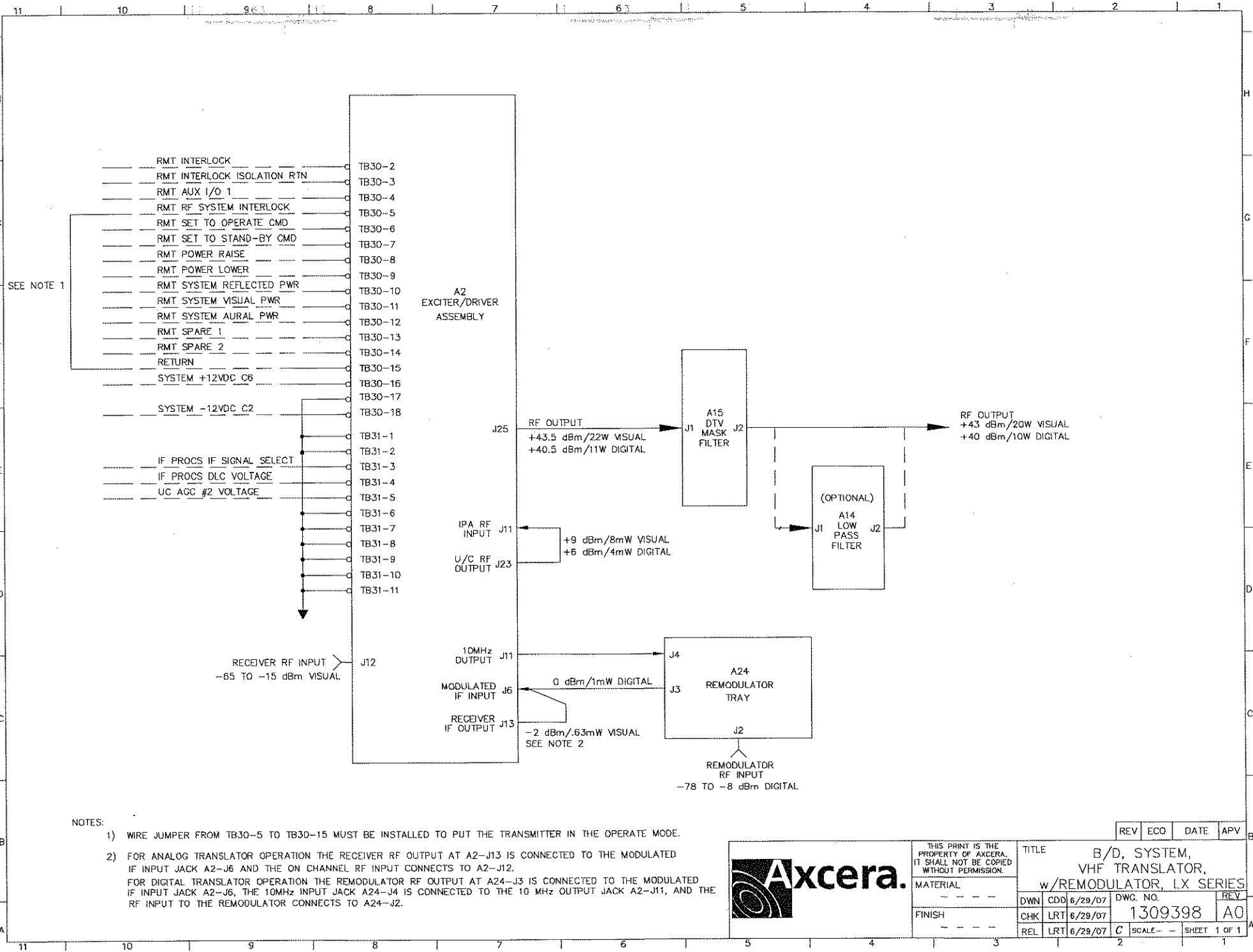




NOTES:

- 1) WIRE JUMPER FROM TB30-5 TO TB30-15 MUST BE INSTALLED TO PUT THE TRANSMITTER IN THE OPERATE MODE.
- 2) FOR ANALOG TRANSLATOR OPERATION THE RECEIVER RF OUTPUT AT A2-J13 IS CONNECTED TO THE MODULATED IF INPUT JACK A2-J6 AND THE ON CHANNEL RF INPUT CONNECTS TO A2-J12.
FOR DIGITAL TRANSLATOR OPERATION THE REMODULATOR RF OUTPUT AT A24-J3 IS CONNECTED TO THE MODULATED IF INPUT JACK A2-J6, THE 10MHz INPUT JACK A24-J4 IS CONNECTED TO THE 10 MHz OUTPUT JACK A2-J11, AND THE RF INPUT TO THE REMODULATOR CONNECTS TO A24-J2.



THIS PRINT IS THE PROPERTY OF AXCIERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.				TITLE B/D, SYSTEM, VHF TRANSLATOR, w/REMODULATOR, LX SERIES			
MATERIAL - - - -				DWN	CDD	6/29/07	DWG. NO.
FINISH - - - -				CHK	LRT	6/29/07	1309398
				REL	LRT	6/29/07	SCALE - - SHEET 1 OF 1

REV ECO DATE APV

REV
A0

SEE NOTE 1

RMT INTERLOCK TB30-2
 RMT INTERLOCK ISOLATION RTN TB30-3
 RMT AUX I/O 1 TB30-4
 RMT RF SYSTEM INTERLOCK TB30-5
 RMT SET TO OPERATE CMD TB30-6
 RMT SET TO STAND-BY CMD TB30-7
 RMT POWER RAISE TB30-8
 RMT POWER LOWER TB30-9
 RMT SYSTEM REFLECTED PWR TB30-10
 RMT SYSTEM VISUAL PWR TB30-11
 RMT SYSTEM AURAL PWR TB30-12
 RMT SPARE 1 TB30-13
 RMT SPARE 2 TB30-14
 RETURN TB30-15
 SYSTEM +12VDC C6 TB30-16
 SYSTEM -12VDC C2 TB30-17
 IF PROCS IF SIGNAL SELECT TB31-1
 IF PROCS DDC VOLTAGE TB31-2
 IF AGC #2 VOLTAGE TB31-3
 TB31-4
 TB31-5
 TB31-6
 TB31-7
 TB31-8
 TB31-9
 TB31-10
 TB31-11

A2
DRIVER/AMPLIFIER
ASSEMBLY

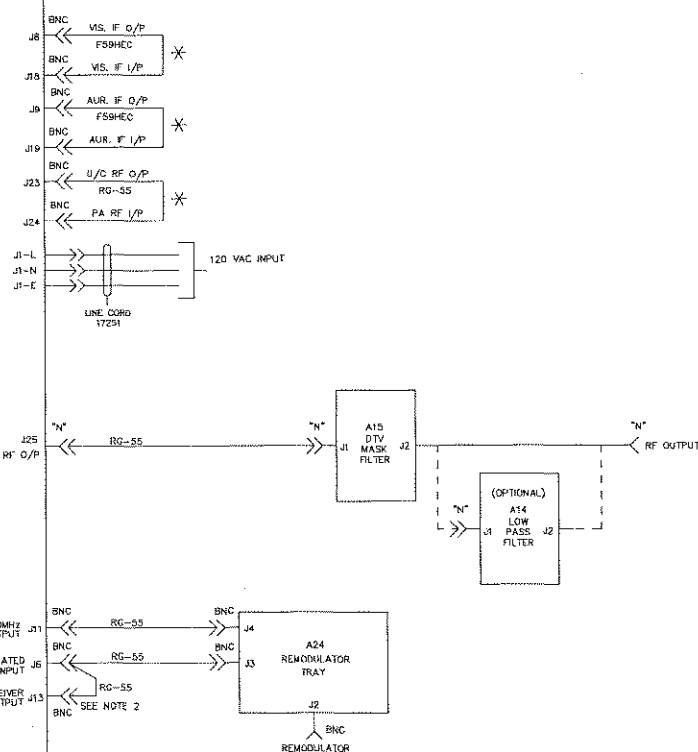
KEYS TB30-4, TB30-15

KEYS TB31-3, TB31-16

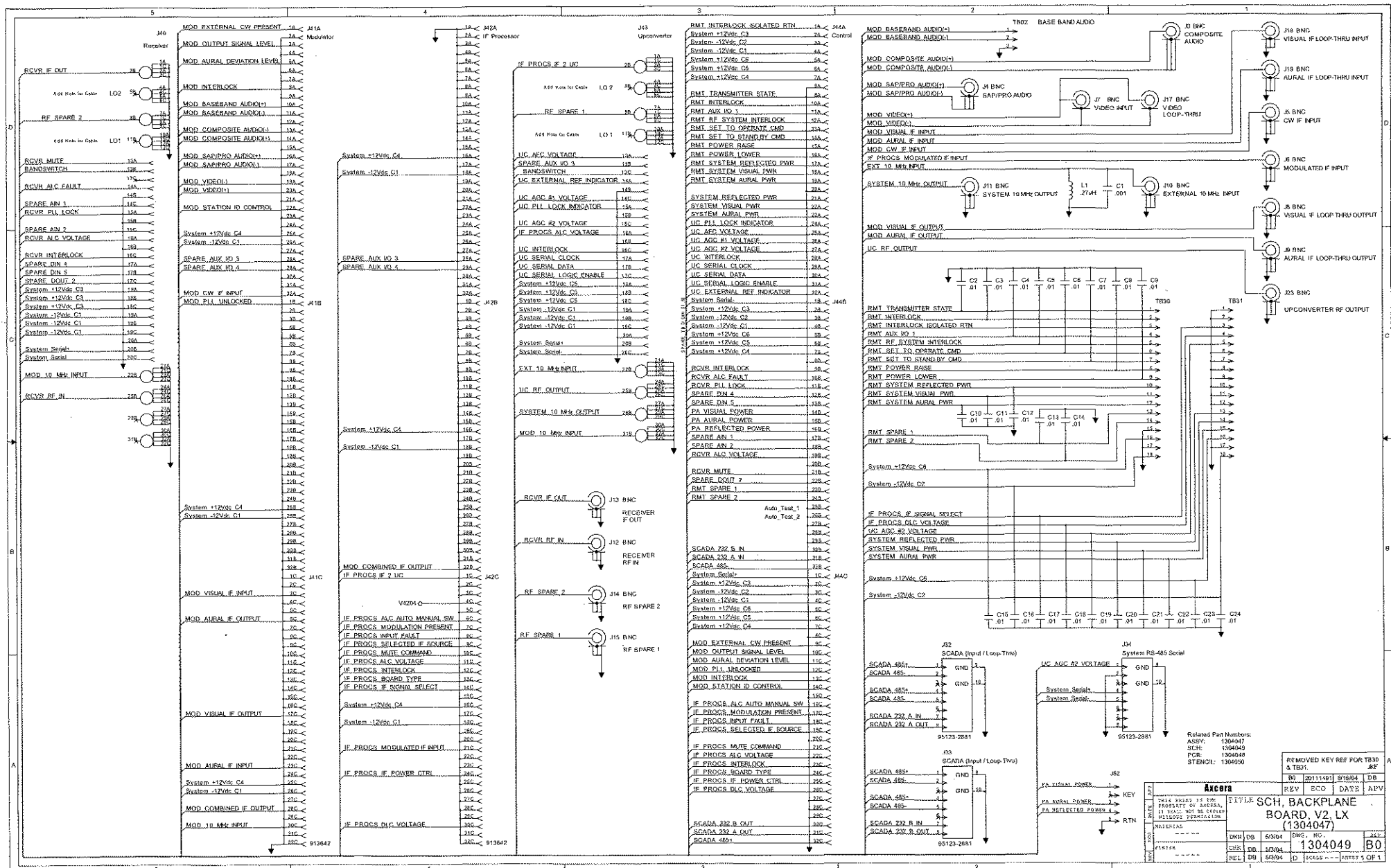
TB30 IS AN 18 POS TERMINAL BLOCK
 TB31 IS AN 18 POS TERMINAL BLOCK
 TB02 IS AN 3 POS TERMINAL BLOCK

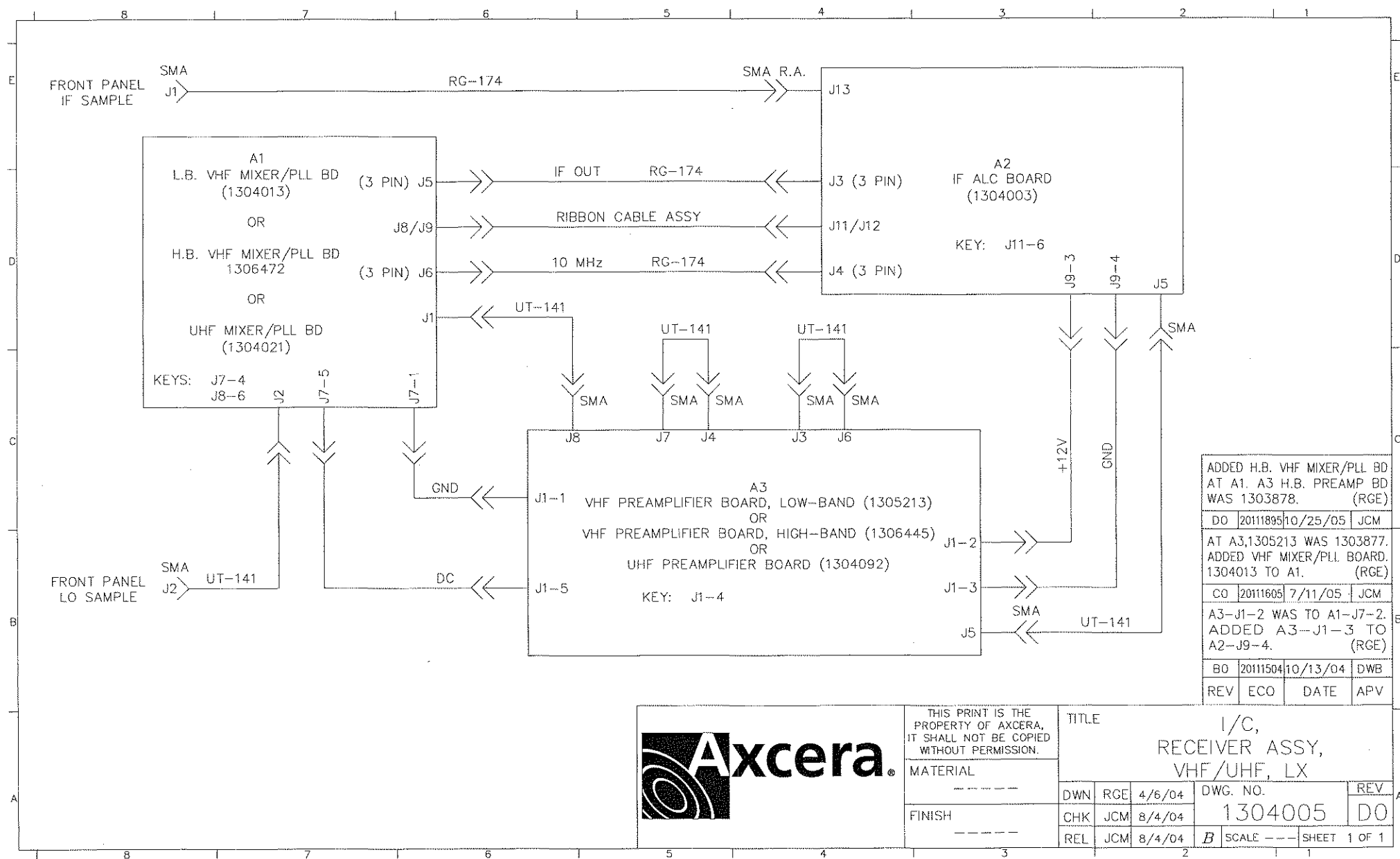
NOTES

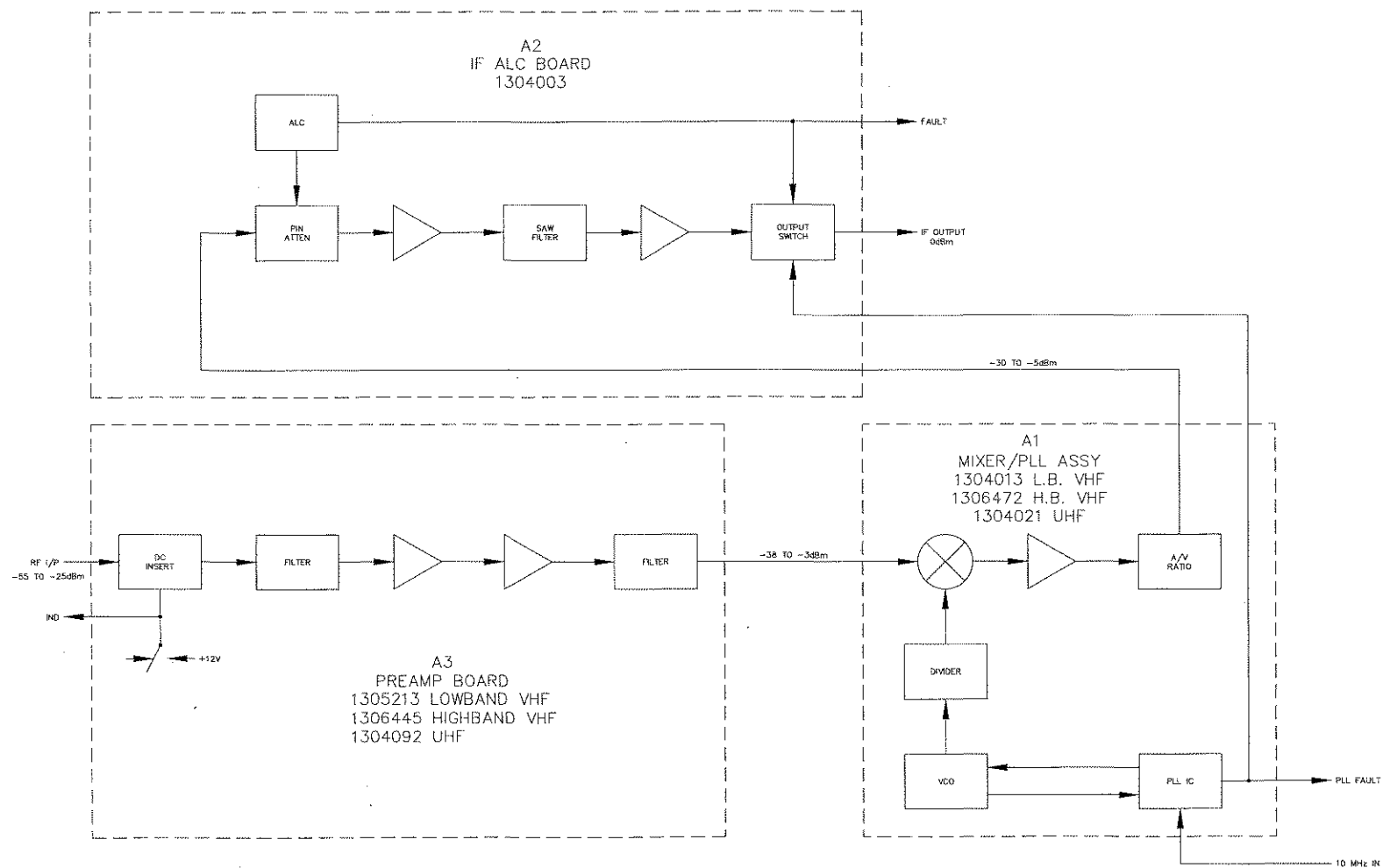
- 1) WIRE JUMPER FROM TB30-5 TO TB30-15 MUST BE INSTALLED TO PUT THE TRANSLATOR IN THE OPERATE MODE.
- 2) * DENOTES CABLE/WIRE IS PART OF TRANSMITTER ASSY.
- 3) ALL WIRES ARE 22AWG UNLESS OTHERWISE NOTED.
- 4) FOR ANALOG TRANSLATOR OPERATION THE RECEIVER RF OUTPUT AT A2-J13 IS CONNECTED TO THE MODULATED IF INPUT JACK A2-J6 AND THE ON CHANNEL RF INPUT CONNECTS TO A2-J2. FOR DIGITAL TRANSLATOR OPERATION THE REMODULATOR RF OUTPUT AT A24-J3 IS CONNECTED TO THE MODULATED IF INPUT JACK A2-J6, THE 10MHz INPUT JACK A24-J4 IS CONNECTED TO THE 10 MHz OUTPUT JACK A2-J11, AND THE RF INPUT TO THE REMODULATOR CONNECTS TO A24-J2.



		THIS PRINT IS THE PROPERTY OF ANICRA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.	
TITLE I/C, SYSTEM, VHF TRANSLATOR, LX SERIES		REV ECD DATE APV	
MATERIAL COB 6/29/07 DWG. NO. 1309399		REL 1/6/29/07 0.1 SCALE 1:1 SHEET 1 OF 1	







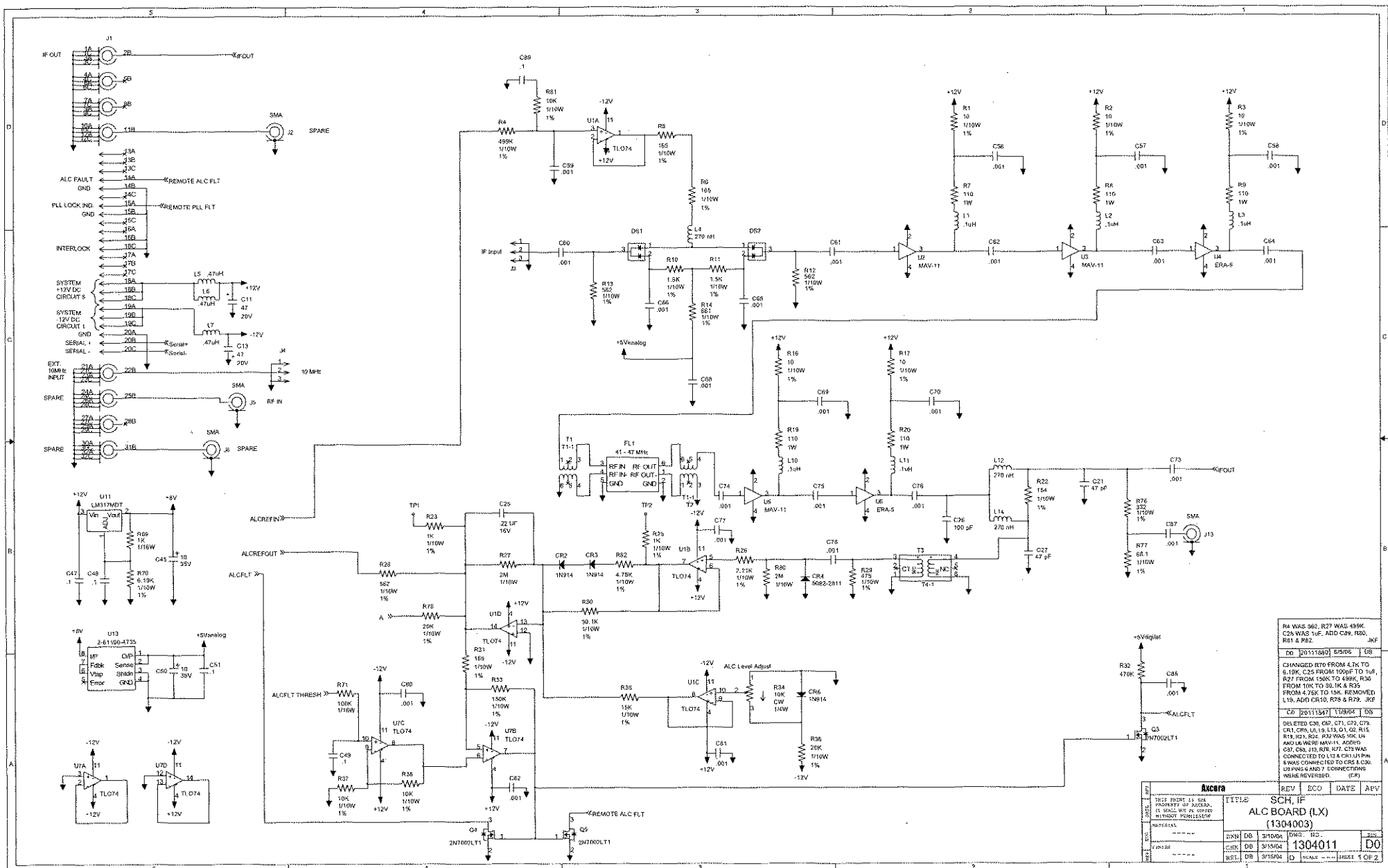
THIS PRINT IS THE PROPERTY OF AXCIERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.

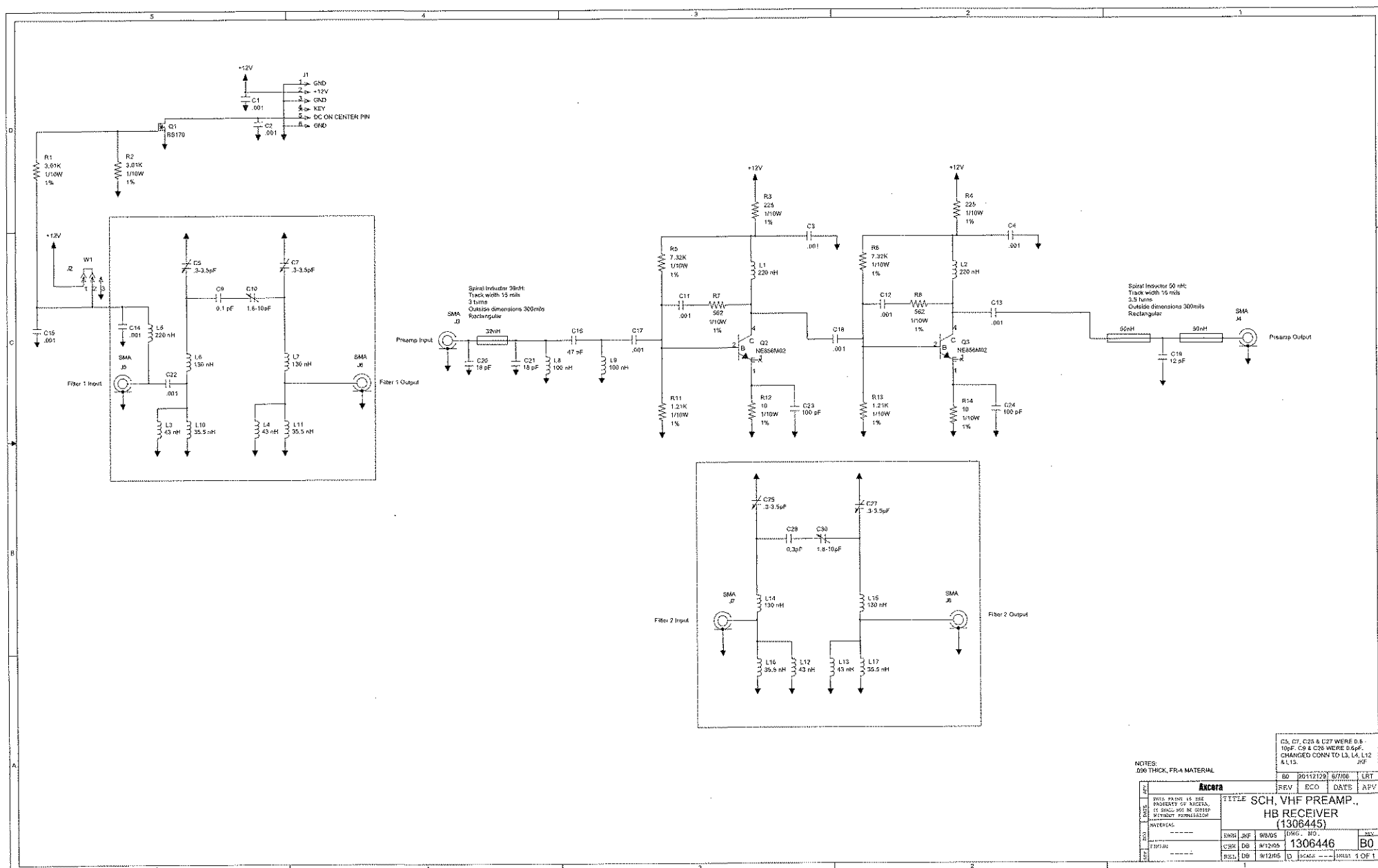
MATERIAL _____

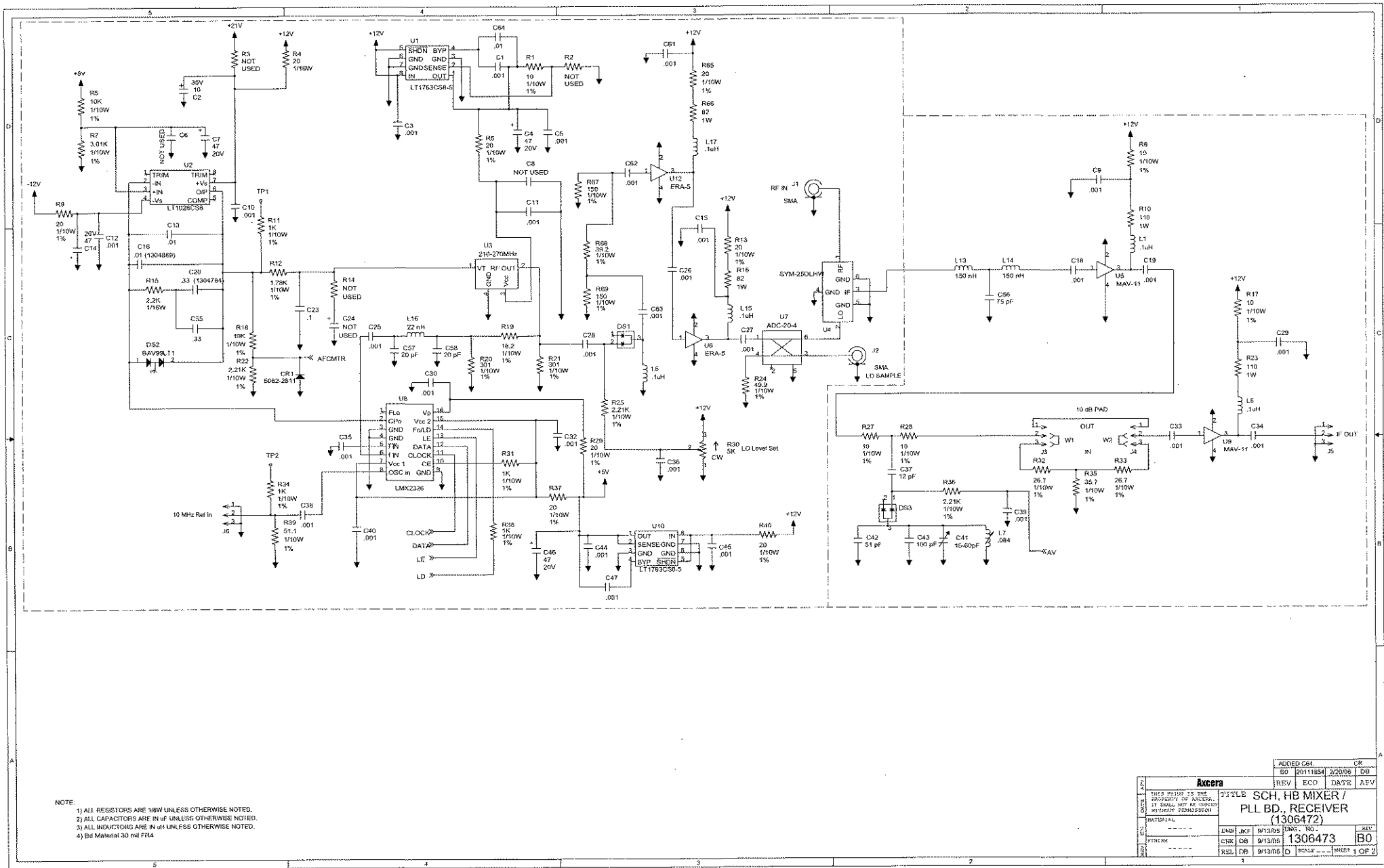
FINISH _____

TITLE B/D, RECEIVER ASSEMBLY, VHF/UHF LX		REV
DWG. NO. 1304004	CO	
DWG. DATE 3/4/04	REL 8/26/04	DATE 7/5/05
SCALE 1 OF 1		APV

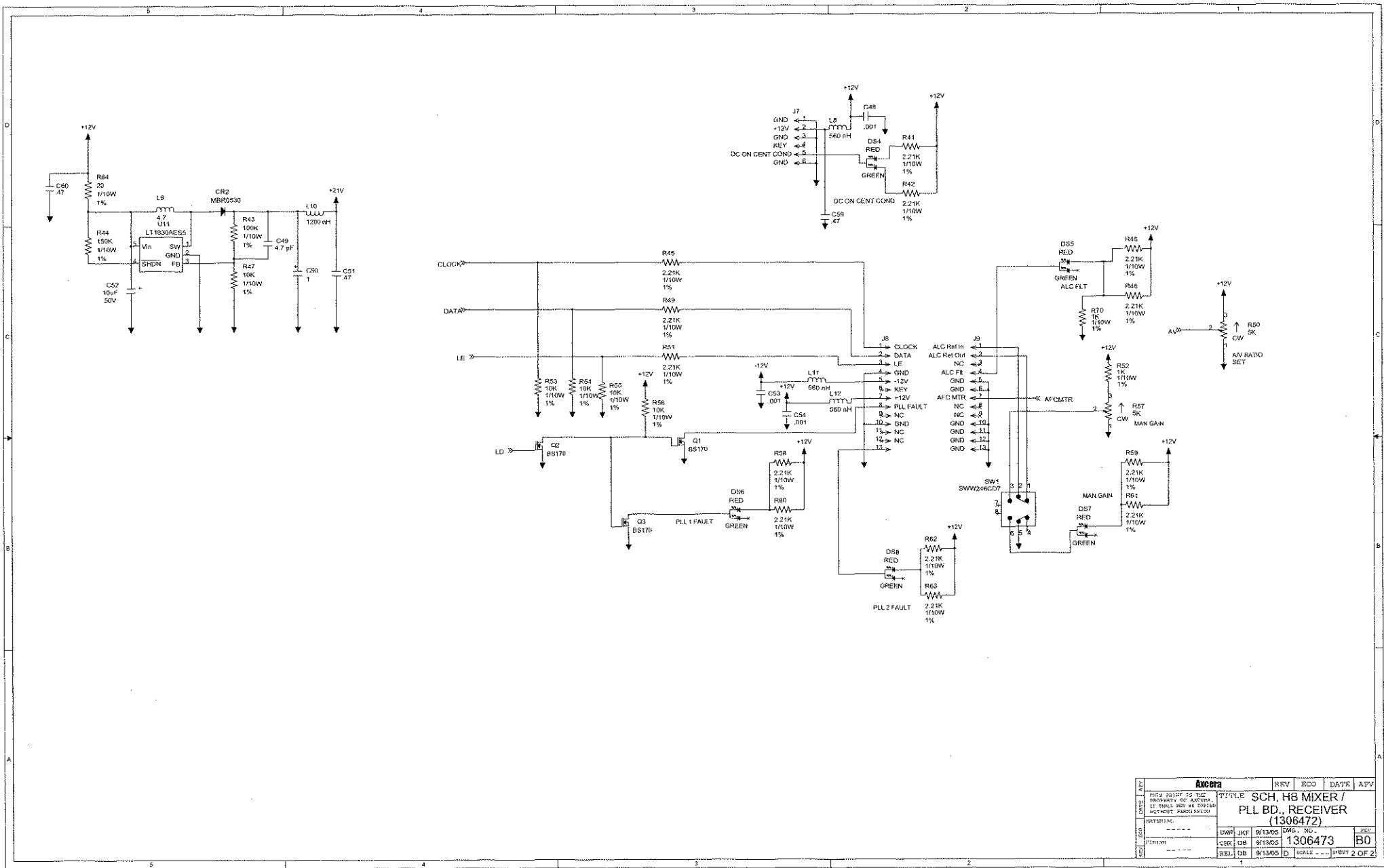
ADDED H.B. VHF MIXER/PLL BD
 AT A1, A3 H.B. PREAMP BD
 WAS 1303878.
 (RGE)
 CO 20118010/25/05 JCM
 A3 LOWBAND VHF PRE-
 AMP BD WAS 1303877.
 (RGE)
 BD 2011821 7/5/05 URT
 REV ECO DATE APV

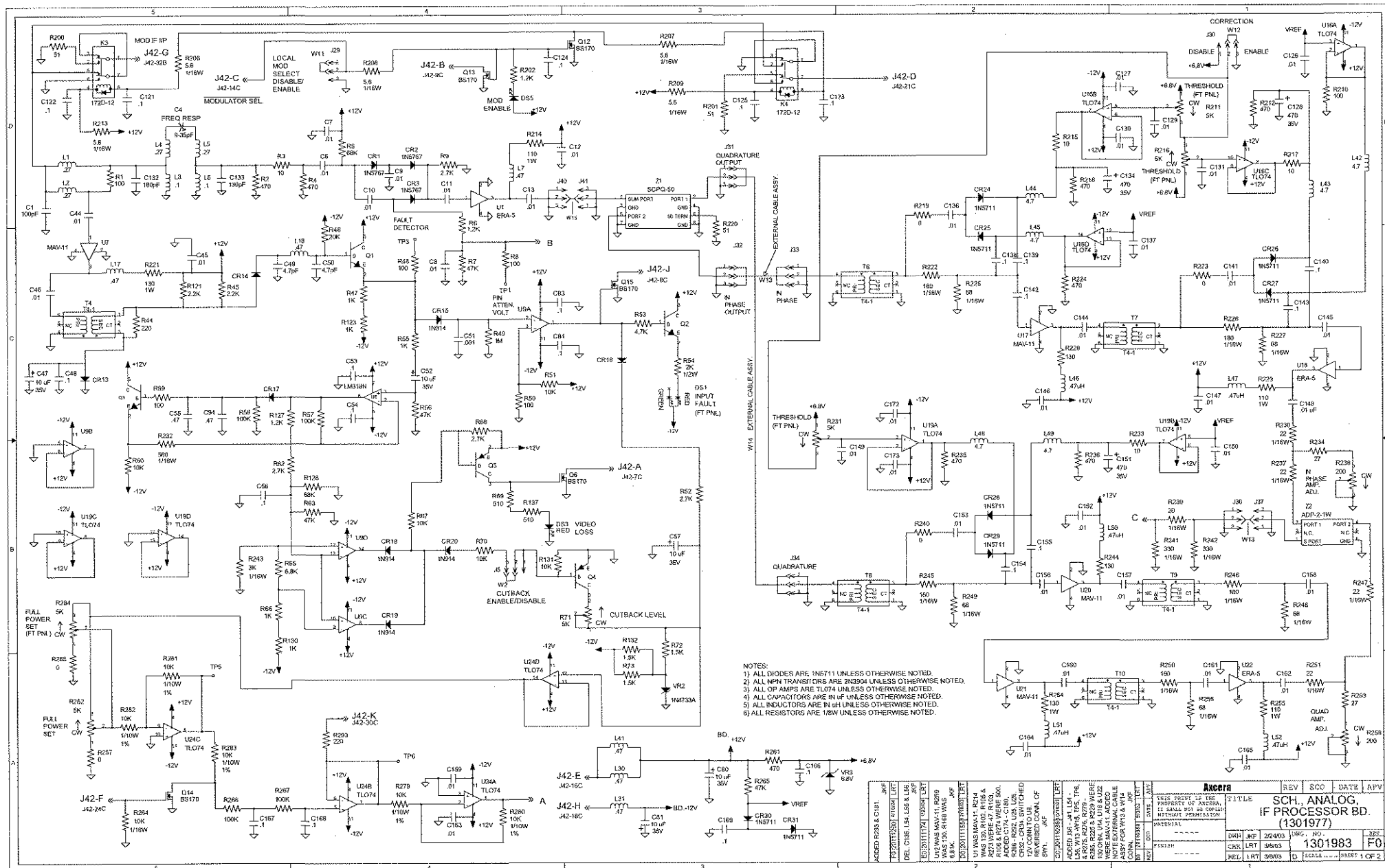




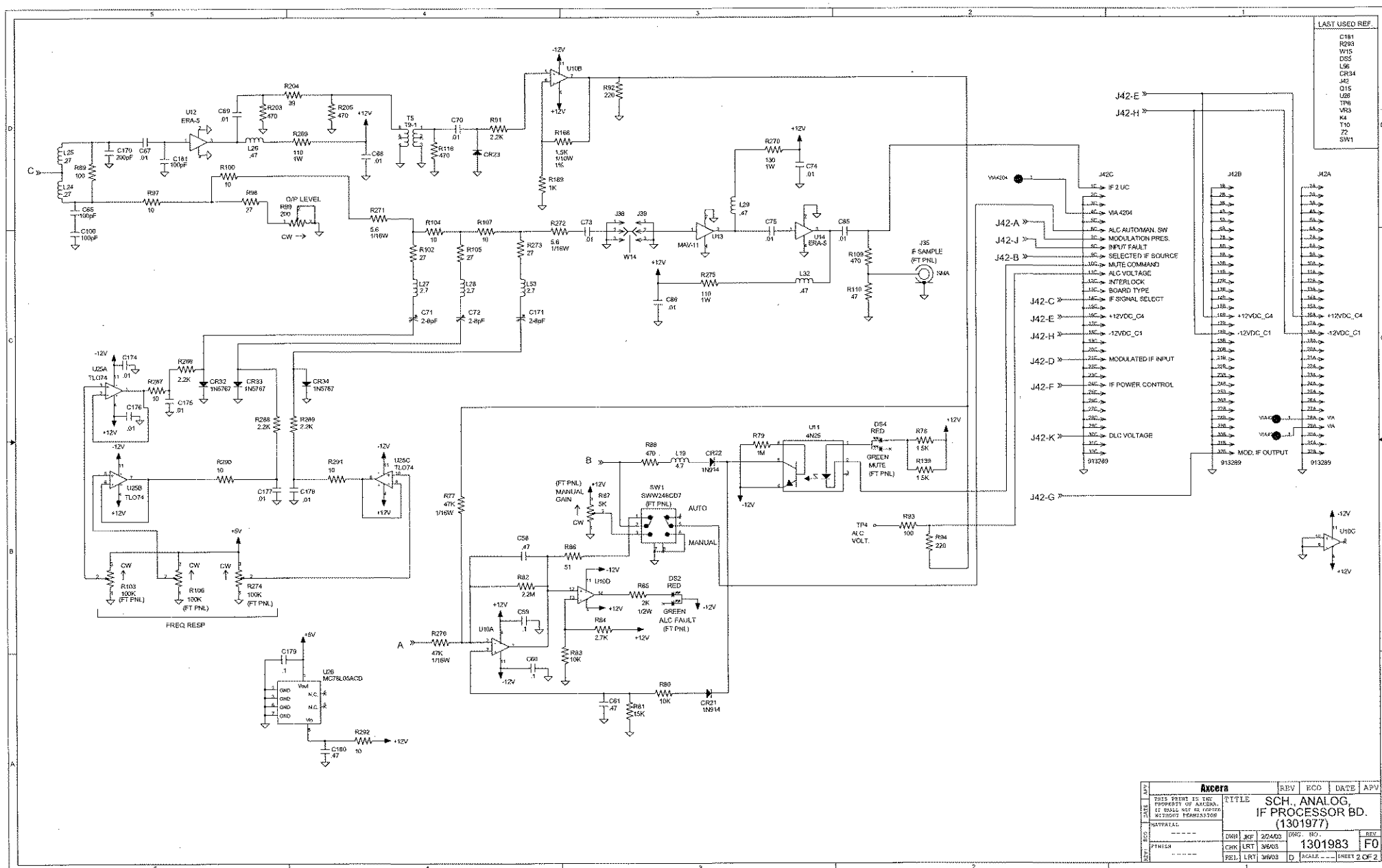


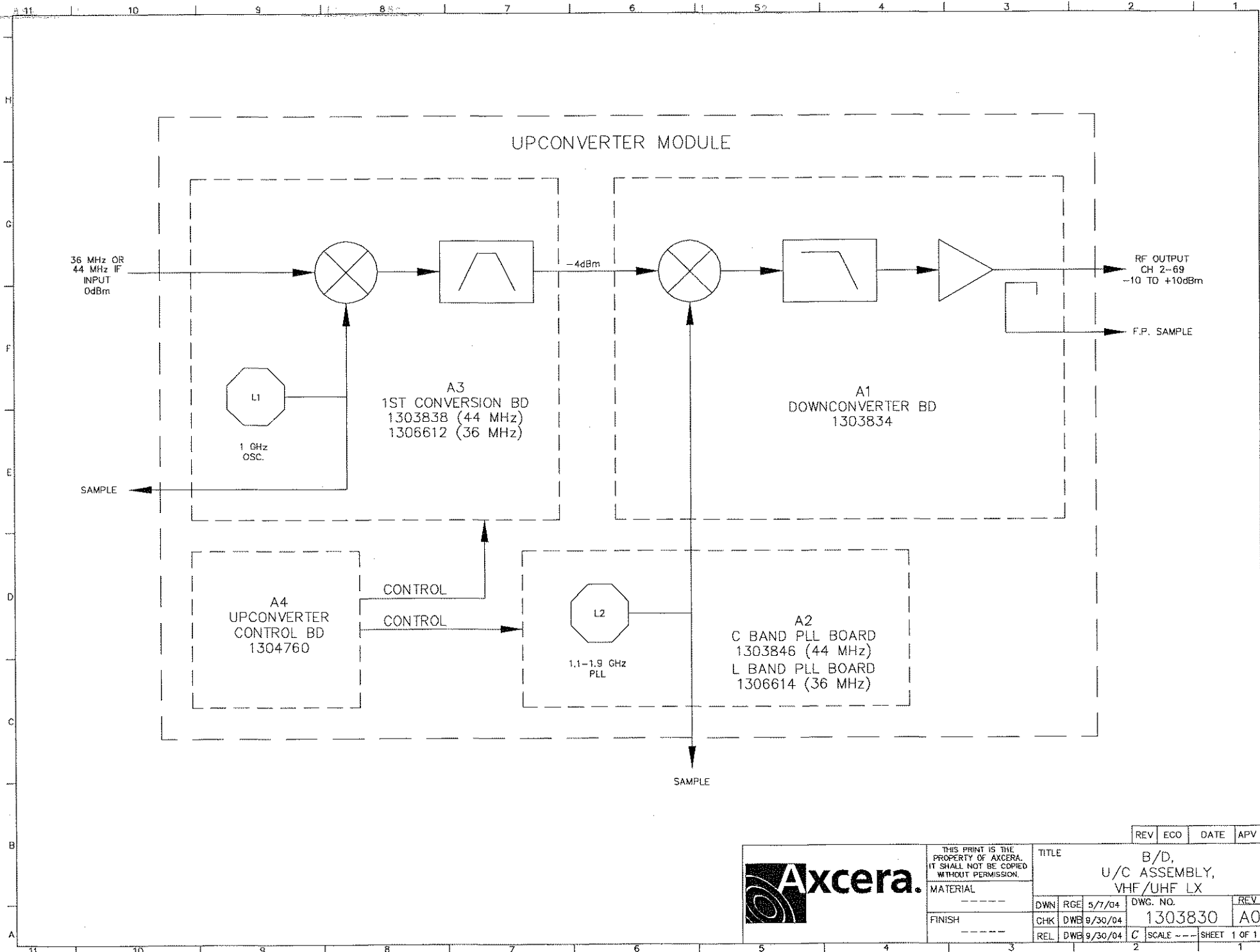
		ADDED C61		CR	
		B0		2/20/06 DB	
		REV ECO		DATE AFV	
P		Axtera			
E		THIS PRINT IS THE PROPERTY OF AXTERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.			
D		TITLE SCH, HB MIXER / PLL BD, RECEIVER (1306472)			
C		NATIONAL			
		ENH	JCF	9/13/05	DES. NO.
		CHK	DB	9/13/05	1306473
		REL	DB	9/13/05	0
					SCALE
					SHEET 1 OF 2





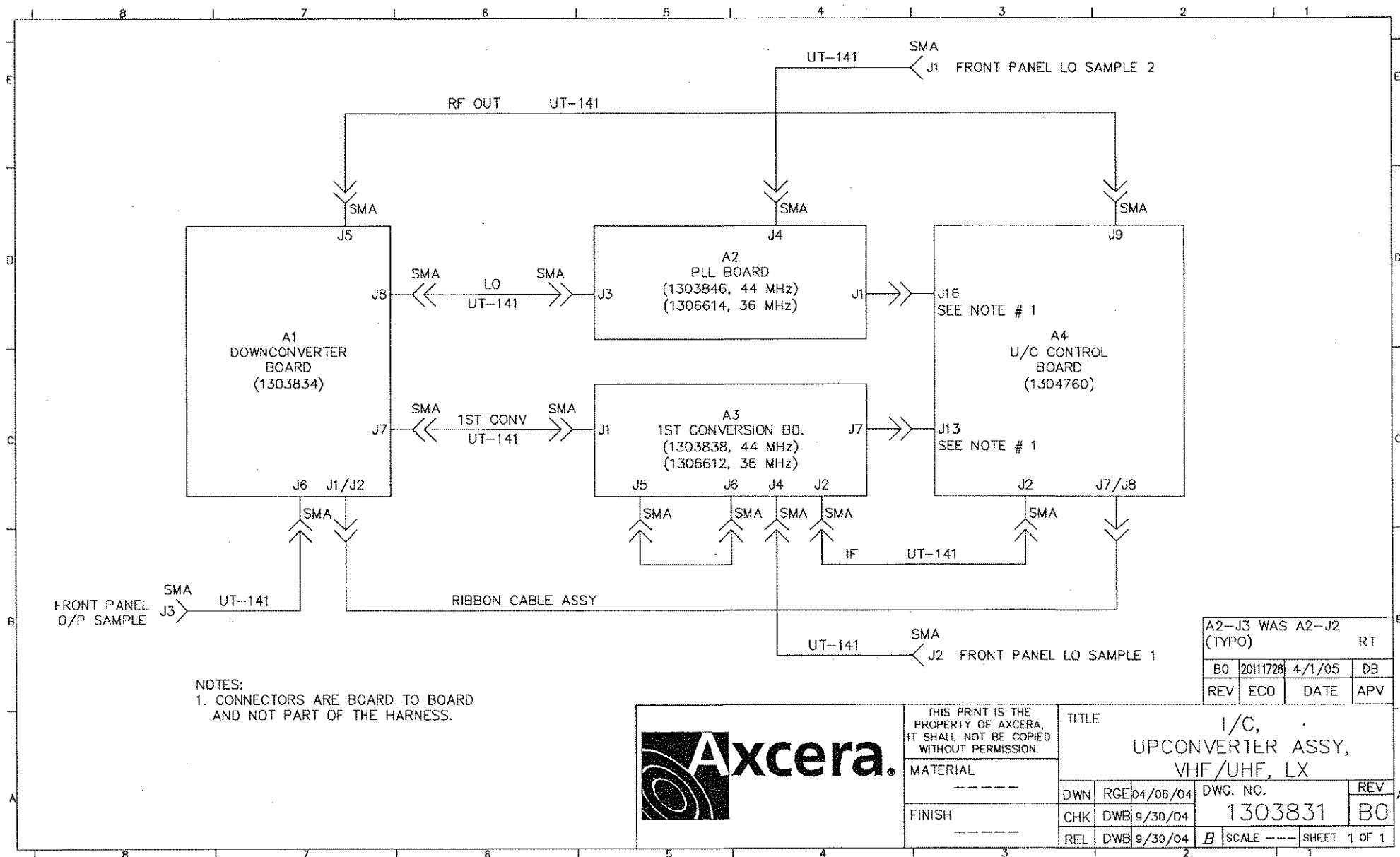
						Acerca		REV	SCO	DATE	APV
								SCH. ANALOG.			
								IF PROCESSOR BD.			
								(130197)			
								THIS PRINT IS THE PROPERTY OF ACRICA, INC. AND MAY NOT BE REPRODUCED WITHOUT PERMISSION			
								(INTERNAL)			
								FISHIN			
DWG	JNF	252403					F0				
CNR	NFT	54693					F0				
DEL	LAT	510					F0				
								SCALE --- SHEET 1 OF 2			





		THIS PRINT IS THE PROPERTY OF AXCERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.		TITLE		
		MATERIAL		B/D, U/C ASSEMBLY, VHF/UHF LX		
		FINISH		DWN RGE 5/7/04	DWG. NO. 1303830	REV A0
				CHK DWB 9/30/04	REL DWB 9/30/04	C SCALE --- SHEET 1 OF 1

REV	ECO	DATE	APV
-----	-----	------	-----



THIS PRINT IS THE
PROPERTY OF AXCERA,
IT SHALL NOT BE COPIED
WITHOUT PERMISSION.

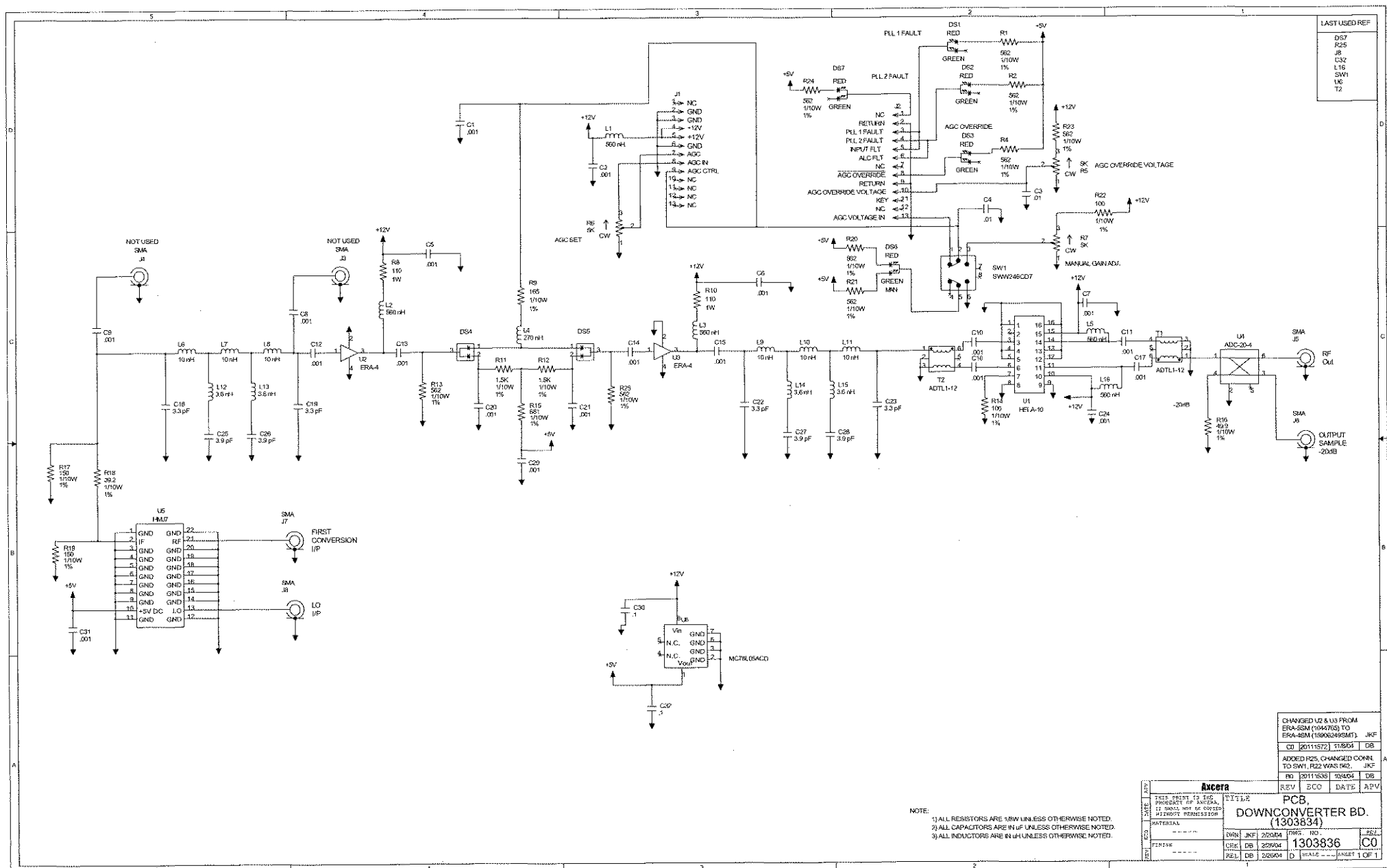
MATERIAL

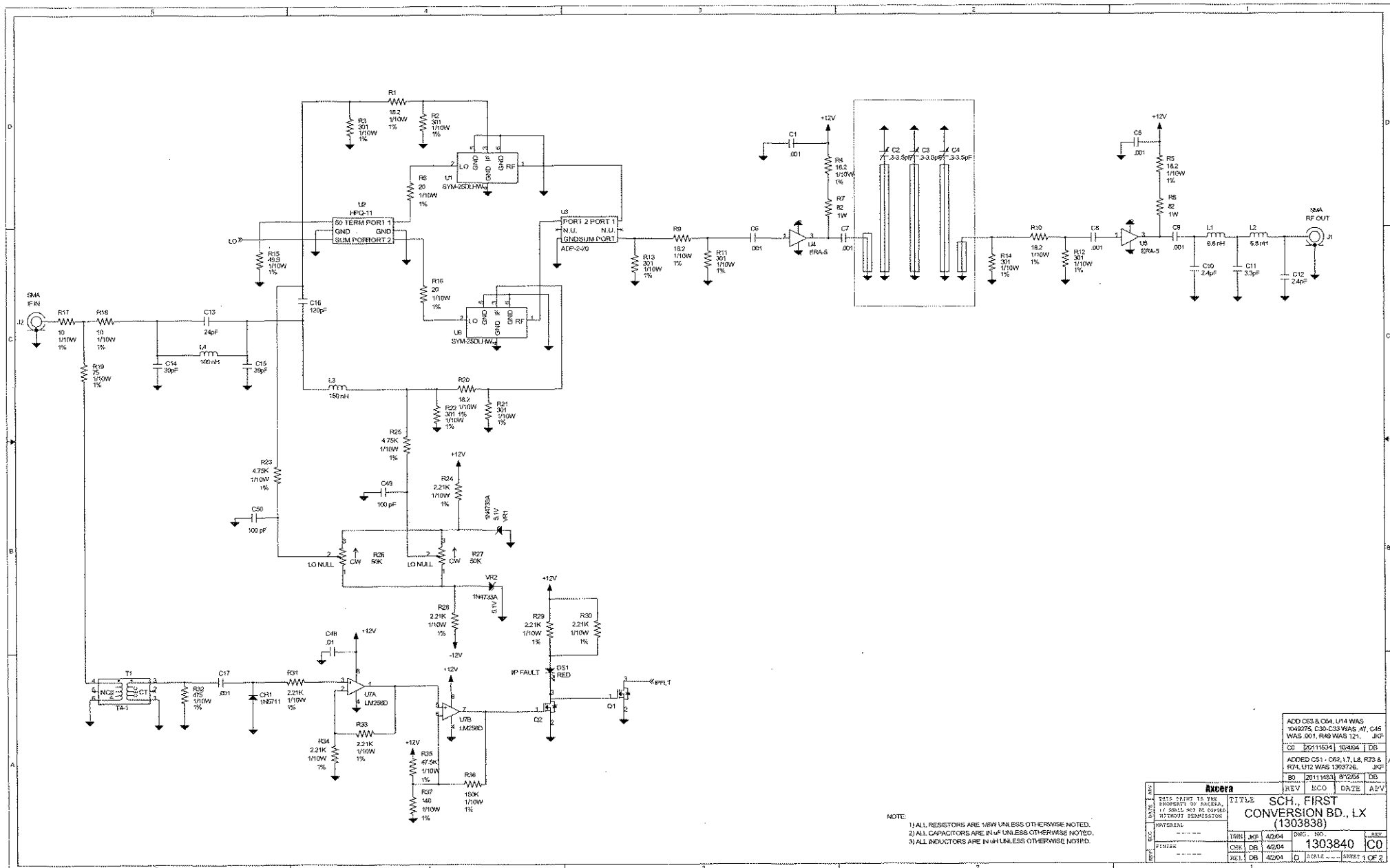
FINISH

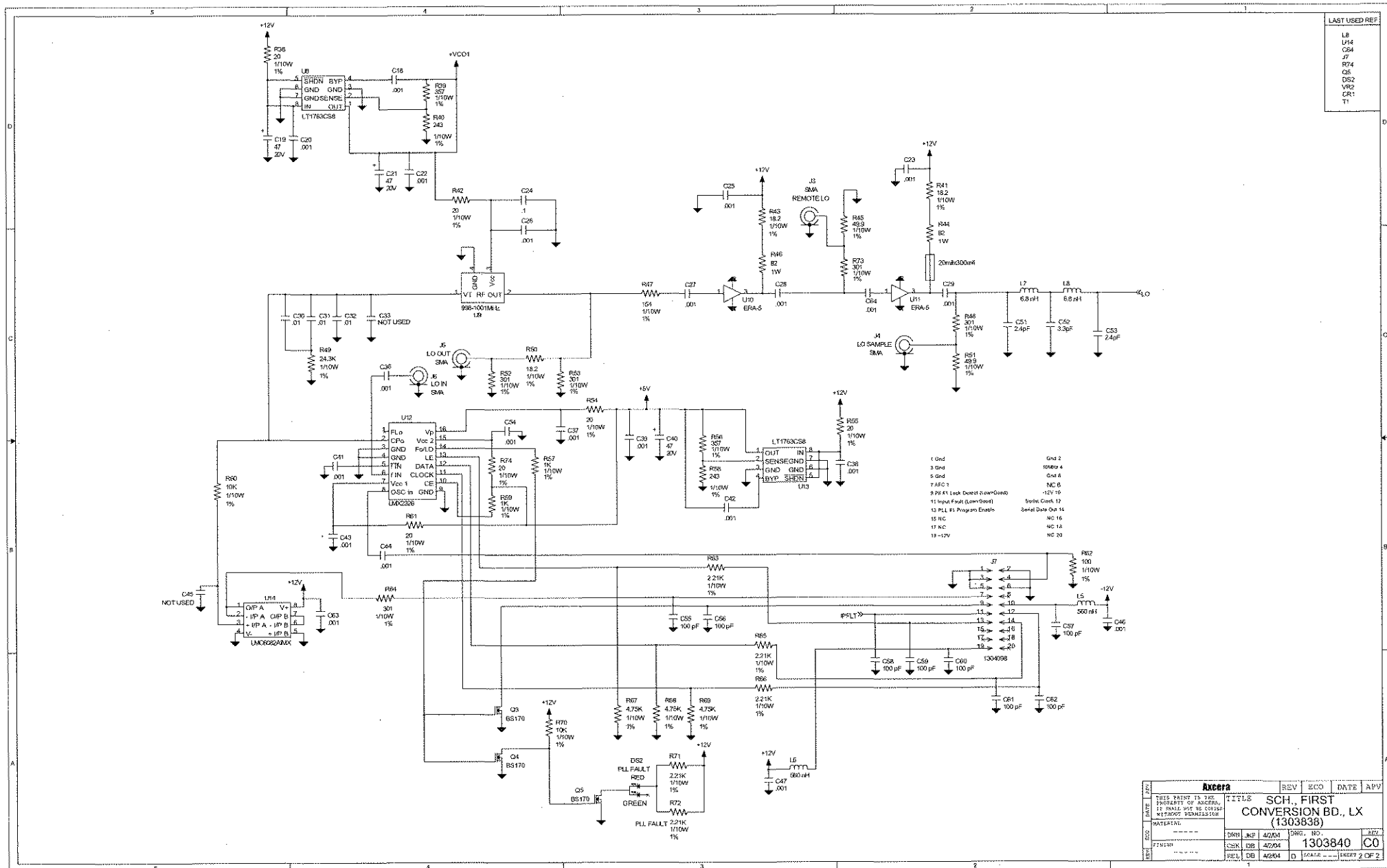
TITLE
I/C,
UPCONVERTER ASSY,
VHF/UHF, LX

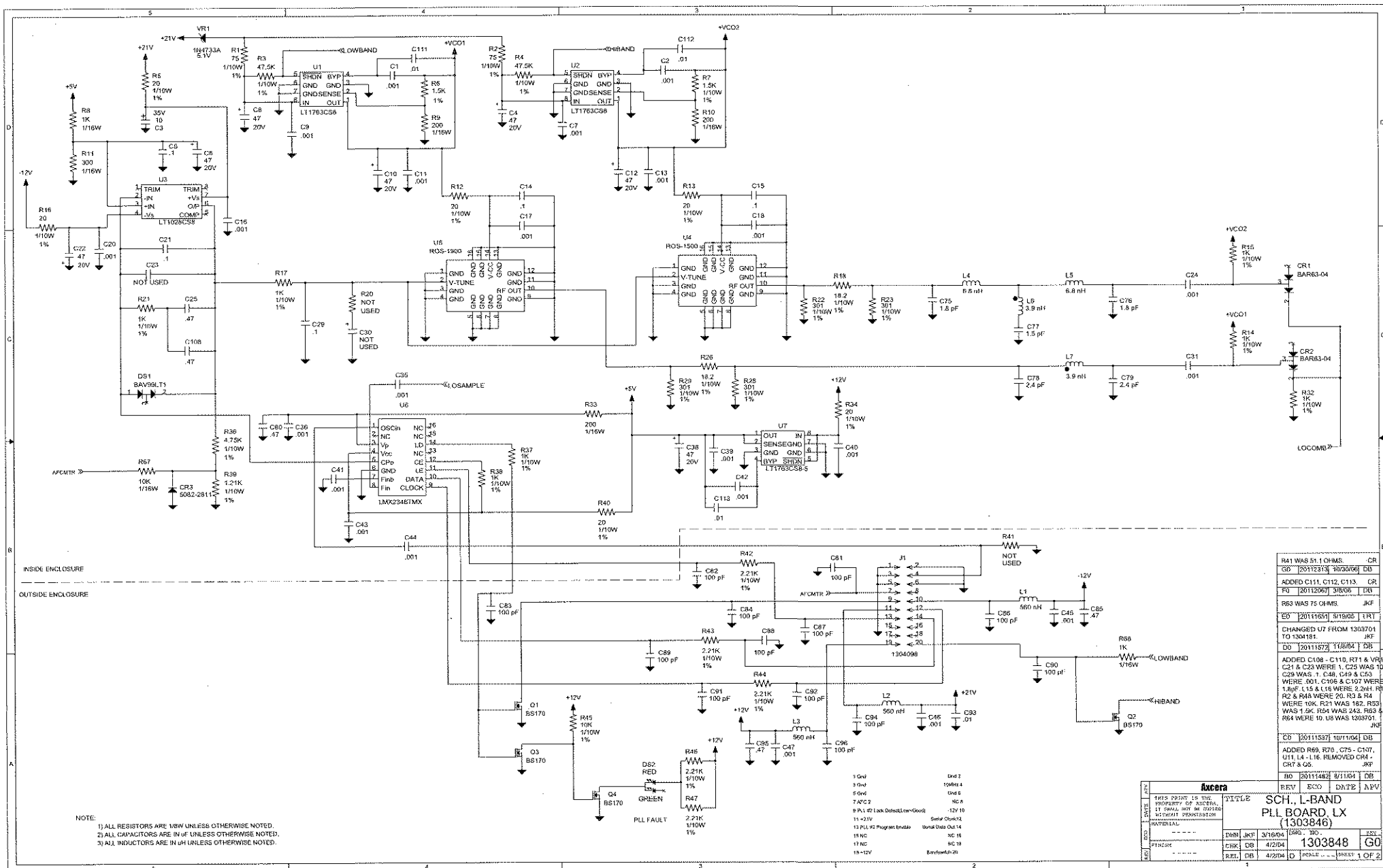
DWN	RGE	04/06/04	DWG. NO.	REV
CHK	DWB	9/30/04	1303831	B0
REL	DWB	9/30/04	B	SCALE --- SHEET 1 OF 1

A2-J3 WAS A2-J2 (TYPO) RT			
B0	2011728	4/1/05	DB
REV	ECO	DATE	APV





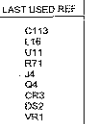




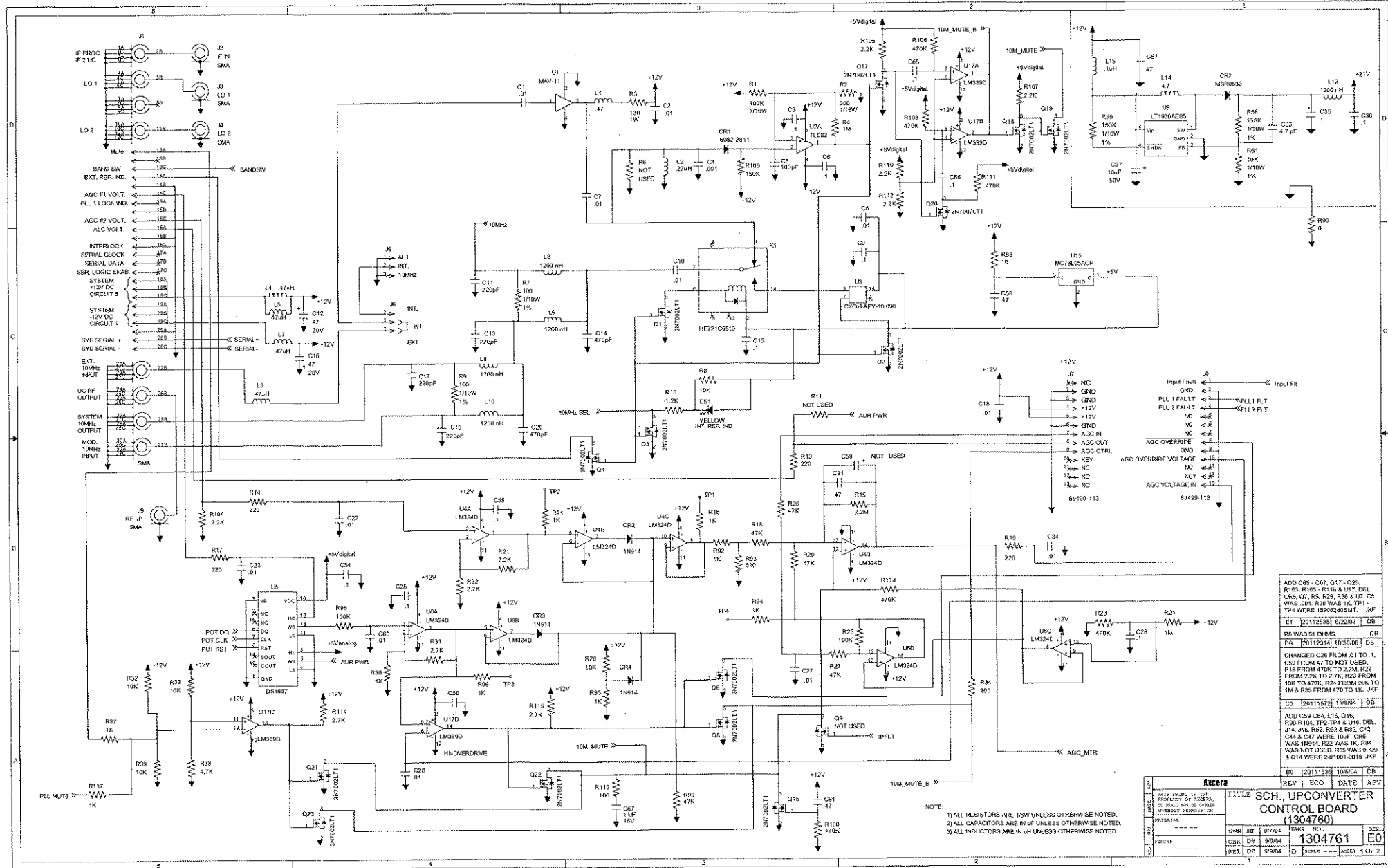
NOTE:

- 1) ALL RESISTORS ARE 1/8W UNLESS OTHERWISE NOTED.
- 2) ALL CAPACITORS ARE IN μF UNLESS OTHERWISE NOTED.
- 3) ALL INDUCTORS ARE IN μH UNLESS OTHERWISE NOTED.

					REV	ECO	DATE	APV
Axcera								
THIS PRINT IS THE PROPERTY OF AXCERA, IT SHALL NOT BE COPIED WITHOUT PERMISSION						TITLE SCH., L-BAND PLL BOARD, LX (1303846)		
MATERIAL								
REV	QBS	DATE	DRAWN	JCF	3/7/04	ISSUED BY	REV	
						1303848		G0
PRINTING			CHECK	DOB	4/2/04			
			REV	DOB	4/2/04	SCALE	SHEET	1 OF 2



REV	Axcera		REV	ECO	DATE	APV
DATE	THIS PRINT IS THE PROPERTY OF AXCERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION		TITLE SCH., L-BAND			
DATE	MATERIAL		PLL BOARD, LX (1303846)			
REV	---	OWN	JCF	3/10/04	OWN	NO.
DATE	---	REQ	DB	4/2/04	1303848	G0
REV	---	REL	DB	4/2/04	ID	SCALE --- SHEET 2 OF 2



ADD C65 - C67, Q17 - Q25,
R106, R108 - R116 & U17, DEL
C56, Q7, R5, R26, R36 & U7. C5
WAS .001, R36 WAS 1K, TP1 -
TP4 WERE 100K/200K/1K .JCF

ET 20112639 072207 CR

R5 WAS 81 OHMS DB

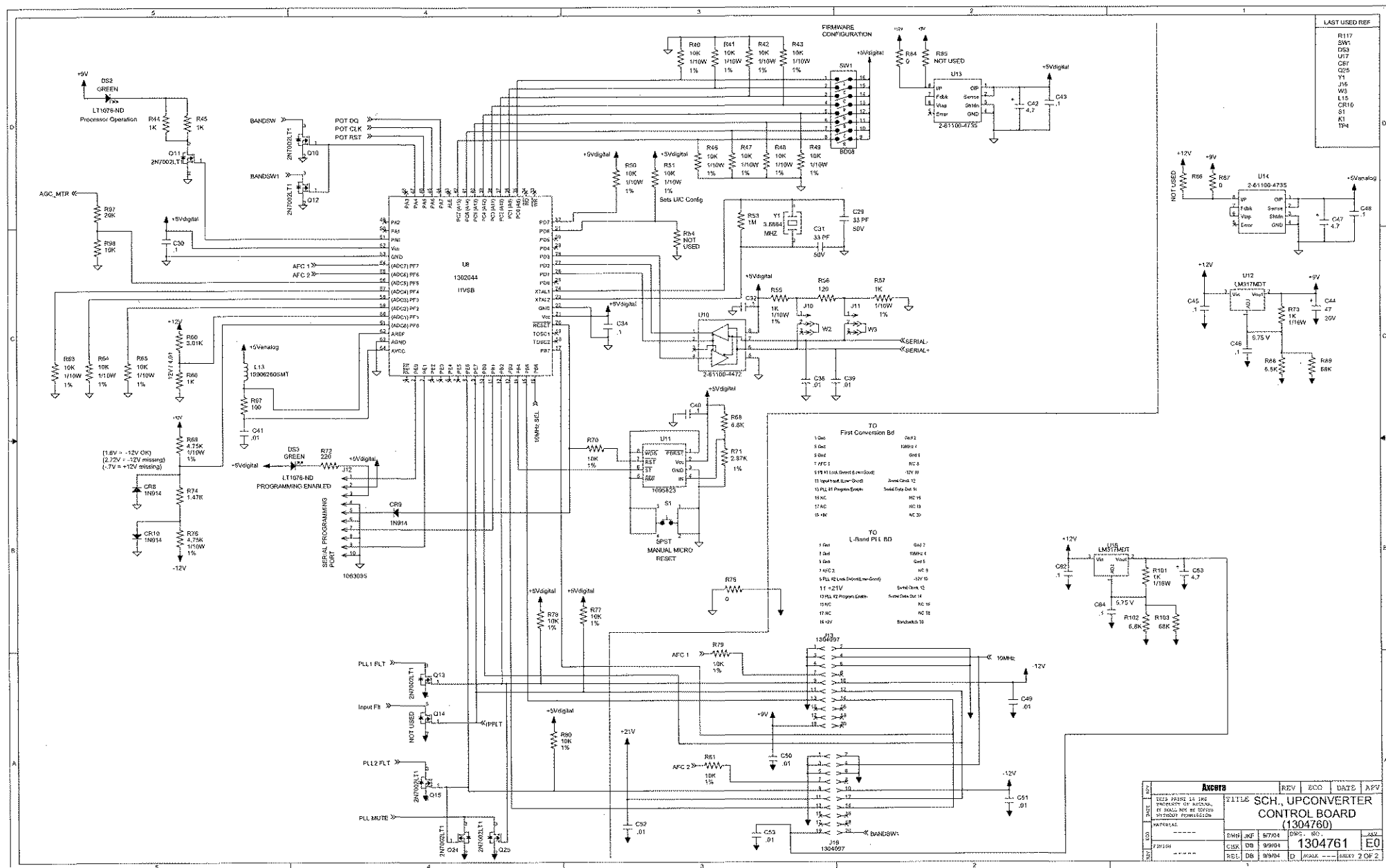
DO 20112274 093006 DB

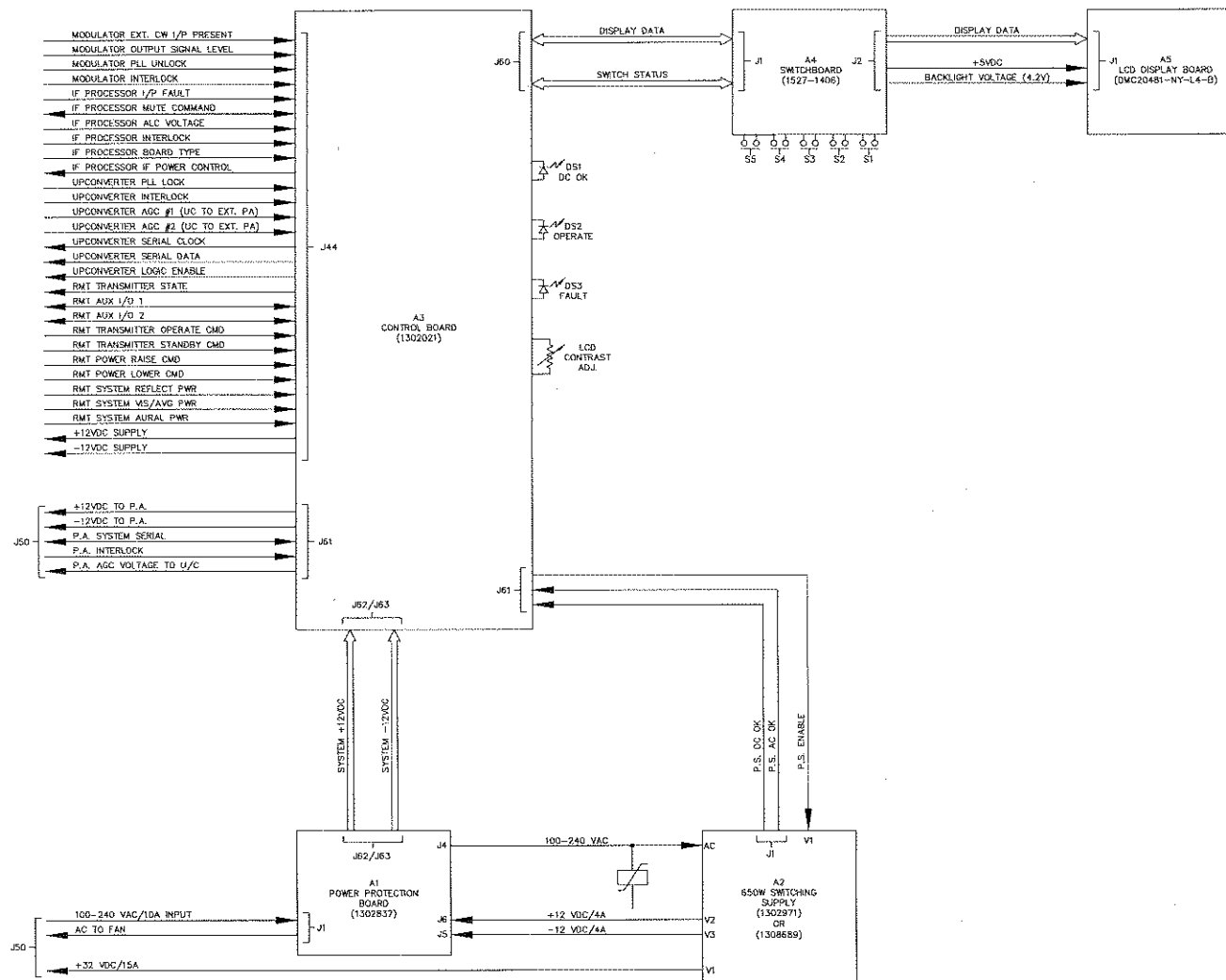
CHANGED C26 FROM .01 TO .1,
C59 FROM .01 TO .001, U16
R15 FROM 47K TO 2.2K, R22
FROM 2.2K TO 2.7K, R3 FROM
10K TO 47K, R24 FROM 20K TO
1M & R35 FROM 47K TO 1K .JCF

ADD C59, C64, L15, Q16,
R100, R104, TP2-TP4 & U16, DEL
J14, R15, R26, R36 & R38, C2,
C4 & C47 WERE 100F, C36
WAS 100K, R22 WAS 1K, R34
WAS NOT USED, R35 WAS 8.09
& Q14 WERE 2-41001-0015 .JCF

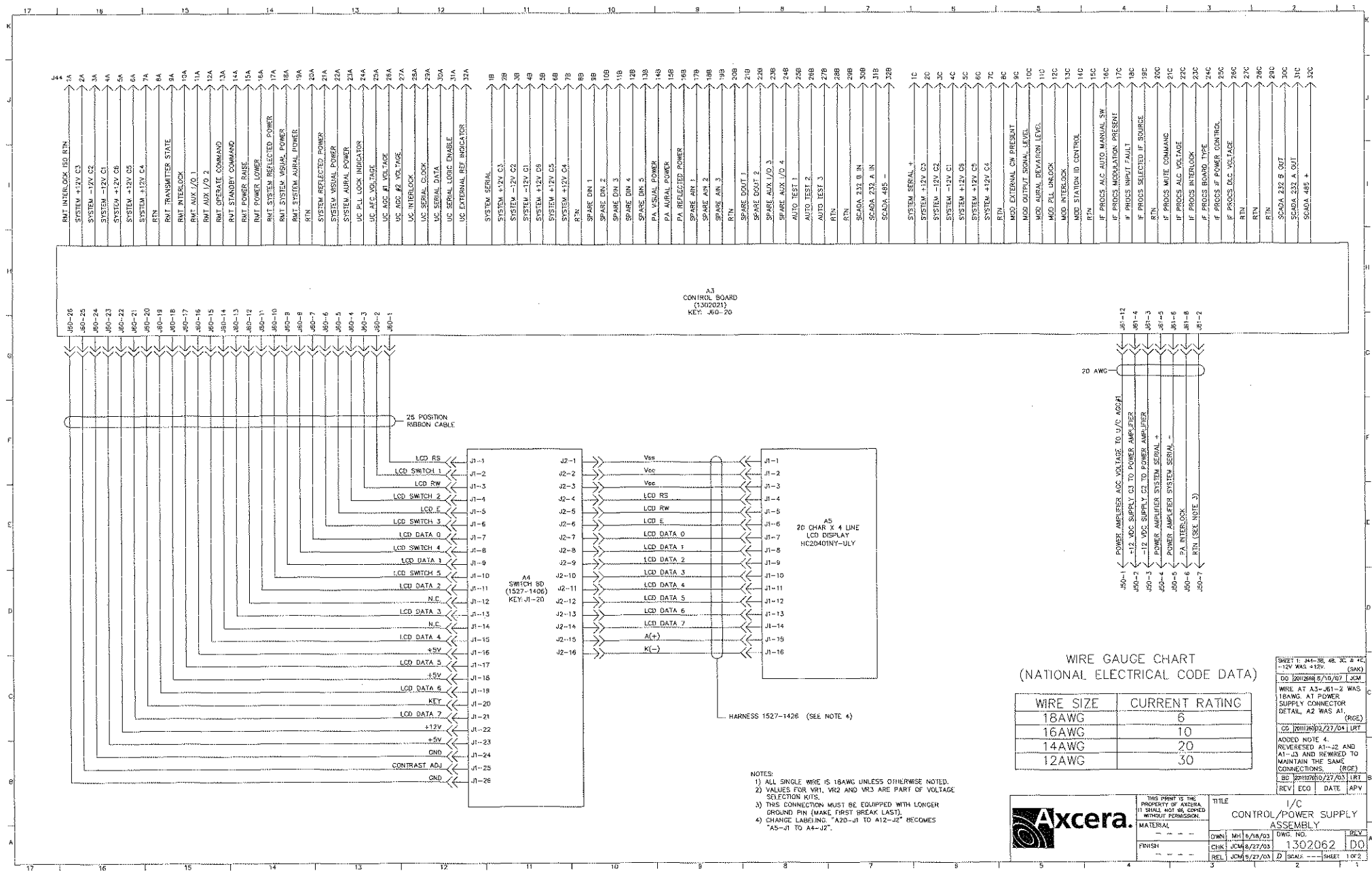
DB 20112626 100604 DB

REV				ECO	DATE	APV
1						
2						
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REV ECD DATE APV		TITLE B/D, CONTROL/POWER SUPPLY ASSEMBLY, INNOVATOR LX	
DWN RGE 1/28/04		DWG. NO. 1303889	
CHK JCM 2/2/04		REL JCM 2/2/04	
FINISH		SCALE	
SHEET 1 OF 1		SHEET 1 OF 1	

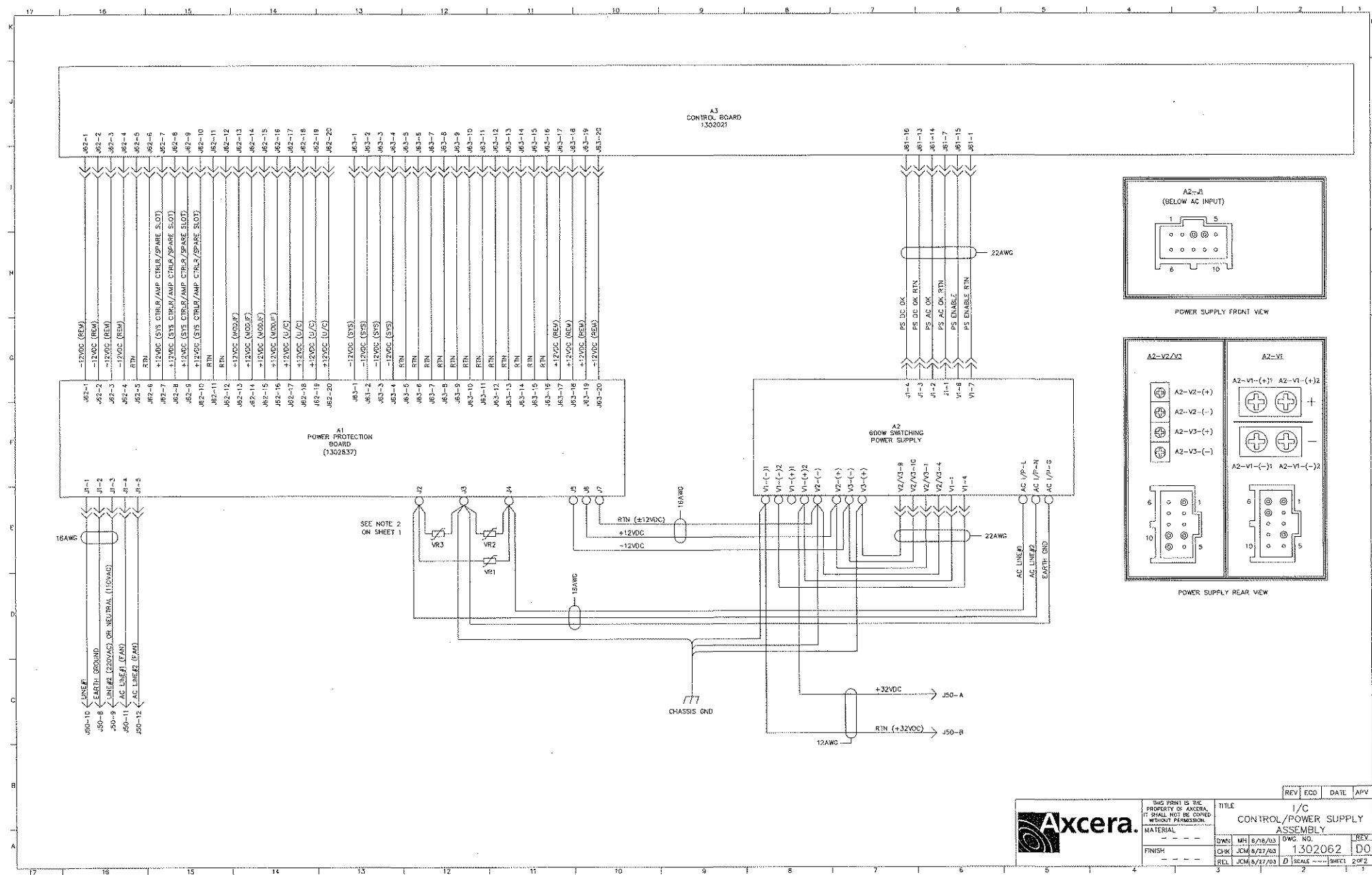


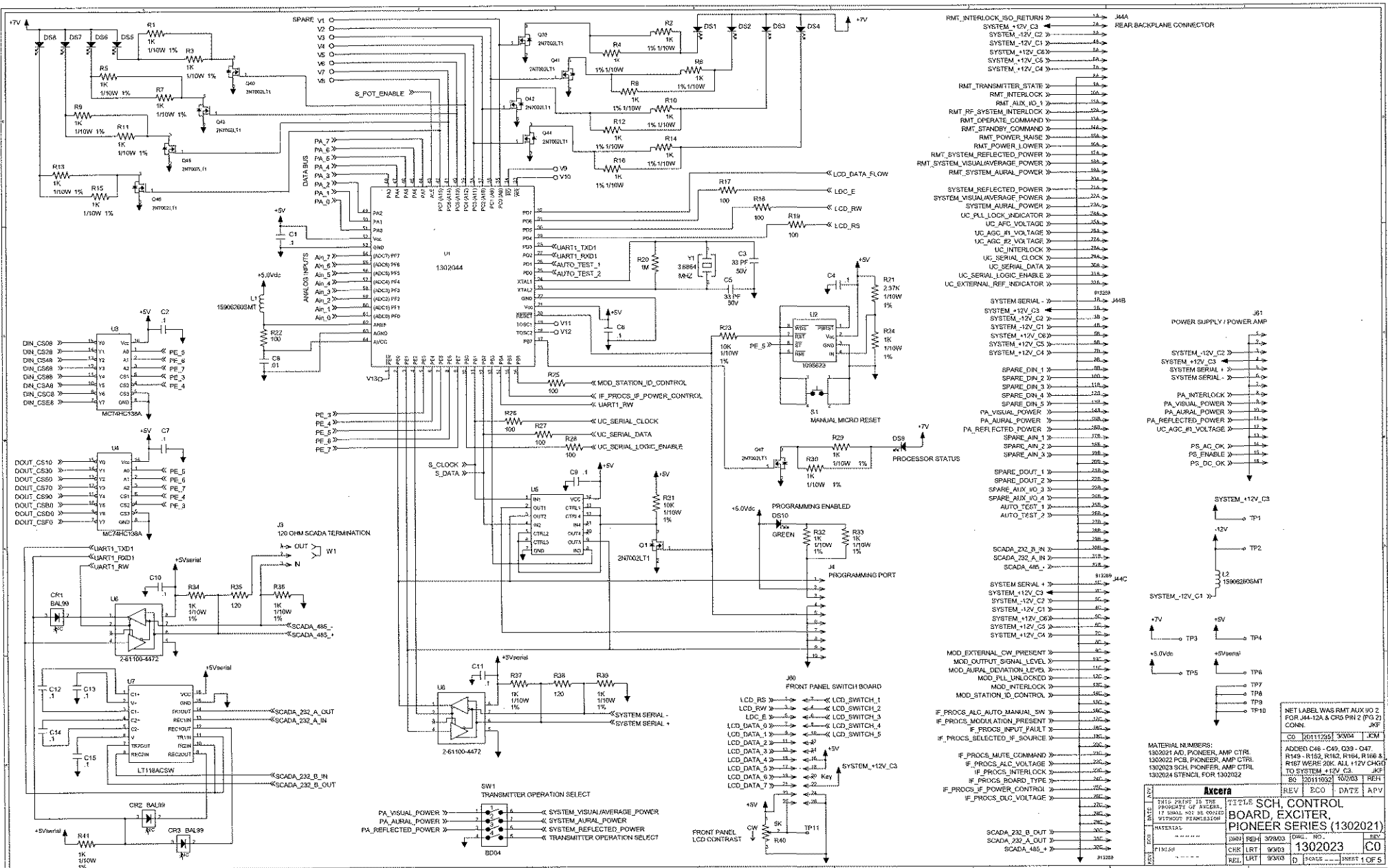
WIRE SIZE	CURRENT RATING
18AWG	6
16AWG	10
14AWG	20
12AWG	30

SHEET 1: 44-38, 48, 50, 54, 56, -12V WAS +12V. (SAX)			
DO 20112609/5/10/07 JCM			
WIRE AT A3-J61-2 WAS 18AWG. AT POWER SUPPLY CONNECTOR DETAIL A2 WAS A1. (RGE)			
CC 20112609/2/27/04 LRT			
ADDED NOTE 4. REVERSED A1-J2 AND A1-J3 AND REWIRED TO MAINTAIN THE SAME CONNECTIONS. (RGE)			
BC 20112610/27/03 LRT			
REV	FCO	DATE	APV

ADDED NOTE 4. REVERSED A1-J2 AND A1-J3 AND REWIRED TO MAINTAIN THE SAME CONNECTIONS. (RCE)			
BD	20110710	10/27/03	IRT
REV	ECO	DATE	APV

I/C		DWG. NO.		REV
OL/POWER SUPPLY ASSEMBLY				
03	DWG. NO.			REV
03	1302062			D0
03	D	SCALE ---	SHEET	1 OF 2

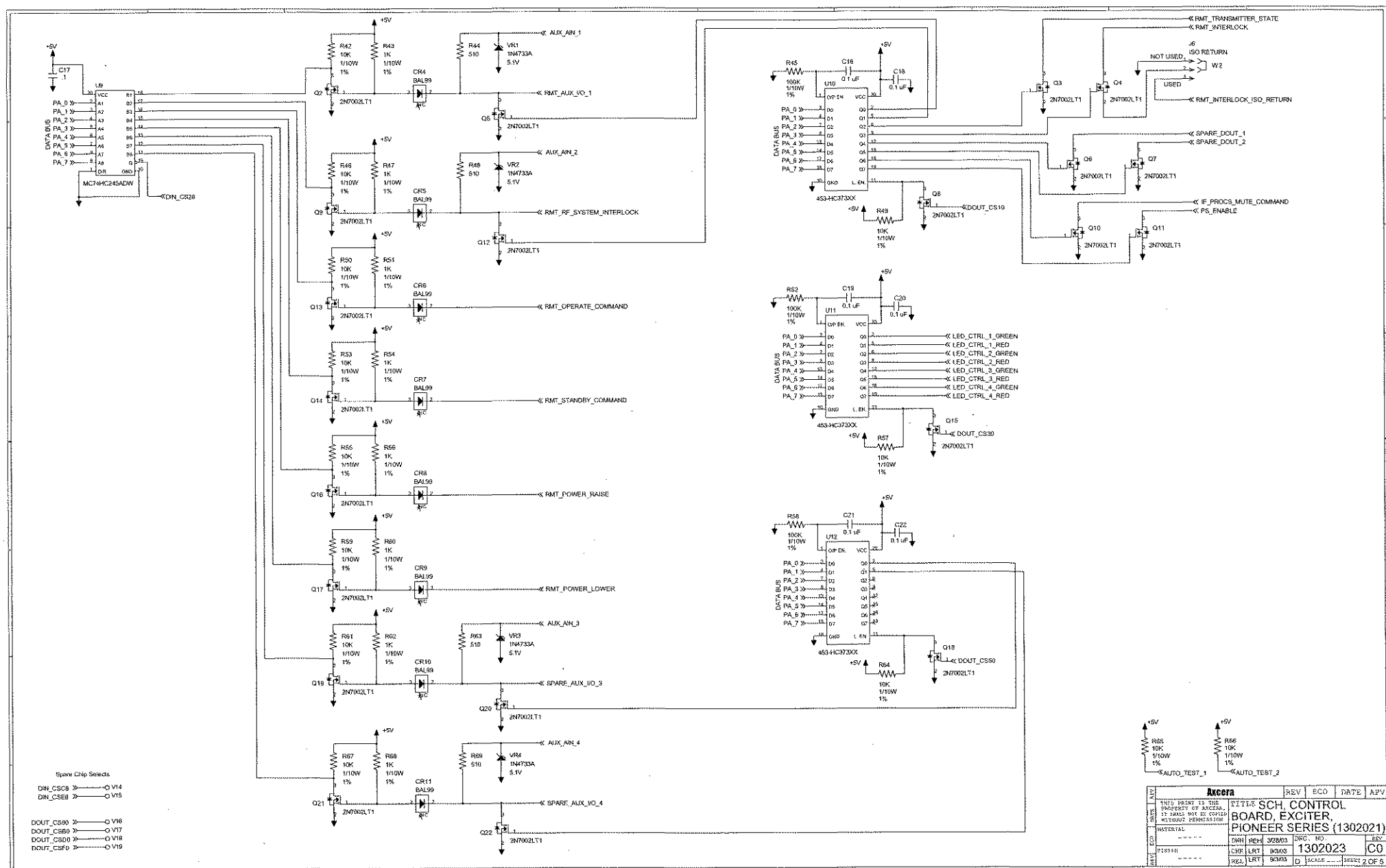




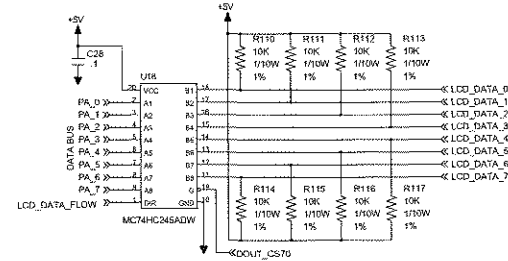
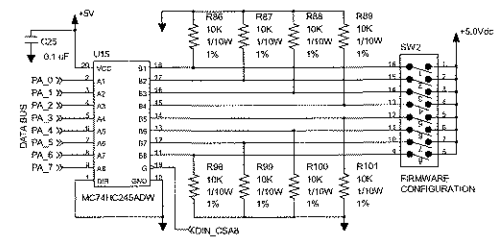
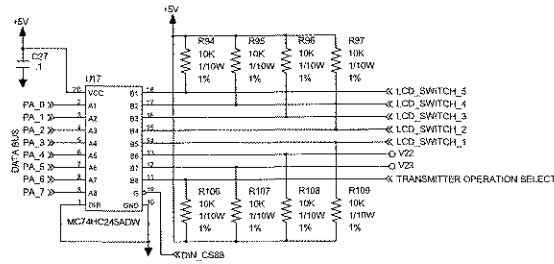
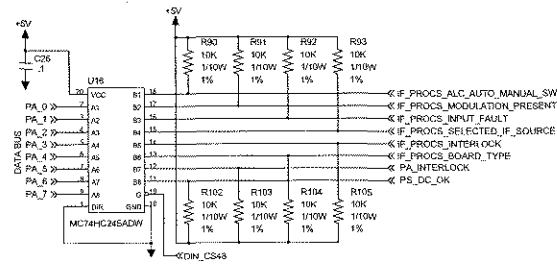
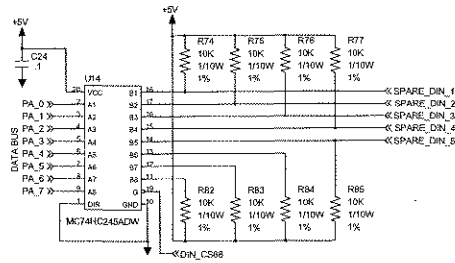
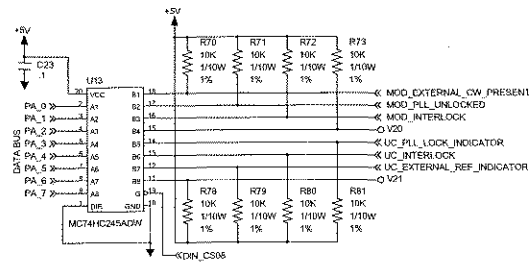
NET LABEL WAS RMT AUX 90 2
FOR J44-12A & CR5 PIN 2 (PG 2)
CONN. JKF

MATERIAL NUMBERS:	C0 20111251	9304	JCM
130201 AD, PIONEER, AMP CTRL	ADDED C48 - C49, Q39 - Q47.		
1302022 PCS, PIONEER, AMP CTRL	R149 - R158, R162, R164, R166 &		
1302023 SCH, PIONEER, AMP CTRL	R167 WERE 20K. A31 +12V CHG		
1302024 STENCIL FOR 1302022	TO SYSTEM +12V CS	JKF	
	B0 20111032	K0203	REH

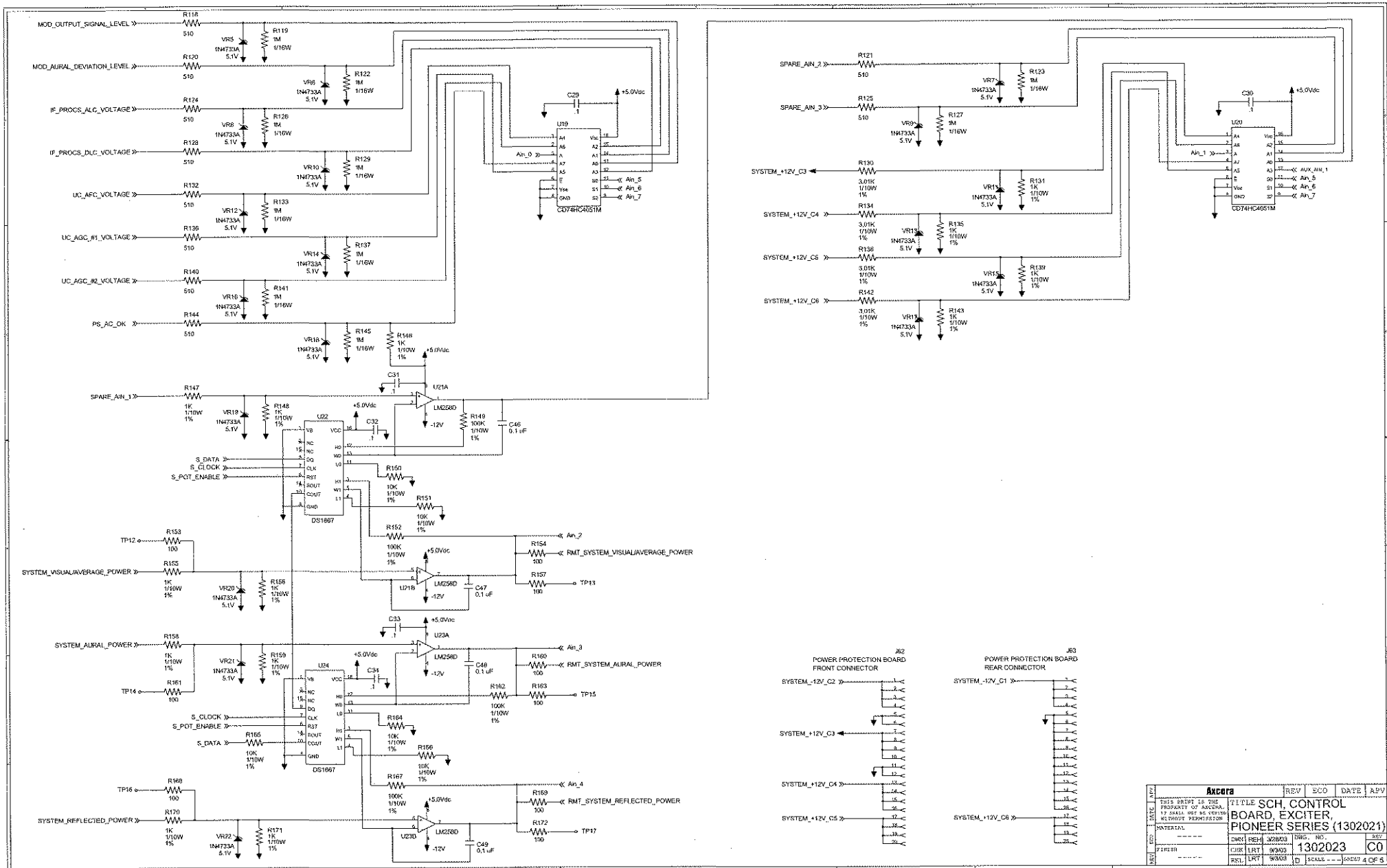
REV	ECO	DATE	APV
Axcera THIS PRICE IS THE PROPERTY OF AXCERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.		TITLE SCH. CONTROL BOARD, EXCITER, PIONEER SERIES (1302021)	
DATE	MATERIAL		
ECO	JWH REH 3/28/03 CHK LRT 9/30/03 REL LRT 9/30/03	DWG. NO. 1302023	REV C0
FINISH	D SCALE _____ SHEET 1 OF 5		

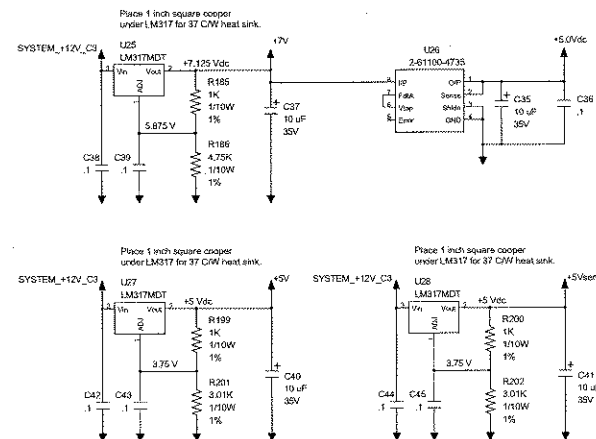


		Axcera	REV	ECD	DATE	APV
TITLE	THIS PRINT IS THE PROPERTY OF AXCERA, 17 DALLI BOY IN COLLEGE, MIDHURST MEMPHIS/TN					
SUBJECT	TITLE SCH. CONTROL BOARD, EXCITER, PIONEER SERIES (1302021)					
MATERIAL						
DRAWING NO.	DWG.	REV.	32803	DWG. NO.	REV.	
PTRSH	CHEF	LRT	93003	1302023	C0	
	CHEF	LRT	93003	D SCALE _____	SHEET 2 OF 5	



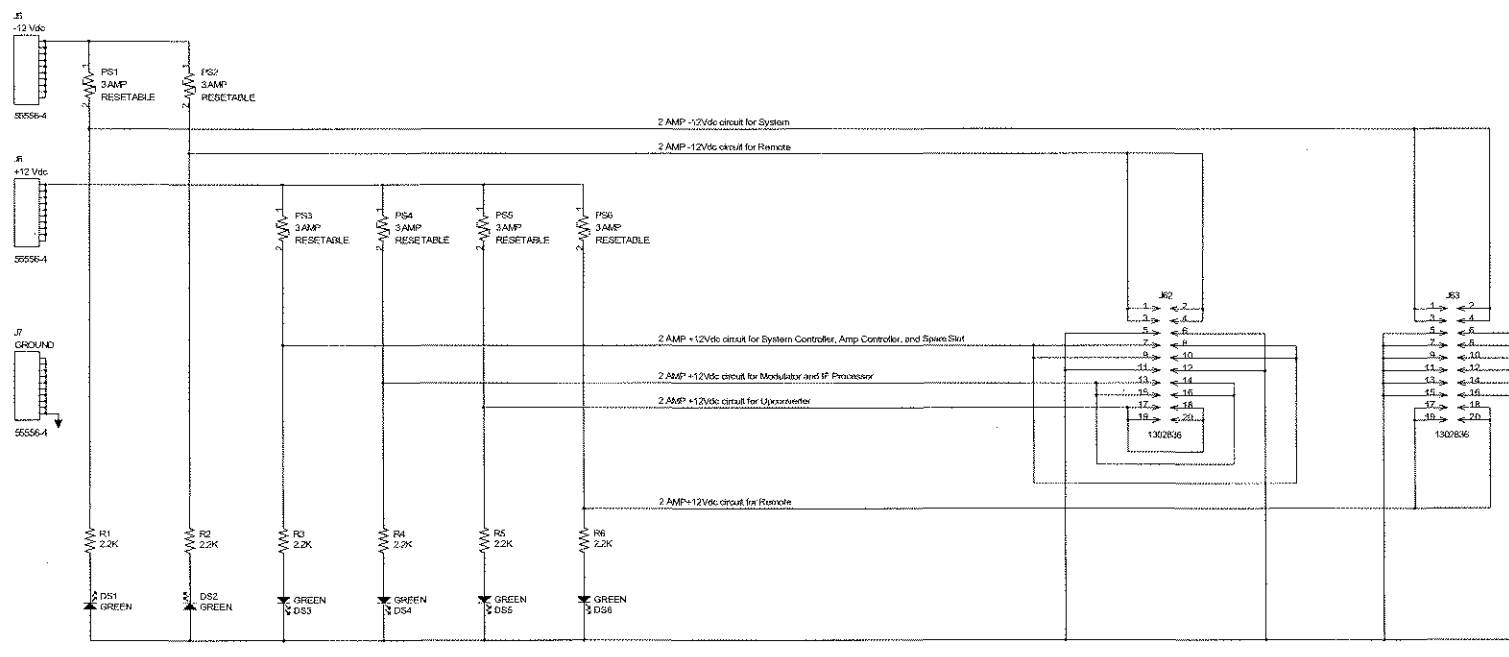
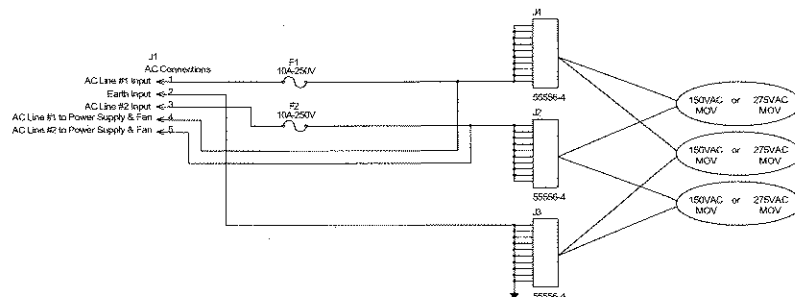
Axcera		REV	ECO	DATE	REV
THIS PRINT IS THE PROPERTY OF AXICERA. IT SHALL NOT BE COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION FROM AXICERA.		TITLE SCH. CONTROL BOARD, EXCITER, PIONEER SERIES (1302021)			
DATE	130203	REV	130203	ECO	130203
CHK	130203	DATE	130203	SCALE	1:1
REV	130203	DATE	130203	SCALE	1:1





Several voltage regulators are used to power the board. Seven volts is typically applied to board LEDs and to the input of a precision 5.0 volt regulator. The 5.0 volt regulator is used for analog circuits and the microcontroller analog reference voltage. Another two 5 volt regulator circuits are used for most other board circuits.

REV	REV	ECO	DATE	APV
Axcera 7813 PRINC IS THE PROPERTY OF AXCERA. IT IS/ISN'T NOT BE COPIED WITHOUT PERMISSION OF AXCERA		TITLE SCH, CONTROL BOARD, EXCITER, PIONEER SERIES (1302021)		
FINISH	TDRN RES CHK LRT LRT	32803 03030 93030	1983. NO. 1302023 1302023	REV CO
-----	SCALE _____		SHEET 5 OF 5	

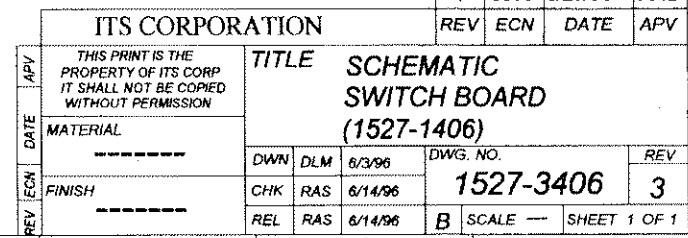


Circuit Design Notes:

1. Track widths of 0.140 inch minimum top and bottom of board shall be used to connections to J1, J2, J3, J4.
2. Track widths of 0.140 inch minimum top of board shall be used to connections to J5 and J6.
3. Track widths of 0.055 inch minimum shall be used to connections to J8 and J9.
4. Track widths of 0.020 inch minimum shall be used to connections between LEDs and resistors.
5. Board BOM needs the following items added to those exported from OrCAD:
 First Number Qty Description
 102071 4 Fuse Clip, PC BO Mnt., 15 Amp

MATERIAL NUMBERS:
 1302837 PIONEER, POWER PROTECTION
 1302838 PCB, PIONEER, PWR PROTECT
 1302839 SCH, PIONEER, PWR PROTECT
 1302840 STENCIL FOR 1302838

Axcera		REV	ECO	DATE	APV
THIS PRINT IS THE PROPERTY OF AXICERA. IT SHALL NOT BE COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION.		TITLE SCH, PIONEER, PWR PROTECT (1302837)			
MATERIAL		OWN	REV	DATE	NO.
TINMAN		CHK	REV	DATE	NO.
REL		REV	DATE	NO.	NO.
SCALE		SHEET 1 OF 1			



DELETED C1, C2, L1, L2,
U1, J3, & W1. MOVED
W2 FROM J6-1,-2 TO J6
-2,-3. JKF

3	8603	11/7/96	RAC
---	------	---------	-----

AT J2 W2 WAS W1. (TMY)

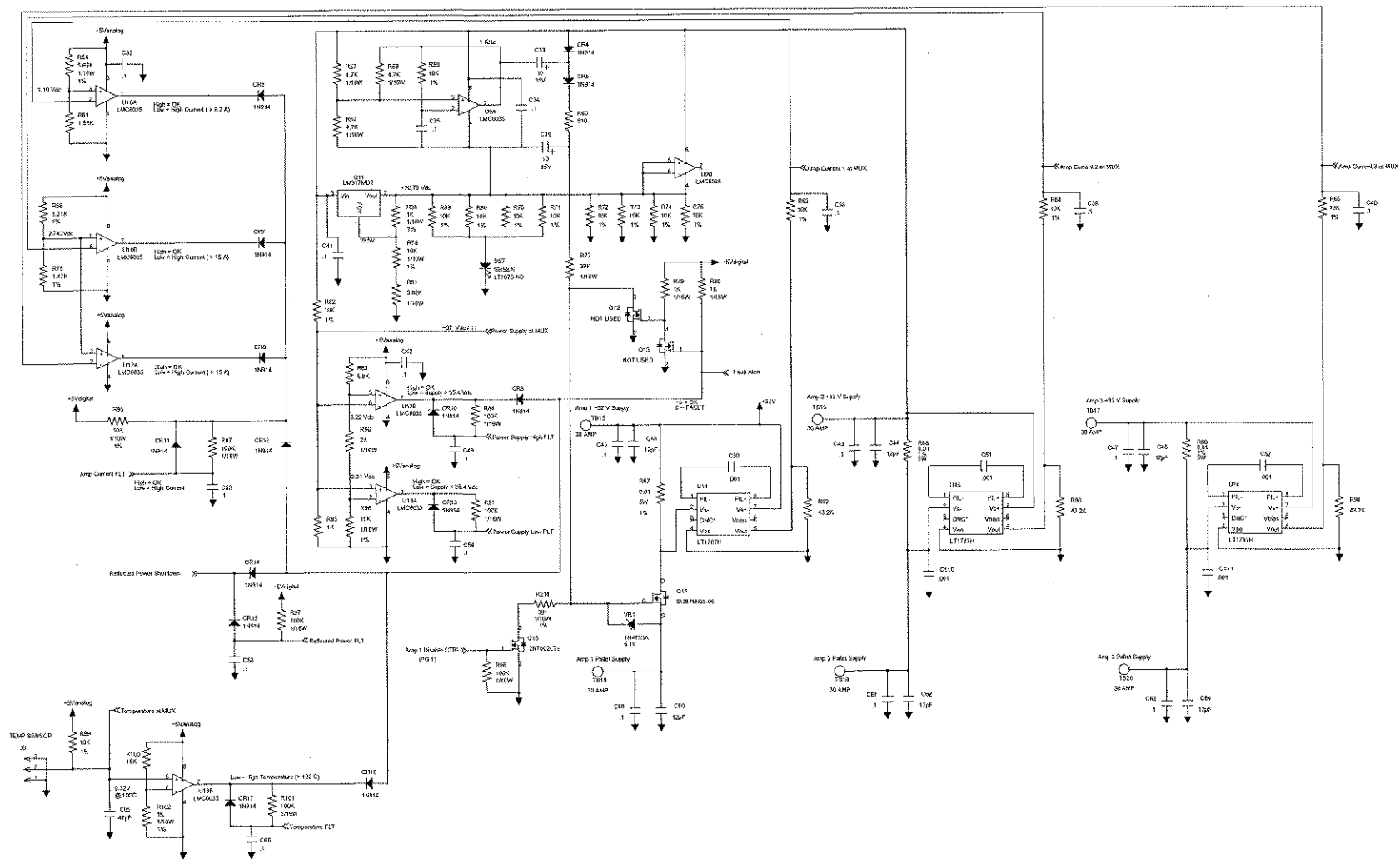
SWITCHED PINS 1 & 2 OF
U2. (TMY)

1	8368	8/27/96	RAS
---	------	---------	-----

REV	ECN	DATE	APV
-----	-----	------	-----

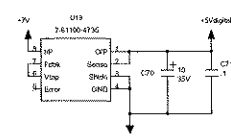
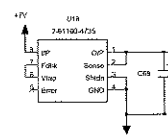
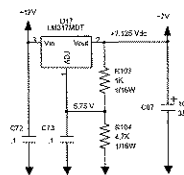
TITLE	SCHEMATIC SWITCH BOARD (1527-1406)
-------	--

DWN	DLM	6/3/96	DWG. NO.		REV
CHK	RAS	6/14/96	1527-3406		3
REL	RAS	6/14/96	B	SCALE —	SHEET 1 OF 1

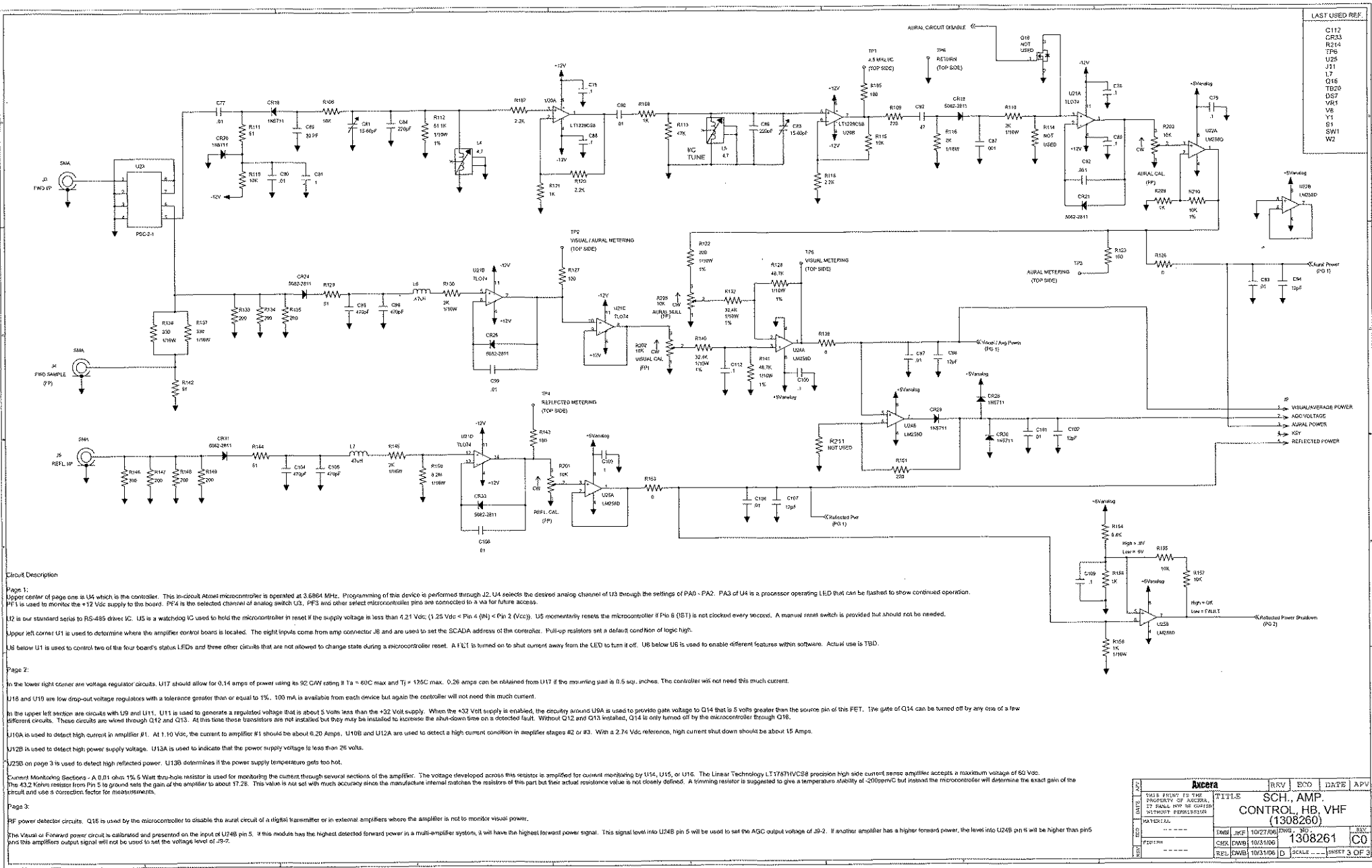


NOTE:

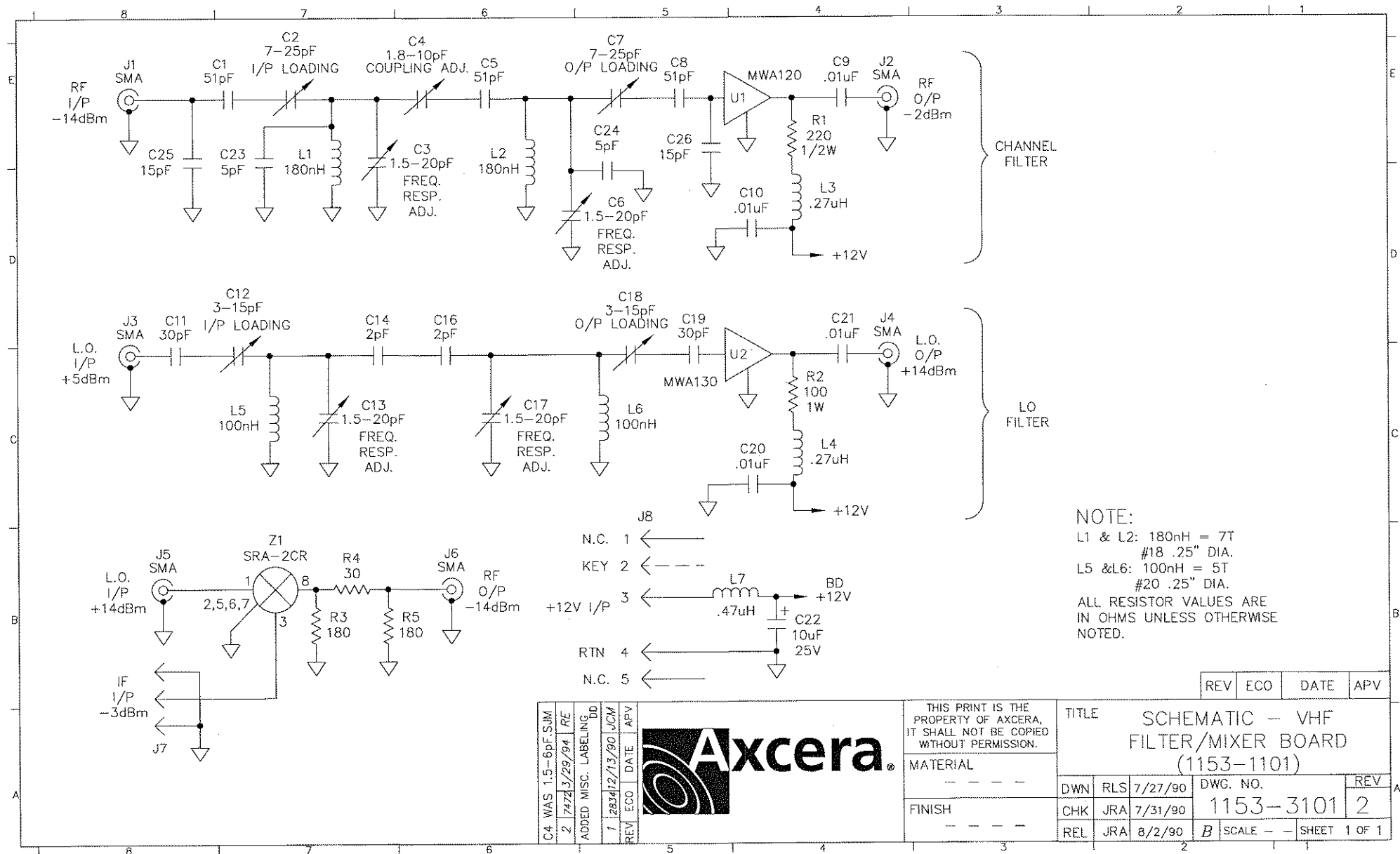
A track width of 0.3 inch is needed between power input vias and sense resistors R55, R56, R57. 0.3 inch track width is also needed between the output of the sense resistors and the output vias that provide power to the amplifier pallets.

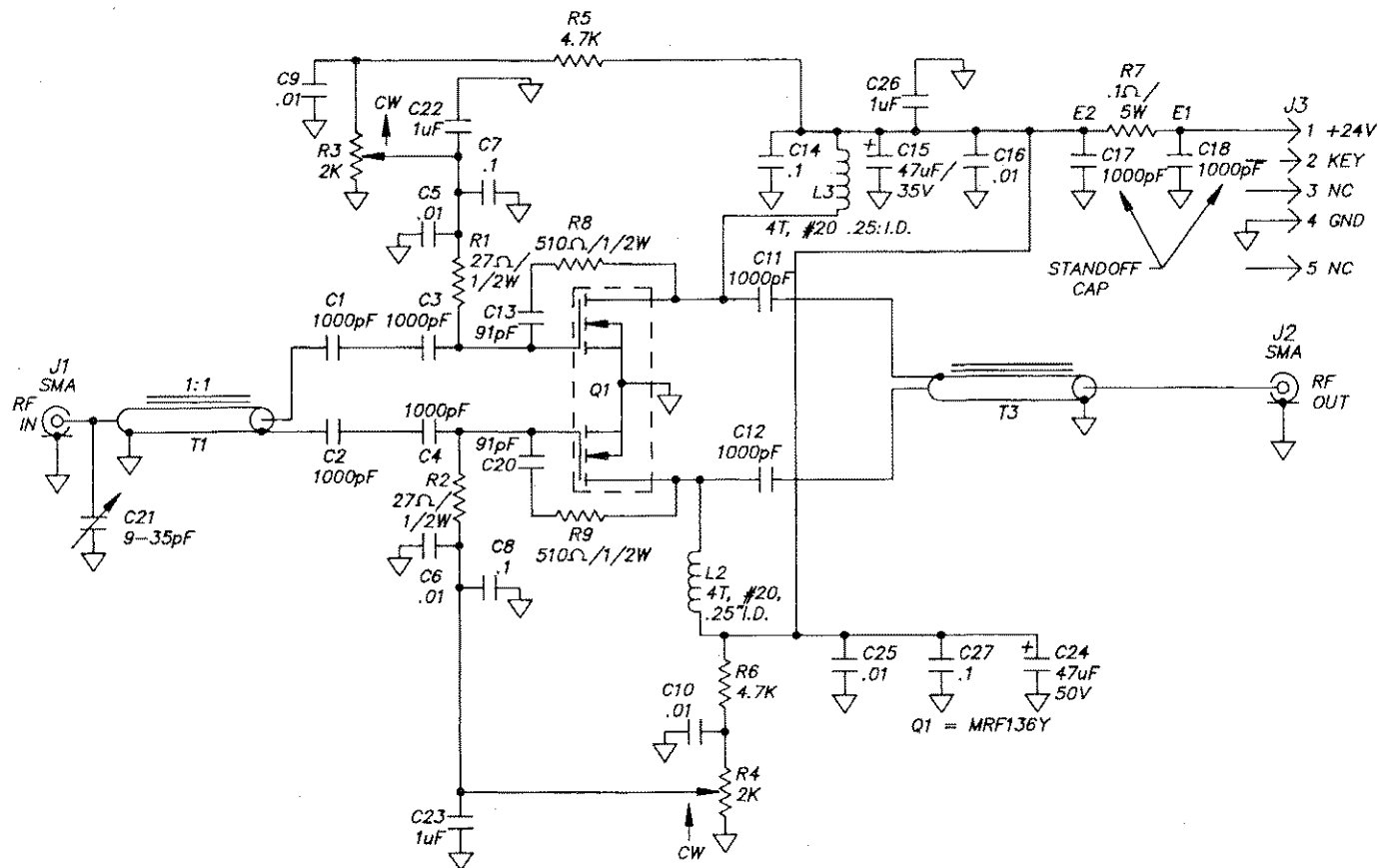


APV	Axcera		REV	ECO	DATE	APV
	THIS PRINT IS THE PROPERTY OF AXCERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION		TITLE SCH. AMP. CONTROL HB. VHF (1308260)			
DATE	DRAWN		10/27/06		DWG. NO.	
	F212121		CHKD		1308261	
REV	REC		10/31/06		C0	
	SCALE		SHEET 2 OF 3			

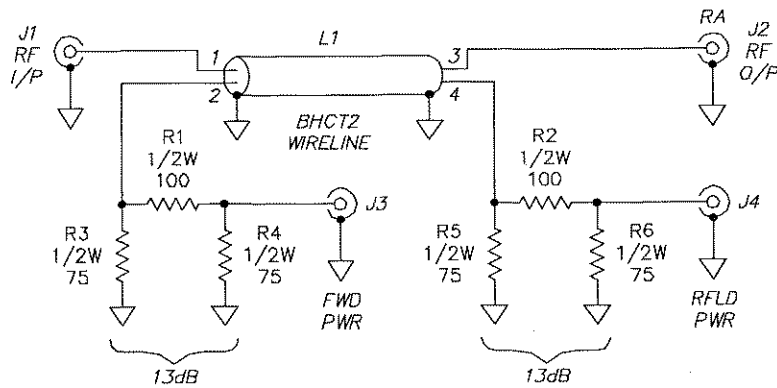


Axcera					REV	ECO	DATE	APV
THIS FILMO IS THE PROPERTY OF AXCERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.					TITLE			
					SCH. AMP. CONTROL HB. VHF (1308260)			
					DATE			
					10/27/96			
					CSC			
					10/31/96			
					REV			
					1308261			
					C0			
					SCALE			
					10/31/96			
					D			
					3 OF 3			





ITS CORPORATION				REV	ECN	DATE	APV
THIS PRINT IS THE PROPERTY OF ITS CORP. IT SHALL NOT BE COPIED WITHOUT PERMISSION.				TITLE			
				SCHEMATIC - LOW BAND VHF DRIVER BD. (1153-1107)			
MATERIAL				DWN	BUD	8/1/90	DWG. NO.
FINISH				CHK	DWB	8-3-90	1153-3107
				REL	DWB	8-3-90	B SCALE --- SHEET 1 OF 1
				REV			
				0			



R1 & R2 WERE 1/4W, 16 OHMS.			
R3-R6 WERE 1/4W, 300 OHMS. WB			
A0	20112539	3/29/07	LRT
R3,R4,R5 AND R6 WERE 150. R1 AND R2 WERE 36. SJM			
1	7231	2/8/93	RE
REV	ECD	DATE	APV



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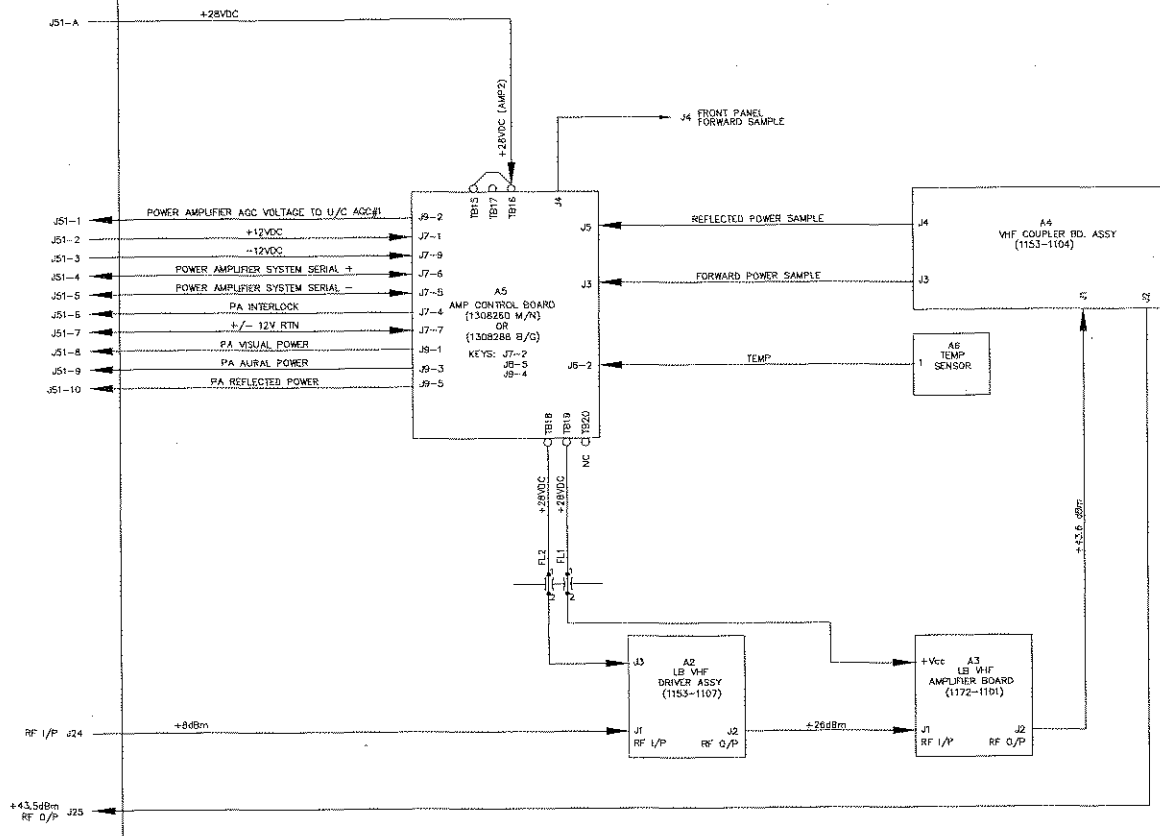
MATERIAL

FINISH

TITLE

SCH,
OUTPUT COUPLER BOARD,
LOW BAND VHF

DWN	RLS	7/23/90	DWG. NO.	REV
CHK	KF	7/27/90	1153-3104	A0
REL	KF	7/30/90	B SCALE ---	SHEET 1 OF 1

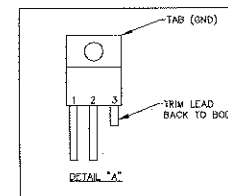
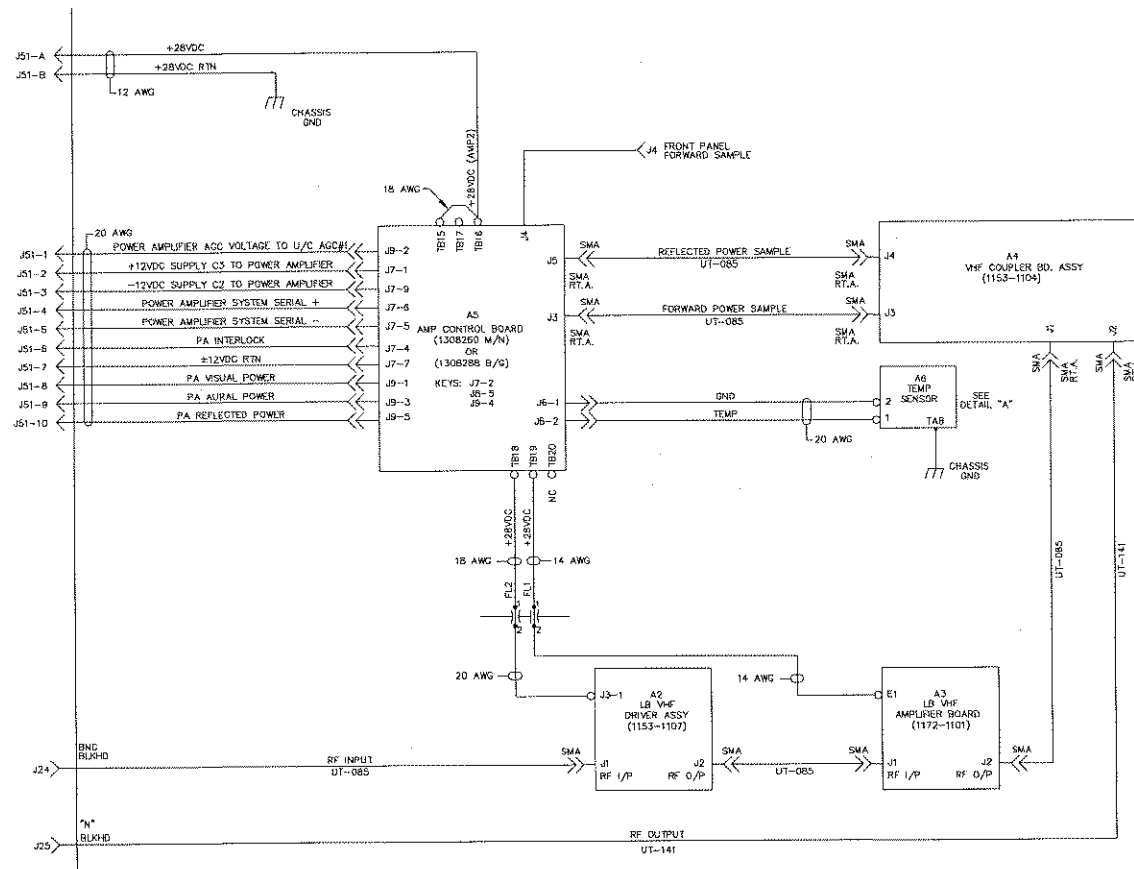


NOTE:
1. ALL POWER LEVELS ARE PK-SYNC +10% AURAL FOR DTV LEVELS, SUBTRACT 3dBm.

A5 WAS 1303582 M/N & 1304574 B/G. A4 WAS 1141-1002.	CD
CD 1012454 7/10/07 LRT	
DELETED LOW PASS FILTER BOARDS BETWEEN A4 & A5.	
A2 WAS 1307141. ADDED A3. +28V WAS 4.50V.	WB
WB 1011114 4/28/06 LRT	
REV ECD DATE APV	

THIS PRINT IS THE PROPERTY OF ANCELA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.		TITLE		REV
MATERIAL		B/D DRIVER ASSEMBLY 20W LG VHF		A
FINISH	SAK 3/22/06	DWG. NO.	1307159	CD
REL	LRT 3/28/06	D SCALE	1	SHEET 1 OF 1





NOTE:
1. ALL WIRE IS 18AWG UNLESS OTHERWISE NOTED.

AS WAS 1303682 M/N &
1304574 B/C. A4 WAS
1141-1002. CDD
CO 10010847/10/07 LRT
DELETED LOW PASS
FILTER BOARDS BETWEEN
A4 & A5.
A2 WAS 1307141.
ADDED A3. +28V WAS
+30V. WB
REV ECD DATE APV
BO 10010847/10/08 LRT

THIS PRINT IS THE PROPERTY OF AXCERA. IT SHALL NOT BE COPIED WITHOUT PERMISSION.		TITLE I/C, DRIVER ASSEMBLY 20W LB VHF		REV
		MATERIAL	DWN: SAK03/22/08 DWS: NO	C0
FINISH		CHK: LRT/13/29/08	1307158	
		REL: LRT/13/02/08	D 3048	SHEET 1 OF 1

