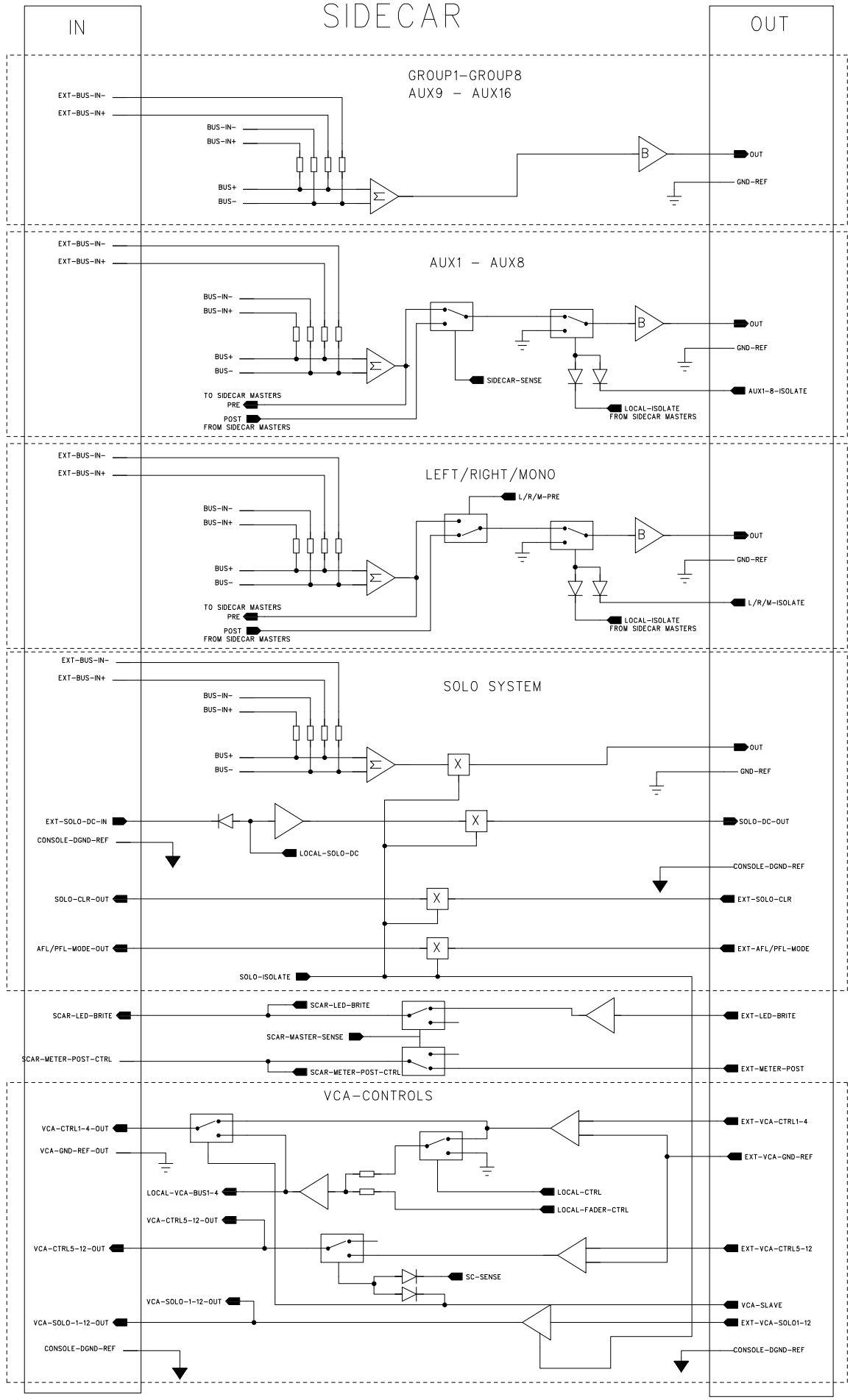
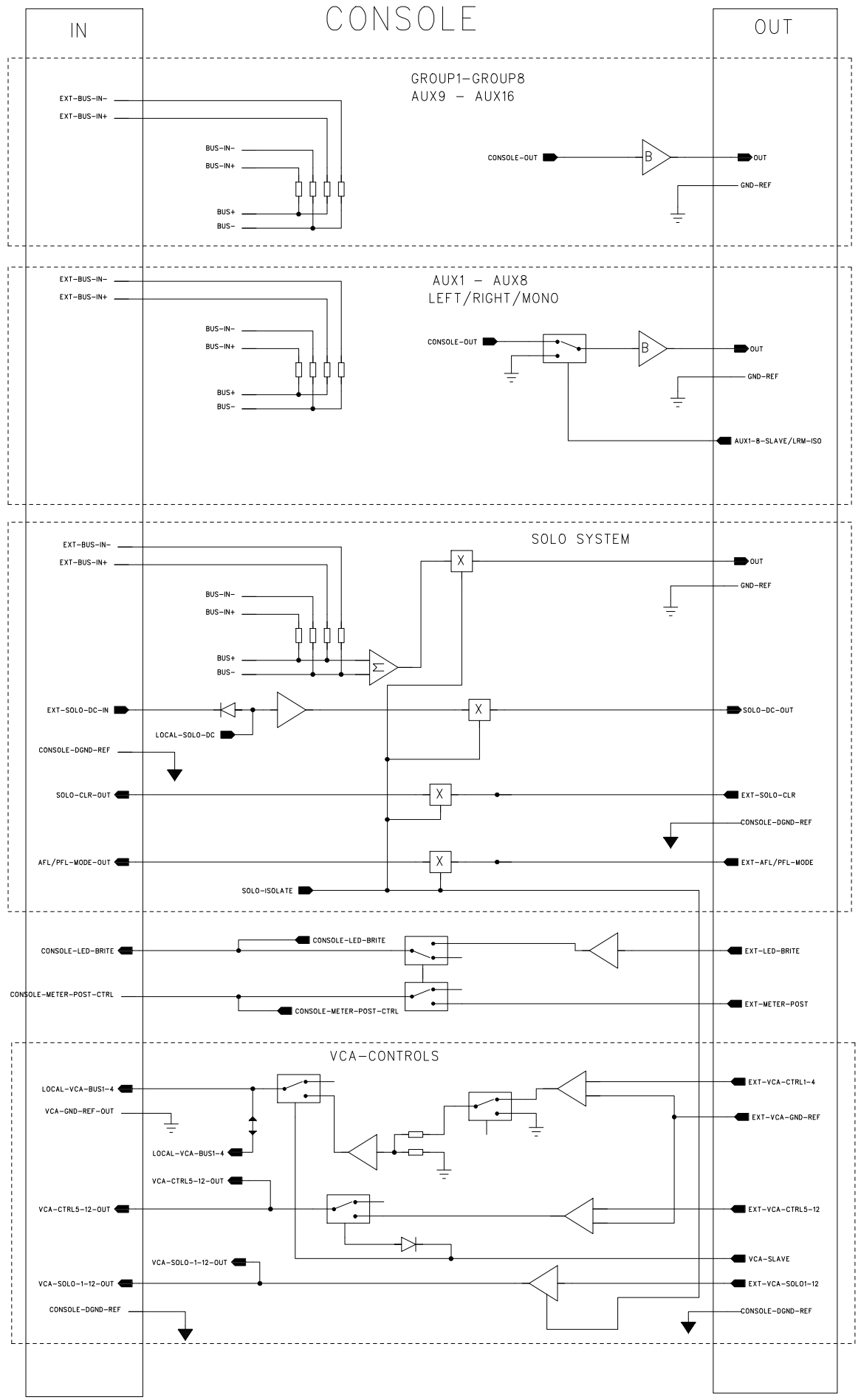
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

SIDECAR



CONSOLE



DRAWN: TAZ	DATED: 1/6/00		
CHECKED:	DATED:		
QUALITY CONTROL:	DATED:		
RELEASED:	DATED:		

CRESTAUDIO

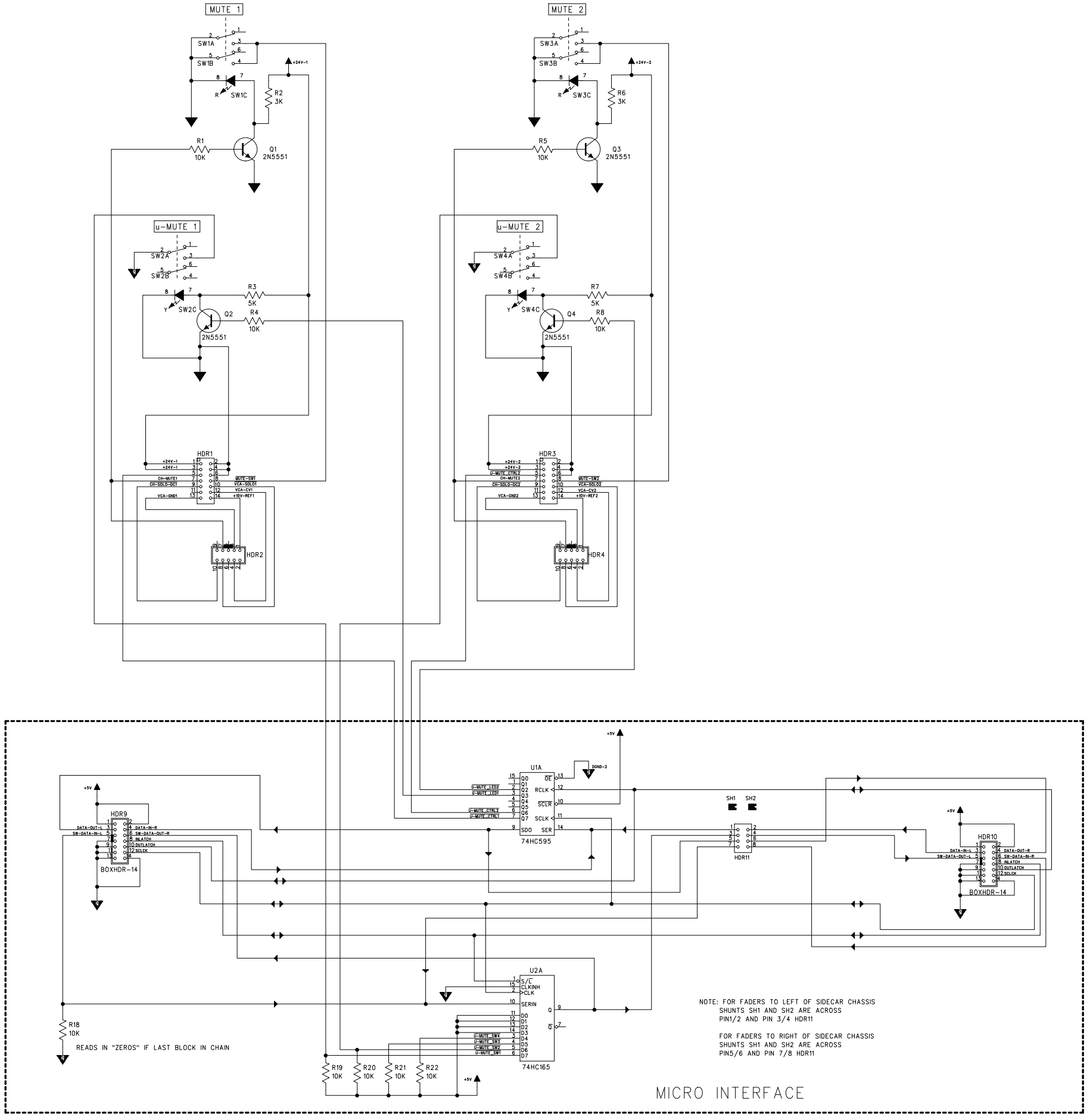
TITLE:

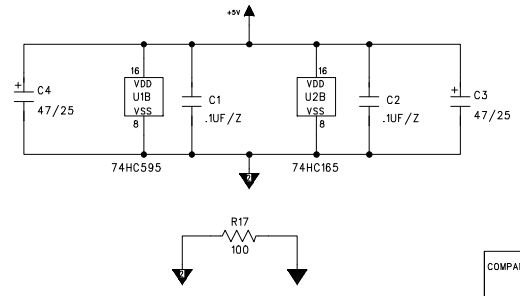
V12 EXPANSION SYSTEM BLOCK DIAGRAM

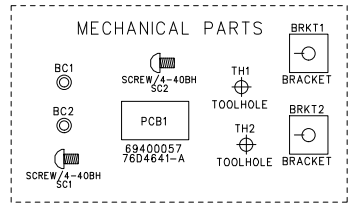
CODE:	SIZE:	DRAWING NO:	REV:

SCALE: | SHEET: 1 OF 1

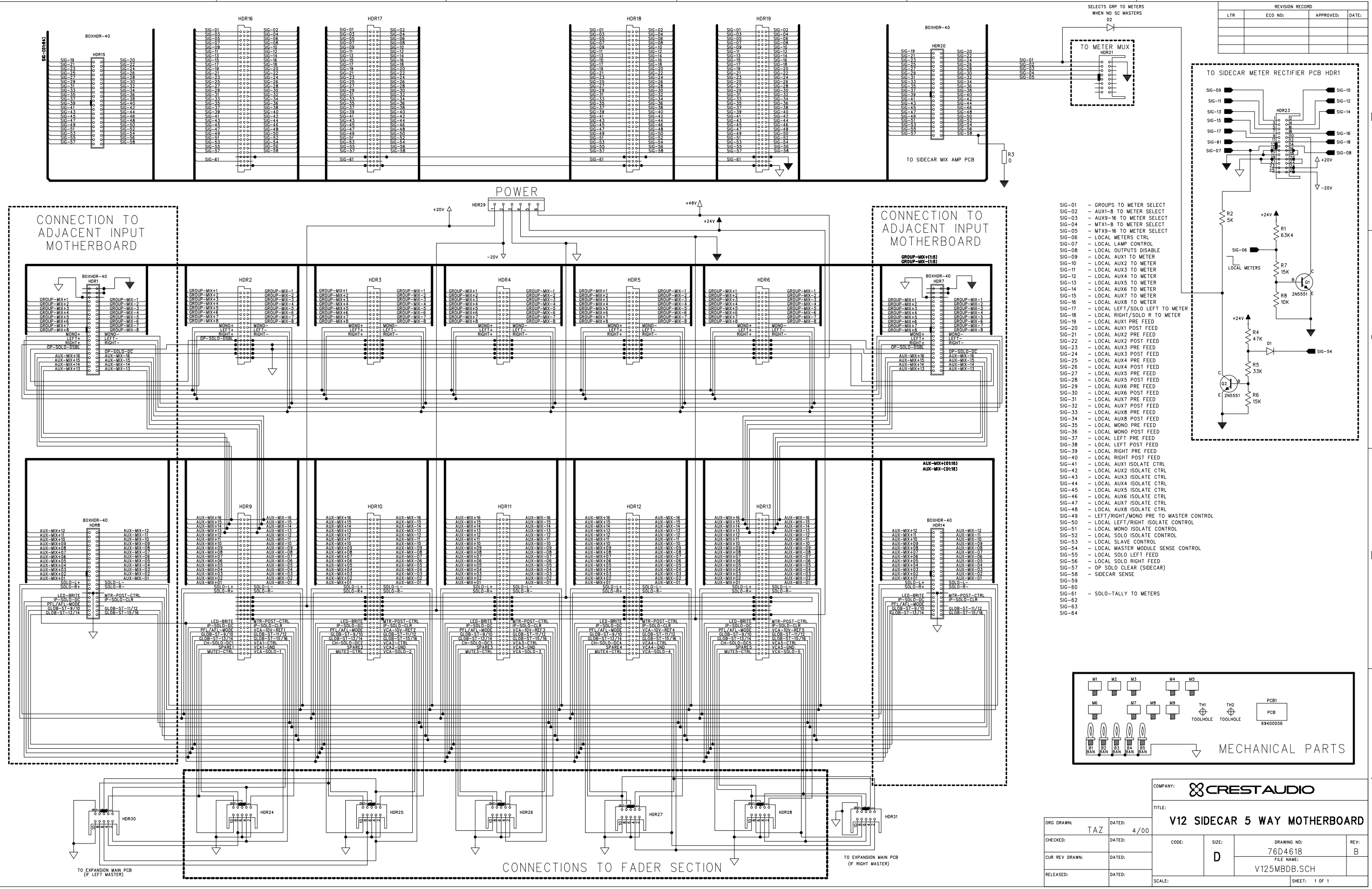
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:







COMPANY: CRESTAUDIO			
TITLE: V12 TWO INPUT FADER MUTE PCB			
ORG DRAWN: TAZ	DATED: 10/99	CODE:	SIZE: D
CHECKED:	DATED:	DRAWING NO: 76DXXXX-C	REV: C
CUR REV DRAWN:	DATED:	FILE NAME: V122IFMA.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 1 OF 1



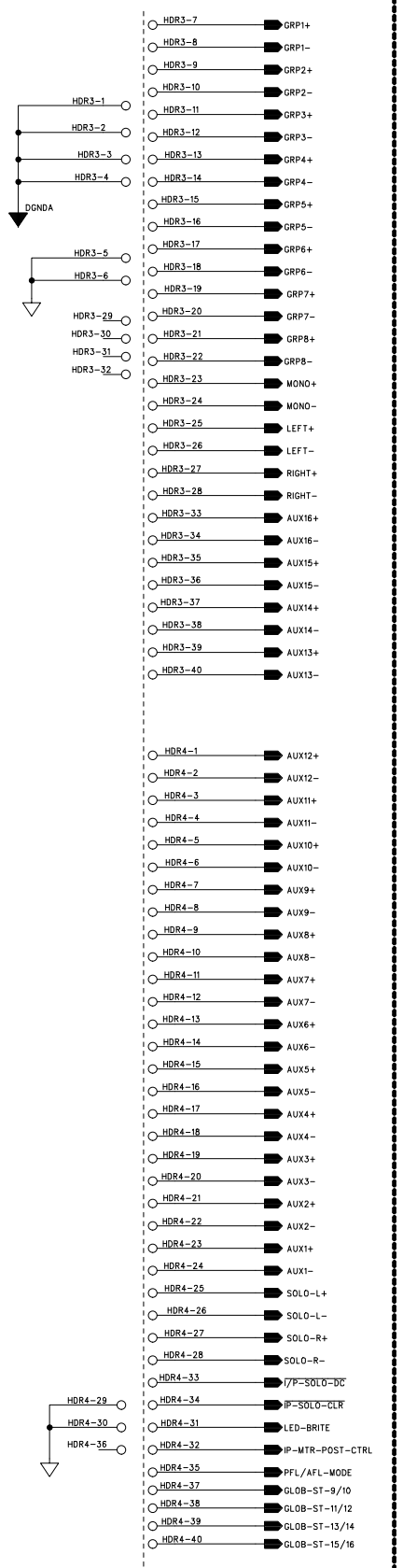
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

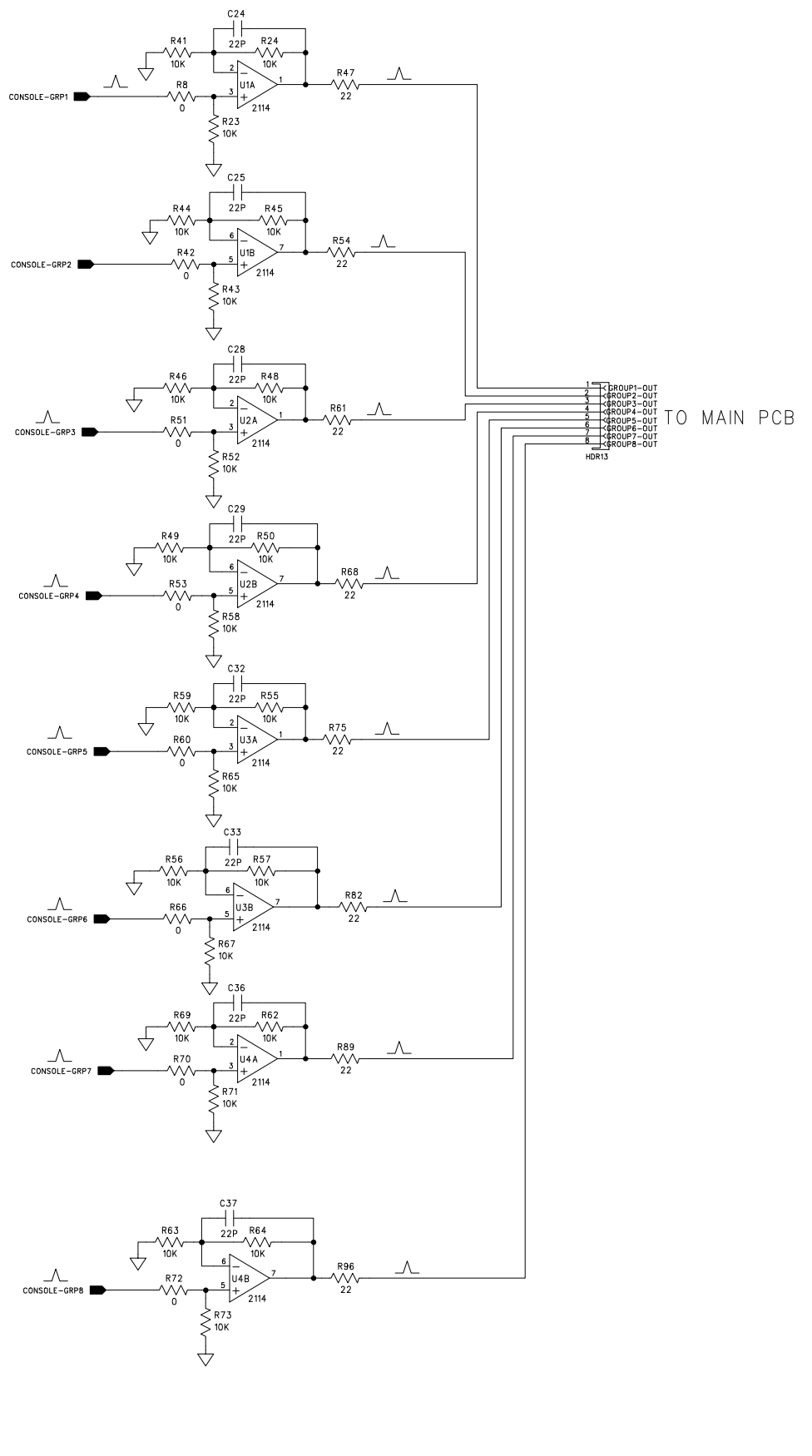
SIG-01 – GROUPS TO METER SELECT
SIG-02 – AUX1-8 TO METER SELECT
SIG-03 – AUX9-16 TO METER SELECT
SIG-04 – MTX1-8 TO METER SELECT
SIG-05 – MTX9-16 TO METER SELECT
SIG-06 – LOCAL METERS CTRL
SIG-07 – LOCAL LAMP CONTROL
SIG-08 – LOCAL OUTPUTS DISABLE
SIG-09 – LOCAL AUX1 TO METER
SIG-10 – LOCAL AUX2 TO METER
SIG-11 – LOCAL AUX3 TO METER
SIG-12 – LOCAL AUX4 TO METER
SIG-13 – LOCAL AUX5 TO METER
SIG-14 – LOCAL AUX6 TO METER
SIG-15 – LOCAL AUX7 TO METER
SIG-16 – LOCAL AUX8 TO METER
SIG-17 – LOCAL LEFT/SOLO LEFT TO METER
SIG-18 – LOCAL RIGHT/SOLO R TO METER
SIG-19 – LOCAL AUX1 PRE FEED
SIG-20 – LOCAL AUX1 POST FEED
SIG-21 – LOCAL AUX2 PRE FEED
SIG-22 – LOCAL AUX2 POST FEED
SIG-23 – LOCAL AUX3 PRE FEED
SIG-24 – LOCAL AUX3 POST FEED
SIG-25 – LOCAL AUX4 PRE FEED
SIG-26 – LOCAL AUX4 POST FEED
SIG-27 – LOCAL AUX5 PRE FEED
SIG-28 – LOCAL AUX5 POST FEED
SIG-29 – LOCAL AUX6 PRE FEED
SIG-30 – LOCAL AUX6 POST FEED
SIG-31 – LOCAL AUX7 PRE FEED
SIG-32 – LOCAL AUX7 POST FEED
SIG-33 – LOCAL AUX8 PRE FEED
SIG-34 – LOCAL AUX8 POST FEED
SIG-35 – LOCAL MONO PRE FEED
SIG-36 – LOCAL MONO POST FEED
SIG-37 – LOCAL LEFT PRE FEED
SIG-38 – LOCAL LEFT POST FEED
SIG-39 – LOCAL RIGHT PRE FEED
SIG-40 – LOCAL RIGHT POST FEED
SIG-41 – LOCAL AUX1 ISOLATE CTRL
SIG-42 – LOCAL AUX2 ISOLATE CTRL
SIG-43 – LOCAL AUX3 ISOLATE CTRL
SIG-44 – LOCAL AUX4 ISOLATE CTRL
SIG-45 – LOCAL AUX5 ISOLATE CTRL
SIG-46 – LOCAL AUX6 ISOLATE CTRL
SIG-47 – LOCAL AUX7 ISOLATE CTRL
SIG-48 – LOCAL AUX8 ISOLATE CTRL
SIG-49 – LEFT/RIGHT/MONO PRE TO MASTER CONTROL
SIG-50 – LOCAL LEFT/RIGHT ISOLATE CONTROL
SIG-51 – LOCAL MONO ISOLATE CONTROL
SIG-52 – LOCAL SOLO ISOLATE CONTROL
SIG-53 – LOCAL SLAVE CONTROL
SIG-54 – LOCAL MASTER MODULE SENSE CONTROL
SIG-55 – LOCAL SOLO LEFT FEED
SIG-56 – LOCAL SOLO RIGHT FEED
SIG-57 – OP SOLO CLEAR (SIDECAR)
SIG-58 – SIDECAR SENSE
SIG-59
SIG-60
SIG-61 – SOLO-TALLY TO METERS
SIG-62
SIG-63
SIG-64

COMPANY:	CREST AUDIO		
TITLE:	V12 SIDECAR 5 WAY MOTHERBOARD		
ORG DRAWN: TAZ	DATED: 4/00	CODE:	SIZE: D
CHECKED:	DATED:	DRAWING NO: 76D4618	REV: B
CUR REV DRAWN:	DATED:	FILE NAME: V125MBDB.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 1 OF 1

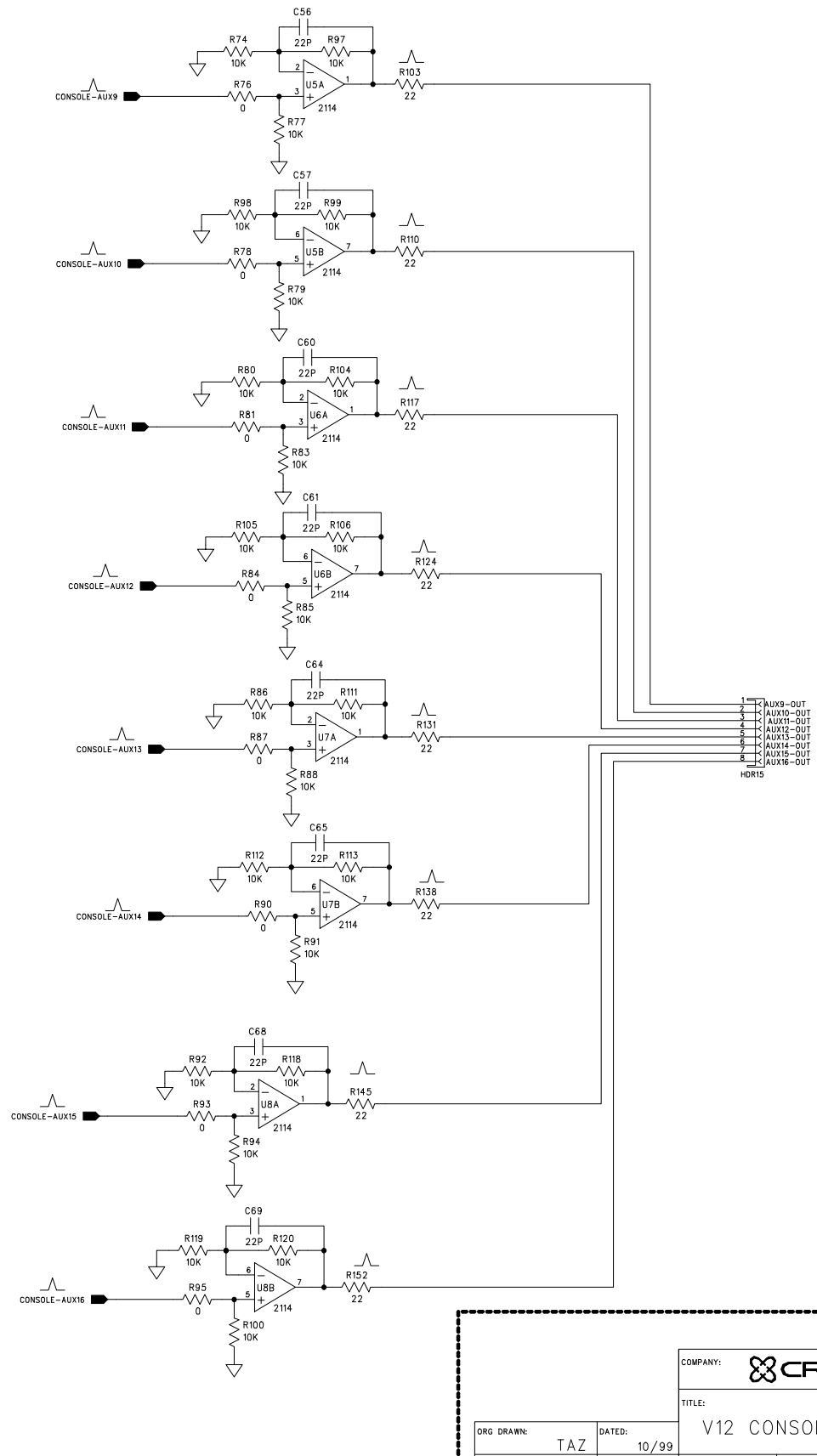
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

CONNECTION TO/FROM SUB PCB





GROUP OUT BUFFERS



AUX 9-16 OUT BUFFERS

ORG DRAWN: TAZ	DATED: 10/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 CONSOLE EXPANSION SUB PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4617-A	REV: A
		FILE NAME: V12CEXSA.SCH	
		SCALE:	SHEET: 1 OF 3

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

FROM INPUT/SIDECAR MASTER MOTHERBOARD

HDR1-1 DGNDA
HDR1-2
HDR1-3
HDR1-4
HDR1-5
HDR1-6
HDR1-29
HDR1-30
HDR1-31
HDR1-32

HDR1-7 GRP1+
HDR1-8 GRP1-
HDR1-9 GRP2+
HDR1-10 GRP2-
HDR1-11 GRP3+
HDR1-12 GRP3-
HDR1-13 GRP4+
HDR1-14 GRP4-
HDR1-15 GRP5+
HDR1-16 GRP5-
HDR1-17 GRP6+
HDR1-18 GRP6-
HDR1-19 GRP7+
HDR1-20 GRP7-
HDR1-21 GRP8+
HDR1-22 GRP8-
HDR1-23 MONO+
HDR1-24 MONO-
HDR1-25 LEFT+
HDR1-26 LEFT-
HDR1-27 RIGHT+
HDR1-28 RIGHT-
HDR1-33 AUX16+
HDR1-34 AUX16-
HDR1-35 AUX15+
HDR1-36 AUX15-
HDR1-37 AUX14+
HDR1-38 AUX14-
HDR1-39 AUX13+
HDR1-40 AUX13-

HDR2-1 AUX12+
HDR2-2 AUX12-
HDR2-3 AUX11+
HDR2-4 AUX11-
HDR2-5 AUX10+
HDR2-6 AUX10-
HDR2-7 AUX9+
HDR2-8 AUX9-
HDR2-9 AUX8+
HDR2-10 AUX8-
HDR2-11 AUX7+
HDR2-12 AUX7-
HDR2-13 AUX6+
HDR2-14 AUX6-
HDR2-15 AUX5+
HDR2-16 AUX5-
HDR2-17 AUX4+
HDR2-18 AUX4-
HDR2-19 AUX3+
HDR2-20 AUX3-
HDR2-21 AUX2+
HDR2-22 AUX2-
HDR2-23 AUX1+
HDR2-24 AUX1-
HDR2-25 SOLO-L+
HDR2-26 SOLO-L-
HDR2-27 SOLO-R+
HDR2-28 SOLO-R-
HDR2-33 I/P-SOLO-DC
HDR2-34 IP-SOLO-CLR
HDR2-31 LED-BRITE
HDR2-32 IP-MTR-POST-CTRL
HDR2-35 PFL/AFL-MODE
HDR2-37 GLOB-ST-9/10
HDR2-38 GLOB-ST-11/12
HDR2-39 GLOB-ST-13/14
HDR2-40 GLOB-ST-15/16

CONSOLE-MONO → R1 0 → U9B 2114 (C2 22P, R2 10K, R3 10K, R4 10K, U9A 2114) → R7 22
CONSOLE-LEFT → R6 0 → U10A 2114 (C6 22P, R5 10K, R9 10K, R12 10K) → R15 22
CONSOLE-RIGHT → R13 0 → U10B 2114 (C7 22P, R10 10K, R11 10K, R14 10K) → R22 22
CONSOLE-SOLO-L → R20 0 → U11A 2114 (C10 22P, R19 10K, R16 10K, R21 10K) → R31 22
CONSOLE-SOLO-R → R25 0 → U11B 2114 (C11 22P, R17 10K, R18 10K, R26 10K) → R38 22

+24V → D1 → RL4 (NC) → R39 1K
+24V → D6 → RL5 (NC) → R40 1K
+24V → 1K R304 → D4 → RL3 (NC)

HDR20
1 MONO-OUT
2 LEFT-OUT
3 RIGHT-OUT
4
5 MONO-SLAVE
6 L/R-SLAVE
7
8 SOLO-ISO-REL

TO/FROM MAIN PCB

TO MAIN PCB
HDR21
SOLO-L-OUT
SOLO-R-OUT

HDR19
CONSOLE-SLAVE-CTRL
CONSOLE-SOLO-ISOLATE

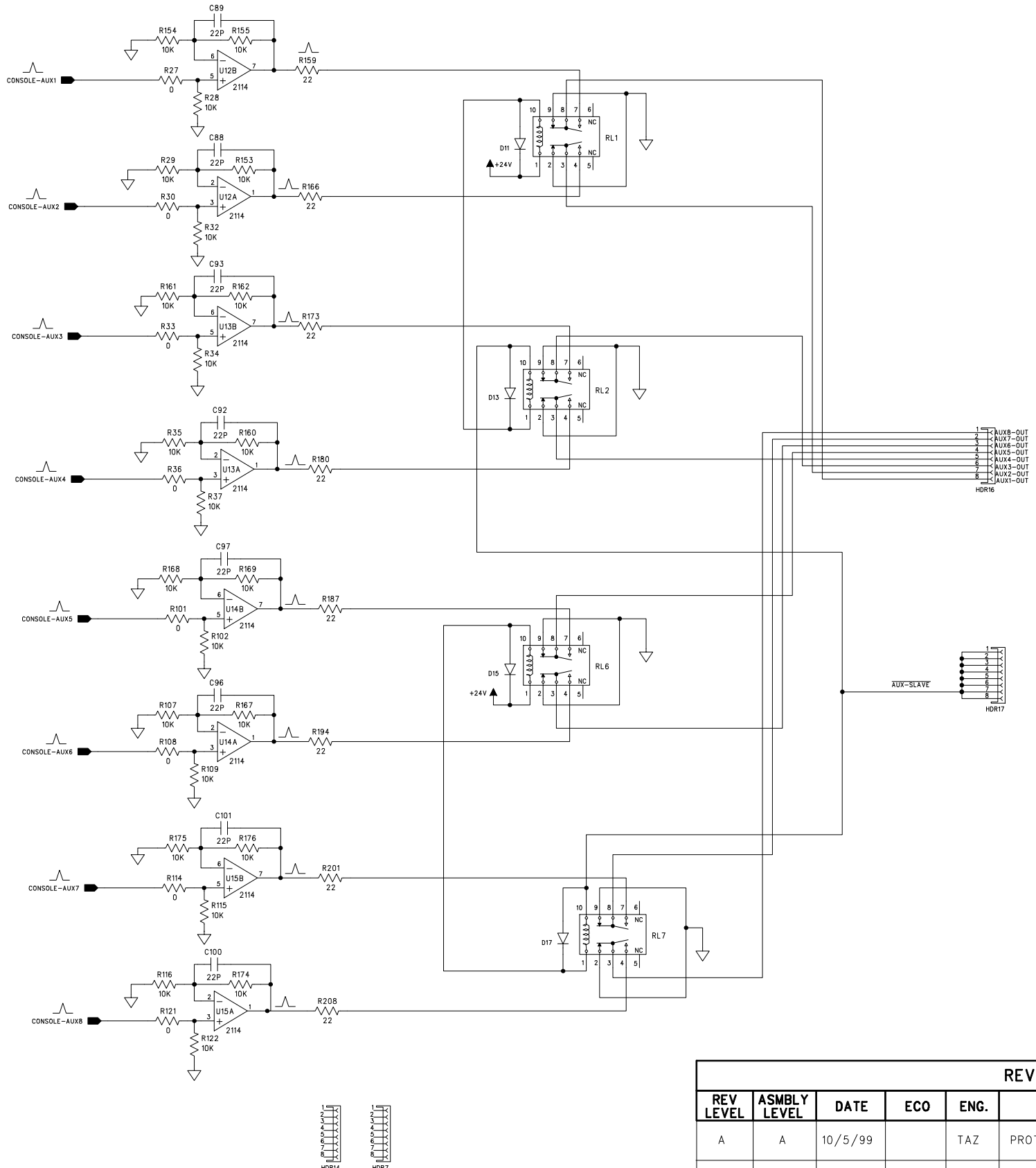
TO/FROM MAIN PCB

FROM CONSOLE MASTER MOTHERBOARD

CONSOLE-AUX1 HDR6-1
CONSOLE-AUX2 HDR6-2
CONSOLE-AUX3 HDR6-3
CONSOLE-AUX4 HDR6-4
CONSOLE-AUX5 HDR6-5
CONSOLE-AUX6 HDR6-6
CONSOLE-AUX7 HDR6-7
CONSOLE-AUX8 HDR6-8
CONSOLE-AUX9 HDR6-9
CONSOLE-AUX10 HDR6-10
CONSOLE-AUX11 HDR6-11
CONSOLE-AUX12 HDR6-12
CONSOLE-AUX13 HDR6-13
CONSOLE-AUX14 HDR6-14
CONSOLE-AUX15 HDR6-15
CONSOLE-AUX16 HDR6-16
CONSOLE-GRP8 HDR6-17
CONSOLE-GRP7 HDR6-18
CONSOLE-GRP6 HDR6-19
CONSOLE-GRP5 HDR6-20
CONSOLE-GRP4 HDR6-21
CONSOLE-GRP3 HDR6-22
CONSOLE-GRP2 HDR6-23
CONSOLE-GRP1 HDR6-24
CONSOLE-LEFT HDR6-25
CONSOLE-RIGHT HDR6-26
CONSOLE-MONO HDR6-27
OP-SOLO-DSBL HDR6-28
HDR6-29
OP-SOLO-CLR HDR6-30
OP-SOLO-DC HDR6-31
HDR6-32
HDR6-33
CONSOLE-SOLO-ISOLATE HDR6-34
HDR6-35
CONSOLE-SLAVE-CTRL HDR6-36
HDR6-37
HDR6-38
CONSOLE-SOLO-L HDR6-39
CONSOLE-SOLO-R HDR6-40

HDR8
TO/FROM MAIN PCB

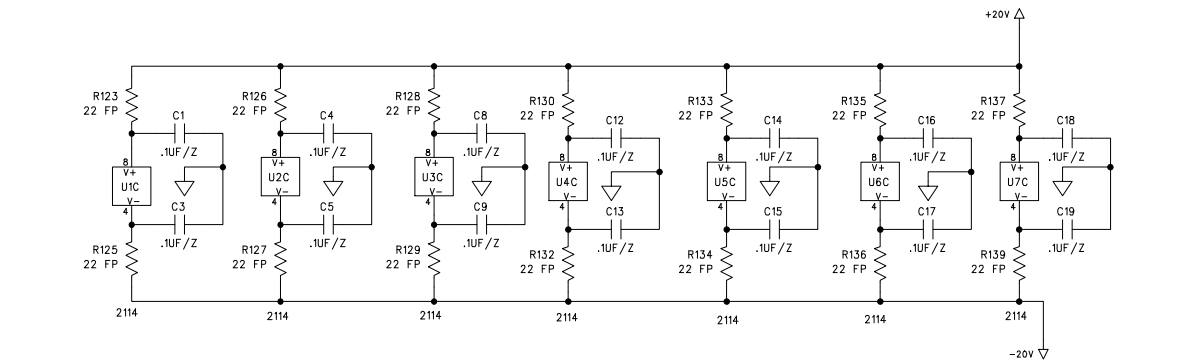
COMPANY: CRESTAUDIO			
TITLE: V12 CONSOLE EXPANSION SUB PCB			
ORG DRAWN: TAZ	DATED: 10/99		
CHECKED:	DATED:		
CUR REV DRAWN:	DATED:		
RELEASED:	DATED:		
CODE:	SIZE: D	DRAWING NO: 76D4617-A	REV: A
		FILE NAME: V12CEXSA.SCH	
SCALE:		SHEET: 2 OF 3	

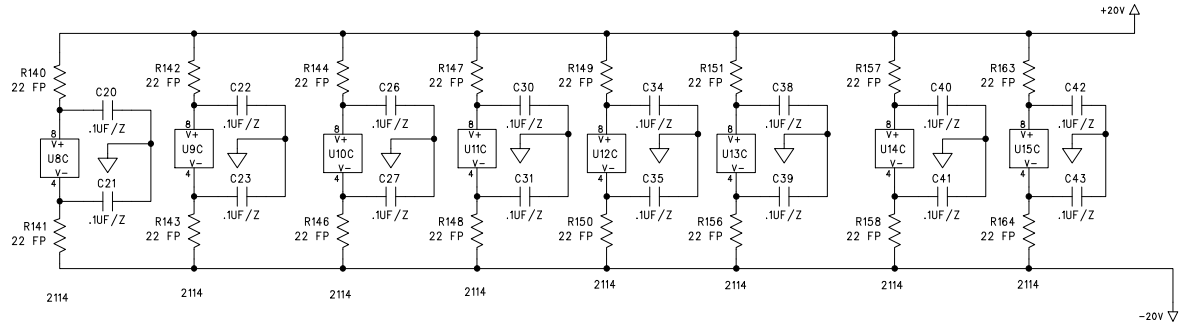


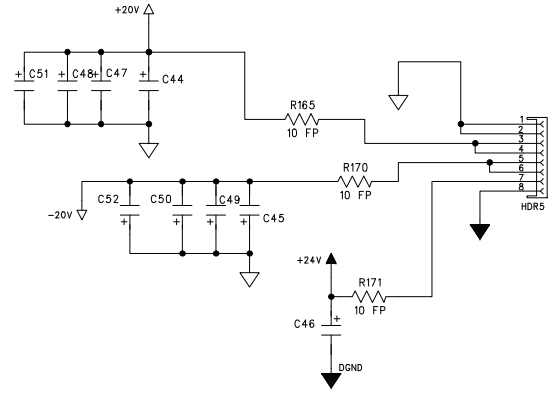
TO MAIN PCB

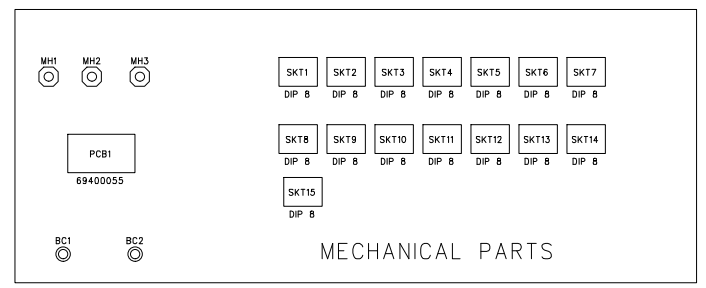
FROM MAIN PCB

TO/FROM MAIN PCB









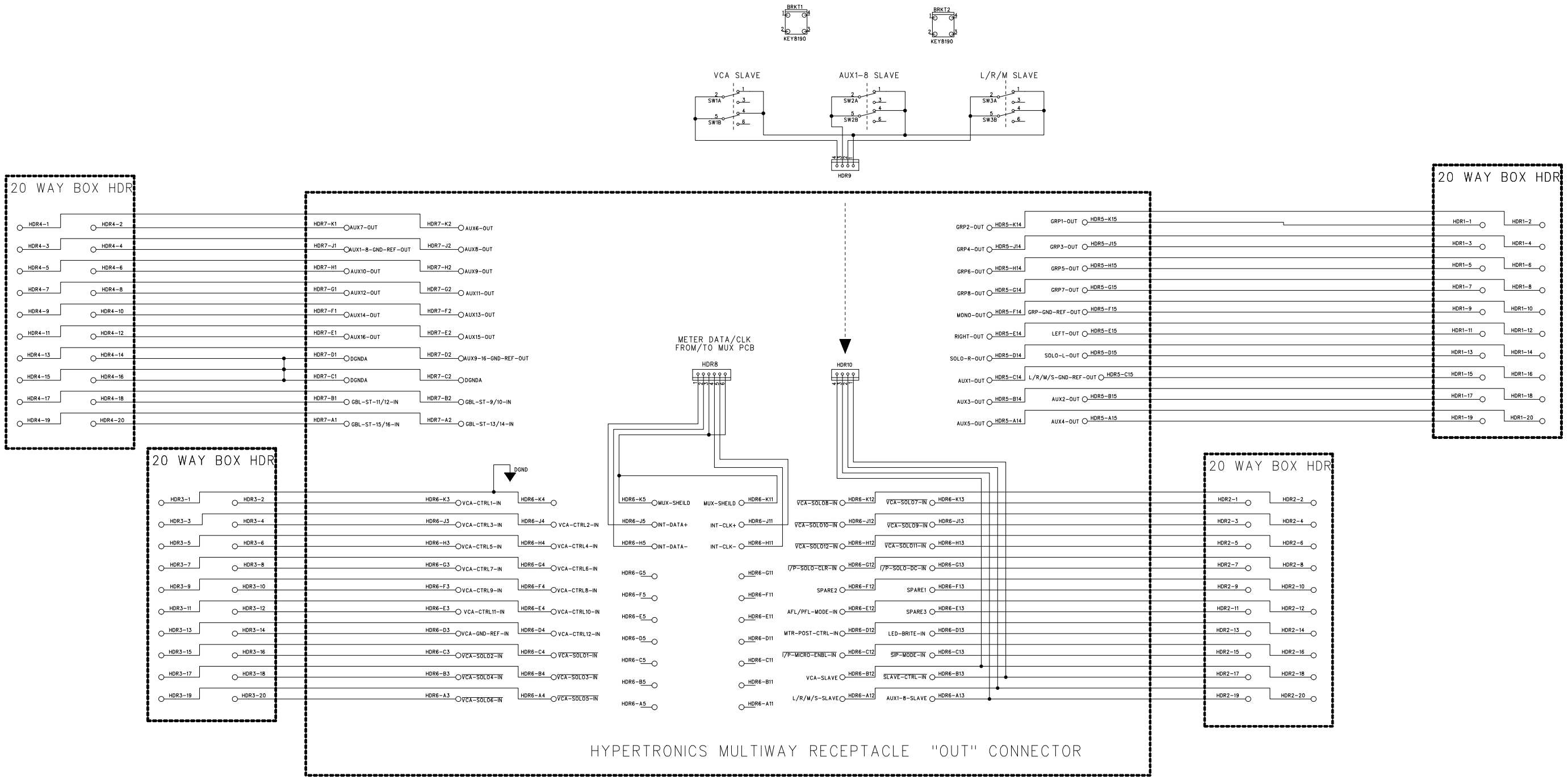
AUX 1 – 8 OUT BUFFERS

REVISION RECORD					
REV LEVEL	ASMBLY LEVEL	DATE	ECO	ENG.	DESCRIPTION
A	A	10/5/99		TAZ	PROTOTYPE PCB
A	B	01/05/00	DC01037	TAZ	MODIFICATIONS TO PROTO BUILD – CHANGE HDR3, HDR4 TO NEW RECEPT (DEEPER) – CHANGE R8, R42, R51, R53, R60, R66, R70, R72, R76, R78, R81, R84, R87, R90, R93, R95,R1, R6, R13, R20, R25, R27, R30, R33, R36 R101, R108, R114, R121 FROM 10K0 TO 0R

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

COMPANY:	CREST AUDIO		
TITLE:	V12 CONSOLE EXPANSION SUB PCB		
ORG DRAWN: TAZ	DATED: 10/99	CODE:	SIZE: D
CHECKED:	DATED:	DRAWING NO: 76D4617-A	REV: A
CUR REV DRAWN:	DATED:	FILE NAME: V12CEXSA.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 3 OF 3

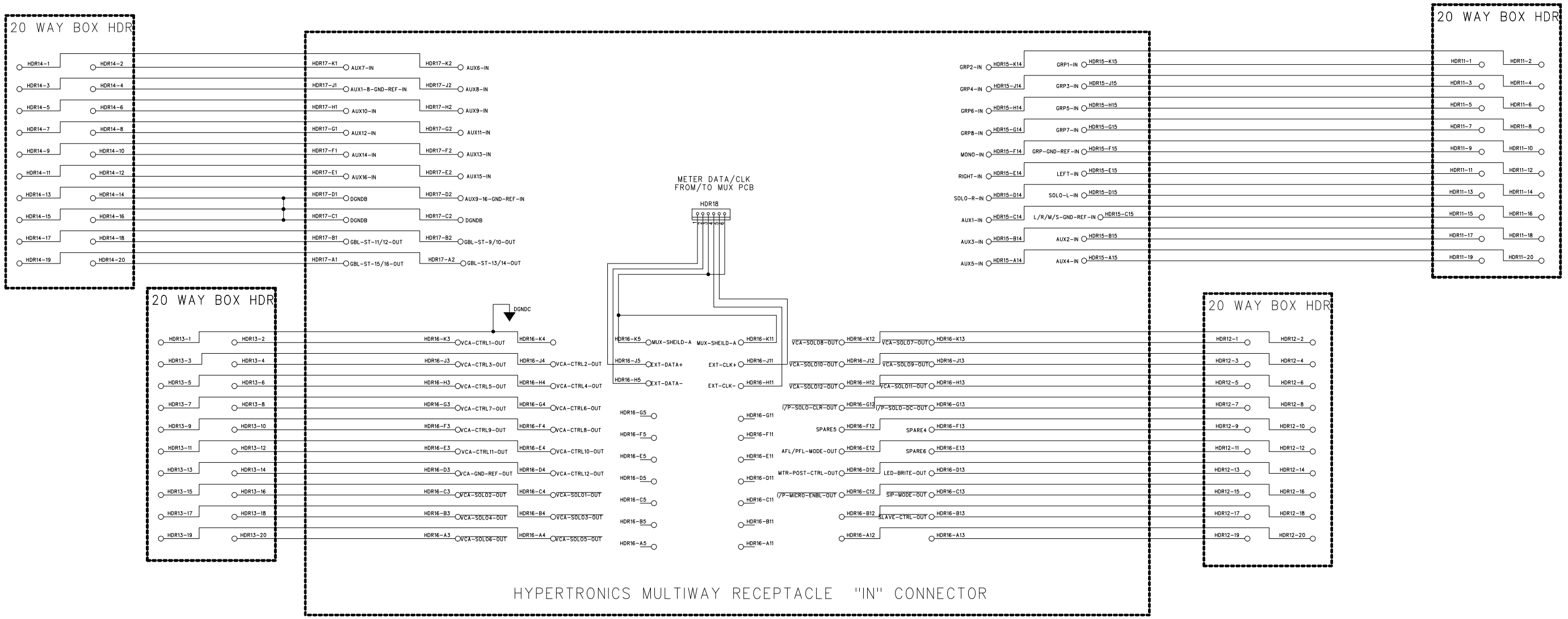
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



PCB1
69400052

ORG DRAWN: TAZ	DATED: 9/99	COMPANY: CRESTAUDIO	
CHECKED:	DATED:	TITLE: V12 EXPANSION INTERFACE PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D3233	REV: A
		FILE NAME: V12EXPIA.SCH	
		SCALE:	SHEET: 1 OF 2

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



ORG DRAWN: TAZ	DATED: 9/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 EXPANSION INTERFACE PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D3233	REV: A
		FILE NAME: V12EXPIA.SCH	
		SCALE:	SHEET: 2 OF 2

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

FROM INPUT MOTHERBOARD

HDR3-1 HDR3-2 HDR3-3 HDR3-4 HDR3-5 HDR3-6 HDR3-30 HDR3-31

HDR3-7	GRP1+
HDR3-8	GRP1-
HDR3-9	GRP2+
HDR3-10	GRP2-
HDR3-11	GRP3+
HDR3-12	GRP3-
HDR3-13	GRP4+
HDR3-14	GRP4-
HDR3-15	GRP5+
HDR3-16	GRP5-
HDR3-17	GRP6+
HDR3-18	GRP6-
HDR3-19	GRP7+
HDR3-20	GRP7-
HDR3-21	GRP8+
HDR3-22	GRP8-
HDR3-23	MONO+
HDR3-24	MONO-
HDR3-25	LEFT+
HDR3-26	LEFT-
HDR3-27	RIGHT+
HDR3-28	RIGHT-
HDR3-29	OP-SOLO-DSBL
HDR3-32	OP-SOLO-DC
HDR3-33	AUX16+
HDR3-34	AUX16-
HDR3-35	AUX15+
HDR3-36	AUX15-
HDR3-37	AUX14+
HDR3-38	AUX14-
HDR3-39	AUX13+
HDR3-40	AUX13-

HDR4-1	AUX12+
HDR4-2	AUX12-
HDR4-3	AUX11+
HDR4-4	AUX11-
HDR4-5	AUX10+
HDR4-6	AUX10-
HDR4-7	AUX9+
HDR4-8	AUX9-
HDR4-9	AUX8+
HDR4-10	AUX8-
HDR4-11	AUX7+
HDR4-12	AUX7-
HDR4-13	AUX6+
HDR4-14	AUX6-
HDR4-15	AUX5+
HDR4-16	AUX5-
HDR4-17	AUX4+
HDR4-18	AUX4-
HDR4-19	AUX3+
HDR4-20	AUX3-
HDR4-21	AUX2+
HDR4-22	AUX2-
HDR4-23	AUX1+
HDR4-24	AUX1-
HDR4-25	SOLO-L+
HDR4-26	SOLO-L-
HDR4-27	SOLO-R+
HDR4-28	SOLO-R-
HDR4-33	I/P-SOLO-DC
HDR4-34	IP-SOLO-CLR
HDR4-31	LED-BRITE
HDR4-32	IP-MTR-POST-CTRL
HDR4-35	PFL/AFL-MODE
HDR4-37	GLOB-ST-9/10
HDR4-38	GLOB-ST-11/12
HDR4-39	GLOB-ST-13/14
HDR4-40	GLOB-ST-15/16

HDR4-29 HDR4-30 HDR4-36

GROUP1-8

BUS-IN-GRP1- R12 2K
BUS-IN-GRP1+ R9 2K
EXT-GRP1 R480 2K5 → GRP1+
R481 2K5 → GRP1-

C5 22P, R6 10K, U1A 4580, R106 0, R5 10K, R107 0
EXT-GRP-REF-GND
EXT-GRP-REF-GND-BUFF

EXT-GRP2 R482 2K5 → GRP2+
R483 2K5 → GRP2-
BUS-IN-GRP2+ R13 2K
BUS-IN-GRP2- R14 2K

EXT-GRP3 R484 2K5 → GRP3+
R485 2K5 → GRP3-
BUS-IN-GRP3+ R15 2K
BUS-IN-GRP3- R16 2K

EXT-GRP4 R486 2K5 → GRP4+
R487 2K5 → GRP4-
BUS-IN-GRP4+ R17 2K
BUS-IN-GRP4- R18 2K

EXT-GRP5 R488 2K5 → GRP5+
R489 2K5 → GRP5-
BUS-IN-GRP5+ R19 2K
BUS-IN-GRP5- R20 2K

EXT-GRP6 R490 2K5 → GRP6+
R491 2K5 → GRP6-
BUS-IN-GRP6+ R21 2K
BUS-IN-GRP6- R22 2K

EXT-GRP7 R492 2K5 → GRP7+
R493 2K5 → GRP7-
BUS-IN-GRP7+ R23 2K
BUS-IN-GRP7- R24 2K

EXT-GRP8 R494 2K5 → GRP8+
R495 2K5 → GRP8-
BUS-IN-GRP8+ R25 2K
BUS-IN-GRP8- R26 2K

GROUP1-OUT GROUP2-OUT GROUP3-OUT GROUP4-OUT GROUP5-OUT GROUP6-OUT GROUP7-OUT GROUP8-OUT → HDR13 → O/P'S TO EXPANSION SYSTEM

AUX 9–16

EXT-AUX9 R496 7K8 → AUX9+
R497 7K8 → AUX9-

C6 22P, R8 10K, U1B 4580, R7 10K
EXT-A9-16-REF
EXT-A9-16-REF-BUFF

EXT-AUX10 R498 7K8 → AUX10+
R499 7K8 → AUX10-

EXT-AUX11 R500 7K8 → AUX11+
R501 7K8 → AUX11-

EXT-AUX12 R502 7K8 → AUX12+
R503 7K8 → AUX12-

EXT-AUX13 R504 7K8 → AUX13+
R505 7K8 → AUX13-

EXT-AUX14 R506 7K8 → AUX14+
R507 7K8 → AUX14-

EXT-AUX15 R508 7K8 → AUX15+
R509 7K8 → AUX15-

EXT-AUX16 R510 7K8 → AUX16+
R511 7K8 → AUX16-

AUX9-OUT AUX10-OUT AUX11-OUT AUX12-OUT AUX13-OUT AUX14-OUT AUX15-OUT AUX16-OUT → HDR15 → O/P'S TO EXPANSION SYSTEM

POWER TO SUB PCB

+20V -20V +24V → HDR2

BUS-IN-GRP1-	HDR30-1
BUS-IN-GRP1+	HDR30-2
BUS-IN-GRP2-	HDR30-3
BUS-IN-GRP2+	HDR30-4
BUS-IN-GRP3-	HDR30-5
BUS-IN-GRP3+	HDR30-6
BUS-IN-GRP4-	HDR30-7
BUS-IN-GRP4+	HDR30-8
BUS-IN-GRP5-	HDR30-9
BUS-IN-GRP5+	HDR30-10
BUS-IN-GRP6-	HDR30-11
BUS-IN-GRP6+	HDR30-12
BUS-IN-GRP7-	HDR30-13
BUS-IN-GRP7+	HDR30-14
BUS-IN-GRP8-	HDR30-15
BUS-IN-GRP8+	HDR30-16
BUS-IN-MONO-	HDR30-17
BUS-IN-MONO+	HDR30-18
BUS-IN-LEFT-	HDR30-19
BUS-IN-LEFT+	HDR30-20
BUS-IN-RIGHT-	HDR30-21
BUS-IN-RIGHT+	HDR30-22
BUS-IN-SOLO-L-	HDR30-23
BUS-IN-SOLO-L+	HDR30-24
BUS-IN-SOLO-R-	HDR30-25
BUS-IN-SOLO-R+	HDR30-26
I/P-SOLO-DC	HDR30-27
	HDR30-28
	HDR30-29
	HDR30-30
	HDR30-31
	HDR30-32
	HDR30-33
	HDR30-34

BUS-IN-AUX8-	HDR31-1
BUS-IN-AUX8+	HDR31-2
BUS-IN-AUX7-	HDR31-3
BUS-IN-AUX7+	HDR31-4
BUS-IN-AUX6-	HDR31-5
BUS-IN-AUX6+	HDR31-6
BUS-IN-AUX5-	HDR31-7
BUS-IN-AUX5+	HDR31-8
BUS-IN-AUX4-	HDR31-9
BUS-IN-AUX4+	HDR31-10
BUS-IN-AUX3-	HDR31-11
BUS-IN-AUX3+	HDR31-12
BUS-IN-AUX2-	HDR31-13
BUS-IN-AUX2+	HDR31-14
BUS-IN-AUX1-	HDR31-15
BUS-IN-AUX1+	HDR31-16
	HDR31-17
	HDR31-18
	HDR31-19
	HDR31-20
	HDR31-21
	HDR31-22
	HDR31-23
	HDR31-24
	HDR31-25
	HDR31-26

ORG DRAWN: TAZ	DATED: 9/99	COMPANY: CRESTAUDIO	
CHECKED:	DATED:	TITLE: V12 EXPANSION MAIN PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4615	REV: A
		FILE NAME: V12EXPMA.SCH	
		SCALE:	SHEET: 1 OF 5

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

AUX 1–8

R512 7K8 AUX1-
EXT-AUX1 R513 7K8 AUX1+
BUS-IN-AUX1- R27 6K8
BUS-IN-AUX1+ R28 6K8

R514 7K8 AUX2-
EXT-AUX2 R515 7K8 AUX2+
BUS-IN-AUX2- R29 6K8
BUS-IN-AUX2+ R30 6K8

R516 7K8 AUX3-
EXT-AUX3 R517 7K8 AUX3+
BUS-IN-AUX3- R31 6K8
BUS-IN-AUX3+ R32 6K8

R518 7K8 AUX4-
EXT-AUX4 R519 7K8 AUX4+
BUS-IN-AUX4- R33 6K8
BUS-IN-AUX4+ R34 6K8

R520 7K8 AUX5-
EXT-AUX5 R521 7K8 AUX5+
BUS-IN-AUX5- R35 6K8
BUS-IN-AUX5+ R36 6K8

R522 7K8 AUX6-
EXT-AUX6 R523 7K8 AUX6+
BUS-IN-AUX6- R37 6K8
BUS-IN-AUX6+ R38 6K8

R524 7K8 AUX7-
EXT-AUX7 R525 7K8 AUX7+
BUS-IN-AUX7- R39 6K8
BUS-IN-AUX7+ R40 6K8

R526 7K8 AUX8-
EXT-AUX8 R527 7K8 AUX8+
BUS-IN-AUX8- R41 6K8
BUS-IN-AUX8+ R42 6K8

AUX8-POST-EXP
AUX8-PRE-SCMASTER
AUX7-POST-EXP
AUX7-PRE-SCMASTER
AUX6-POST-EXP
AUX6-PRE-SCMASTER
AUX5-POST-EXP
AUX5-PRE-SCMASTER
HDR7

AUX4-POST-EXP
AUX4-PRE-SCMASTER
AUX3-POST-EXP
AUX3-PRE-SCMASTER
AUX2-POST-EXP
AUX2-PRE-SCMASTER
AUX1-POST-EXP
AUX1-PRE-SCMASTER
HDR14

AUX8-OUT
AUX7-OUT
AUX6-OUT
AUX5-OUT
AUX4-OUT
AUX3-OUT
AUX2-OUT
AUX1-OUT
HDR16

AUX1-ISOLATE
AUX2-ISOLATE
AUX3-ISOLATE
AUX4-ISOLATE
AUX5-ISOLATE
AUX6-ISOLATE
AUX7-ISOLATE
AUX8-ISOLATE
HDR17
DN1 DIO-SIP9-CC
AUX1-8-SLAVE

EXT-A1-8-REF-BUFF
C7 22P R44 10K U6A 4580
EXT-A1-8-REF
R43 10K

VCA BUFFERS

C8 22P R46 10K U6B 4580
EXT-VCA-GND-REF R45 10K
R72 0

EXT-VCA-1 RN1B RN1C C158 .1UF/X RN1A RN1D U2A 4580
EXT-VCA-2 RN2B RN2C C159 .1UF/X RN2A RN2D U3A 4580
EXT-VCA-3 RN3B RN3C C160 .1UF/X RN3A RN3D U4A 4580
EXT-VCA-4 RN4B RN4C C161 .1UF/X RN4A RN4D U5A 4580

+24V R63 1K D23 RL10
+24V R65 1K D27 RL11
+24V R69 1K D28 RL12
+24V R108 1K D29 RL13

LOCAL-VCA1-SEL
LOCAL-VCA2-SEL
LOCAL-VCA3-SEL
LOCAL-VCA4-SEL
HDR18

-20V R112 1K Z1 10V
R113 0
R114 100K
X = TRACK CUT
Q1 Q2 Q3 Q4 2N5551

D30 D31 D32 D33 D34 D35 D36 D37
R52 1K R53 1K R55 1K R56 1K

+20V R115 100K Q5 R116 20K R47 1K NU
+20V R117 100K Q6 R118 20K R48 1K NU
+20V R119 100K Q7 R120 20K R49 1K NU
+20V R121 100K Q8 R122 20K R51 1K NU
Z2 D38 Z3 D39 Z4 D40 Z5 D41

R64 47 SH1 CON1 SIDECAR CONSOLE VCA-BUS1 (TO CONSOLE VCA BUS)
SH2 CON2
RN19B RN19A C9 .1UF/X RN19C RN19D U2B 4580 R346 47
VCA-CTRL1 (TO "IN" MULTIWAY)

R67 47 SH3 CON3
+24V D17 RL4
SH4 CON4 VCA-BUS2 (TO CONSOLE VCA BUS)
RN20B RN20A C10 .1UF/X RN20C RN20D U3B 4580 R50 47
VCA-CTRL2 (TO "IN" MULTIWAY)

R109 47 SH5 CON5
SH6 CON6 VCA-BUS3 (TO CONSOLE VCA BUS)
RN21B RN21A C11 .1UF/X RN21C RN21D U4B 4580 R54 47
VCA-CTRL3 (TO "IN" MULTIWAY)

R111 47 SH7 CON7
D18 RL5
SH8 CON8 VCA-BUS4 (TO CONSOLE VCA BUS)
RN22B RN22A C14 .1UF/X RN22C RN22D U5B 4580 R58 47
VCA-CTRL4 (TO "IN" MULTIWAY)

D21 D16 D22 R62 0 SCAR-SENSE VCA-SLAVE

C162 .1UF/X RN5A RN5B RN5C RN5D U7B 4580 R350 47
EXT-VCA-5 +24V D19 RL6 VCA-CTRL5
C163 .1UF/X RN6A RN6B RN6C RN6D U7A 4580 R351 47
EXT-VCA-6 VCA-CTRL6
C164 .1UF/X RN7A RN7B RN7C RN7D U8B 4580 R352 47
EXT-VCA-7 +24V D20 RL7 VCA-CTRL7
C166 .1UF/X RN8A RN8B RN8C RN8D U8A 4580 R353 47
EXT-VCA-8 VCA-CTRL8

C167 .1UF/X RN9A RN9B RN9C RN9D U9B 4580 R354 47
EXT-VCA-9 +24V D24 RL8 VCA-CTRL9
C168 .1UF/X RN10A RN10B RN10C RN10D U9A 4580 R355 47
EXT-VCA-10 VCA-CTRL10
C169 .1UF/X RN11A RN11B RN11C RN11D U10B 4580 R356 47
EXT-VCA-11 +24V D25 RL9 VCA-CTRL11
C170 .1UF/X RN12A RN12B RN12C RN12D U10A 4580 R357 47
EXT-VCA-12 VCA-CTRL12

+5V RN13 100K X 9 C171 .1UF/Z U11 74HC244
MASTER-VCA-SOLO1 MASTER-VCA-SOLO2 MASTER-VCA-SOLO3 MASTER-VCA-SOLO4 MASTER-VCA-SOLO5 MASTER-VCA-SOLO6 MASTER-VCA-SOLO7 MASTER-VCA-SOLO8 VCA-SOLO-ISO
VCA-SOLO1 VCA-SOLO2 VCA-SOLO3 VCA-SOLO4 VCA-SOLO5 VCA-SOLO6 VCA-SOLO7 VCA-SOLO8

+5V RN14 100K X 9 C172 .1UF/Z U12 74HC244
MASTER-VCA-SOLO12 MASTER-VCA-SOLO11 MASTER-VCA-SOLO10 MASTER-VCA-SOLO9 MASTER-SOLO-SIP-MODE MASTER-OP-SOLO-DSBL OP-SOLO-DC EXT-OP-SOLO-DC F/P-SOLO-DC EXT-IP-SOLO-DC
VCA-SOLO12 VCA-SOLO11 VCA-SOLO10 VCA-SOLO9 MASTER-OP-SOLO-DC MASTER-I/P-SOLO-DC OP-SOLO-DSBL SIP-MODE
D9 D15 D12

COMPANY:	CREST AUDIO		
TITLE:	V12 EXPANSION MAIN PCB		
ORG DRAWN: TAZ	DATED: 9/99		
CHECKED:	DATED:		
CUR REV DRAWN:	DATED:		
RELEASED:	DATED:		
CODE:	SIZE: D	DRAWING NO: 76D4615	REV: A
		FILE NAME: V12EXPMA.SCH	
SCALE:		SHEET: 2 OF 5	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

LEFT/RIGHT/MONO SECTION AND CONTROLS

BUS-IN-MONO- R74 2K
BUS-IN-MONO+ R71 2K
EXT-MONO R528 2K5 → MONO+
R529 2K5 → MONO-

BUS-IN-LEFT- R76 2K
BUS-IN-LEFT+ R75 2K
EXT-LEFT R530 2K5 → LEFT+
R531 2K5 → LEFT-

BUS-IN-RIGHT- R78 2K
BUS-IN-RIGHT+ R77 2K
EXT-RIGHT R532 2K5 → RIGHT+
R533 2K5 → RIGHT-

EXT-L/R/M/SOLO-GND
R73 0
R84 10K
U13A TLE2082CP
R105 0
R83 10K

U13B TLE2082CP

HDR19
1 2 3 4 5 6 7 8
MONO-PRE
MONO-POST
LEFT-PRE
LEFT-POST
RIGHT-PRE
RIGHT-POST
SLAVE-CTRL

HDR20
1 2 3 4 5 6 7 8
MONO-OUT
LEFT-OUT
RIGHT-OUT
SCAR-MASTER-MODULE-SENSE
MONO-SLAVE
L/R-SLAVE
L/R/M-MASTER-PRE
D5
D6
L/R/M-SLAVE

SOLO SECTION AND CONTROLS

EXT-L/R/M/SOLO-REF-FEED

EXT-SOLOL R534 10K → SOLO-L-
R535 10K → SOLO-L+
BUS-IN-SOLO-L+ R79 10K
BUS-IN-SOLO-L- R80 10K

EXT-SOLOR R536 10K → SOLO-R-
R537 10K → SOLO-R+
BUS-IN-SOLO-R+ R81 10K
BUS-IN-SOLO-R- R82 10K

HDR5
1 2 3 4
OP-SOLO-DC
OP-SOLO-CLR
OP-SOLO-DSBL

HDR21
1 2 3 4
SOLO-LEFT-SCMASTER
SOLO-L-OUT
SOLO-RIGHT-SCMASTER
SOLO-R-OUT

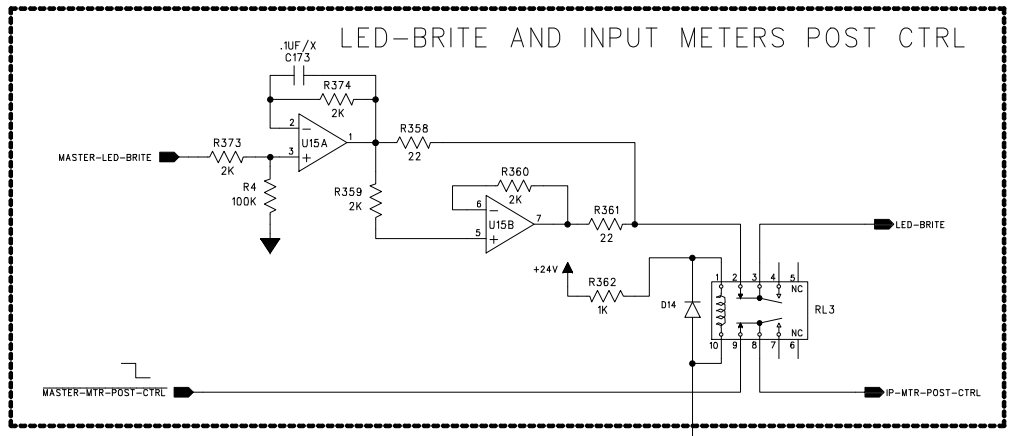
SOLO-ISOLATE
D4
+24V
R300 63K4
R294 47K
R301 15K
Q26 2N5551
R302 5K
D3
+24V
R295 63K4
R296 15K
Q27 2N5551
R297 5K
D13
VCA-SOLO-ISO

+5V
R263 20K
MASTER-OP-SOLO-CLR
R261 20K NU
OP-SOLO-CLR
+24V
D1
RL1
+5V
R262 20K
MASTER-I/P-SOLO-CLEAR
R287 20K NU
I/P-SOLO-CLR
MASTER-AFL/PFL-MODE
AFL
PFL
R289 20K
D2
DGND
RL2
AFL
PFL
PFL/AFL-MODE

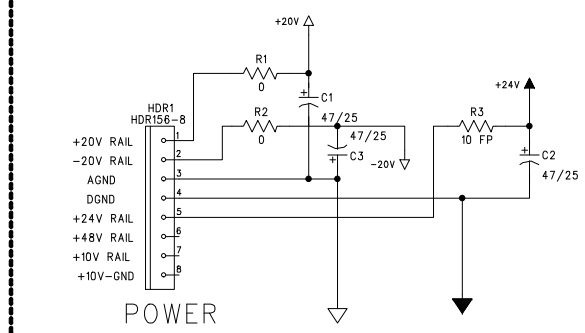
ORG DRAWN: TAZ	DATED: 9/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 EXPANSION MAIN PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4615	REV: A
		FILE NAME: V12EXPMA.SCH	
		SCALE:	SHEET: 3 OF 5

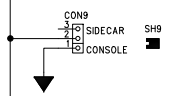
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

LED-BRITE AND INPUT METERS POST CTRL

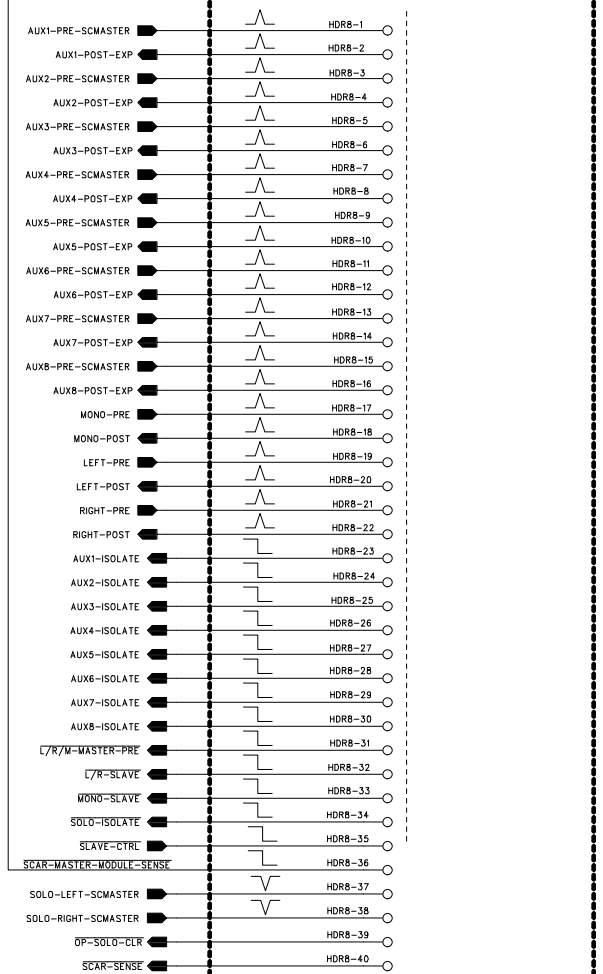


MAIN POWER IN



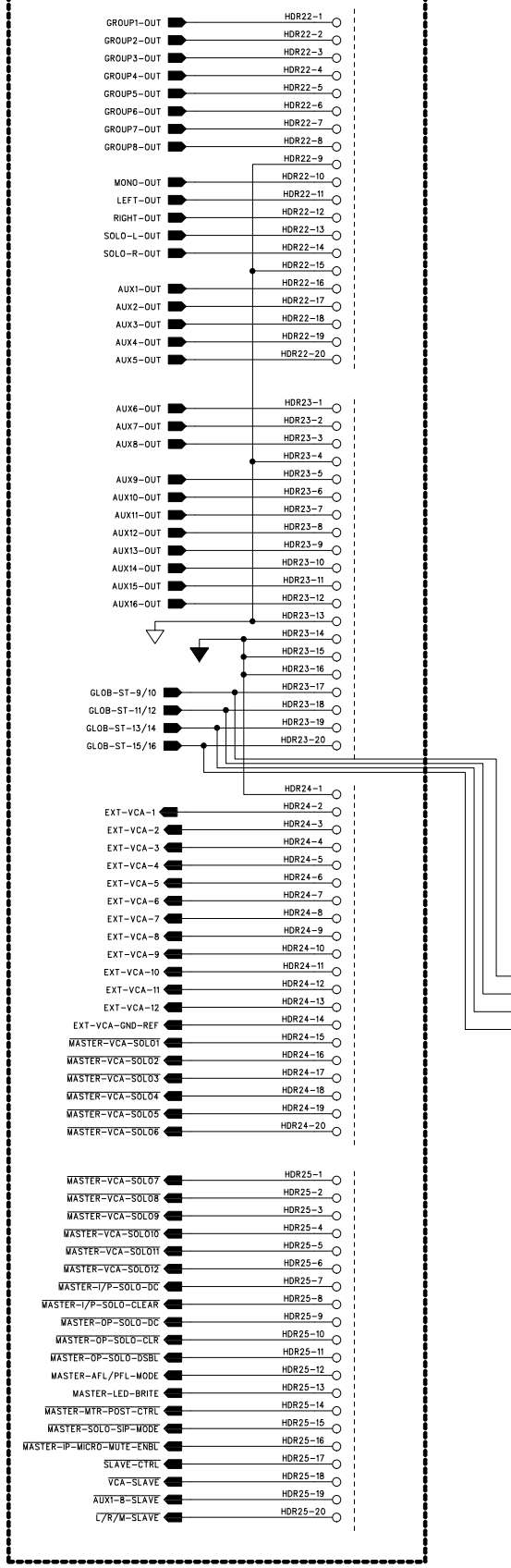


34 WAY TO SIDECAR MASTER MOTHERBOARD

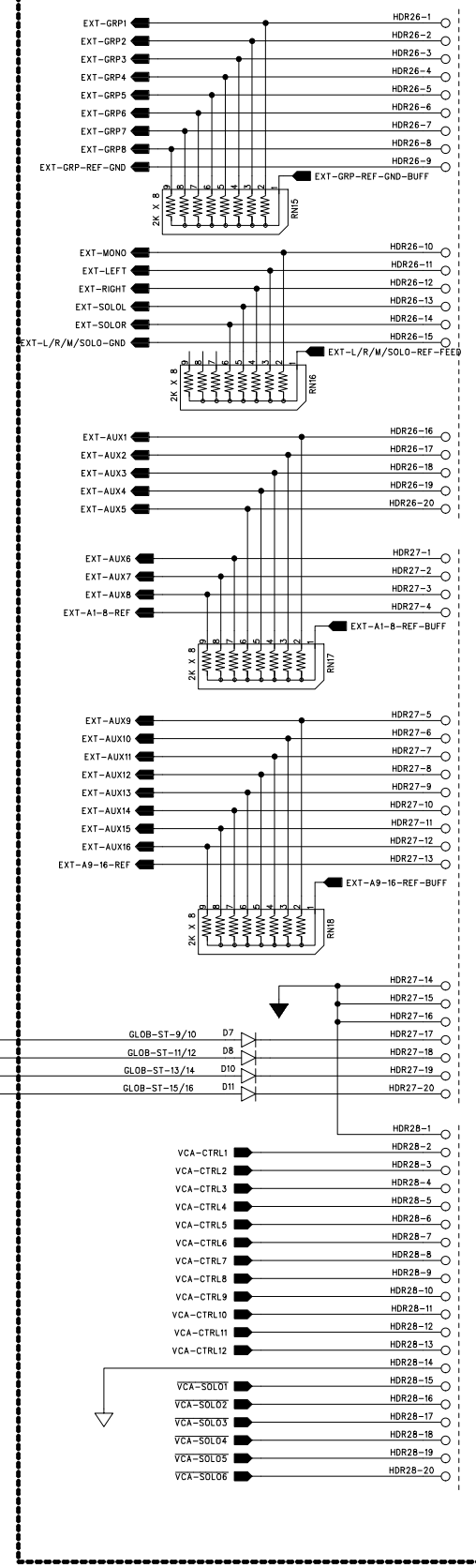


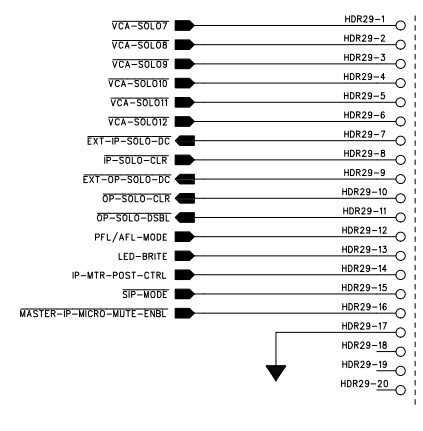
CONNECTION TO SIDECAR MASTER MOTHERBOARD

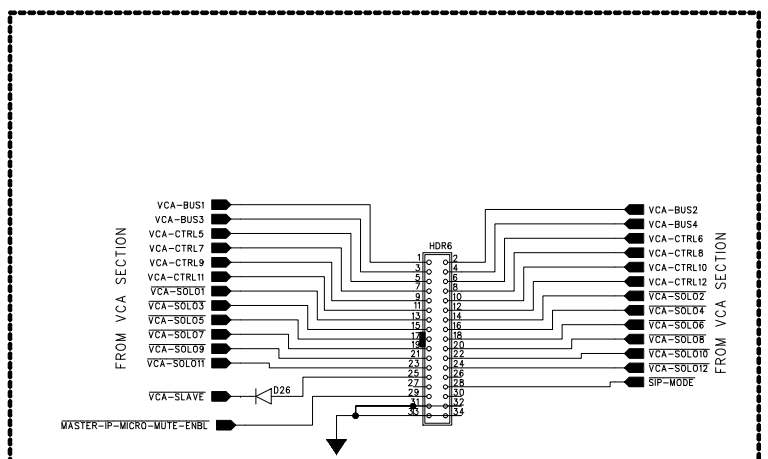
4 X 20 WAY CONNECTIONS TO SIDECAR "OUT" EXPANSION CONNECTOR PCB



4 X 20 WAY CONNECTIONS TO SIDECAR "IN" EXPANSION CONNECTOR PCB



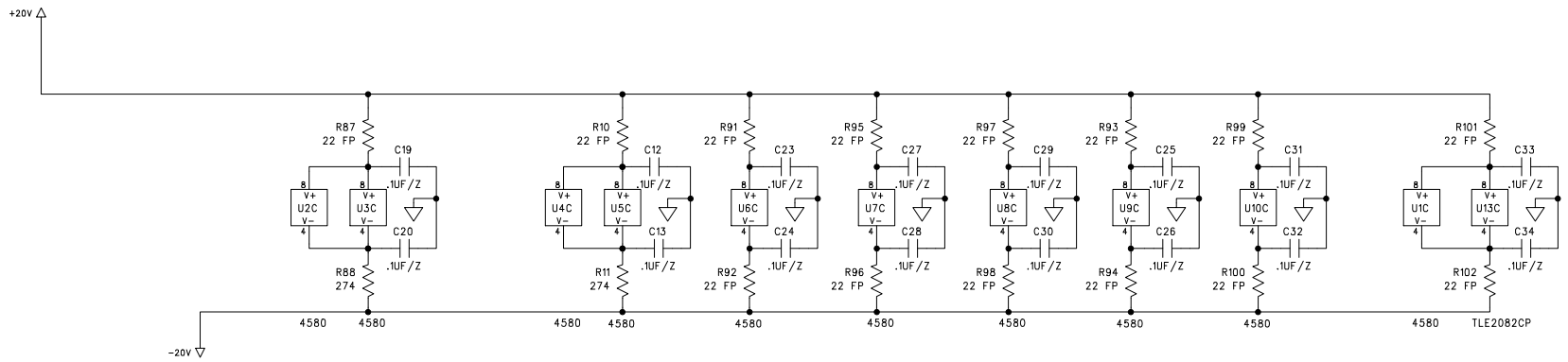


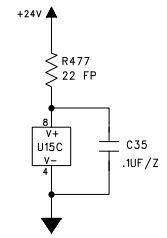


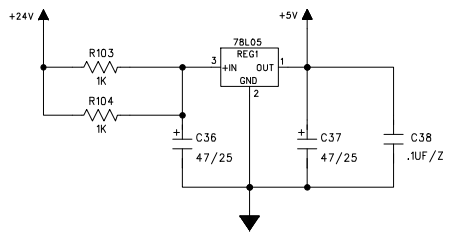
FADER SECTION VCA CONTROLS

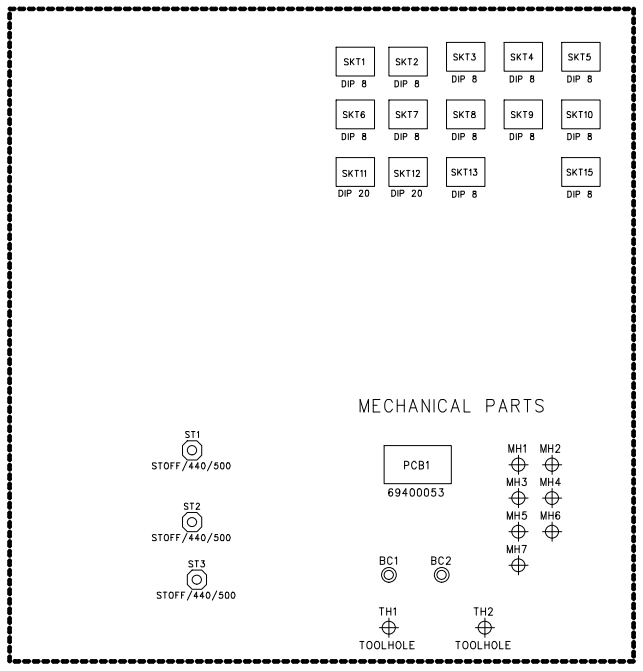
ORG DRAWN: TAZ	DATED: 9/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 EXPANSION MAIN PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D / DRAWING NO: 76D4615 / REV: A
RELEASED:	DATED:	FILE NAME: V12EXPMA.SCH	
		SCALE:	SHEET: 4 OF 5

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:









REVISION RECORD					
REV LEVEL	ASMBLY LEVEL	DATE	ECO	ENG.	DESCRIPTION
A	A	12/99		TAZ	PROTOTYPE BUY
A	B	1/5/00	DC01035	TAZ	MODIFICATIONS TO PROTOTYPE - REMOVE SKT14 - ADD ST3 - CHANGE SKT11, SKT12 TO SOCKET DIP12 0.400 (NOT0.600) - CHANGE R88, R11 FROM 22R-FP TO 274R (REDUCE NEG SUPPLY) - CHANGE R1, R2 FROM 10R-FP TO 0R (CURRENT DRAW DROPS RAILS TOO MUCH) - REMOVE R261, R287 (NOT NEEDED) - CHANGE R115, R117, R119, R121 FROM 47K5 TO 100K0 - CHANGE R113 FROM 1K0 TO 0R (STIFFEN REF VOLTAGE) - FIX FLOATING AGND TO Q5, Q6, Q7, Q8 EMITTERS AND RN3D PIN 8 - REMOVE R47, R48, R49, R51 (CLAMPING TOO SOFT BECAUSE OF THIS) - ADD R52, R53, R55, R56 (1K0) - TO STOP BASE REF VOLTAGE FROM DRIFT

ORG DRAWN: TAZ	DATED: 9/99	COMPANY: CRESTAUDIO	
CHECKED:	DATED:	TITLE: V12 EXPANSION MAIN PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4615	REV: A
		FILE NAME: V12EXPMA.SCH	
		SCALE:	SHEET: 5 OF 5

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

CONNECTION TO/FROM SUB PCB

HDR3-1 HDR3-2 HDR3-3 HDR3-4 HDR3-5 HDR3-6

HDR3-7	GRP1+	HDR3-29	GRP7-
HDR3-8	GRP1-	HDR3-30	GRP8+
HDR3-9	GRP2+	HDR3-31	GRP8-
HDR3-10	GRP2-	HDR3-32	MONO+
HDR3-11	GRP3+	HDR3-33	MONO-
HDR3-12	GRP3-	HDR3-34	LEFT+
HDR3-13	GRP4+	HDR3-35	LEFT-
HDR3-14	GRP4-	HDR3-36	RIGHT+
HDR3-15	GRP5+	HDR3-37	RIGHT-
HDR3-16	GRP5-	HDR3-38	AUX16+
HDR3-17	GRP6+	HDR3-39	AUX16-
HDR3-18	GRP6-	HDR3-40	AUX15+
HDR3-19	GRP7+		
HDR3-20	GRP7-		
HDR3-21	GRP8+		
HDR3-22	GRP8-		
HDR3-23	MONO+		
HDR3-24	MONO-		
HDR3-25	LEFT+		
HDR3-26	LEFT-		
HDR3-27	RIGHT+		
HDR3-28	RIGHT-		
HDR3-33	AUX16+		
HDR3-34	AUX16-		
HDR3-35	AUX15+		
HDR3-36	AUX15-		
HDR3-37	AUX14+		
HDR3-38	AUX14-		
HDR3-39	AUX13+		
HDR3-40	AUX13-		

HDR4-29 HDR4-30 HDR4-36

HDR4-1	AUX12+	HDR4-29	SOLO-L+
HDR4-2	AUX12-	HDR4-30	SOLO-L-
HDR4-3	AUX11+	HDR4-31	SOLO-R+
HDR4-4	AUX11-	HDR4-32	SOLO-R-
HDR4-5	AUX10+	HDR4-33	
HDR4-6	AUX10-	HDR4-34	
HDR4-7	AUX9+	HDR4-35	
HDR4-8	AUX9-	HDR4-36	
HDR4-9	AUX8+	HDR4-37	
HDR4-10	AUX8-	HDR4-38	
HDR4-11	AUX7+	HDR4-39	
HDR4-12	AUX7-	HDR4-40	
HDR4-13	AUX6+		
HDR4-14	AUX6-		
HDR4-15	AUX5+		
HDR4-16	AUX5-		
HDR4-17	AUX4+		
HDR4-18	AUX4-		
HDR4-19	AUX3+		
HDR4-20	AUX3-		
HDR4-21	AUX2+		
HDR4-22	AUX2-		
HDR4-23	AUX1+		
HDR4-24	AUX1-		
HDR4-25	SOLO-L+		
HDR4-26	SOLO-L-		
HDR4-27	SOLO-R+		
HDR4-28	SOLO-R-		

GROUP MIX AMPS

GRP1+ GRP1- GRP2+ GRP2- GRP3+ GRP3- GRP4+ GRP4- GRP5+ GRP5- GRP6+ GRP6-

C24 C25 C26 C27 C28 C29 C30 C31 C32 C33 C34 C35 C36 C37 C38 C39 C40 C41 C42 C43 C44 C45 C46 C47

R41 R42 R43 R44 R45 R46 R47 R48 R49 R50 R51 R52 R53 R54 R55 R56 R57 R58 R59 R60 R61 R62 R63 R64 R65 R66 R67 R68 R69 R70 R71 R72 R73 R74 R75 R76 R77 R78 R79 R80 R81 R82

U11A U11B U12A U13A U13B U12B U14A U14B U15B U16A U16B U15A U17A U17B U18B U19A U19B U18A — 2114 / 022B

1M1 R45 R52 R59 R66 R73 R80

TO METER RECTIFIER PCB1 HDR8

TO MAIN PCB HDR13

GROUP1-OUT GROUP2-OUT GROUP3-OUT GROUP4-OUT GROUP5-OUT GROUP6-OUT GROUP7-OUT GROUP8-OUT

GRP7+ GRP7- GRP8+ GRP8-

C48 C49 C50 C51 C52 C53 C54 C55

R83 R84 R85 R86 R87 R88 R89 R90 R91 R92 R93 R94 R95 R96

U20A U20B U21B U21A U22A U22B — 2114 / 022B

1M1 R87 R94

AUX9+ AUX9- AUX10+ AUX10- AUX11+ AUX11- AUX12+ AUX12-

C56 C57 C58 C59 C60 C61 C62 C63 C64 C65 C66 C67 C68 C69 C70 C71

R97 R98 R99 R100 R101 R102 R103 R104 R105 R106 R107 R108 R109 R110 R111 R112 R113 R114 R115 R116 R117 R118 R119 R120 R121 R122 R123 R124

U23A U23B U24B U25A U25B U24A U26A U26B U27A U28A U28B U27B — 2114 / 022B

1M1 R101 R108 R115 R122

AUX 9–16 MIX AMPS

AUX13+ AUX13- AUX14+ AUX14- AUX15+ AUX15- AUX16+ AUX16-

C72 C73 C74 C75 C76 C77 C78 C79 C80 C81 C82 C83 C84 C85 C86 C87

R125 R126 R127 R128 R129 R130 R131 R132 R133 R134 R135 R136 R137 R138 R139 R140 R141 R142 R143 R144 R145 R146 R147 R148 R149 R150 R151 R152

U29A U29B U30A U31A U31B U30B U32A U32B U33B U34A U34B U33A — 2114 / 022B

1M1 R129 R136 R143 R150

TO METER RECTIFIER PCB1 HDR9

AUX9-OUT AUX10-OUT AUX11-OUT AUX12-OUT AUX13-OUT AUX14-OUT AUX15-OUT AUX16-OUT

TO MAIN PCB HDR15

AUX9-OUT AUX10-OUT AUX11-OUT AUX12-OUT AUX13-OUT AUX14-OUT AUX15-OUT AUX16-OUT

COMPANY: CREST AUDIO

TITLE: V12 SIDECAR EXPANSION SUB PCB

ORG DRAWN: TAZ	DATED: 10/99	CODE:	SIZE: D	DRAWING NO: 76D4616-A	REV: A
CHECKED:	DATED:			FILE NAME: V12SEXSA.SCH	
CUR REV DRAWN:	DATED:				
RELEASED:	DATED:	SCALE:		SHEET: 1 OF 4	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

FROM INPUT/SIDECAR MASTER MOTHERBOARD

HDR1-1
HDR1-2
HDR1-3
HDR1-4
HDR1-5
HDR1-6
HDR1-29
HDR1-30
HDR1-31
HDR1-32

HDR1-7 GRP1+
HDR1-8 GRP1-
HDR1-9 GRP2+
HDR1-10 GRP2-
HDR1-11 GRP3+
HDR1-12 GRP3-
HDR1-13 GRP4+
HDR1-14 GRP4-
HDR1-15 GRP5+
HDR1-16 GRP5-
HDR1-17 GRP6+
HDR1-18 GRP6-
HDR1-19 GRP7+
HDR1-20 GRP7-
HDR1-21 GRP8+
HDR1-22 GRP8-
HDR1-23 MONO+
HDR1-24 MONO-
HDR1-25 LEFT+
HDR1-26 LEFT-
HDR1-27 RIGHT+
HDR1-28 RIGHT-
HDR1-33 AUX16+
HDR1-34 AUX16-
HDR1-35 AUX15+
HDR1-36 AUX15-
HDR1-37 AUX14+
HDR1-38 AUX14-
HDR1-39 AUX13+
HDR1-40 AUX13-

HDR2-1 AUX12+
HDR2-2 AUX12-
HDR2-3 AUX11+
HDR2-4 AUX11-
HDR2-5 AUX10+
HDR2-6 AUX10-
HDR2-7 AUX9+
HDR2-8 AUX9-
HDR2-9 AUX8+
HDR2-10 AUX8-
HDR2-11 AUX7+
HDR2-12 AUX7-
HDR2-13 AUX6+
HDR2-14 AUX6-
HDR2-15 AUX5+
HDR2-16 AUX5-
HDR2-17 AUX4+
HDR2-18 AUX4-
HDR2-19 AUX3+
HDR2-20 AUX3-
HDR2-21 AUX2+
HDR2-22 AUX2-
HDR2-23 AUX1+
HDR2-24 AUX1-
HDR2-25 SOLO-L+
HDR2-26 SOLO-L-
HDR2-27 SOLO-R+
HDR2-28 SOLO-R-
HDR2-33
HDR2-34
HDR2-31
HDR2-32
HDR2-35
HDR2-37
HDR2-38
HDR2-39
HDR2-40

HDR2-29
HDR2-30
HDR2-36

HDR19
MONO-PRE
MONO-POST
LEFT-PRE
LEFT-POST
RIGHT-PRE
RIGHT-POST

TO/FROM MAIN PCB

MONO+ C1 22P R1 2K5 U1A 2114 R2 2K5 C2 22P R3 2K5 U1B 2114 R7 22
MONO- R4 1M1 R6 200K U2B 022B U2A 022B C4 .1UF/X C3 .1UF/X R5 1M1

LEFT+ C6 22P R9 2K5 U4A 2114 R10 2K5 C7 22P R11 2K5 U4B 2114 R15 22
LEFT- R12 1M1 R14 200K U6A 022B C9 .1UF/X C8 .1UF/X R13 1M1

RIGHT+ C10 22P R16 2K5 U5A 2114 R17 2K5 C11 22P R18 2K5 U5B 2114 R22 22
RIGHT- R19 1M1 R21 200K U6B 022B C13 .1UF/X C12 .1UF/X R20 1M1

SOLO-L+ C16 22P R25 10K U8A 2114 R26 10K C17 22P R27 10K U8B 2114 R31 22
SOLO-L- R28 1M1 R30 200K U9A 022B C19 .1UF/X C18 .1UF/X R29 1M1

SOLO-R+ C20 22P R32 10K U10A 2114 R33 10K C21 22P R34 10K U10B 2114 R38 22
SOLO-R- R35 1M1 R37 200K U9B 022B C23 .1UF/X C22 .1UF/X R36 1M1

+24V D2 RL1 D1 RL4 R39 1K
+24V D3 RL2 D6 RL5 R40 1K
+24V 1K R304 D4 RL3

HDR20
MONO-OUT
LEFT-OUT
RIGHT-OUT
MONO-SLAVE
L/R-SLAVE
L/R/M-MASTER-PRE
SOLO-ISO-REL

TO/FROM MAIN PCB

SCAR-MASTER-MODULE-SENSE (SEE SHT3)

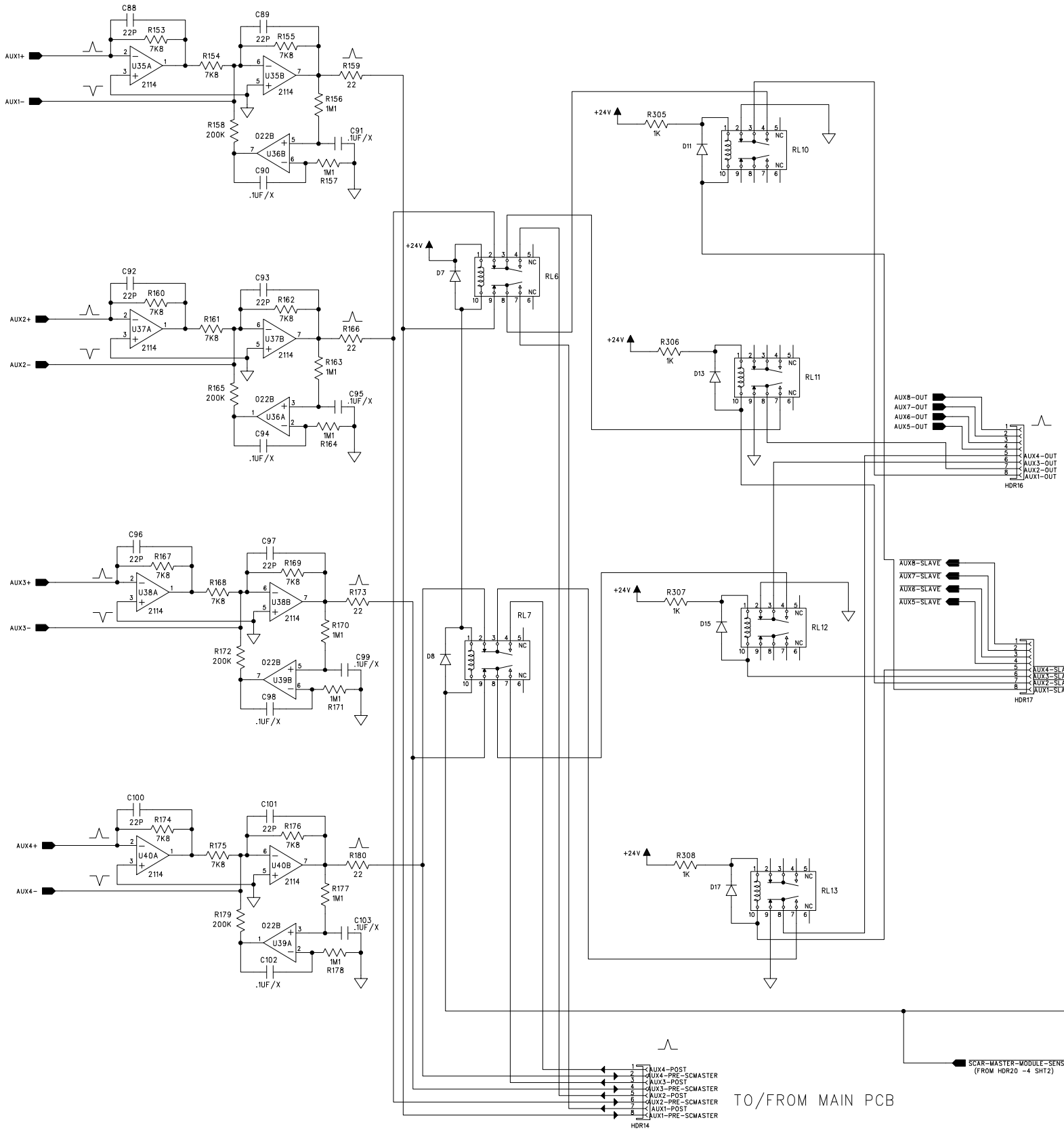
HDR21
SOLO-LEFT-SCMASTER
SOLO-L-OUT
SOLO-RIGHT-SCMASTER
SOLO-R-OUT

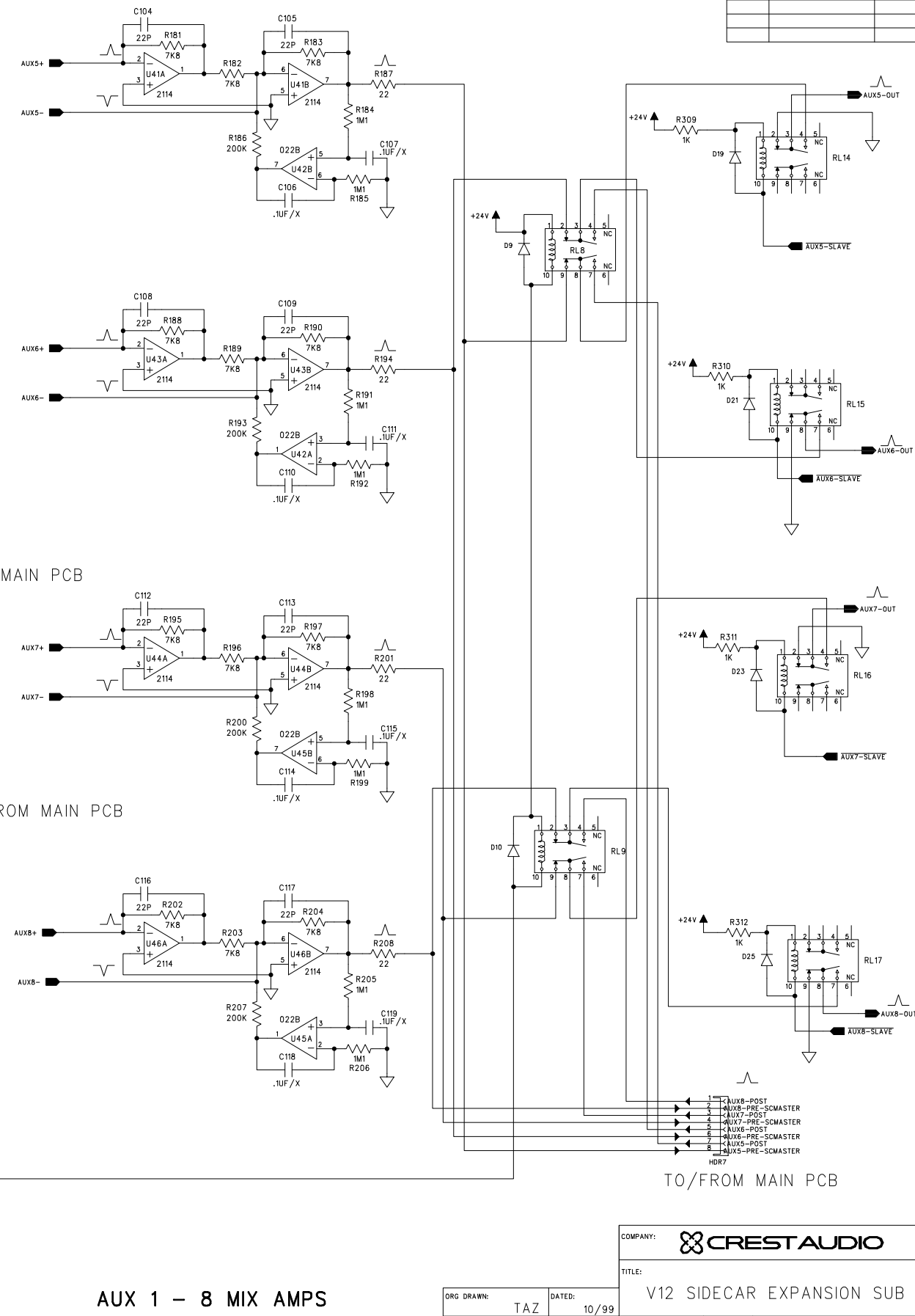
TO MAIN PCB

HDR6
(USED FOR CONSOLE SUB PCB ONLY)

ORG DRAWN: TAZ	DATED: 10/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR EXPANSION SUB PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4616-A	REV: A
		FILE NAME: V12SEXSA.SCH	
		SCALE:	SHEET: 2 OF 4

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



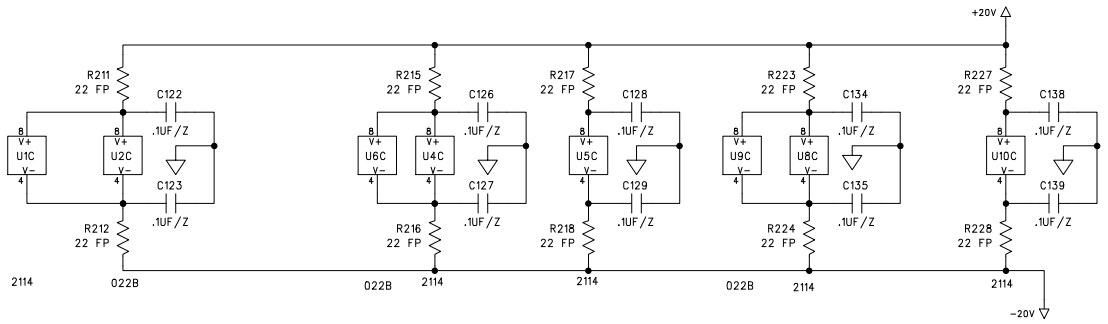


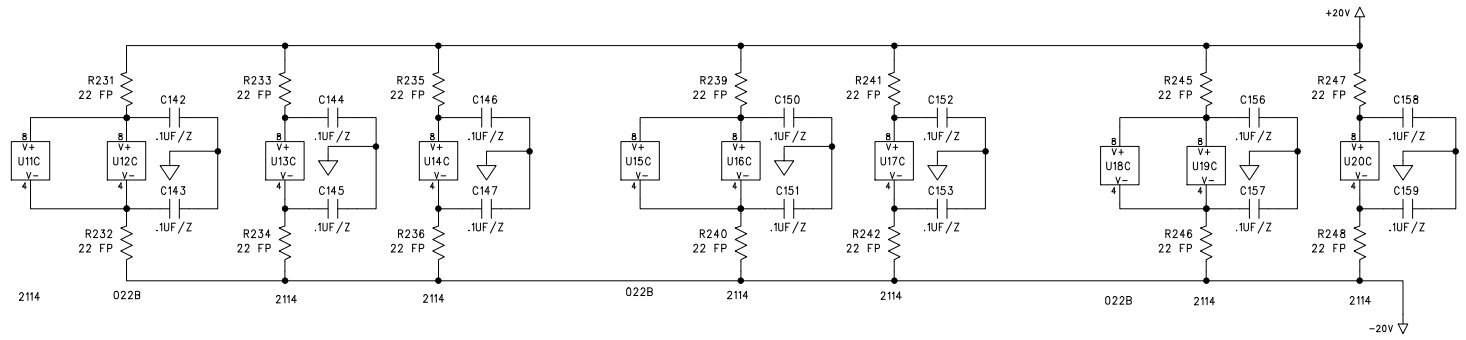
AUX 1 – 8 MIX AMPS

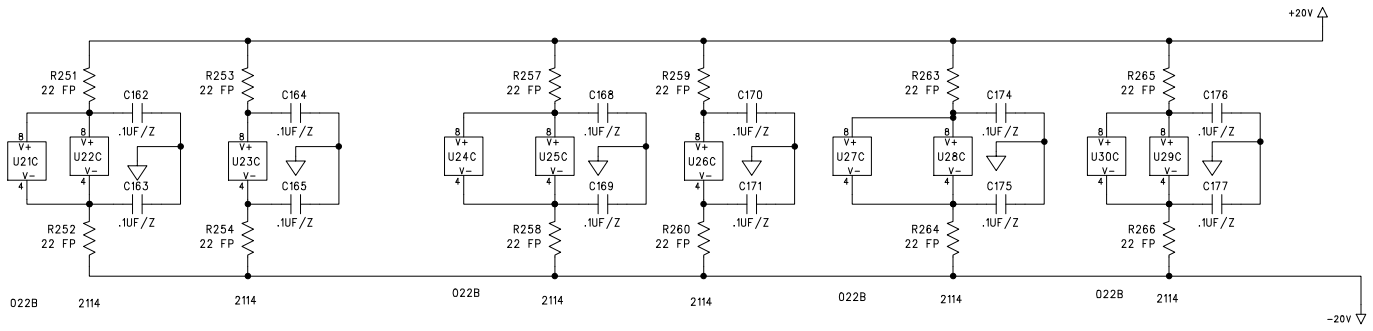
ORG DRAWN: TAZ	DATED: 10/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR EXPANSION SUB PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4616-A	REV: A
		FILE NAME: V12SEXSA.SCH	
		SCALE:	SHEET: 3 OF 4

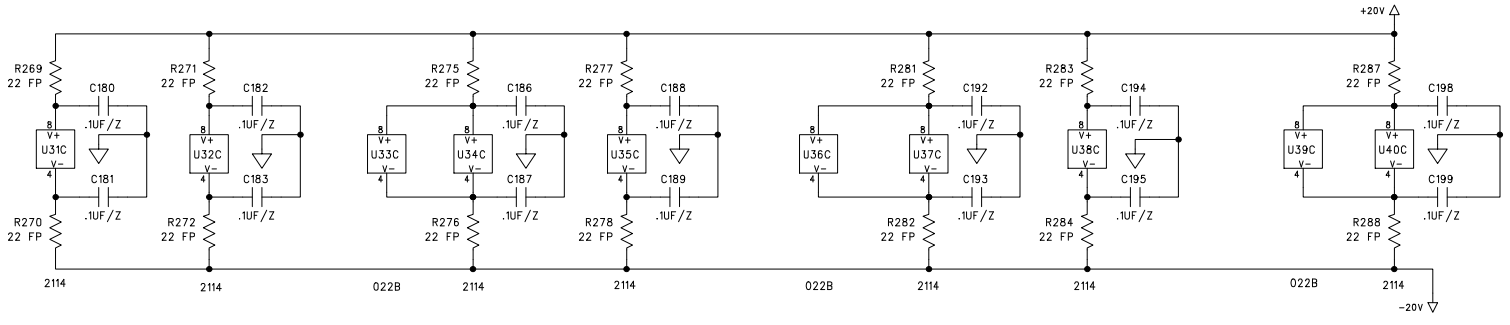
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

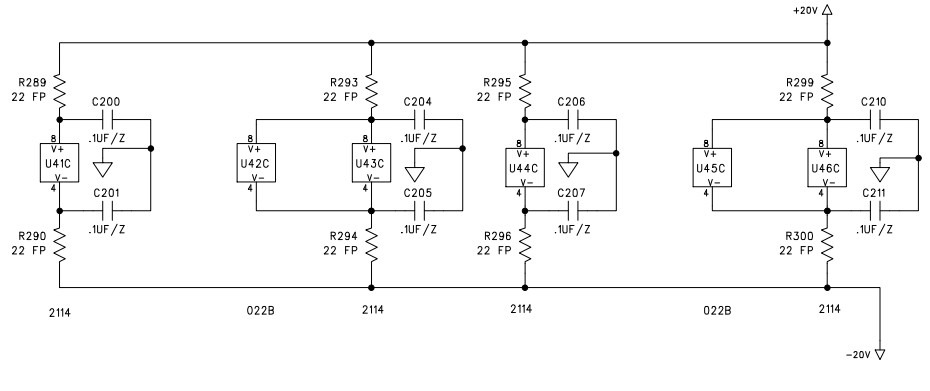
REVISION RECORD					
REV LEVEL	ASMBLY LEVEL	DATE	ECO	ENG.	DESCRIPTION
A	A	10/5/99		TAZ	PROTOTYPE PCB
A	B	1/5/00		TAZ	MODIFICATIONS TO PROTOTYPE BUILD – CHANGE HDR6, HDR21 TO 4 WAY BTM ENTRY RECPT (NOT 8) – CHANGE HDR3, HDR4 TO DEEPER BODY 40 WAY RECEPT – CHANGE R301, R302 FROM 10R–FP TO 0R (TO MUCH CURRENT LIMITING) – CHANGE R25, R26, R27, R32, R33, R34 FROM 2K49 TO 10KO (MIX GAIN)

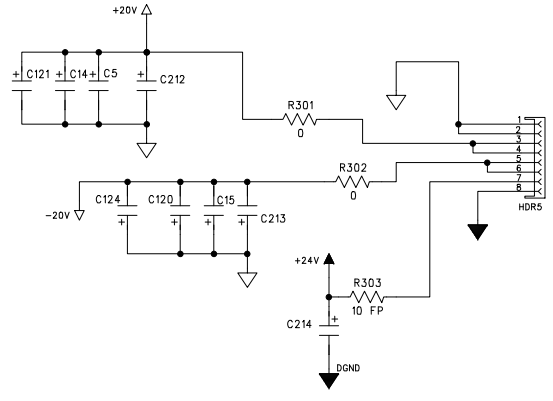


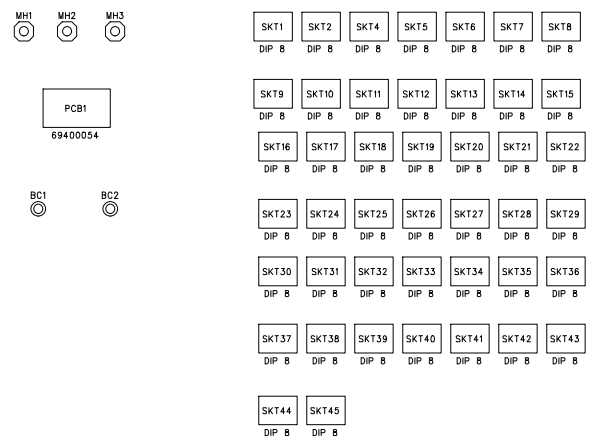






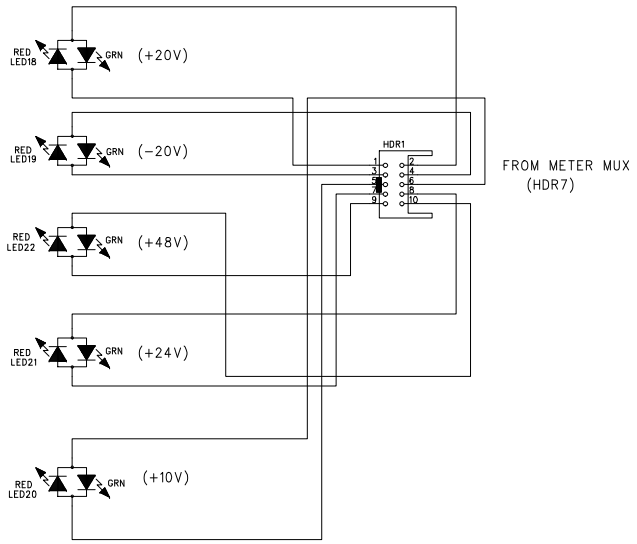




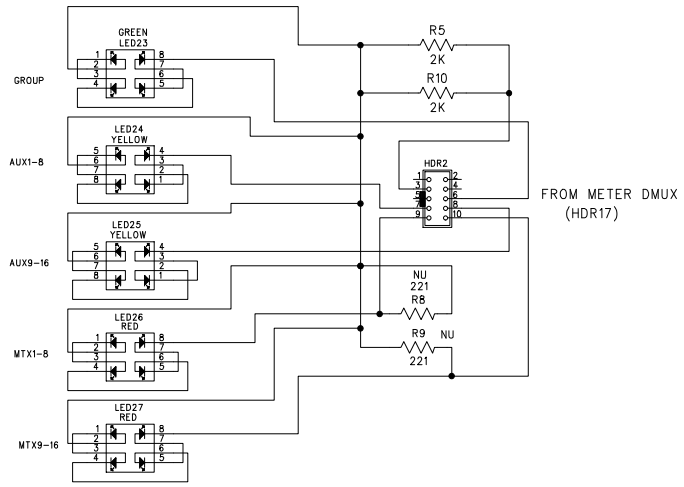


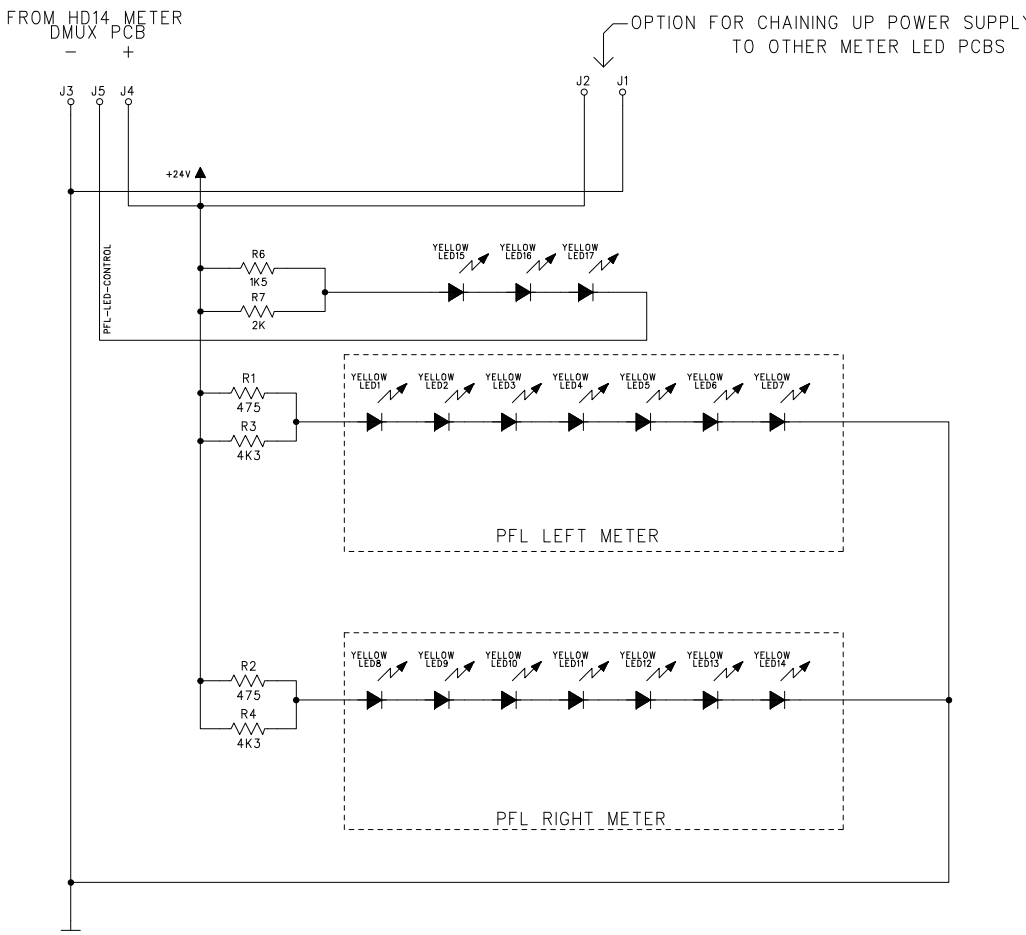
ORG DRAWN: TAZ	DATED: 10/99	COMPANY: CRESTAUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR EXPANSION SUB PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4616-A	REV: A
		FILE NAME: V12SEXSA.SCH	
		SCALE:	SHEET: 4 OF 4

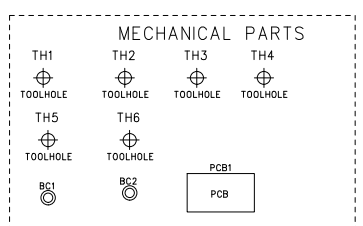
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



METER BANK1 INDICATORS



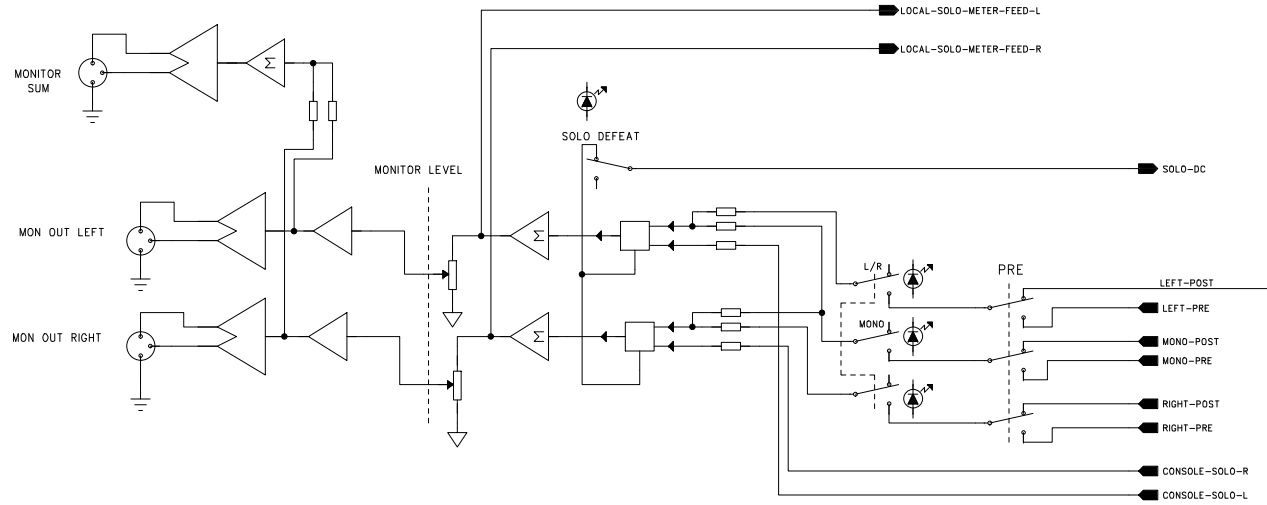




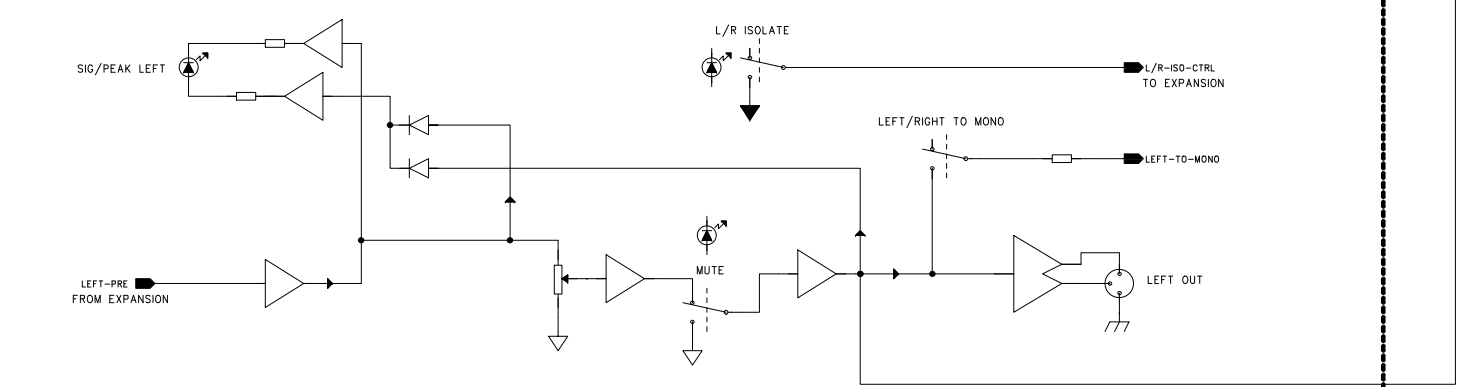
ORG DRAWN: TAZ	DATED: 8/97	COMPANY: CREST AUDIO			
CHECKED:	DATED:	TITLE: V12 SIDECAR LED PCB			
CUR REV DRAWN:	DATED:	CODE:	SIZE: D	DRAWING NO: 76D4671	REV: A
RELEASED:	DATED:			FILE NAME: V12SLEDA.SCH	
		SCALE:		SHEET: 1 OF 1	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

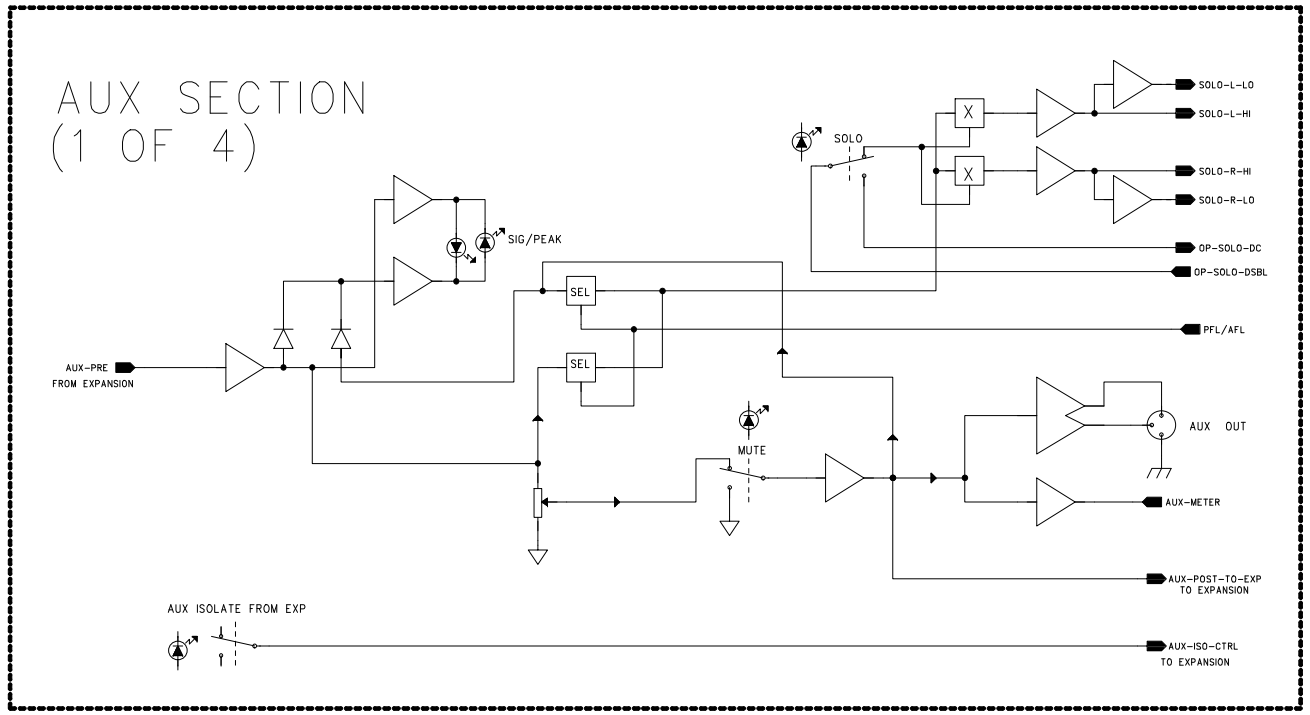
NEAR FIELD MONITOR

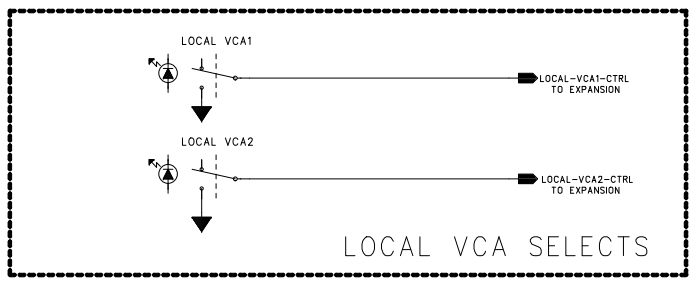


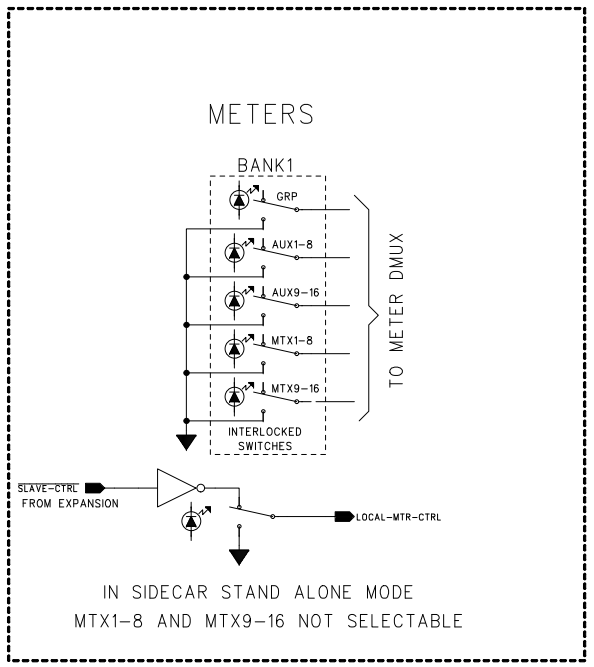
LEFT SECTION
(RIGHT SECTION SIMILAR)



AUX SECTION
(1 OF 4)



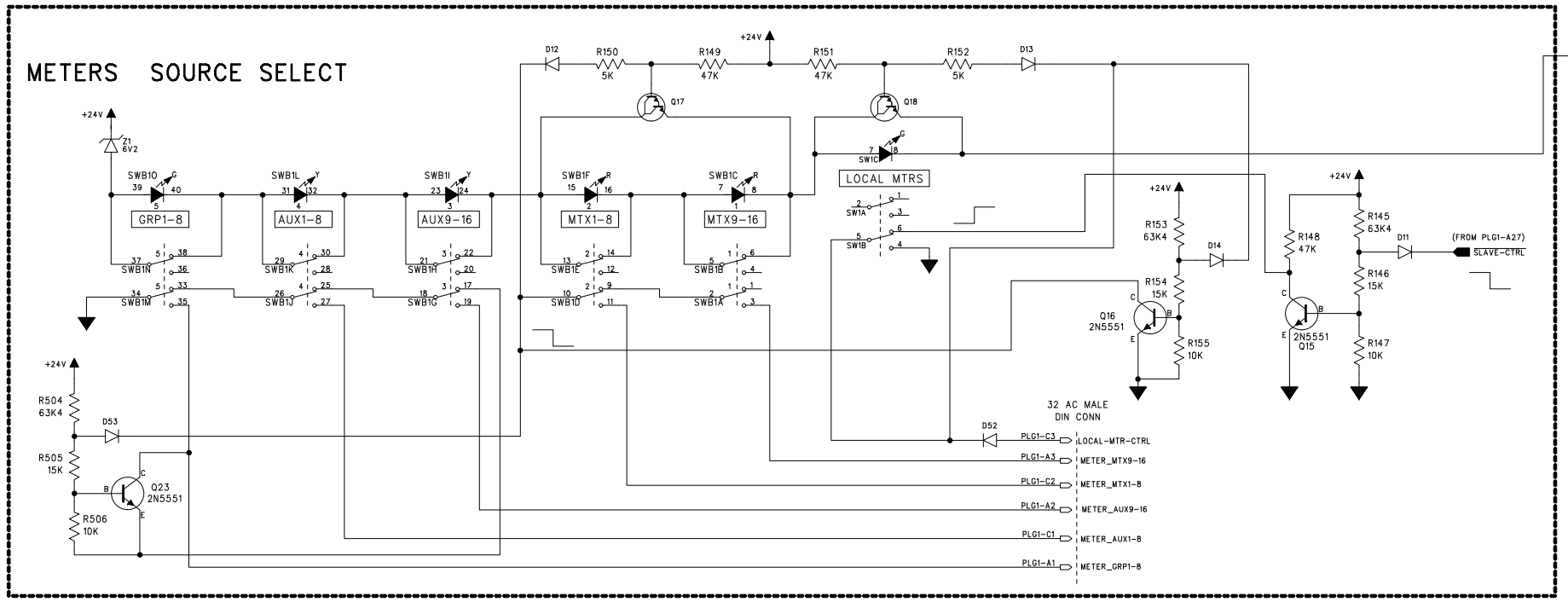




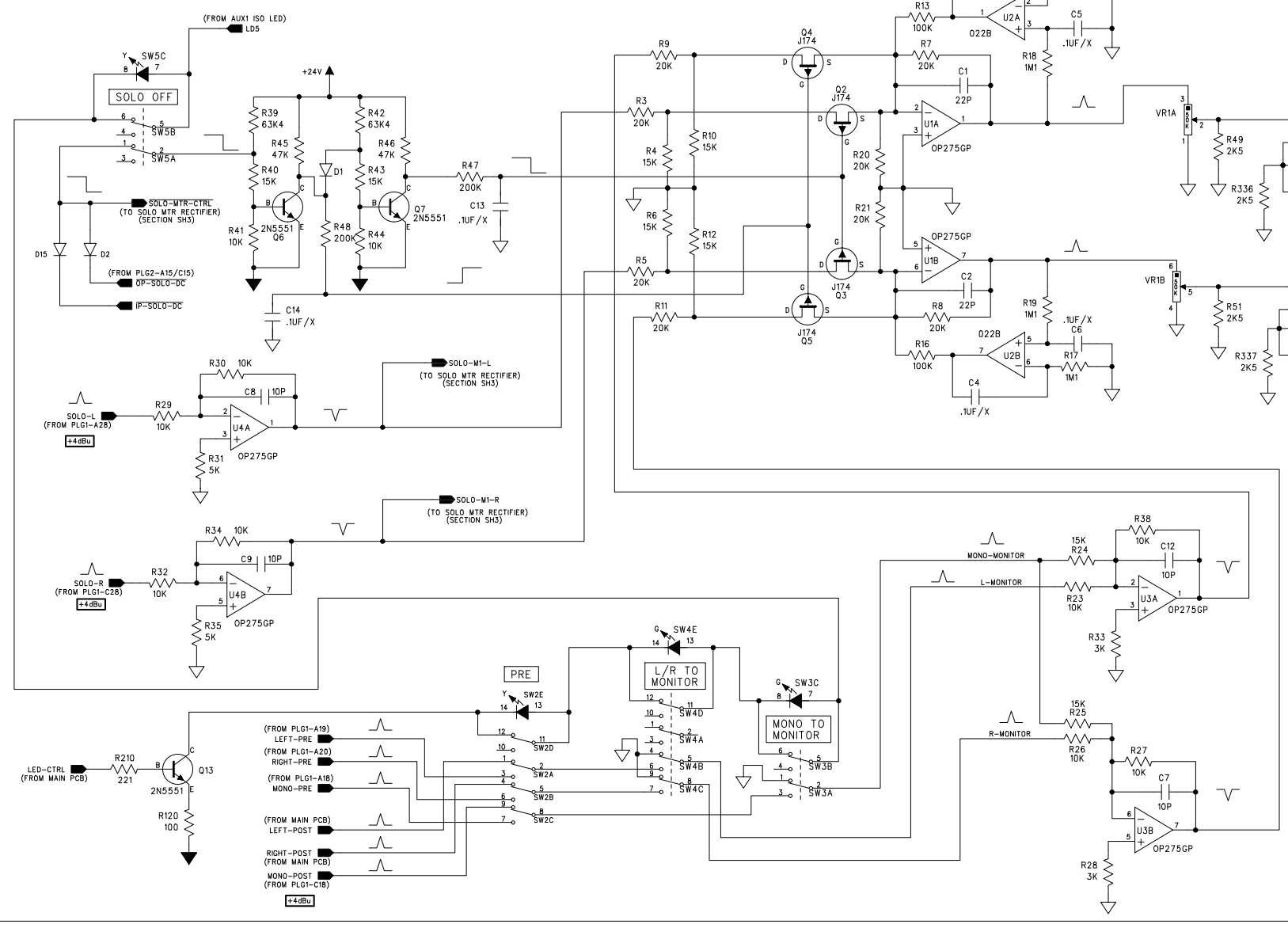
ORG DRAWN: TAZ	DATED: 9/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: SIDECAR MASTER1 MODULE SIG FLOW	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO:	REV:
		FILE NAME: V12SM1BK.SCH	
		SCALE:	SHEET: 1 OF 1

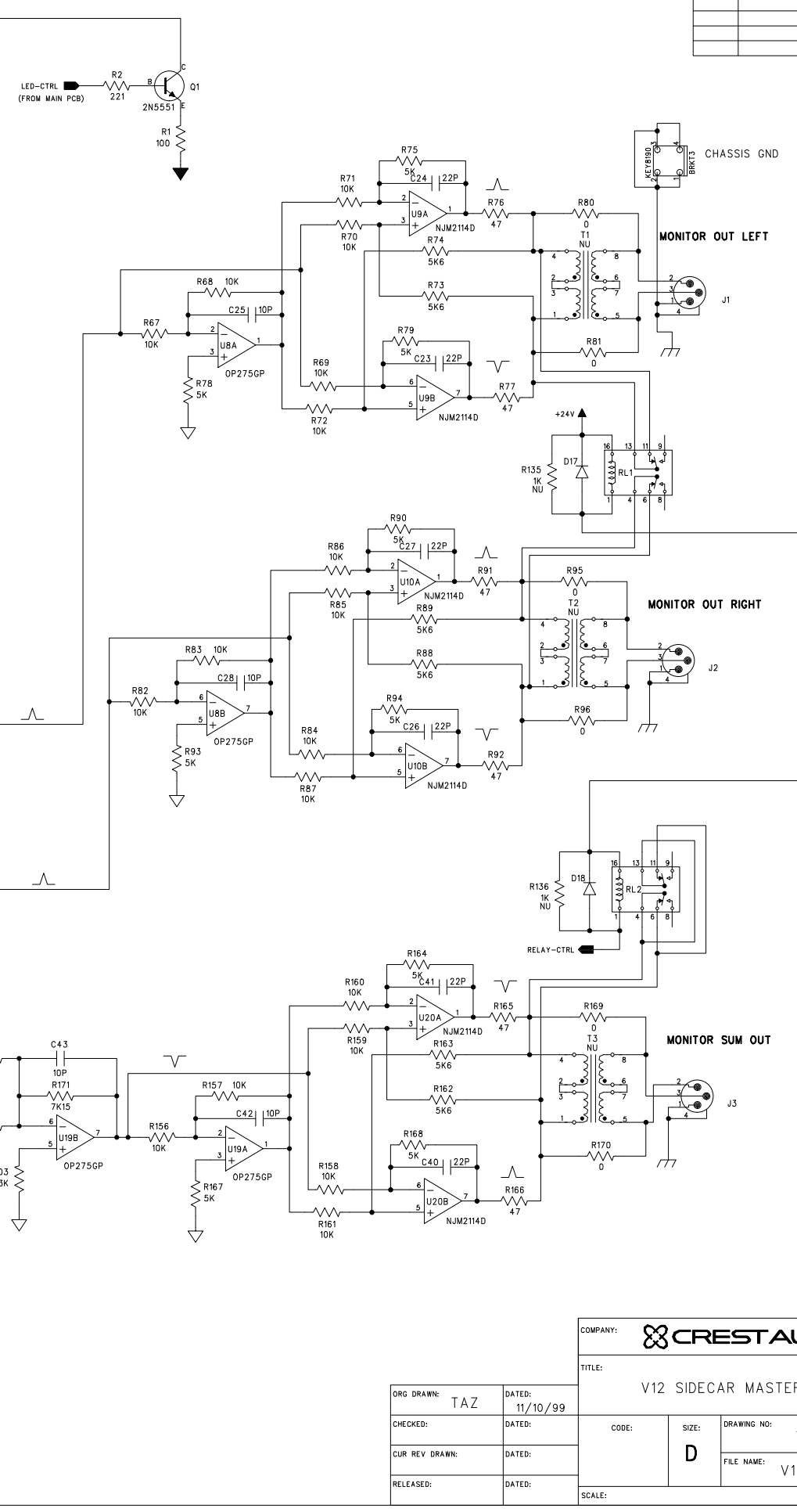
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

METERS SOURCE SELECT



MONITOR SECTION





ORG DRAWN: TAZ	DATED: 11/10/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTER 1 CONNECTOR	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4652	REV: A
		FILE NAME: V12SM1CA.SCH	
		SCALE:	SHEET: 1 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

AUX1 SOLO

AUX3 SOLO

AUX1 ISO

AUX3 ISO

AUX1 SOLO

AUX3 SOLO

AUX1-PRE

AUX1-POST

AUX3-PRE

AUX3-POST

PFL

AFL/PFL-BUS

AUX1-SOLO-DC

AUX1-SOLO-FET

LOCAL-AUX1-ISO

LD5 (TO MON SOLO OFF LED)

AUX3-SOLO-DC

AUX3-SOLO-FET

LOCAL-AUX3-ISO

OP-SOLO-CLEAR

OP-SOLO-DSBL

AUX1-SOLO-

AUX1-SOLO+

AUX3-SOLO-

AUX3-SOLO+

RELAY-CTRL

AUX1-POST +4dBu

AUX3-POST +4dBu

AUX5-POST +4dBu

AUX7-POST +4dBu

AUX1-OUT

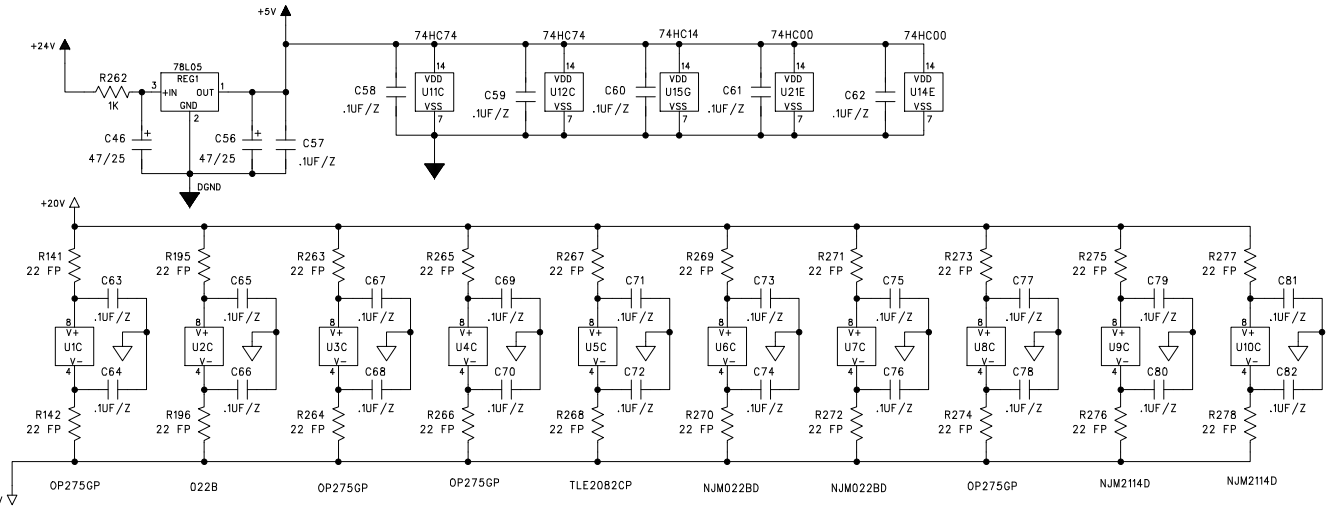
AUX3-OUT

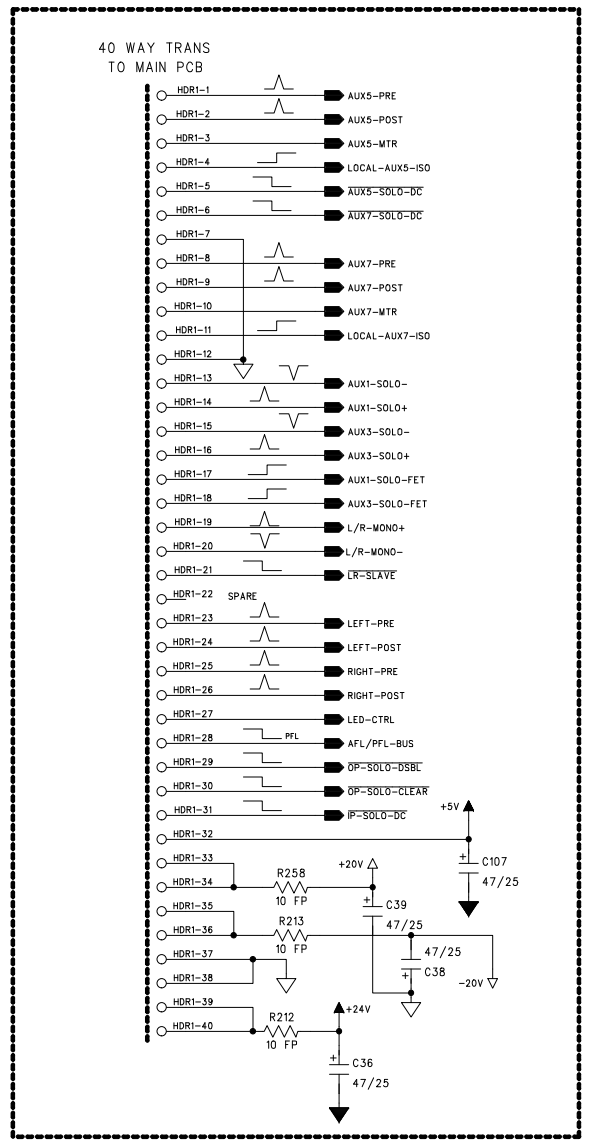
AUX5-OUT

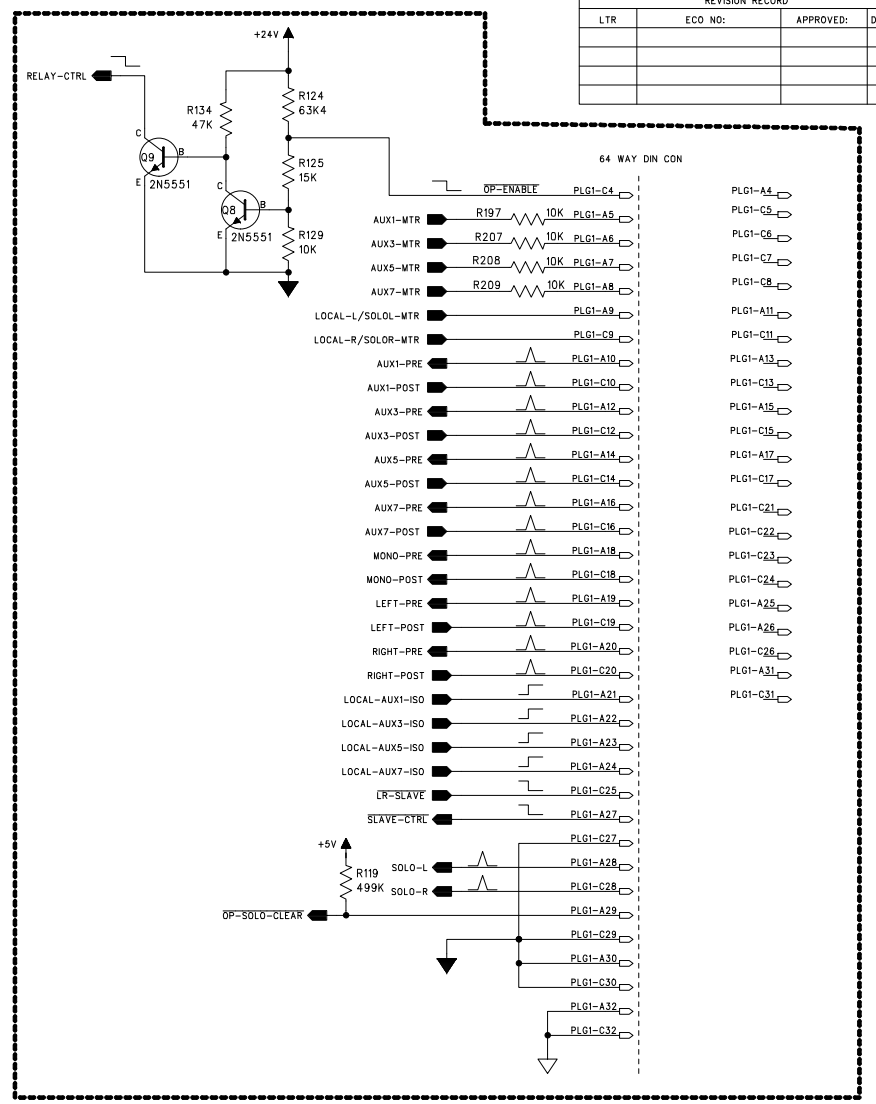
AUX7-OUT

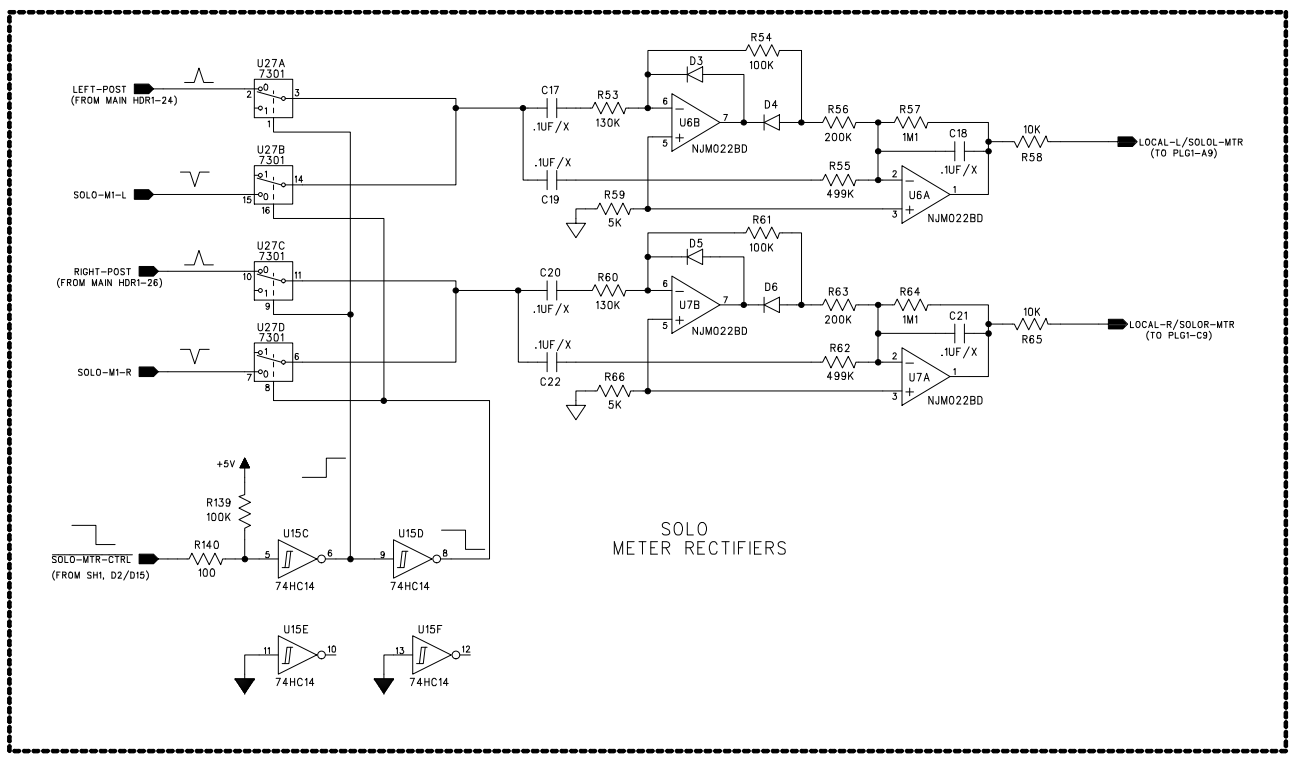
ORG DRAWN: TAZ	DATED: 11/10/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTER 1 CONNECTOR	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4652	REV: A
		FILE NAME: V12SM1CA.SCH	
		SCALE:	SHEET: 2 OF 6

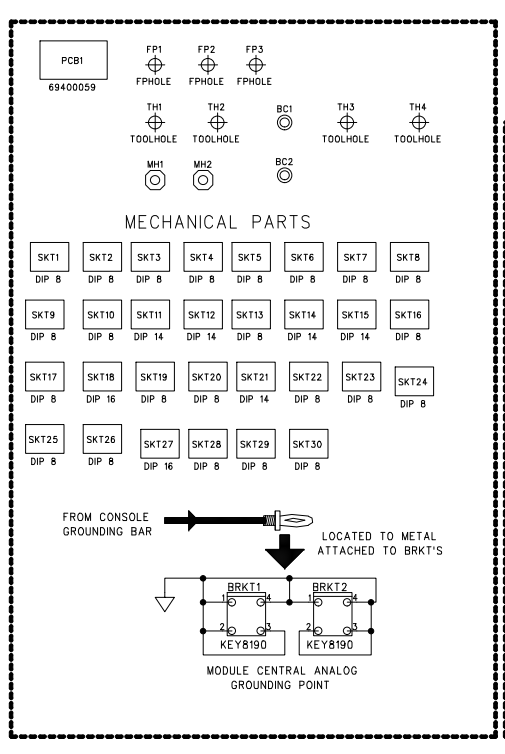
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

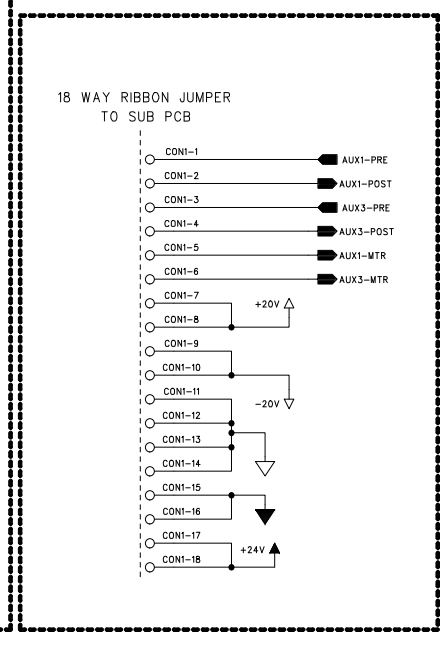


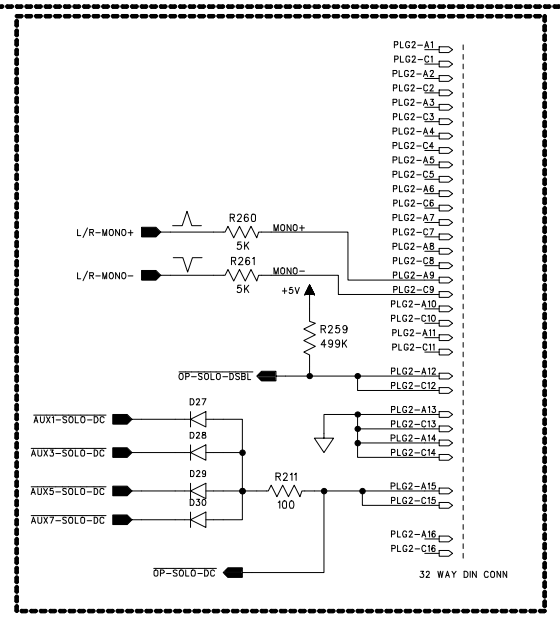








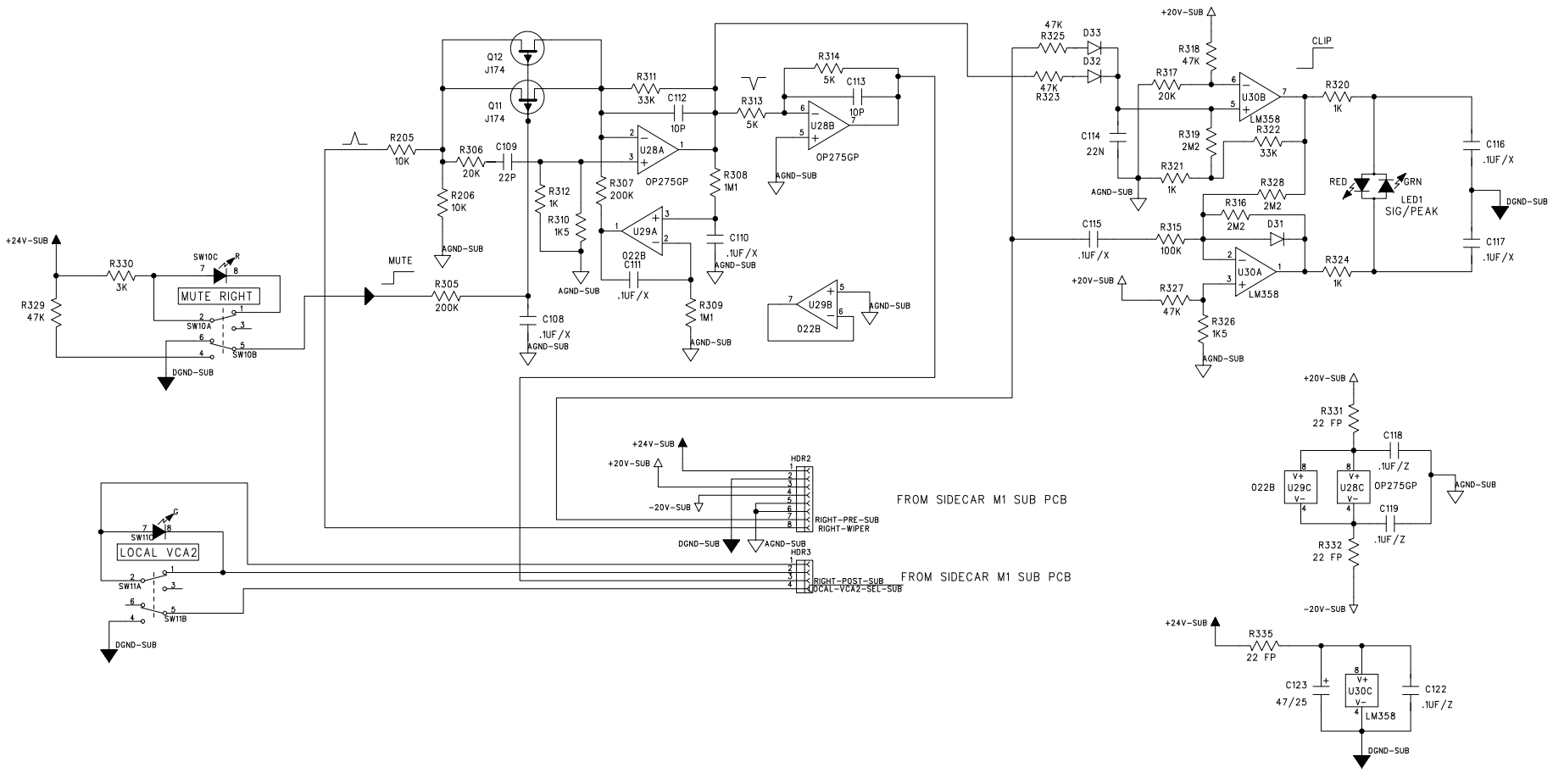




COMPANY:	CRESTAUDIO		
TITLE:	V12 SIDECAR MASTER 1 CONNECTOR		
ORG DRAWN: TAZ	DATED: 11/10/99	CODE:	SIZE: D
CHECKED:	DATED:	DRAWING NO: 76D4652	REV: A
CUR REV DRAWN:	DATED:	FILE NAME: V12SM1CA.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 3 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

SIDECAR MASTER1 MAIN SUB PCB



ORG DRAWN: TAZ	DATED: 11/10/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTER 1 CONNECTOR (SIDECAR MAST1 MAIN SUB PCB)	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4652	REV: A
		FILE NAME: V12SM1CA.SCH	
		SCALE:	SHEET: 4 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

18 WAY CON TO MAIN PCB

CON2-1 AUX-LO-PRE
CON2-2 AUX-LO-POST
CON2-3 AUX-HI-PRE
CON2-4 AUX-HI-POST
CON2-5 AUX-LO-MTR
CON2-6 AUX-HI-MTR
CON2-7 R406 10 FP +20V-SUB2 C150 47/25
CON2-8
CON2-9 R405 10 FP C149 47/25 -20V-SUB2
CON2-10
CON2-11
CON2-12
CON2-13 AGND-SUB2
CON2-14
CON2-15 DGND-SUB2
CON2-16
CON2-17 R404 10 FP +24V-SUB2 C148 47/25 DGND-SUB2
CON2-18

+20V-SUB2
R407 22 FP C151 .1UF/Z U31C OP275GP R408 22 FP C152 .1UF/Z -20V-SUB2
R409 22 FP C153 .1UF/Z U32C NJM022BD R410 22 FP C154 .1UF/Z
R411 22 FP C155 .1UF/Z U34C NJM022BD R412 22 FP C156 .1UF/Z
R413 22 FP C157 .1UF/Z U35C OP275GP R414 22 FP C158 .1UF/Z
R415 22 FP C159 .1UF/Z U37C NJM022BD R416 22 FP C160 .1UF/Z
AGND-SUB2

+24V-SUB2
R417 22 FP C163 47/25 C161 .1UF/Z U33C LM358 DGND-SUB2
R418 22 FP U36C C162 .1UF/Z C164 47/25 DGND-SUB2

VR2 R15 5K6 C120 10P R22 18K U31A OP275GP R346 5K AGND-SUB2
R333 10K R334 10K AGND-SUB2
Q14 J174 R338 20K C121 22P R344 825 R340 1K5 AGND-SUB2
C127 10P R339 33K U31B OP275GP R343 200K
U34A NJM022BD C125 .1UF/X R341 1M1 AGND-SUB2
C124 .1UF/X AGND-SUB2 R342 1M1
AUX-LO-POST
+24V-SUB2 R367 3K R368 47K SW12C MUTE AUX1 SW12A SW12B DGND-SUB2
200K R345 C126 .1UF/X AGND-SUB2

C132 .1UF/X R361 130K U32A NJM022BD R362 100K D35 D36 R364 200K R365 1M1 C133 .1UF/X
C134 .1UF/X R366 5K R363 499K U32B NJM022BD AUX-LO-MTR
AGND-SUB2

+20V-SUB2
47K R357 47K R355 D34 D24
R350 47K R349 20K U33B LM358 R352 1K CLIP
C128 22N R351 2M2 R354 33K R353 1K AGND-SUB2
R360 2M2 R348 2M2 D10 RED GRN LED2 SIG/PEAK C130 .1UF/X DGND-SUB2
C129 .1UF/X R347 100K U33A LM358 R356 1K C131 .1UF/X
+20V-SUB2 R359 47K R358 1K5 AGND-SUB2

VR3 R369 5K6 C135 10P R370 18K U35A OP275GP R381 5K AGND-SUB2
R371 10K R372 10K AGND-SUB2
Q19 J174 R373 20K C136 22P R379 825 R375 1K5 AGND-SUB2
C140 10P R374 33K U35B OP275GP R378 200K
U34B NJM022BD C138 .1UF/X R376 1M1 AGND-SUB2
C137 .1UF/X AGND-SUB2 R377 1M1
AUX-HI-POST
+24V-SUB2 R402 3K R403 47K SW13C MUTE AUX1 SW13A SW13B DGND-SUB2
200K R380 C139 .1UF/X AGND-SUB2

C145 .1UF/X R396 130K U37A NJM022BD R397 100K D40 D41 R399 200K R400 1M1 C146 .1UF/X
C147 .1UF/X R401 5K R398 499K U37B NJM022BD AUX-HI-MTR
AGND-SUB2

+20V-SUB2
47K R392 47K R390 D39 D38
R385 47K R384 20K U36B LM358 R387 1K CLIP
C141 22N R386 2M2 R389 33K R388 1K AGND-SUB2
R395 2M2 R383 2M2 D37 RED GRN LED3 SIG/PEAK C143 .1UF/X DGND-SUB2
C142 .1UF/X R382 100K U36A LM358 R391 1K C144 .1UF/X
+20V-SUB2 R394 47K R393 1K5 AGND-SUB2

SKT31 DIP 8 SKT32 DIP 8 SKT33 DIP 8 SKT34 DIP 8 SKT35 DIP 8 SKT36 DIP 8 SKT37 DIP 8
MH4 STOFF/440/790 MH3 STOFF/440/790
MECHANICAL PARTS

ORG DRAWN: TAZ	DATED: 11/10/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTER 1 CONNECTOR (SIDECAR MST1 AUX SUB PCB 1)	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4652	REV: A
		FILE NAME: V12SM1CA.SCH	
		SCALE:	SHEET: 5 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

18 WAY CON TO MAIN PCB

CON3-1 AUX-LO-PRE-SUB3
CON3-2 AUX-LO-POST-SUB3
CON3-3 AUX-HI-PRE-SUB3
CON3-4 AUX-HI-POST-SUB3
CON3-5 AUX-LO-MTR-SUB3
CON3-6 AUX-HI-MTR-SUB3
CON3-7 R491 10 FP +20V-SUB3 C193 47/25
CON3-8
CON3-9 R490 10 FP
CON3-10 C192 47/25 -20V-SUB3 AGND-SUB3
CON3-11
CON3-12
CON3-13
CON3-14
CON3-15 DGND-SUB3
CON3-16
CON3-17 R489 10 FP +24V-SUB3
CON3-18 C191 47/25 DGND-SUB3

+20V-SUB3
R492 22 FP C194 .1UF/Z U38C
R493 22 FP C195 .1UF/Z
R494 22 FP C196 .1UF/Z U39C
R495 22 FP C197 .1UF/Z
R496 22 FP C198 .1UF/Z U41C
R497 22 FP C199 .1UF/Z
R498 22 FP C200 .1UF/Z U42C
R499 22 FP C201 .1UF/Z
R500 22 FP C202 .1UF/Z U44C
R501 22 FP C203 .1UF/Z
OP275GP NJM022BD NJM022BD OP275GP NJM022BD
-20V-SUB3 AGND-SUB3

+24V-SUB3
R502 22 FP C204 .1UF/Z U40C LM358 C206 47/25 DGND-SUB3
R503 22 FP U43C LM358 C205 .1UF/Z C207 47/25 DGND-SUB3

VR4 R419 5K6 AGND-SUB3
C165 10P R420 18K OP275GP U38A
R431 5K AGND-SUB3
R421 10K R422 10K AGND-SUB3
D Q21 J174 S G
R423 20K C166 22P R429 825
C170 10P R424 33K OP275GP U38B
R425 1K5 AGND-SUB3
R428 200K
C168 .1UF/X R426 1M1 AGND-SUB3
U41A NJM022BD
R427 1M1 C167 .1UF/X AGND-SUB3
AUX-LO-POST-SUB3

+24V-SUB3 R452 3K R453 47K SW14C MUTE AUX1 SW14A SW14B DGND-SUB3
200K R430 C169 .1UF/X AGND-SUB3

C175 .1UF/X R446 130K R447 100K D45 U39A NJM022BD D46
R449 200K R450 1M1 C176 .1UF/X
C177 .1UF/X R448 499K U39B NJM022BD AUX-LO-MTR-SUB3
R451 5K AGND-SUB3

47K R442 47K R440 D44 D43
+20V-SUB3 R435 47K CLIP
R434 20K U40B LM358 R437 1K
C171 22N R436 2M2 R439 33K
AGND-SUB3 R438 1K R445 2M2
R433 2M2 D42 RED GRN LED4 SIG/PEAK
C172 .1UF/X R432 100K U40A LM358 R441 1K
+20V-SUB3 R444 47K R443 1K5 AGND-SUB3
C173 .1UF/X DGND-SUB3 C174 .1UF/X

VR5 R454 5K6 AGND-SUB3
C178 10P R455 18K OP275GP U42A
R466 5K AGND-SUB3
R456 10K R457 10K AGND-SUB3
D Q22 J174 S G
R458 20K C179 22P R464 825
C183 10P R459 33K OP275GP U42B
R460 1K5 AGND-SUB3
R463 200K
C181 .1UF/X R461 1M1 AGND-SUB3
U41B NJM022BD
R462 1M1 C180 .1UF/X AGND-SUB3
AUX-HI-POST-SUB3

+24V-SUB3 R487 3K R488 47K SW15C MUTE AUX1 SW15A SW15B DGND-SUB3
200K R465 C182 .1UF/X AGND-SUB3

C188 .1UF/X R481 130K R482 100K D50 U44A NJM022BD D51
R484 200K R485 1M1 C189 .1UF/X
C190 .1UF/X R483 499K U44B NJM022BD AUX-HI-MTR-SUB3
R486 5K AGND-SUB3

47K R477 47K R475 D49 D48
+20V-SUB3 R470 47K CLIP
R469 20K U43B LM358 R472 1K
C184 22N R471 2M2 R474 33K
AGND-SUB3 R473 1K R480 2M2
R468 2M2 D47 RED GRN LED5 SIG/PEAK
C185 .1UF/X R467 100K U43A LM358 R476 1K
+20V-SUB3 R479 47K R478 1K5 AGND-SUB3
C186 .1UF/X DGND-SUB3 C187 .1UF/X

SKT38 DIP 8 SKT39 DIP 8 SKT40 DIP 8 SKT41 DIP 8 SKT42 DIP 8 SKT43 DIP 8 SKT44 DIP 8
MH6 STOFF/440/790 MH5 STOFF/440/790
MECHANICAL PARTS

COMPANY:	CREST AUDIO		
TITLE:	V12 SIDECAR MASTER 1 CONNECTOR (SIDECAR MASTER AUX SUB PCB 2)		
ORG DRAWN: TAZ	DATED: 11/10/99	CODE:	SIZE: D
CHECKED:	DATED:	DRAWING NO: 76D4652	REV: A
CUR REV DRAWN:	DATED:	FILE NAME: V12SM1CA.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 6 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

40 WAY TRANS
TO CON PCB

HDR1-1 AUX5-PRE
HDR1-2 AUX5-POST
HDR1-3 AUX5-MTR
HDR1-4 LOCAL-AUX5-ISO
HDR1-5 AUX5-SOLO-DC
HDR1-6 AUX7-SOLO-DC
HDR1-7
HDR1-8 AUX7-PRE
HDR1-9 AUX7-POST
HDR1-10 AUX7-MTR
HDR1-11 LOCAL-AUX7-ISO
HDR1-12
HDR1-13 AUX1-SOLO-
HDR1-14 AUX1-SOLO+
HDR1-15 AUX3-SOLO-
HDR1-16 AUX3-SOLO+
HDR1-17 AUX1-SOLO-FET
HDR1-18 AUX3-SOLO-FET
HDR1-19 L/R-MONO+
HDR1-20 L/R-MONO-
HDR1-21 LR-SLAVE
HDR1-22 SPARE
HDR1-23 LEFT-PRE
HDR1-24 LEFT-POST
HDR1-25 RIGHT-PRE
HDR1-26 RIGHT-POST
HDR1-27 LED-CTRL
HDR1-28 PFL AFL/PFL-BUS
HDR1-29 OP-SOLO-DSBL
HDR1-30 OP-SOLO-CLEAR
HDR1-31 IP-SOLO-DC
HDR1-32
HDR1-33 +20V-FEED
HDR1-34
HDR1-35
HDR1-36
HDR1-37
HDR1-38 -20V-FEED
HDR1-39
HDR1-40 +24V-FEED

+5V C10 47/25

LD5
SW5C LOCAL VCA1 SW5A SW5B LOCAL-VCA1-SEL (TO PLG1-C30)
SW6E L/R TO MONO SW6D SW6A SW6B (TO HDR1-19) L/R-MONO+ SW6C L/R-MONO- (TO HDR1-20)
SW7C L/R ISOLATE SW7A SW7B LR-SLAVE (TO HDR1-21)
SW9C INPUT METERS POST SW9B SW9A
MTR-POST-CTRL (TO PLG1-C25)
Q25 2N5551 C31 47/25 R135 20K R134 47K R133 1K +24V
Q26 2N5551 R142 221 LED-CTRL R143 100

R126 10K R127 10K C29 10P R128 7K15 U12A TLE2082CP R129 3K R130 5K C30 22P R132 5K U12B TLE2082CP R131 2K5

LEFT-POST (TO HDR1-24)

LEFT-PRE (FROM HDR1-23) FAD1 LEFT FADER
R99 10K R102 20K C20 22P R100 10K R108 1K R106 1K5
Q24 J174 Q23 J174 R107 33K C23 10P U9A OP275GP R103 200K R104 1M1 C21 .1UF/X U10A 022B C22 .1UF/X R105 1M1
R109 5K R110 5K C24 10P U9B OP275GP
SW8C MUTE LEFT SW8A SW8B MUTE R101 200K C16 .1UF/X +24V R125 47K

47K R121 D12 D9 47K R119
+20V R114 47K R113 20K U11B LM358 R118 33K R115 2M2 R117 1K C25 22N
CLIP R116 1K C27 .1UF/X
RED LED1 SIG/PEAK GRN
R112 2M2 D4 R124 C26 .1UF/X R111 100K U11A LM358 R120 1K C28 .1UF/X
+20V R123 47K R122 1K5

BRK4 BRACKET PCB1 69400060 BRK5 BRACKET TH1 TOOLHOLE TH2 TOOLHOLE BC1 BC2 BRK6 KEY8190
SKT1 DIP 14 SKT2 DIP 14 SKT4 DIP 8 SKT5 DIP 16 SKT6 DIP 14 SKT7 DIP 14 SKT8 DIP 8 SKT9 DIP 8 SKT10 DIP 8 SKT11 DIP 8 SKT12 DIP 8 FP1 FPHOLE FP2 FPHOLE FP3 FPHOLE
BRK1 KEY8190 BRK2 KEY8190 BRK3 KEY8190
MECHANICAL PARTS

RIGHT-PRE (FROM HDR1-25) FAD2 RIGHT FADER RIGHT-WIPER
+24V +20V -20V HDR2 TO SIDECAR M1 SUB PCB
LD-SUB LD5 HDR3 TO SIDECAR M1 SUB PCB
LOCAL-VCA2-SEL (TO PLG1-C32)

+20V +10VA -20V
R147 20K C38 .1UF/Z VDD U5B VEE C39 .1UF/Z R161 20K R162 20K R148 20K 4053-NJR
R149 22 FP C40 .1UF/Z U4C C41 .1UF/Z R150 22 FP OP275GP
R151 22 FP C42 .1UF/Z U8C C43 .1UF/Z R152 22 FP OP275GP
R153 22 FP C44 .1UF/Z U10C U9C C45 .1UF/Z R154 22 FP 022B OP275GP
R157 22 FP C48 .1UF/Z U12C C49 .1UF/Z R158 22 FP TLE2082CP
C51 47/25 C52 47/25 C53 47/25 C54 47/25

74HC74 74HC00 74HC74 74HC00
+5V C33 .1UF/Z C34 .1UF/Z C35 .1UF/Z C36 .1UF/Z U1C U2E U6C U7E VDD VSS
+24V R146 22 FP C55 47/25 U11C LM358 C37 .1UF/Z C50 47/25

ORG DRAWN: TAZ	DATED: 11/11/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTER1 MAIN PCB1	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4653	REV: A
		FILE NAME: V12SM1MA.SCH	
		SCALE:	SHEET: 1 OF 2

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

AUX5 SOLO

AUX7 SOLO

AUX5 ISO

AUX7 ISO

64 WAY A/C DIN MALE R/A

18 WAY RIBBON JUMPER
TO SUB PCB

CON1-1	AUX5-PRE	(FROM HDR1-1)
CON1-2	AUX5-POST	(TO HDR1-2)
CON1-3	AUX7-PRE	(FROM HDR1-8)
CON1-4	AUX7-POST	(TO HDR1-9)
CON1-5	AUX5-MTR	(TO HDR1-3)
CON1-6	AUX7-MTR	(TO HDR1-10)
CON1-7	+20V	
CON1-8		
CON1-9		
CON1-10		
CON1-11		
CON1-12		
CON1-13		
CON1-14		
CON1-15		
CON1-16		
CON1-17		
CON1-18	+24V	

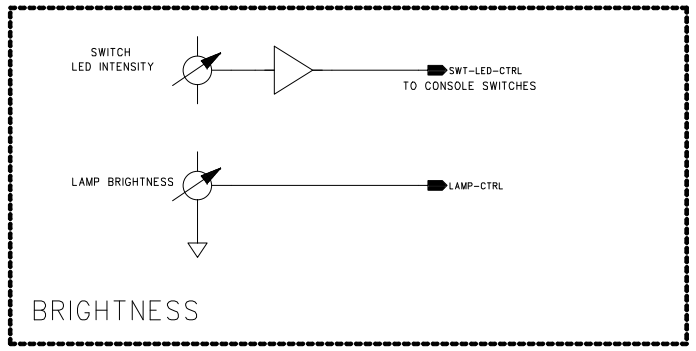
ORG DRAWN: TAZ	DATED: 11/11/99
CHECKED:	DATED:
CUR REV DRAWN:	DATED:
RELEASED:	DATED:

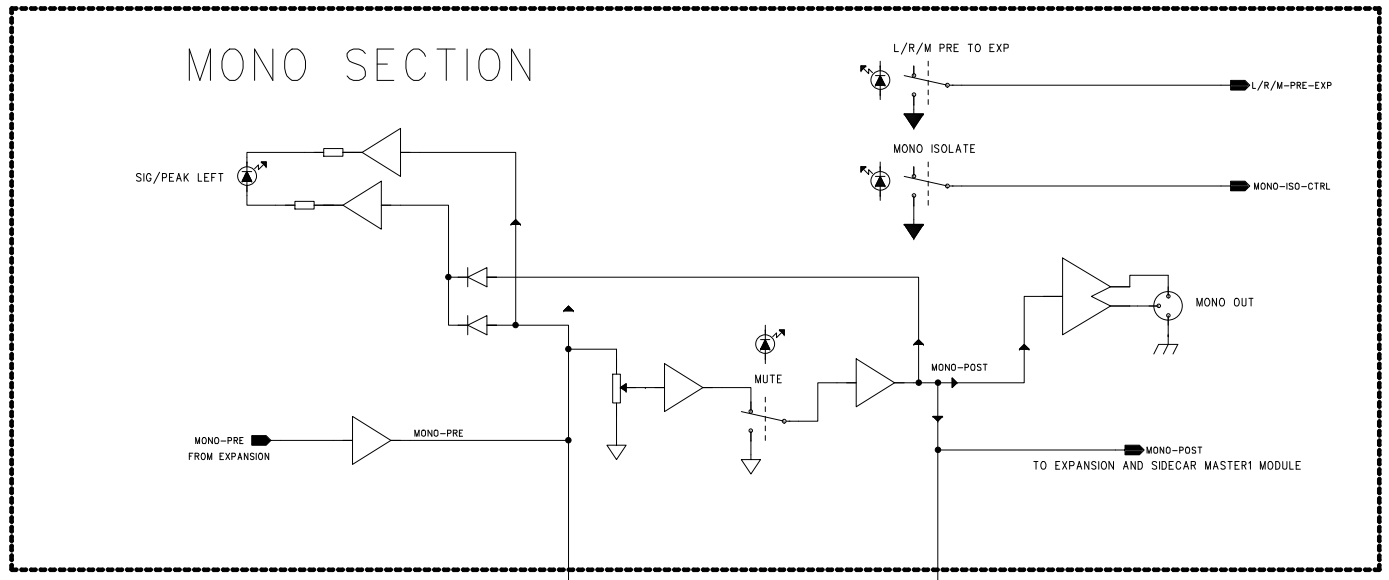
COMPANY: CRESTAUDIO

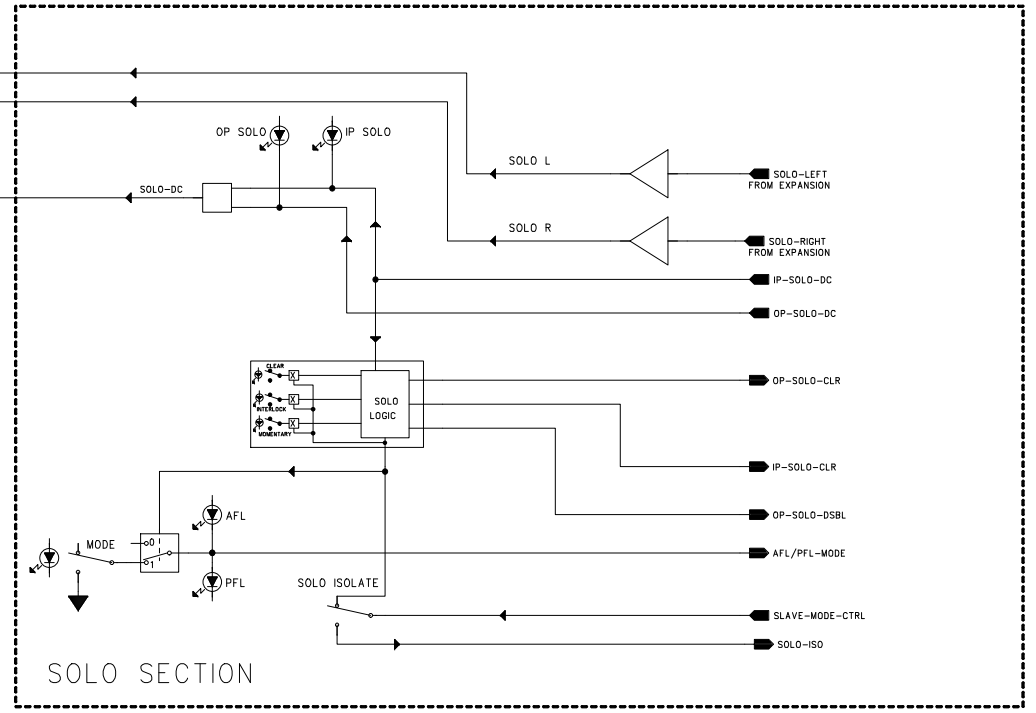
TITLE: V12 SIDECAR MASTER1 MAIN PCB

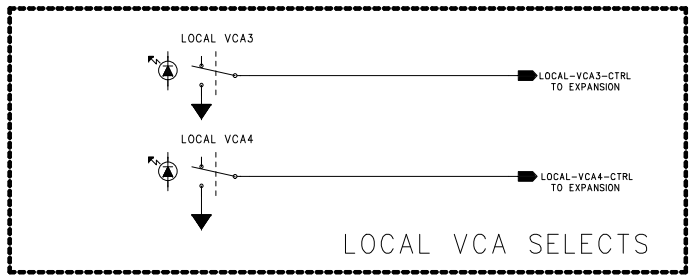
CODE:	SIZE:	DRAWING NO:	REV:
	D	76D4653	A
		FILE NAME: V12SM1MA.SCH	
SCALE:		SHEET: 2 OF 2	

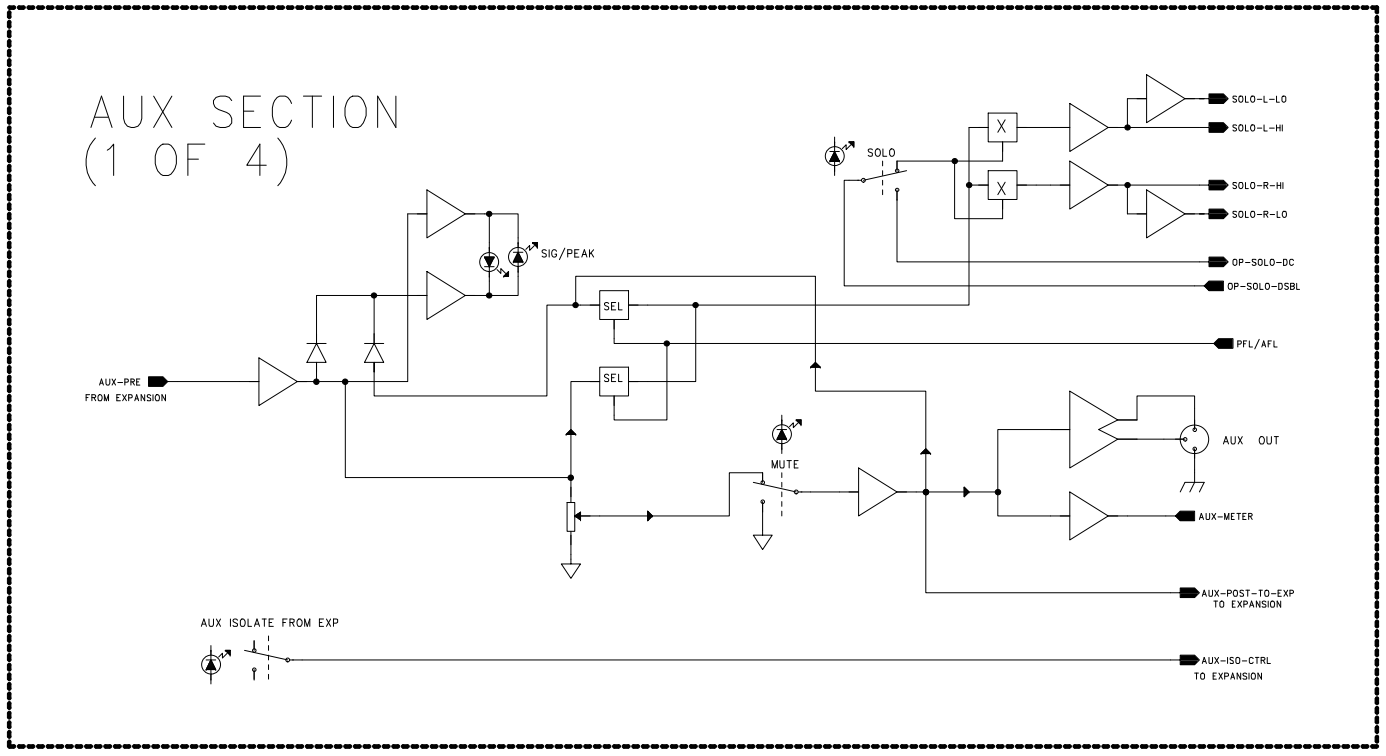
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

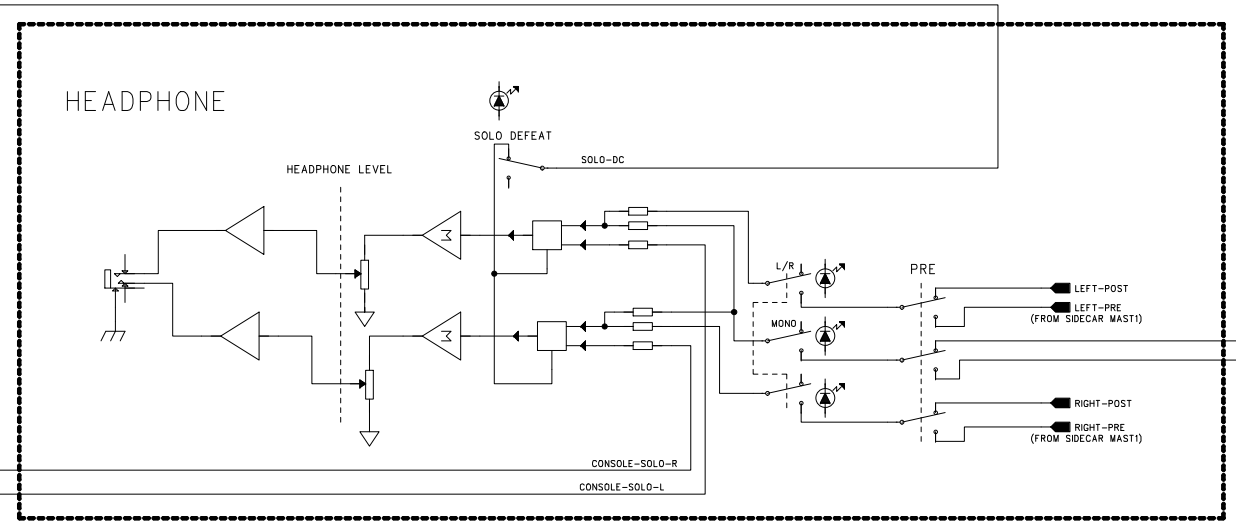












ORG DRAWN: TAZ	DATED: 9/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTER2 SIG FLOW	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO:	REV:
		FILE NAME: V12SM2BK.SCH	
		SCALE:	SHEET: 1 OF 1

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

HEADPHONE SECTION

HEADPHONE AMP

HEADPHONES

HDPH1

HS1
HEATSINK-DIP8

SW4C
SOLO OFF
SW4B
SW4A
(FROM AUX2 ISO LED)
LD5
+24V
R53 63K4
R59 47K
R54 15K
R55 10K
2N5551 Q5
R56 63K4
R60 47K
D5
R57 15K
R62 200K
R58 10K
Q6 2N5551
R61 200K
C14 .1UF/X
C15 .1UF/X
D7
D6
(FROM PLG2-A/C15)
OP-SOLO-DC
IP-SOLO-DC
(FROM HDR1-31)

R31 20K
R25 20K
R26 15K
R28 15K
R27 20K
R33 20K
R32 15K
R34 15K
Q3 J174
Q1 J174
Q2 J174
Q4 J174
R29 20K
C6 22P
R37 22
R42 20K
R43 20K
R30 20K
C7 22P
R44 22
R41 1M1
C11 .1UF/X
R39 1M1
R38 100K
C9 .1UF/X
R35 100K
C8 .1UF/X
R36 1M1
C10 .1UF/X
U4A 022B
U3A OP275GP
U3B OP275GP
U4B 022B

VR3A 10K
R63 2K5
C16 22P
R64 7K15
U7A OP275GP
VR3B 10K
R65 2K5
C19 22P
R74 7K15
U7B OP275GP

R1 47K
C1 22P
U1A 0.372
R2 10K
HPHN-L
R3 8K2
D1
D2
22 FP R7
+20V
R9 22 FP
R11 0
HP_GND
C4 100/25
C3 100/25
U1C 0.372
R10 22 FP
-20V
D4
R4 47K
C2 22P
U1B 0.372
R5 10K
HPHN-R
R6 8K2
D3
22 FP R8

SOLO-L
(FROM PLG1-A28)
+4dBu
R66 10K
R67 10K
C17 10P
U6B OP275GP
R68 5K

SOLO-R
(FROM PLG1-C28)
+4dBu
R69 10K
R70 10K
C18 10P
U6A OP275GP
R71 5K

LED-CTRL
(HDR1-27)
R73 221
Q7 2N5551
R72 100

PRE
SW1E
SW1D
SW1A
SW1B
SW1C
L/R TO HPHN
SW2E
SW2D
SW2A
SW2B
SW2C
MONO TO HPHN
SW3C
SW3B
SW3A

(FROM PLG1-A19)
LEFT-PRE
(FROM PLG1-A20)
RIGHT-PRE
(FROM PLG1-A18)
MONO-PRE
(FROM PLG1-C19)
LEFT-POST
(FROM PLG1-C20)
RIGHT-POST
MONO-POST
(FROM HDR1-24)
+4dBu

MONO-HPHN
L-HPHN
R-HPHN
15K R46
R45 10K
R52 10K
C13 10P
U5A OP275GP
R51 3K
15K R47
R48 10K
R49 10K
C12 10P
U5B OP275GP
R50 3K

C5 .1UF/X
R14 20K
VR1 10K
R13 10K
R17 33K
R12 221
+5V
R16 10K
U2A LM358
R20 22
R23 2K
R21 2K
U2B LM358
R24 22
+24V
R19 10K NU
VR2 10K
R18 0
LAMP-DIM
(TO PLG1-A4)
LED-BRITE
(TO HDR1-22)

COMPANY:	CREST AUDIO		
TITLE:	V12 SIDECAR MASTER 2 CONNECTOR		
ORG DRAWN: TAZ	DATED: 3/24/00	CODE:	SIZE: D
CHECKED:	DATED:	DRAWING NO: 76D4655	REV: B
CUR REV DRAWN:	DATED:	FILE NAME: V12SM2CB.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 1 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

AUX2 SOLO

AUX4 SOLO

AUX2-SOLO-DC (TO D22)

AUX2-SOLO-FET (TO HDR1-17)

AUX4-SOLO-DC (TO D23)

AUX4-SOLO-FET (TO HDR1-18)

OP-SOLO-CLEAR (FROM HDR1-30)

OP-SOLO-DSBL (FROM HDR1-29)

AUX2 ISO

AUX4 ISO

LD5 (TO HPHN SOLO OFF LED)

LOCAL-AUX2-ISO (TO PLG1-C21)

LOCAL-AUX4-ISO (TO PLG1-C22)

AUX2-PRE (FROM PLG1-A11)

AUX2-POST (FROM CON1-2)

AUX4-PRE (FROM PLG1-A13)

AUX4-POST (FROM CON1-4)

PFL

AFL/PFL-BUS (FROM HDR1-28)

AUX2-SOLO- (TO HDR1-13)

AUX2-SOLO+ (TO HDR1-14)

AUX4-SOLO- (TO HDR1-15)

AUX4-SOLO+ (TO HDR1-16)

18 WAY RIBBON JUMPER TO SUB PCB

CON1-1 AUX2-PRE
CON1-2 AUX2-POST
CON1-3 AUX4-PRE
CON1-4 AUX4-POST
CON1-5 AUX2-MTR
CON1-6 AUX4-MTR
CON1-7 +20V
CON1-8
CON1-9
CON1-10
CON1-11 -20V
CON1-12
CON1-13
CON1-14
CON1-15
CON1-16
CON1-17
CON1-18 +24V

AUX2-POST (FROM CON1-2) +4dBu

AUX4-POST (FROM CON1-4) +4dBu

AUX6-POST (FROM HDR1-2) +4dBu

AUX8-POST (FROM HDR1-9) +4dBu

AUX2 OUT J4

AUX4 OUT J5

AUX6 OUT J6

AUX8 OUT J7

RELAY-CTRL

COMPANY:	CREST AUDIO		
TITLE:	V12 SIDECAR MASTER 2 CONNECTOR		
ORG DRAWN: TAZ	DATED: 3/24/00		
CHECKED:	DATED:	CODE:	SIZE: D
CUR REV DRAWN:	DATED:	DRAWING NO: 76D4655	REV: B
RELEASED:	DATED:	FILE NAME: V12SM2CB.SCH	
SCALE:		SHEET: 2 OF 6	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

40 WAY TRANS
TO MAIN PCB

HDR1-1 AUX6-PRE
HDR1-2 AUX6-POST
HDR1-3 AUX6-MTR
HDR1-4 LOCAL-AUX6-ISO
HDR1-5 AUX6-SOLO-DC
HDR1-6 AUX8-SOLO-DC
HDR1-7
HDR1-8 AUX8-PRE
HDR1-9 AUX8-POST
HDR1-10 AUX8-MTR
HDR1-11 LOCAL-AUX8-ISO
HDR1-12 OP-SOLO-DC
HDR1-13 AUX2-SOLO-
HDR1-14 AUX2-SOLO+
HDR1-15 AUX4-SOLO-
HDR1-16 AUX4-SOLO+
HDR1-17 AUX2-SOLO-FET
HDR1-18 AUX4-SOLO-FET
HDR1-19 SOLO-TALLY
HDR1-20 L/R/M-MST-PRE
HDR1-21 MONO-SLAVE
HDR1-22 LED-BRITE
HDR1-23 MONO-PRE
HDR1-24 MONO-POST
HDR1-25 SOLO-ISOLATE
HDR1-26 SLAVE-CTRL
HDR1-27 LED-CTRL
HDR1-28 AFL/PFL-BUS
HDR1-29 OP-SOLO-DSBL
HDR1-30 OP-SOLO-CLEAR
HDR1-31 IP-SOLO-DC
HDR1-32
HDR1-33 R244 10 FP +20V C52 47/25 C53 47/25 +5V
HDR1-34
HDR1-35 R243 10 FP C51 47/25 -20V
HDR1-36
HDR1-37
HDR1-38
HDR1-39 R242 10 FP +24V C50 47/25
HDR1-40

RELAY-CTRL (TO RL2 PIN1)
+24V R233 63K4 R234 15K R235 10K
R236 47K Q12 2N5551 Q11 2N5551

64 WAY DIN CON

LAMP-DIM PLG1-A4
OP-ENABLE PLG1-C4
AUX2-MTR R237 10K PLG1-C5
AUX4-MTR R238 10K PLG1-C6
AUX6-MTR R239 10K PLG1-C7
AUX8-MTR R240 10K PLG1-C8
AUX2-PRE PLG1-A11
AUX2-POST PLG1-C11
AUX4-PRE PLG1-A13
AUX4-POST PLG1-C13
AUX6-PRE PLG1-A15
AUX6-POST PLG1-C15
AUX8-PRE PLG1-A17
AUX8-POST PLG1-C17
MONO-PRE PLG1-A18
MONO-POST PLG1-C18
LEFT-PRE PLG1-A19
LEFT-POST PLG1-C19
RIGHT-PRE PLG1-A20
RIGHT-POST PLG1-C20
LOCAL-AUX2-ISO PLG1-C21
LOCAL-AUX4-ISO PLG1-C22
LOCAL-AUX6-ISO PLG1-C23
LOCAL-AUX8-ISO PLG1-C24
MONO-SLAVE PLG1-A26
SLAVE-CTRL PLG1-A27
SOLO-ISOLATE PLG1-C26
L/R/M-MST-PRE PLG1-A25

PLG1-A6 PLG1-A3 PLG1-A1 PLG1-C2 PLG1-C3 PLG1-C1 PLG1-A2 PLG1-A8
PLG1-A10 PLG1-C10 PLG1-A12 PLG1-C12 PLG1-A14 PLG1-C14 PLG1-A5 PLG1-C16 PLG1-C9 PLG1-A7 PLG1-A22 PLG1-A23 PLG1-A9 PLG1-C25 PLG1-A24 PLG1-C31 PLG1-A16 PLG1-A21

+5V R241 499K SOLO-L SOLO-R
OP-SOLO-CLEAR
PLG1-C29 PLG1-A28 PLG1-C28 PLG1-A29 PLG1-A30 PLG1-C30 PLG1-C27 PLG1-A31 PLG1-A32 PLG1-C32
SOLO-TALLY R289 10K

MECHANICAL PARTS

PCB1
69400062
TH1 TH2 TH3 TH4
ST1 STOFF/440/790 BC1
ST2 STOFF/440/790 BC2
FP1 FPHOLE FP2 FPHOLE FP3 FPHOLE
SKT2 SKT3 SKT4 SKT5 SKT6 DIP 8
SKT7 SKT8 SKT9 SKT10 DIP 8 DIP 14
SKT11 SKT12 SKT13 SKT14 SKT15 DIP 16 DIP 14 DIP 14 DIP 8 DIP 8
SKT16 SKT17 SKT18 SKT19 SKT20 DIP 8
SKT21 SKT22 SKT23 SKT24 SKT25 DIP 8
SKT26 SKT27 SKT28 DIP 8
FROM CONSOLE GROUNDING BAR
LOCATED TO METAL ATTACHED TO BRKT'S
BRKT4 KEY8190
BRKT1 KEY8190 BRKT2 KEY8190
MODULE CENTRAL ANALOG GROUNDING POINT

+20V C112 47/25 C113 47/25 C114 47/25
C115 47/25 C116 47/25 C117 47/25 -20V

LEFT-POST (FROM PLG1-C19) +4dBu
R186 10K R187 10K R188 10K R189 10K R190 10K R191 10K R192 5K6 R193 5K6 R194 5K R195 47 R196 47 R197 5K R198 5K R199 0 R200 0
C41 22P C42 22P C43 10P
U21A U22A U22B OP275GP NJM2114D
T1 NU LEFT OUT J1

RIGHT-POST (FROM PLG1-C20) +4dBu
R201 10K R202 10K R203 10K R204 10K R205 10K R206 10K R207 5K6 R208 5K6 R209 5K R210 47 R211 47 R212 5K R213 5K R214 0 R215 0
C44 22P C45 22P C46 10P
U21B U23A U23B OP275GP NJM2114D
T2 NU RIGHT OUT J2

+24V R216 1K NU D20 RL3 LX203
RELAY-CTRL
R217 1K NU D21 RL4

MONO-POST (FROM HDR1-24) +4dBu
R218 10K R219 10K R220 10K R221 10K R222 10K R223 10K R224 5K6 R225 5K6 R226 5K R227 47 R228 47 R229 5K R230 5K R231 0 R232 0
C47 22P C48 22P C49 10P
U24A U24B U25A U25B OP275GP NJM2114D
T3 NU MONO OUT J3
CHASSIS GND
KEY8190 BRKT3

PLG2-A1 PLG2-C1 PLG2-A2 PLG2-C2 PLG2-A3 PLG2-C3 PLG2-A4 PLG2-C4 PLG2-A5 PLG2-C5 PLG2-A6 PLG2-C6 PLG2-A7 PLG2-C7 PLG2-A8 PLG2-C8 PLG2-A9 PLG2-C9 PLG2-A10 PLG2-C10 PLG2-A11 PLG2-C11

+5V R246 499K
OP-SOLO-DSBL
AUX2-SOLO-DC D22
AUX4-SOLO-DC D23
AUX6-SOLO-DC D25
AUX8-SOLO-DC D24
R245 100
OP-SOLO-DC
PLG2-A12 PLG2-C12 PLG2-A13 PLG2-C13 PLG2-A14 PLG2-C14 PLG2-A15 PLG2-C15 PLG2-A16 PLG2-C16
32 WAY DIN CONN

+20V
R249 22 FP C56 .1UF/Z U3C R250 22 FP OP275GP 022B
R251 22 FP C58 .1UF/Z U4C R252 22 FP OP275GP
R253 22 FP C60 .1UF/Z U5C R254 22 FP OP275GP
R255 22 FP C62 .1UF/Z U6C R256 22 FP OP275GP
R257 22 FP C64 .1UF/Z U7C R258 22 FP OP275GP
R259 22 FP C66 .1UF/Z U21C R260 22 FP OP275GP
R261 22 FP C68 .1UF/Z U10C R262 22 FP OP275GP
R263 22 FP C70 .1UF/Z U14C R264 22 FP OP275GP
R265 22 FP C72 .1UF/Z U15C R266 22 FP OP275GP
R266 22 FP C73 .1UF/Z U16C NJM2114D
-20V

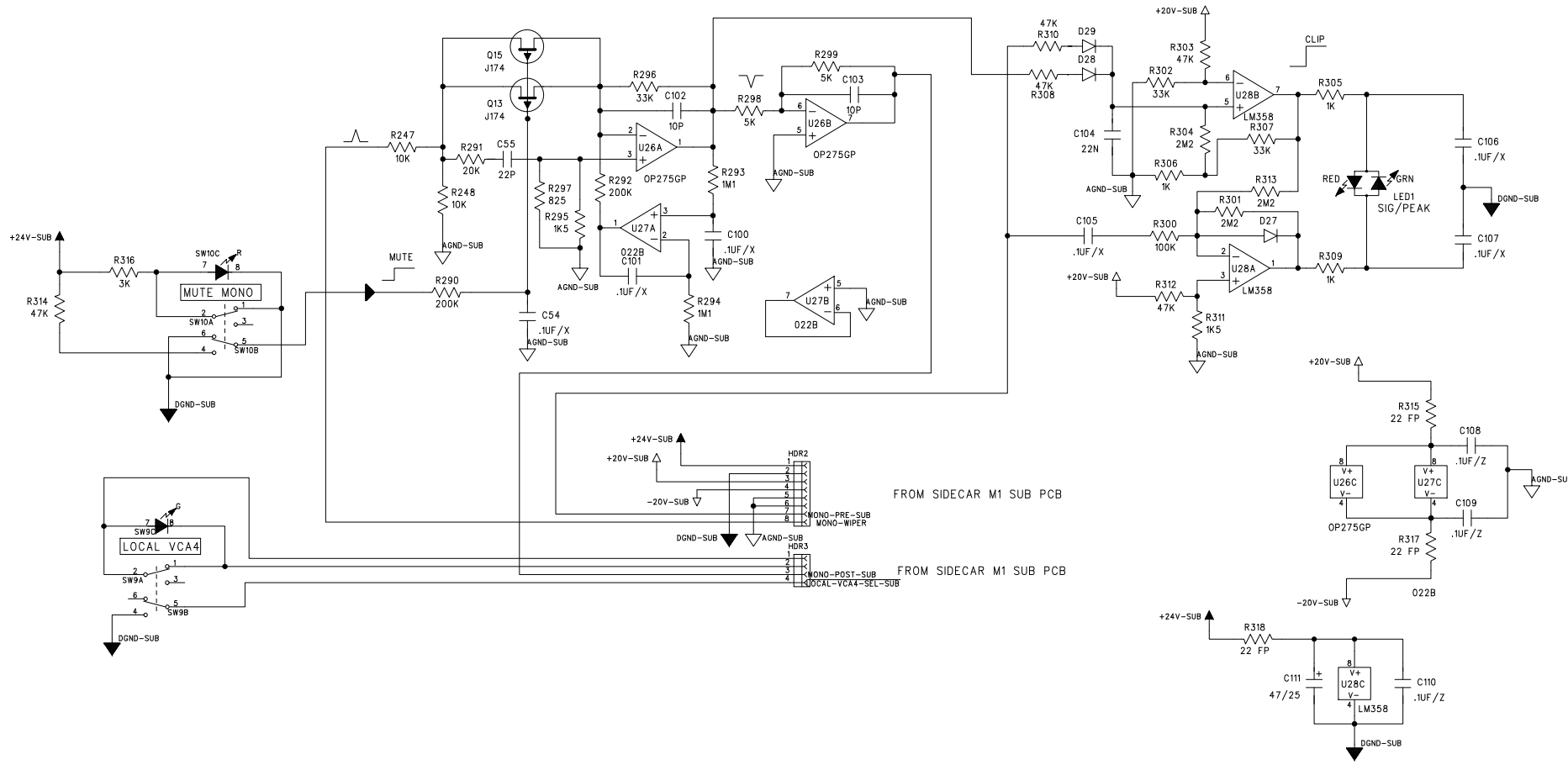
+20V
R267 22 FP C74 .1UF/Z U17C R268 22 FP NJM2114D
R269 22 FP C76 .1UF/Z U18C R270 22 FP OP275GP
R271 22 FP C78 .1UF/Z U19C R272 22 FP NJM2114D
R273 22 FP C80 .1UF/Z U20C R274 22 FP NJM2114D
R275 22 FP C82 .1UF/Z U22C R276 22 FP NJM2114D
R277 22 FP C84 .1UF/Z U23C R278 22 FP NJM2114D
R279 22 FP C86 .1UF/Z U24C R280 22 FP OP275GP
R281 22 FP C88 .1UF/Z U25C R282 22 FP NJM2114D
+10VA R287 20K C92 .1UF/Z U11B VEE R288 20K R286 20K 4053-NJR
R285 20K C93 .1UF/Z
-20V

+24V R283 475 78L05 REG1 +5V C94 47/25 C95 47/25 C90 .1UF/Z
U14 U8C 74HC74 C91 .1UF/Z
U12C 74HC74 C96 .1UF/Z
U9E 74HC00 C97 .1UF/Z
U13E 74HC00 C98 .1UF/Z
+24V R284 22 FP U2C LM358 C99 .1UF/Z

COMPANY:	CREST AUDIO		
TITLE:	V12 SIDECAR MASTER 2 CONNECTOR		
ORG DRAWN: TAZ	DATED: 3/24/00	CODE:	SIZE: D
CHECKED:	DATED:	DRAWING NO: 76D4655	REV: B
CUR REV DRAWN:	DATED:	FILE NAME: V12SM2CB.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 3 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

SIDECAR MASTER2 MAIN SUB PCB



REVISION RECORD					
REV LEVEL	ASMBLY LEVEL	DATE	ECO	ENG.	DESCRIPTION
A	A	11/10/99		TAZ	PROTOTYPE BUILD
B	A	3/24/00	DCO 1087	TAZ	– CORRECT PINOUT ON PLG1 – ADD MISSING DGND–SUB TO SW10A PIN1 – COPPER RE–TRACK ON SUB PCB'S TO REDUCE SIG PRES BLEED ON AUX HI POST FEED. – SIG–PRES: CHANGE – R349,384: 20K0–33K2 (AUX LO & AUX HI RESP.) – +5V REG: CHANGE – R283: 1K0–475R – MONO POST: CHANGE – R297: 1K0–825R (MUTE TRIM)

ORG DRAWN: TAZ	DATED: 3/24/00	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTER 2 CONNECTOR (SIDECAR MAST2 MAIN SUB PCB)	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4652	REV: B
		FILE NAME: V12SM2CB.SCH	
		SCALE:	SHEET: 4 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

18 WAY CON TO MAIN PCB

CON2-1 AUX-LO-PRE
CON2-2 AUX-LO-POST
CON2-3 AUX-HI-PRE
CON2-4 AUX-HI-POST
CON2-5 AUX-LO-MTR
CON2-6 AUX-HI-MTR
CON2-7 — R406 10 FP — +20V-SUB2 — C150 47/25
CON2-8
CON2-9 — R405 10 FP — C149 47/25 -20V-SUB2
CON2-10
CON2-11
CON2-12
CON2-13 — AGND-SUB2
CON2-14
CON2-15 — DGND-SUB2
CON2-16
CON2-17 — R404 10 FP — +24V-SUB2 — C148 47/25 — DGND-SUB2
CON2-18

+20V-SUB2 — R407 22 FP — C151 .1UF/Z — U31C — C152 .1UF/Z — R408 22 FP — OP275GP — -20V-SUB2
R409 22 FP — C153 .1UF/Z — U32C — C154 .1UF/Z — R410 22 FP — NJM022BD
R411 22 FP — C155 .1UF/Z — U34C — C156 .1UF/Z — R412 22 FP — NJM022BD
R413 22 FP — C157 .1UF/Z — U35C — C158 .1UF/Z — R414 22 FP — OP275GP
R415 22 FP — C159 .1UF/Z — U37C — C160 .1UF/Z — R416 22 FP — NJM022BD
AGND-SUB2

+24V-SUB2 — R417 22 FP — C163 47/25 — C161 .1UF/Z — U33C — LM358 — DGND-SUB2
R418 22 FP — U36C — C162 .1UF/Z — C164 47/25 — LM358 — DGND-SUB2

VR6 — R15 5K6 — C120 10P — R22 18K — U31A OP275GP — R346 5K — AGND-SUB2
R333 10K — R334 10K — AGND-SUB2
Q14 J174 (D, S, G)
R338 20K — C121 22P — R344 825 — C127 10P — R339 10K — U31B OP275GP — AUX-LO-POST
+24V-SUB2 — R367 3K — R368 47K — SW12C — MUTE AUX1 — SW12A — SW12B — DGND-SUB2
200K R345 — C126 .1UF/X — AGND-SUB2
R340 1K5 — AGND-SUB2
C125 .1UF/X — R341 1M1 — AGND-SUB2
R343 200K — U34A NJM022BD — R342 1M1 — C124 .1UF/X — AGND-SUB2

R362 100K — D35 — C132 .1UF/X — R361 130K — U32A NJM022BD — D36 — R364 200K — R365 1M1 — C133 .1UF/X
C134 .1UF/X — R363 499K — U32B NJM022BD — AUX-LO-MTR
R366 5K — AGND-SUB2

47K R357 — D34 — 47K R355 — D24
+20V-SUB2 — R350 47K — R349 33K — U33B — LM358 — R352 1K — CLIP
C128 22N — R351 2M2 — R354 33K — R353 1K — AGND-SUB2
R360 2M2 — R348 2M2 — D10 — RED LED2 GRN SIG/PEAK — C130 .1UF/X — DGND-SUB2
C129 .1UF/X — R347 100K — U33A — LM358 — R356 1K — C131 .1UF/X
+20V-SUB2 — R359 47K — R358 1K5 — AGND-SUB2

VR7 — R369 5K6 — C135 10P — R370 18K — U35A OP275GP — R381 5K — AGND-SUB2
R371 10K — R372 10K — AGND-SUB2
Q19 J174 (D, S, G)
R373 20K — C136 22P — R379 825 — C140 10P — R374 10K — U35B OP275GP — AUX-HI-POST
+24V-SUB2 — R402 3K — R403 47K — SW13C — MUTE AUX1 — SW13A — SW13B — DGND-SUB2
200K R380 — C139 .1UF/X — AGND-SUB2
R375 1K5 — AGND-SUB2
C138 .1UF/X — R376 1M1 — AGND-SUB2
R378 200K — U34B NJM022BD — R377 1M1 — C137 .1UF/X — AGND-SUB2

R397 100K — D40 — C145 .1UF/X — R396 130K — U37A NJM022BD — D41 — R399 200K — R400 1M1 — C146 .1UF/X
C147 .1UF/X — R398 499K — U37B NJM022BD — AUX-HI-MTR
R401 5K — AGND-SUB2

47K R392 — D39 — 47K R390 — D38
+20V-SUB2 — R385 47K — R384 33K — U36B — LM358 — R387 1K — CLIP
C141 22N — R386 2M2 — R389 33K — R388 1K — AGND-SUB2
R395 2M2 — R383 2M2 — D37 — RED LED3 GRN SIG/PEAK — C143 .1UF/X — DGND-SUB2
C142 .1UF/X — R382 100K — U36A — LM358 — R391 1K — C144 .1UF/X
+20V-SUB2 — R394 47K — R393 1K5 — AGND-SUB2

SKT31 DIP 8 | SKT32 DIP 8 | SKT33 DIP 8 | SKT34 DIP 8 | SKT35 DIP 8 | SKT36 DIP 8 | SKT37 DIP 8
MH4 STOFF/440/790 MH3 STOFF/440/790
MECHANICAL PARTS

ORG DRAWN: TAZ	DATED: 3/24/00	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTER 2 CONNECTOR (SIDECAR MST2 AUX SUB PCB 1)	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4652	REV: B
		FILE NAME: V12SM2CB.SCH	
		SCALE:	SHEET: 5 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

18 WAY CON TO MAIN PCB

CON3-1 AUX-LO-PRE-SUB3
CON3-2 AUX-LO-POST-SUB3
CON3-3 AUX-HI-PRE-SUB3
CON3-4 AUX-HI-POST-SUB3
CON3-5 AUX-LO-MTR-SUB3
CON3-6 AUX-HI-MTR-SUB3
CON3-7 R491 10 FP +20V-SUB3 C193 47/25
CON3-8
CON3-9 R490 10 FP
CON3-10 C192 47/25 -20V-SUB3 AGND-SUB3
CON3-11
CON3-12
CON3-13
CON3-14
CON3-15 DGND-SUB3
CON3-16
CON3-17 R489 10 FP +24V-SUB3
CON3-18 C191 47/25 DGND-SUB3

+20V-SUB3
R492 22 FP C194 .1UF/Z U38C
R494 22 FP C196 .1UF/Z U39C
R496 22 FP C198 .1UF/Z U41C
R498 22 FP C200 .1UF/Z U42C
R500 22 FP C202 .1UF/Z U44C
C195 .1UF/Z R493 22 FP OP275GP
C197 .1UF/Z R495 22 FP NJM022BD
C199 .1UF/Z R497 22 FP NJM022BD
C201 .1UF/Z R499 22 FP OP275GP
C203 .1UF/Z R501 22 FP NJM022BD
-20V-SUB3
AGND-SUB3

+24V-SUB3
R502 22 FP C204 .1UF/Z C206 47/25 U40C LM358
R503 22 FP C205 .1UF/Z C207 47/25 U43C LM358
DGND-SUB3
DGND-SUB3

VR4 R419 5K6 AGND-SUB3
C165 10P R420 18K OP275GP U38A
R431 5K AGND-SUB3
R421 10K
R422 10K AGND-SUB3
Q21 J174
R423 20K
C166 22P
R429 825
C170 10P R424 10K OP275GP U38B
R425 1K5
AGND-SUB3
R428 200K
C168 .1UF/X R426 1M1 AGND-SUB3
U41A NJM022BD
R427 1M1
C167 .1UF/X AGND-SUB3
AUX-LO-POST-SUB3

+24V-SUB3
R452 3K
R453 47K
SW14C SW14A SW14B MUTE AUX1
DGND-SUB3
DGND-SUB3
200K R430
C169 .1UF/X AGND-SUB3

C175 .1UF/X R446 130K
C177 .1UF/X
R447 100K D45 U39A NJM022BD D46
R449 200K R450 1M1 C176 .1UF/X
R448 499K U39B NJM022BD AUX-LO-MTR-SUB3
R451 5K AGND-SUB3

47K R442 D44
47K R440 D43
+20V-SUB3
R435 47K CLIP
R434 33K U40B LM358
C171 22N R436 2M2 R439 33K
AGND-SUB3 R438 1K
R445 2M2
R433 2M2 D42
C172 .1UF/X R432 100K U40A LM358
+20V-SUB3 R444 47K R443 1K5 AGND-SUB3
R437 1K
RED GRN LED4 SIG/PEAK
R441 1K
C173 .1UF/X
C174 .1UF/X
DGND-SUB3

VR5 R454 5K6 AGND-SUB3
C178 10P R455 18K OP275GP U42A
R466 5K AGND-SUB3
R456 10K
R457 10K AGND-SUB3
Q22 J174
R458 20K
C179 22P
R464 825
C183 10P R459 10K OP275GP U42B
R460 1K5
AGND-SUB3
R463 200K
C181 .1UF/X R461 1M1 AGND-SUB3
U41B NJM022BD
R462 1M1
C180 .1UF/X AGND-SUB3
AUX-HI-POST-SUB3

+24V-SUB3
R487 3K
R488 47K
SW15C SW15A SW15B MUTE AUX1
DGND-SUB3
DGND-SUB3
200K R465
C182 .1UF/X AGND-SUB3

C188 .1UF/X R481 130K
C190 .1UF/X
R482 100K D50 U44A NJM022BD D51
R484 200K R485 1M1 C189 .1UF/X
R483 499K U44B NJM022BD AUX-HI-MTR-SUB3
R486 5K AGND-SUB3

47K R477 D49
47K R475 D48
+20V-SUB3
R470 47K CLIP
R469 33K U43B LM358
C184 22N R471 2M2 R474 33K
AGND-SUB3 R473 1K
R480 2M2
R468 2M2 D47
C185 .1UF/X R467 100K U43A LM358
+20V-SUB3 R479 47K R478 1K5 AGND-SUB3
R472 1K
RED GRN LED5 SIG/PEAK
R476 1K
C186 .1UF/X
C187 .1UF/X
DGND-SUB3

SKT38 DIP 8 SKT39 DIP 8 SKT40 DIP 8 SKT41 DIP 8 SKT42 DIP 8 SKT43 DIP 8 SKT44 DIP 8
MH6 STOFF/440/790 MH5 STOFF/440/790
MECHANICAL PARTS

COMPANY:	CREST AUDIO		
TITLE:	V12 SIDECAR MASTER 2 CONNECTOR (SIDECAR MST2 AUX SUB PCB 2)		
ORG DRAWN: TAZ	DATED: 3/24/00	CODE:	SIZE: D
CHECKED:	DATED:	DRAWING NO: 76D4655	REV: B
CUR REV DRAWN:	DATED:	FILE NAME: V12SM2CB.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 6 OF 6

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

40 WAY TRANS
TO CONN PCB

HDR1-1 AUX6-PRE
HDR1-2 AUX6-POST
HDR1-3 AUX6-MTR
HDR1-4 LOCAL-AUX6-ISO
HDR1-5 AUX6-SOLO-DC
HDR1-6 AUX8-SOLO-DC
HDR1-7
HDR1-8 AUX8-PRE
HDR1-9 AUX8-POST
HDR1-10 AUX8-MTR
HDR1-11 LOCAL-AUX8-ISO
HDR1-12 OP-SOLO-DC
HDR1-13 AUX2-SOLO-
HDR1-14 AUX2-SOLO+
HDR1-15 AUX4-SOLO-
HDR1-16 AUX4-SOLO+
HDR1-17 AUX2-SOLO-FET
HDR1-18 AUX4-SOLO-FET
HDR1-19 SOLO-TALLY
HDR1-20 L/R/M-MST-PRE
HDR1-21 MONO-SLAVE
HDR1-22 LED-BRITE
HDR1-23 MONO-PRE
HDR1-24 MONO-POST
HDR1-25 SOLO-ISOLATE
HDR1-26 SLAVE-CTRL
HDR1-27 LED-CTRL
HDR1-28 PFL AFL/PFL-BUS
HDR1-29 OP-SOLO-DSBL
HDR1-30 OP-SOLO-CLEAR
HDR1-31 IP-SOLO-DC
HDR1-32
HDR1-33
HDR1-34 +20V-FEED
HDR1-35
HDR1-36
HDR1-37
HDR1-38 -20V-FEED
HDR1-39
HDR1-40 +24V-FEED

+5V C42 47/25

IP-SOLO-DC (FROM PLG1-A26)
OP-SOLO-DC
REF
R144 100K
R145 100K
R134 2K
R135 2K
R142 10K
R143 10K
R140 100K
R141 100K
U9A LM339
U9B LM339
+24V
R136 3K
R137 3K
R138 274
R139 274
SOLO ACTIVE
LED2
INPUT
OUTPUT
+5VA
R196 1K
D17
SOLO-ON (TO SOLO-ACTIVE LED CTRL)
SOLO-TALLY (TO HDR1-19))
R165 3K
R166 3K
R167 5K
Q27 2N5551
IN-SOLO (TO D4 ANODE)

SOLO CONTROL SECTION

IP-SOLO-CLEAR (TO PLG1-C26)
OP-SOLO-CLEAR (TO CONN PCB HDR1-30))
+24V
D16
RL1
RLY2 (TO RELAY2)
+5VA
R157 10K
Q28 2N5401
R176 5K
R175 5K
LAST PRESSED
R173 100
Q29 2N5555
R174 10K
R177 10K
R178 10K
Q30 2N5401
R182 5K
R181 5K
R179 100
Q31 2N5551
R180 10K
R183 10K
SW10A
SW10B
SW10C
R184 10K
SW9E
MOMENTARY
SW9D
SW9C
SW9A
SW9B
R185 1K

SW10C
LD15 (TO SOLO) (ISOLATE) (LED)
LAST PRESSED
SW10F
SW10D
SW10E
R149 100
R160 200K
R159 10K
R152 2K
C32 1U5
R150 100K
R151 10K
U9C LM339
R147 1K
R146 1K
C31 100/10
REF

RLY2 (FROM RELAY1)
D18
RL2
+24V
Z2 6V2
SW8C
SOLO MODE
SW8A
SW8B
U9D LM339
AFL
PFL
AFL/PFL-BUS (TO PLG1-A27) (TO HDR1-28))
Q26 2N5551
C35 U1/50
R164 47K
R163 20K
LED1
AFL
SOLO MODE
PFL
R187 3K
R188 3K
R189 1M1 NU
R190 10K
U8A LM358
REF
R170 100K
U10C HCOO
R199 20K
U10D HCOO
+5VA
R168 15K
R169 15K
U10A HCOO
SOLO ACTIVE
SW12C
SOLO-ON
+24V
R186 3K
SOLO CLEAR
SW12A
SW12B
Q33 2N5551
R201 15K
C37 22/35
R200 100K
U10B HCOO
475
R148
+5VA
78L05
REG1
C29 100/10
C30 22/35
+5V REG FOR LOGIC
Q32 2N5551
R191 20K
Q35 2N5551
+24V
R195 63K4
R162 20K
R158 15K
R161 10K
SW11C
LD15 (FROM LAST PRESS LED)
SOLO ISOLATE
SW11B
SW11A
R194 100K
R193 100K
SLAVE-CTRL (FROM PLG1-A25)
SOLO-ISOLATE (TO PLG1-C24)
LED-CTRL
R155 221
Q34 2N5551
R156 100

MONO-PRE (FROM HDR1-25)
FAD1
MONO FADER
+24V
+20V
-20V
MONO-WIPER
HDR2
LD-SUB
HDR3
MONO-POST
LOCAL-VCA4-SEL (TO PLG1-C32)
TO SIDECAR M1 SUB PCB

SW5C
SW6C
SW7C
LOCAL VCA1
L/R/M PRE
MONO ISOLATE
SW5A
SW5B
SW6A
SW6B
SW7A
SW7B
MONO-SLAVE (TO HDR1-21)
L/R/M-MST-PRE (TO HDR1-20)
LOCAL-VCA3-SEL (TO PLG1-C30)
Q24 2N5551
R107 221
LED-CTRL
R108 100

+5V
+5VA
+20V
-20V
+10VA
U1C U2E U5C U6E U10E VDD VSS
74HC74
74HC00
C25 .1UF/Z
C26 .1UF/Z
C27 .1UF/Z
C28 .1UF/Z
C33 .1UF/Z
HCOO
C19 47/25
C20 47/25
R109 22 FP
R110 22 FP
R111 22 FP
R112 22 FP
C34 .1UF/Z
C36 .1UF/Z
C38 .1UF/Z
C39 .1UF/Z
U3C U7C
OP275GP
R115 20K
R116 20K
R113 20K
R114 20K
C23 .1UF/Z
C24 .1UF/Z
4053-NJR
U4B VEE

+24V
R117 22 FP
R118 22 FP
C21 47/25
C40 .1UF/Z
C41 .1UF/Z
C22 47/25
U8C U9E
LM358
LM339

MECHANICAL PARTS
TH1 TH2 TOOLHOLE
FP1 FP2 FP3 FPHOLE
BC1 BC2
ST1 ST2
SKT1 SKT2 SKT3 SKT4 DIP 14 DIP 14 DIP 8 DIP 16
SKT5 SKT6 SKT7 SKT8 DIP 14 DIP 14 DIP 8 DIP 8
SKT9 SKT10 DIP 14 DIP 14
PCB1
69400063
BRK4 BRACKET
BRK5 BRACKET
BRK1 BRK2 BRK3 BRK6 KEY8190

COMPANY:	CREST AUDIO		
TITLE:	V12 SIDECAR MASTER 2 MAIN PCB		
ORG DRAWN: TAZ	DATED: 11/17/99		
CHECKED:	DATED:		
CUR REV DRAWN:	DATED:		
RELEASED:	DATED:		
CODE:	SIZE: D	DRAWING NO: 76D4656	REV: A
		FILE NAME: V12SM2MA.SCH	
SCALE:		SHEET: 1 OF 2	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

AUX6 SOLO

AUX8 SOLO

AUX6 ISO

AUX8 ISO

AUX6 SOLO

AUX8 SOLO

64 WAY A/C DIN MALE R/A

18 WAY RIBBON JUMPER
TO SUB PCB

CON1-1	AUX6-PRE	(FROM HDR1-1)
CON1-2	AUX6-POST	(TO HDR1-2)
CON1-3	AUX8-PRE	(FROM HDR1-8)
CON1-4	AUX8-POST	(TO HDR1-9)
CON1-5	AUX6-MTR	(TO HDR1-3)
CON1-6	AUX8-MTR	(TO HDR1-10)

ORG DRAWN: TAZ	DATED: 11/17/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTER2 MAIN PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D / DRAWING NO: 76D4656 / REV: A
RELEASED:	DATED:	FILE NAME: V12SM2MA.SCH	
		SCALE:	SHEET: 2 OF 2

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

MUTE SUB PCB

FADER TOP = +0.5V
FADER BOTTOM = -10V
VCA MUTE (NO CHAN MUTE) = -10V
VCA MUTE (CHANNEL MUTE) = -11.8V

VCA FDR1
VCA FDR2
VCA FDR3
VCA FDR4

SW1C SW1B SW1A — VCA MUTE1
SW2C SW2B SW2A — VCA MUTE2
SW3C SW3B SW3A — VCA MUTE3
SW4C SW4B SW4A — VCA MUTE4

TLE2082CP: U1A U1B U2C U2D U3A U3B U4A U4B U5A U5B U6A U6B

LM339: U2C U2D U2A U2B U5C U5D U5A U5B

2114: U7A U7B

UNITY / NO

MUTE SUB PCB

TO SIDECAR MASTER MTHERBOARD — HDR1, HDR6

TO MASTER FADER MUTE SUB PCB — HDR8

FROM MASTER FADER MUTE PCB — HDR7, SKT9X2-CS

VCA FADER REFERENCE

IP CHANNEL MUTE/ATTEN SELECT — SH1 CHAN MUTE ON/OFF, SEL1

VCA UNITY WINDOW REF'S

COMPANY: CREST AUDIO			
TITLE: V12 SIDECAR MASTER FADER PCB			
ORG DRAWN: TAZ	DATED: 11/99		
CHECKED:	DATED:		
CUR REV DRAWN:	DATED:		
RELEASED:	DATED:		
CODE:	SIZE: D	DRAWING NO: 76D4673	REV: A
		FILE NAME: V12SMFDA.SCH	
SCALE:		SHEET: 1 OF 2	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

ADDITIONAL FADER BAY POWER DISTRIBUTION

MH1 MH2 MH3 MH4

HDR3: +20V-DIST1, +20V-DIST1, AGND-DIST1, AGND-DIST1, +24V-DIST1, , +10V-DIST1, DGND-DIST1 → HDR2

HDR4 → HDR14

EXP-VCA1 EXP-VCA2
EXP-VCA3 EXP-VCA4
EXP-VCA5 EXP-VCA6
EXP-VCA7 EXP-VCA8
EXP-VCA9 EXP-VCA10
EXP-VCA11 EXP-VCA12
EXP-VCA1-SOLO EXP-VCA2-SOLO
EXP-VCA3-SOLO EXP-VCA4-SOLO
EXP-VCA5-SOLO EXP-VCA6-SOLO
EXP-VCA7-SOLO EXP-VCA8-SOLO
EXP-VCA9-SOLO EXP-VCA10-SOLO
EXP-VCA11-SOLO EXP-VCA12-SOLO
EXP-VCA-SLAVE2 EXP-P-SOLO-DC
EXP-P-SOLO-CLEAR EXP-SP
EXP-IP-MICRO-MUTE-ENABLE EXP-LED-BRITE

TO EXPANSION PCB

HDR5: +20V-DIST2, +20V-DIST2, AGND-DIST2, DGND-DIST2, +24V-DIST2, , +10V-DIST2, DGND-DIST2

MH5 MH7 MH6 MH8

CON20-1 … CON20-30

FADER BUS RIBBON TO ALL INPUT FADER PCBS

+20V → R79 10 FP → CON20-31
-20V → R80 10 FP → CON20-32
AGND → CON20-35, CON20-36, CON20-37, CON20-38
DGND → CON20-39, CON20-40, CON20-41, CON20-42
+24V → CON20-43, CON20-44, CON20-45, CON20-46
+10V → R81 10 FP → CON20-47, CON20-48
CON20-49, CON20-50 → VCA-REF-(+10V)-BUS

+20V → R21 274 → REG1 LM317LZ (IN, OUT, ADJ) ← D22
C13 .1UF/X, C12 47/25, R23 14.3, R36 100K, R34 1K, C8 47/25, C10 100/10, R35 5K
VCA-REF-(+10V)-BUS
AGND

SIDECAR MICRO INTERFACE PCB

+5V-SUB → C40 .1UF/Z

R96 5K, R95 5K, R94 5K, R90 5K, RB2 5K

U10 74HC573
INLATCH, OUTLATCH, OUTDATA, SHFTCLK-BUS, SWDATA → D7 D6 D5 D4 D3 D2 D1 D0
LE, OE, VCC, GND
Q7 INLATCH-FL, Q6 OUTLATCH-FL, Q5 OUTDATA1-FL, Q4 SFTCLK-FL

FB3 OUTDATA1-FL
FB1 SFTCLK-FL
R97 10 FP SWDATA-OUT

INLATCH
OUTLATCH
OUTDATA
SHFTCLK
CABLE-SENSE

CON1 RJ-45RA FROM CONSOLE

+5V-SUB → R91 10K → U8B HC132

HDR9 TO FADERS (LEFT)
OUTDATA1-FL, SWDATA, INLATCH-FL, OUTLATCH-FL, SFTCLK-FL
+5V-SUB → C4 10U

U9B HC132
U9A HC132
U9C HC132
U9D HC132
U8A HC132
U8C HC132
U8D HC132

+5V-SUB → C11 22/35
R92 100K
R93 15K
C18 1N0

+5V-SUB → C41 .1UF/Z, C42 .1UF/Z → U9E HC132 (VDD, VSS)

DC PWR IN
PWR1 (+10V-SUB, +10V-SUB)
D10
REG2 LM7805T (VIN, VOUT, GND)
C23 100/25, C30 22/35, C39 22/35
HS1

BRKT4 KEY8190, BRKT5 KEY8190

MECHANICAL PARTS

BRKT1 BRACKET, BRKT2 BRACKET, BRKT3 8190
SKT1 SOCKET8, SKT2 SOCKET14, SKT3 SOCKET8, SKT4 SOCKET8, SKT5 SOCKET14, SKT6 SOCKET8, SKT7 SOCKET8
PCB1 69400065
TH1 TOOLHOLE, TH2 TOOLHOLE, BC1, BC2, MH9 TOOLHOLE

COMPANY:	CREST AUDIO		
TITLE:	V12 SIDECAR MASTER FADER PCB		
ORG DRAWN: TAZ	DATED: 11/99	CODE:	SIZE: D
CHECKED:	DATED:	DRAWING NO: 76D4673	REV: A
CUR REV DRAWN:	DATED:	FILE NAME: V12SMFDA.SCH	
RELEASED:	DATED:	SCALE:	SHEET: 2 OF 2

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

18 WAY CON TO MAIN PCB

CON1-1 AUX-LO-PRE
CON1-2 AUX-LO-POST
CON1-3 AUX-HI-PRE
CON1-4 AUX-HI-POST
CON1-5 AUX-LO-MTR
CON1-6 AUX-HI-MTR
CON1-7 R73 10 FP +20V C29 47/25
CON1-8
CON1-9 R72 10 FP 47/25 C28 -20V
CON1-10
CON1-11
CON1-12
CON1-13
CON1-14
CON1-15
CON1-16
CON1-17 R71 10 FP +24V C27 47/25
CON1-18

+20V R74 22 FP C30 1UF/Z U1C NJM022BD C31 .1UF/Z R75 22 FP
R76 22 FP C32 1UF/Z U2C NJM022BD C33 .1UF/Z R77 22 FP
R78 22 FP C34 1UF/Z U4C NJM022BD C35 .1UF/Z R79 22 FP
R80 22 FP C36 1UF/Z U5C OP275GP C37 .1UF/Z R81 22 FP
R82 22 FP C38 1UF/Z U7C NJM022BD C39 .1UF/Z R83 22 FP
OP275GP -20V

+24V R84 22 FP C42 47/25 C40 .1UF/Z U3C LM358
R85 22 FP U6C LM358 C41 .1UF/Z C43 47/25

VR1 R1 5K6 C1 10P R2 18K U1A OP275GP R13 5K
R3 10K R4 10K Q1 J174 R5 20K C2 22P R11 825
C6 10P R6 33K OP275GP U1B R7 1K5 R10 200K U2A NJM022BD C3 .1UF/X
C4 .1UF/X R8 1M1 R9 1M1 AUX-LO-POST
+24V R34 3K R36 47K SW1C MUTE AUX1 SW1A SW1B
200K R12 C5 .1UF/X

C11 .1UF/X R29 130K .1UF/X C13 R35 5K
D5 R30 100K D6 U4B NJM022BD R32 200K R33 1M1 C12 .1UF/X
R31 499K U4A NJM022BD AUX-LO-MTR

VR2 R23 5K6 C14 10P R37 18K U5A OP275GP R48 5K
R38 10K R39 10K Q2 J174 R40 20K C15 22P R46 825
C19 10P R41 33K OP275GP U5B R42 1K5 R45 200K U2B NJM022BD C16 .1UF/X
C17 .1UF/X R43 1M1 R44 1M1 AUX-HI-POST
+24V R69 3K R70 47K SW2C MUTE AUX1 SW2A SW2B
200K R47 C18 .1UF/X

C24 .1UF/X R63 130K .1UF/X C26 R68 5K
R64 100K D9 U7A NJM022BD D10 R66 200K R67 1M1 C25 .1UF/X
R65 499K U7B NJM022BD AUX-HI-MTR

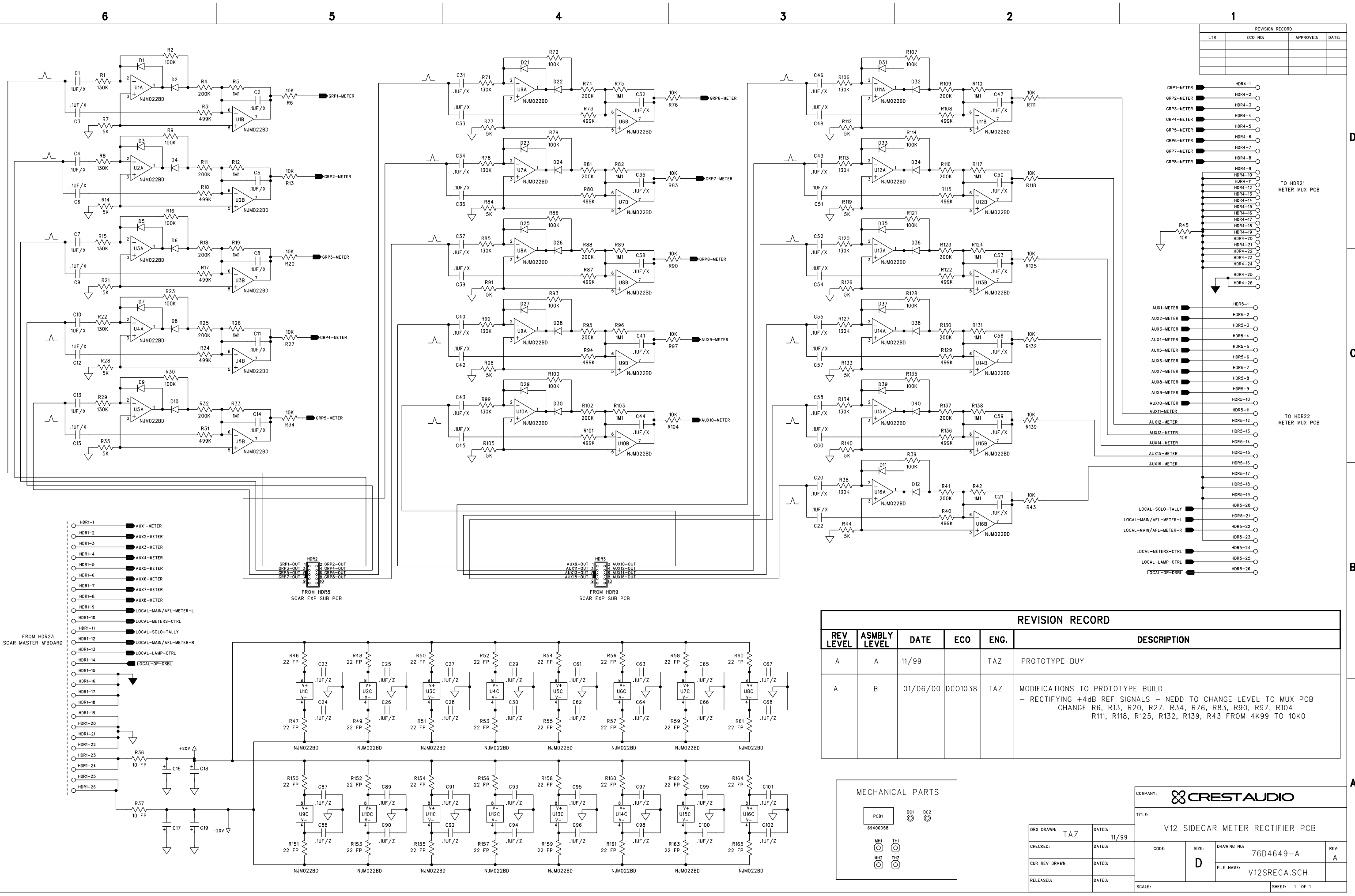
47K R25 47K R22 D1 D2 +20V R17 47K R16 20K U3B LM358 CLIP
R19 1K C9 .1UF/X C7 22N R18 2M2 R21 33K R20 1K
RED GRN LED1 SIG/PEAK C10 .1UF/X
C8 .1UF/X R14 100K R15 2M2 D3 R28 2M2 U3A LM358 R24 1K
+20V R27 47K R26 1K5

47K R59 47K R57 D8 D7 +20V R52 47K R51 20K U6B LM358 CLIP
R54 1K C22 .1UF/X C20 22N R53 2M2 R56 33K R55 1K
RED GRN LED2 SIG/PEAK C23 .1UF/X
C21 .1UF/X R49 100K R50 2M2 D4 R62 2M2 U6A LM358 R58 1K
+20V R61 47K R60 1K5

MECHANICAL PARTS

SKT1 DIP 8 SKT2 DIP 8 SKT3 DIP 8 SKT4 DIP 8
SKT5 DIP 8 SKT6 DIP 8 SKT7 DIP 8
PCB1 69400061
TH1 TOOLHOLE TH2 TOOLHOLE BC1
MH1 STOFF/440/790 MH2 STOFF/440/790 BC2

ORG DRAWN: TAZ	DATED: 11/11/99	COMPANY: CREST AUDIO	
CHECKED:	DATED:	TITLE: V12 SIDECAR MASTERS AUX SUB PCB	
CUR REV DRAWN:	DATED:	CODE:	SIZE: D
RELEASED:	DATED:	DRAWING NO: 76D4654	REV: A
		FILE NAME: V12SMSBA.SCH	
		SCALE:	SHEET: 1 OF 1


6
5
4
3
2
1
D
C
B
A
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
NJM022BD
GRP1-METER
GRP2-METER
GRP3-METER
GRP4-METER
GRP5-METER
GRP6-METER
GRP7-METER
GRP8-METER
AUX9-METER
AUX10-METER
AUX1-METER
AUX2-METER
AUX3-METER
AUX4-METER
AUX5-METER
AUX6-METER
AUX7-METER
AUX8-METER
AUX11-METER
AUX12-METER
AUX13-METER
AUX14-METER
AUX15-METER
AUX16-METER
LOCAL-SOLO-TALLY
LOCAL-MAIN/AFL-METER-L
LOCAL-MAIN/AFL-METER-R
LOCAL-METERS-CTRL
LOCAL-LAMP-CTRL
LOCAL-OP-DSBL
TO HDR21
METER MUX PCB
TO HDR22
METER MUX PCB
FROM HDR8
SCAR EXP SUB PCB
FROM HDR9
SCAR EXP SUB PCB
FROM HDR23
SCAR MASTER M'BOARD
+20V
-20V
REVISION RECORD
REV LEVEL
ASMBLY LEVEL
DATE
ECO
ENG.
DESCRIPTION
A
A
11/99
TAZ
PROTOTYPE BUY
A
B
01/06/00
DC01038
TAZ
MODIFICATIONS TO PROTOTYPE BUILD
– RECTIFYING +4dB REF SIGNALS – NEDD TO CHANGE LEVEL TO MUX PCB
CHANGE R6, R13, R20, R27, R34, R76, R83, R90, R97, R104
R111, R118, R125, R132, R139, R43 FROM 4K99 TO 10K0
MECHANICAL PARTS
PCB1
69400058
BC1
BC2
MH1
TH1
MH2
TH2
COMPANY:
CRESTAUDIO
TITLE:
V12 SIDECAR METER RECTIFIER PCB
ORG DRAWN: TAZ
DATED: 11/99
CHECKED:
DATED:
CUR REV DRAWN:
DATED:
RELEASED:
DATED:
CODE:
SIZE: D
DRAWING NO: 76D4649-A
REV: A
FILE NAME: V12SRECA.SCH
SCALE:
SHEET: 1 OF 1

V12 SIDECAR INTERMASTER CON

Pin #	*Signal*	*Notes*	*Pin #*	*Signal*	*Notes*
A1	Meter Grp to Bank Sel	To Meter Mux	C1	Meter Aux1-8 to Bank Sel	To Meter Mux
A2	Meter Aux9-16 to Bank Sel	To Meter Mux	C2	Meter Mtx1-8 to Bank Sel	To Meter Mux
A3	Meter Mtx9-16 to Bank Sel	To Meter Mux	C3	Local Meter Control	To Sidecar Master Motherboard
A4	Lamp Ctrl	To Meter Mux	C4	OP (Relay) Disable	From Meter Mux (power sense)
A5	Local Aux1 to Meter	To Meter Mux	C5	Local Aux2 to Meter	To Meter Mux
A6	Local Aux3 to Meter	To Meter Mux	C6	Local Aux4 to Meter	To Meter Mux
A7	Local Aux5 to Meter	To Meter Mux	C7	Local Aux6 to Meter	To Meter Mux
A8	Local Aux7 to Meter	To Meter Mux	C8	Local Aux8 to Meter	To Meter Mux
A9	Local Monitor L to Meter	To Meter Mux	C9	Local Monitor R to Meter	To Meter Mux
A10	Local Aux 1 Pre	From Sidecar Mix-Amp PCB	C10	Local Aux 1 Post	To Sidecar Mix-Amp PCB
A11	Local Aux 2 Pre	From Sidecar Mix-Amp PCB	C11	Local Aux 2 Post	To Sidecar Mix-Amp PCB
A12	Local Aux 3 Pre	From Sidecar Mix-Amp PCB	C12	Local Aux 3 Post	To Sidecar Mix-Amp PCB
A13	Local Aux 4 Pre	From Sidecar Mix-Amp PCB	C13	Local Aux 4 Post	To Sidecar Mix-Amp PCB
A14	Local Aux 5 Pre	From Sidecar Mix-Amp PCB	C14	Local Aux 5 Post	To Sidecar Mix-Amp PCB
A15	Local Aux 6 Pre	From Sidecar Mix-Amp PCB	C15	Local Aux 6 Post	To Sidecar Mix-Amp PCB
A16	Local Aux 7 Pre	From Sidecar Mix-Amp PCB	C16	Local Aux 7 Post	To Sidecar Mix-Amp PCB
A17	Local Aux 8 Pre	From Sidecar Mix-Amp PCB	C17	Local Aux 8 Post	To Sidecar Mix-Amp PCB
A18	Local Mono Pre	From Sidecar Mix-Amp PCB	C18	Local Mono Post	To Sidecar Mix-Amp PCB
A19	Local Left Pre	From Sidecar Mix-Amp PCB	C19	Local Left Post	To Sidecar Mix-Amp PCB
A20	Local Right Pre	From Sidecar Mix-Amp PCB	C20	Local Right Post	To Sidecar Mix-Amp PCB
A21	Local Aux1 Isolate	Ctrl to Sidecar Mix-Amp PCB	C21	Local Aux2 Isolate	Ctrl to Sidecar Mix-Amp PCB
A22	Local Aux3 Isolate	Ctrl to Sidecar Mix-Amp PCB	C22	Local Aux4 Isolate	Ctrl to Sidecar Mix-Amp PCB
A23	Local Aux5 Isolate	Ctrl to Sidecar Mix-Amp PCB	C23	Local Aux6 Isolate	Ctrl to Sidecar Mix-Amp PCB
A24	Local Aux7 Isolate	Ctrl to Sidecar Mix-Amp PCB	C24	Local Aux8 Isolate	Ctrl to Sidecar Mix-Amp PCB
A25	L/R/M Pre to Master	Ctrl to Sidecar Mix-Amp PCB	C25	L/R Isolate	Ctrl to Sidecar Mix-Amp PCB
A26	Mono Isolate	Ctrl to Sidecar Mix-Amp PCB	C26	Solo Isolate	Ctrl to Sidecar Mix-Amp PCB
A27	Local Slave Control	Ctrl from Sidecar Mix-Amp PCB	C27	Local Master Module Sense	Ctrl To Sidecar Mix-Amp PCB
A28	Local Solo Left Pre	From Sidecar Mix-Amp PCB	C28	Local Solo Right Pre	From Sidecar Mix-Amp PCB
A29	OP Solo Clear	To Sidecar Mix-Amp PCB	C29	DGND (scar sense)	Sidecar Sense
A30	DGND		C30	DGND	
A31	SOLO-Tally	To Meter Mux	C31	Spare	
A32	AGND		C32	AGND	

V12 EXPANSION CABLE PINOUT PAGE1

CORE NUMBER	CORE JACKET COLOR	WIRE COLOR	SHIELD LINK	HYPERTRONICS PIN NUMBER	SIGNAL NAME
		Clear		K15	GROUP1
1	Black	Brown		K14	GROUP2
		Shield	1	F15	
		Clear		J15	GROUP3
2	Black	Red		J14	GROUP4
		Shield	1	F15	
		Clear		H15	GROUP5
3	Black	Orange		H14	GROUP6
		Shield	1	F15	
		Clear		G15	GROUP7
4	Black	Yellow		G14	GROUP8
		Shield	1	F15	
		Clear			NOT USED
5	Black	Green		F14	MONO
		Shield	2	C15	
		Clear		E15	LEFT
6	Black	Blue		E14	RIGHT
		Shield	2	C15	
		Clear		D15	SOLO LEFT
7	Black	Purple		D14	SOLO RIGHT
		Shield	2	C15	
		Clear		C14	AUX1
8	Black	Gray		B15	AUX2
		Shield	3	J1	
		Clear		B14	AUX3
9	Black	White		A15	AUX4
		Shield	3	J1	
		Clear		A14	AUX5
10	Brown	Black		K2	AUX6
		Shield	3	J1	
		Clear		K1	AUX7
11	Brown	Brown		J2	AUX8
		Shield	3	J1	
		Clear		H2	AUX9
12	Brown	Red		H1	AUX10
		Shield	4	D2	
		Clear		G2	AUX11
13	Brown	Orange		G1	AUX12
		Shield	4	D2	
		Clear		F2	AUX13
14	Brown	Yellow		F1	AUX14
		Shield	4	D2	
		Clear		E2	AUX15
15	Brown	Green		E1	AUX16
		Shield	4	D2	
		Clear		B2	GLOBAL9/10
16	Brown	Blue		B1	GLOBAL11/12
		Shield	5	C1	
CORE NUMBER	**CORE JACKET COLOR**	**WIRE COLOR**	**SHIELD LINK**	**HYPERTRONICS PIN NUMBER**	**SIGNAL NAME**
		Clear		A2	GLOBAL13/14

V12 EXPANSION CABLE PINOUT PAGE2

17	Brown	Purple		A1	GLOBAL15/16
		Shield	5	C1	
		Clear		K3	VCA CTRL1
18	Brown	Gray		J4	VCA CTRL2
		Shield	6	D3	
		Clear		J3	VCA CTRL3
19	Brown	White		H4	VCA CTRL4
		Shield	6	D3	
		Clear		H3	VCA CTRL5
20	Red	Black		G4	VCA CTRL6
		Shield	6	D3	
		Clear		G3	VCA CTRL7
21	Red	Brown		F4	VCA CTRL8
		Shield	6	D3	
		Clear		F3	VCA CTRL9
22	Red	Red		E4	VCA CTRL10
		Shield	6	D3	
		Clear		E3	VCA CTRL11
23	Red	Orange		D4	VCA CTRL12
		Shield	6	D3	
		Clear		C4	VCA SOLO1
24	Red	Yellow		C3	VCA SOLO2
		Shield	7	D1	
		Clear		B4	VCA SOLO3
25	Red	Green		B3	VCA SOLO4
		Shield	7	D1	
		Clear		A4	VCA SOLO5
26	Red	Blue		A3	VCA SOLO6
		Shield	7	D1	
		Clear		K13	VCA SOLO7
27	Red	Purple		K12	VCA SOLO8
		Shield	7	D1	
		Clear		J13	VCA SOLO9
28	Red	Gray		J12	VCA SOLO10
		Shield	7	D1	
		Clear		H13	VCA SOLO11
29	Red	White		H12	VCA SOLO12
		Shield	7	D1	
		Clear		G13	IP SOLO DC
30	Orange	Black		G12	IP SOLO CLR
		Shield	8	K4	
		Clear		F13	OP SOLO DC
31	Orange	Brown		F12	OP SOLO CLR
		Shield	8	K4	
		Clear		E13	OP SOLO DSBL
32	Orange	Red		E12	AFL/PFL MODE
		Shield	8	K4	
CORE NUMBER	**CORE JACKET COLOR**	**WIRE COLOR**	**SHIELD LINK**	**HYPERTRONICS PIN NUMBER**	**SIGNAL NAME**
	Orange	Clear		D13	LED BRITE
33		Orange		D12	MTR POST CTRL
		Shield	9	C2	
		Clear		C13	SIP MODE

34	Orange	Yellow		C12	IP MICRO ENBL
		Shield		B13	SLAVE MODE
		Clear		J5	METER DATA+
35	Orange	Green		H5	METER DATA-
		Shield		K5	
		Clear		J11	METER CLK+
36	Orange	Blue		H11	METER CLK-
		Shield		K11	

CORE SHIELDS LINKING INFORMATION	
CORE NUMBER	**HYPERTRONICS PIN NUMBER**
1, 2, 3, 4	**F15**
5, 6, 7	**C15**
8, 9, 10, 11	**J1**
12,13,14,15	**D2**
16, 17	**C1**
18, 19, 20, 21, 22, 23	**D3**
24, 25, 26, 27, 28, 29	**D1**
30, 31, 32	**K4**
33	**C2**
34	**B13**
35	**K5**
36	**K11**

NOTE: THE ABOVE CORES HAVE THEIR SHIELDS COMBINED AND TIED TO THE INDICATED HYPERTRONICS PIN.

UN-USED HYPERTRONICS PINS			
G5	G11		
F5	F11	F12	F13
E5	E11	E13	
D5	D11		
C5	C11		
B5	B11		
A5	A11		

<u>FIRST ISSUE ERRORS</u> - THE FOLLOWING ERRORS WERE FOUND ON THE FIRST PRODUCED SNAKE CABLE.

A) SHIELDS OF CORE 30, 31, 32, 35 WERE CONNECTED TOGETHER AND CONNECTED TO PIN K5 OF HYPERTRONICS CONNECTOR. CORRECT ARRANGEMENT IS THAT SHIELD CORE 35 CONNECTS

TO PIN K5 AND SHIELD OF CORES 30, 31, 32 CONNECT TO PIN K4

B) SHIELDS OF CORE 33 AND 34 WERE CONNECTED TOGETHER AND CONNECTED TO PIN C2 OF HYPERTRONICS CONNECTOR. CORRECT ARRANGEMENT IS THAT SHIELD OF CORE 33 CONNECTS TO PIN C2, AND SHIELD OF CORE 34 CONNECTS TO B13.

C) ADDITIONAL INFORMATION - IF AT ALL POSSIBLE WE WOULD LIKE TO SEE CORE 35 AND CORE 36 WIRES BE AS SHORT AS POSSIBLE. (I.E. EXPOSED WIRE BE AS SMALL AS POSSIBLE) . THE SIGNALS ON THESE WIRES NEED TO BE ISOLATED AS MUCH AS POSSIBLE AND SHIELDED AS MUCH AS POSSIBLE.