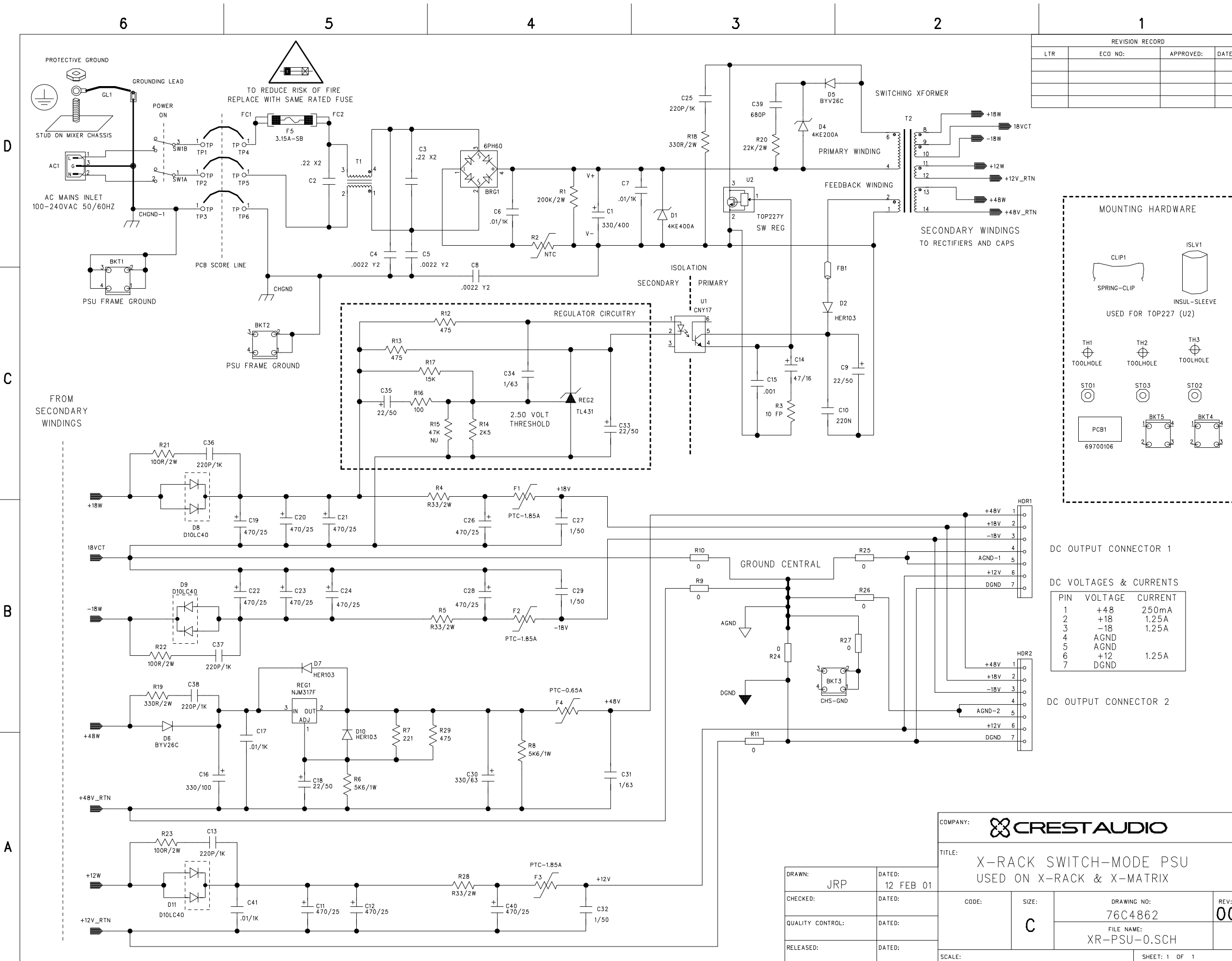
A

D

C

B

A



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

DC OUTPUT CONNECTOR 1

PIN	VOLTAGE	CURRENT
1	+48	250mA
2	+18	1.25A
3	-18	1.25A
4	AGND	
5	AGND	
6	+12	1.25A
7	DGND	

DC OUTPUT CONNECTOR 2

COMPANY: **CRESTAUDIO**

TITLE: **X-RACK SWITCH-MODE PSU  
USED ON X-RACK & X-MATRIX**

DRAWN: JRP	DATED: 12 FEB 01	CODE:	SIZE: C	DRAWING NO: 76C4862	REV: 00
CHECKED:	DATED:	FILE NAME: XR-PSU-0.SCH			
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:				

SCALE: SHEET: 1 OF 1