

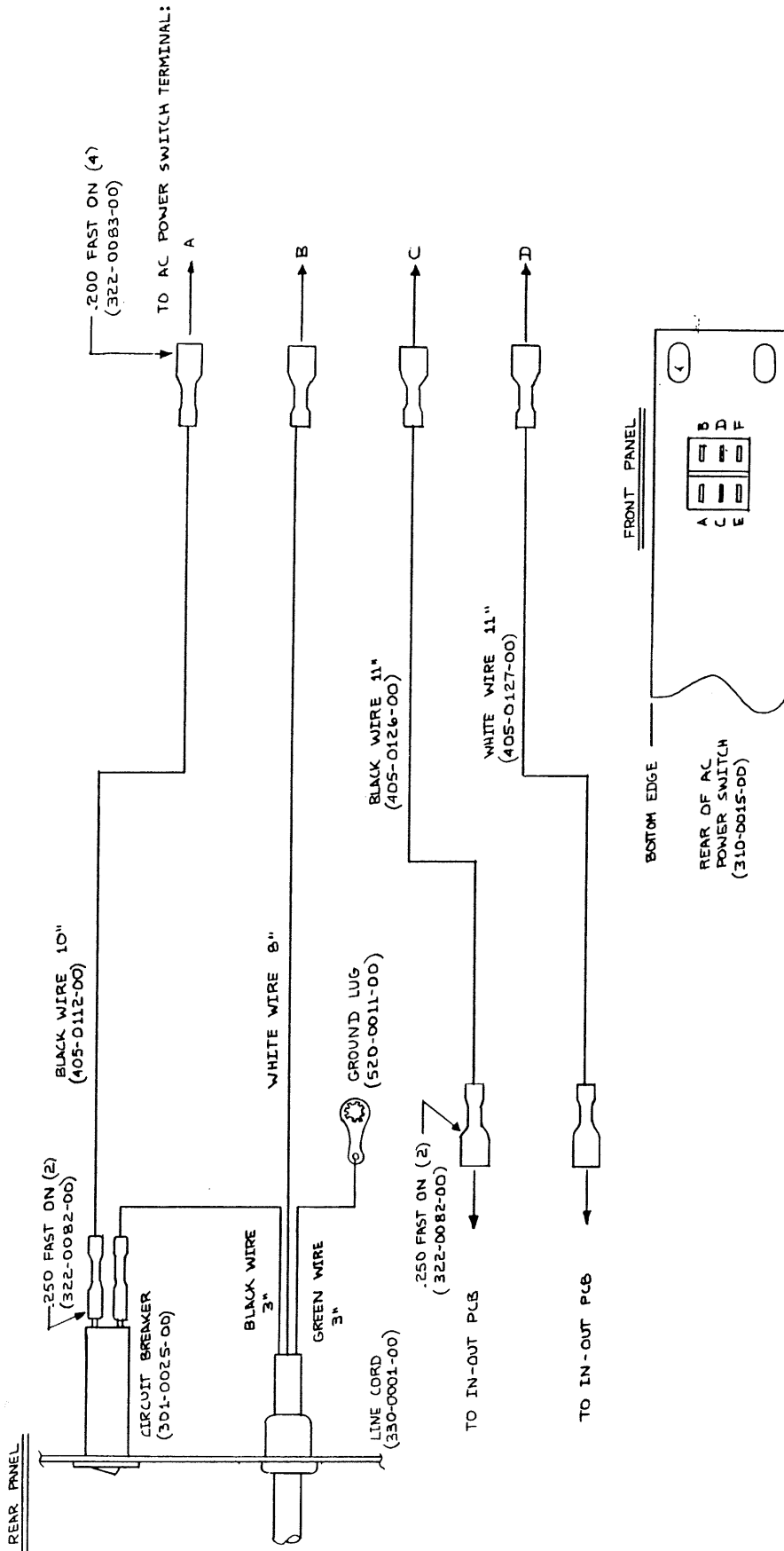
Biamp EQ/140
Parametric EQ

Service Manual

B I A M P[®]

S Y S T E M S

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REV.	E.C.O.	CHANGE	DATE	BY

DESCRIPTION	SIZE	QTY.
BIAMP SYSTEMS INC.		
AC WIRE HARNESS ASSEMBLY		
EQ140 PARAMETRIC EQUALIZER		
DATE	2-83	
DRAWN	J.D.	
CHECKED	J.D.	
ENGINEER		
DESIGN		
APPROVED		
FINISH		
MODEL		
APPLICATION		
SCALE NONE	DO NOT SCALE DRAWING	SHEET 1 OF 1

A

D

REV.	DATE	BY	CHKD.
B	10/2/83	ADDSD	ADDSD
C	10/7/83	ADDSD	ADDSD

REV.	DATE	BY	CHKD.
B	10/2/83	ADDSD	ADDSD
C	10/7/83	ADDSD	ADDSD

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C	10/7/83	ADDSD	ADDSD

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C	10/7/83	ADDSD	ADDSD

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B	10/2/83	ADDSD	ADDSD
C	10/7/83	ADDSD	ADDSD

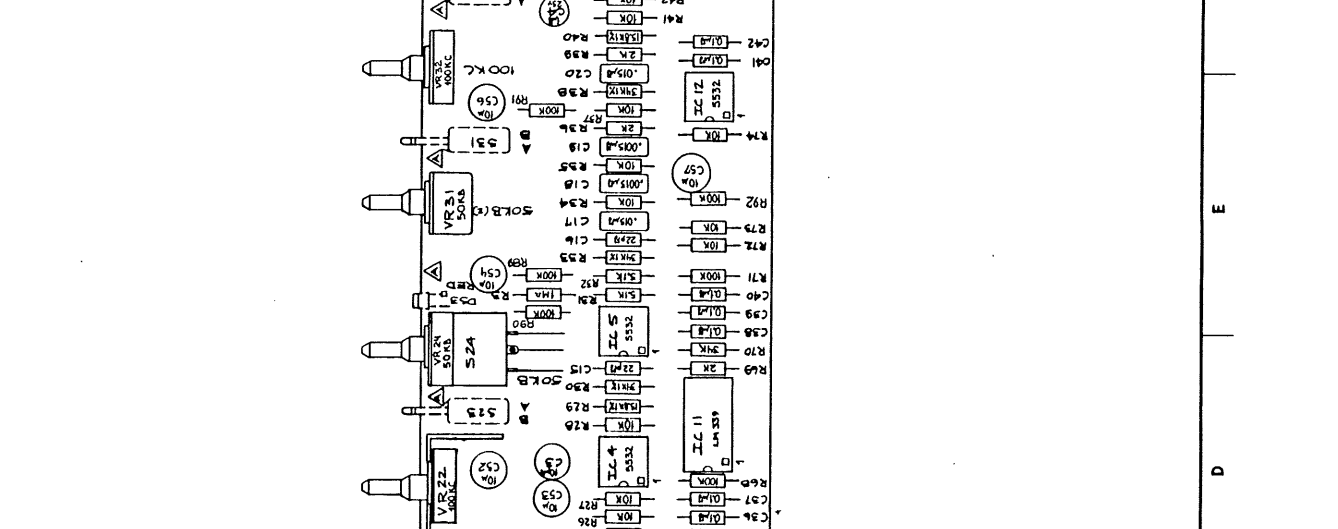
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C	10/7/83	ADDSD	ADDSD

REV.	DATE	BY	CHKD.
B	10/2/83	ADDSD	ADDSD
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B	10/2/83	ADDSD	ADDSD
C	10/7/83	ADDSD	ADDSD

REV.	DATE	BY	CHKD.
B	10/2/83	ADDSD	ADDSD
C	10/7/83	ADDSD	ADDSD

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. DIMENSIONS IN PARENTHESES ARE FOR REFERENCE ONLY. DIMENSIONS IN BRACKETS ARE FOR INFORMATION ONLY. DIMENSIONS IN DASHES ARE FOR INFORMATION ONLY. DIMENSIONS IN SQUARES ARE FOR INFORMATION ONLY. DIMENSIONS IN TRIANGLES ARE FOR INFORMATION ONLY. DIMENSIONS IN CIRCLES ARE FOR INFORMATION ONLY. DIMENSIONS IN DIAMOND SHAPES ARE FOR INFORMATION ONLY. DIMENSIONS IN OTHER SHAPES ARE FOR INFORMATION ONLY.



PIN ASSIGNMENTS

PIN	FUNCTION
1	- INPUT
2	+ INPUT
3	IN GND.
4	N.C.
5	OUTPUT
6	PS GND
7	+15V REGS.
8	-15V REG

NOTES
 ▲ - SWITCHES AND LED'S MOUNT FROM FOIL SIDE OF PCB
 ▲ DO NOT FLOW SOLDER WIRES ON THE BACK OF POTS. HAND SOLDER IN MECH. ASSY TO PREVENT POPPING AND OFF OF P.C.B. IF POTS ARE OUT OF ALIGNMENT.

REV.	DATE	BY	CHKD.
B	10/2/83	ADDSD	ADDSD
C	10/7/83	ADDSD	ADDSD

REV.	DATE	BY	CHKD.
B	10/2/83	ADDSD	ADDSD
C	10/7/83	ADDSD	ADDSD

REV.	DATE	BY	CHKD.
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C	10/7/83	ADDSD	ADDSD

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C	10/7/83	ADDSD	ADDSD

REV.	DATE	BY	CHKD.
B	10/2/83	ADDSD	ADDSD
C	10/7/83	ADDSD	ADDSD

REV	DATE	BY	CHKD
B	10-2-83	ADD	ADD
C	10-7-83	ADD	ADD

REV	DATE	BY	CHKD
B	10-2-83	ADD	ADD
C	10-7-83	ADD	ADD

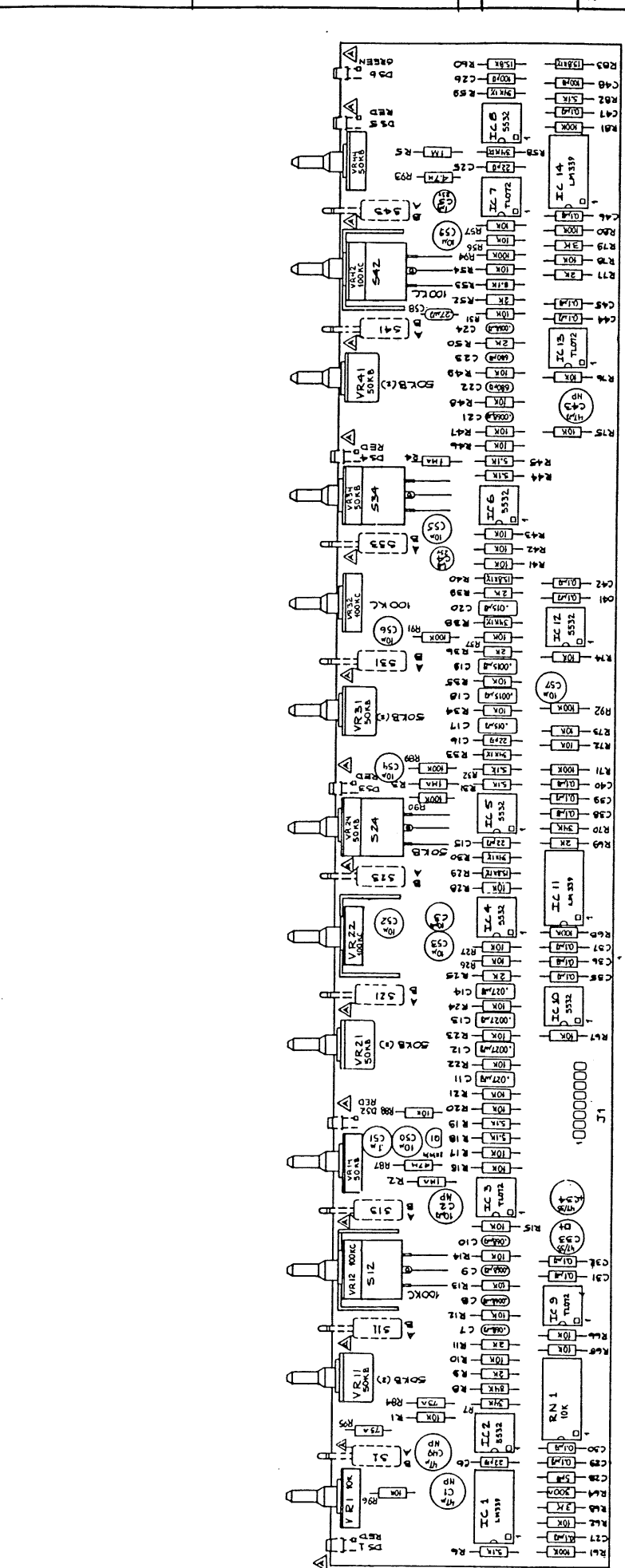
REV	DATE	BY	CHKD
B	10-2-83	ADD	ADD
C	10-7-83	ADD	ADD

REV	DATE	BY	CHKD
B	10-2-83	ADD	ADD
C	10-7-83	ADD	ADD

REV	DATE	BY	CHKD
B	10-2-83	ADD	ADD
C	10-7-83	ADD	ADD

REV	DATE	BY	CHKD
B	10-2-83	ADD	ADD
C	10-7-83	ADD	ADD

THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. DATE 10-2-83 BY 10283/377



PIN ASSIGNMENTS

PIN	FUNCTION
1	- INPUT
2	+ INPUT
3	IN GND
4	N.C.
5	OUTPUT
6	Pk GND
7	1.5V REG
8	- 15V REG

WAGERST REFERENCE DESIG.

R96	C6C
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- NOTES
- SWITCHES AND LED'S MOUNT FROM FOIL SIDE OF PCB.
 - DO NOT FLOW SOLDER SWITCH WIRES ON THE BACK OF POTS. HAND SOLDER IN MECH ASSY TO PREVENT POPPING A PAD OFF OF P.C.B.
 - IF POTS ARE OUT OF ALIGNMENT.

REV	DATE	BY	CHKD
B	10-2-83	ADD	ADD
C	10-7-83	ADD	ADD

REV	DATE	BY	CHKD
B	10-2-83	ADD	ADD
C	10-7-83	ADD	ADD

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REV	DATE	BY	CHKD
B	10-2-83	ADD	ADD
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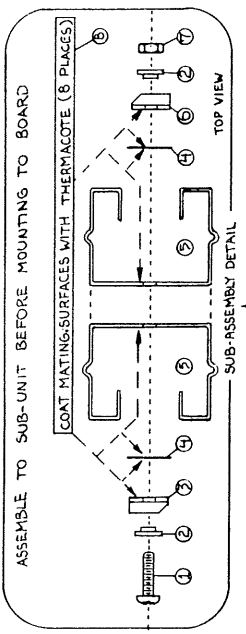
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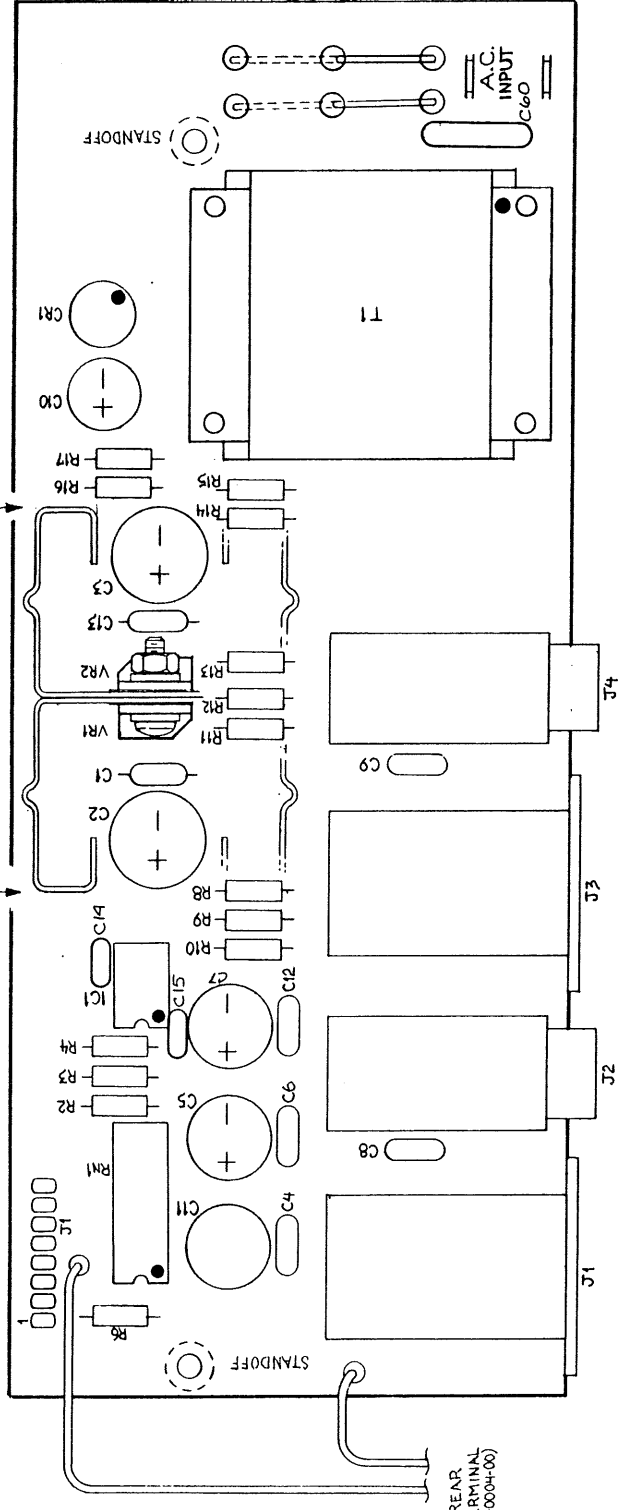
BIAMP SYSTEMS INC. COMPONENT ASSEMBLY EA 14-D PCB

REV.	E.C.D.	CHANGE	DATE	BY
B	102-83	DELETED SWITCH, 1-KV CAP MOVED TO COMP. SIDE	6-83	MWR
C	181-83	ADD C14, C15, DES. C60	9-83	MWR

SUB-ASSEMBLY PARTS				
DESCRIPTION	P/N	QTY		
1. MACHINE SCREW 440-7/16	525-0002-00	1		
2. SHOULDER WASHER #11 SW PLASTIC 7721-77PS	540-001-2	2		
3. REG. REGULATOR LM 7915T (-15V)	240-0024-00	1		
4. MICA INSULATOR, TC-220 CASE	270-0010-00	2		
5. HEATSINK	350-0084-00	2		
6. POS REGULATOR LM 7815T (+15V)	260-0020-00	1		
7. 4-40 HEX NUT	525-0010-00	1		
8. THERMACOTE	905-0003-00	1		



PIN	DESCRIPTION
1	← INPUT
2	+ INPUT
3	INPUT GROUND
4	N.C.
5	OUTPUT
6	PMB SUPPLY GND.
7	+15V DC REG
8	-15V DC REG



WIRE TO REAR
PANEL TERMINAL
BLOCK (425-0044-00)

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ITEM	DESCRIPTION	SIZE	QTY.
841-0000-00	EQ. 140		
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS FRACTIONS ANGLES .XX ± .XXX ±			
MATERIAL FINISH MODEL NEXT DWG. APPLICATION			
DRAWN: [Signature] CHECKED: [Signature] DATE: 3-3-83 ENGINEER: [Signature]			
APPROVED: [Signature] DESIGN: DMH DATE: 9/83 DWG. NO.: 841-0003-00			
SCALE: 2:1 DO NOT SCALE DRAWING			
SHEET 1 OF 2			

THIS DRAWING FOR USE WITH:
 PCB ARTWORK: 380-0121-01 REV. C
 MASK LEVEL 2
 FAB. DRAWING: 380-0121-01 REV. C
 SCHEMATIC: 381-0003-00 REV. C

BIAMP SYSTEMS INC.
 COMPONENT ASSEMBLY
 IN / OUT PCB
 EQ. 140 PARAMETRIC EQUALIZER
 Dwg. No. 841-0003-00
 Scale 2:1
 Do Not Scale Drawing
 Sheet 1 of 2

"Q" Adjust and Shelving Test...continued

Second Filter: 50HZ to 5KHZ

Repeat the First Filter procedure EXCEPT there is NO SHELF TEST.

Third Filter: 100 HA to 10KHZ

Repeat Second Filter procedure.

Fourth Filter: 200 HZ to 20KHZ

Repeat the procedure for the First Filter. The only difference being the Shelf Display will TAPER DOWN from the RIGHT, NOT the LEFT.

BALANCED OUTPUT

Transformer couple the output to the A C Voltmeter.
Adjust the output Level to "0" DBv.

Short separately Pin 2(T) and Pin 3(R) of the XLR OUTPUT connector to GROUND. The Output Level should NOT change.

Connect a balanced INPUT source to the INPUT SLR connector and note NORMAL OUTPUT.

NOISE MEASUREMENT

All Filter and Master IN/OUT Switches OUT. Master Level set at "7" on scale. Measure noise at 80 DBv below "0" reference.

All Filter Frequency, "Q", and -dB+ Controls set at center of rotation. Push all Filter and Master IN/OUT Switches IN. All range Switches OUT (X1).

NOISE should be 80DBv below "0" reference.

Set up and test procedure...continued

Reset the generator OUTPUT Level to "0" DBv.

Push the Range #1 IN/OUT Switch IN and rotate the -dB+ control to its MAX clockwise position.

Rotate the FREQ Control to where the OUTPUT Signal Level PEAKS. The reading should be about 150 (X10).

The PEAK OUTPUT Level should be about 17 DBv (± 1 DBv). The RED L.E.D. should come ON at about +10DBv. Rotate the -DB+ Control to its MAX counter clockwise position. The OUTPUT Level should be -17DBv(± 1 DBv). Return the -dB+ Control to "0" center and push the IN/OUT Switch OUT.

Push Range #2 IN/OUT Switch IN and rotate the -dB+ Control to its MAX clockwise position. Rotate the FREQ Control until the OUTPUT Signal Level PEAKS. The reading should be 150(X10). OUTPUT Level should be +17DBv(± 1 DBv). The +10DB L.E.D. should come ON at about +10DBv. Rotate the -dB+ Control to its MAX counter clockwise position BEFORE the Switch clicks. The OUTPUT Level should be -17DBv(± 1 DBv). Advance the -dB+ Control counter clockwise to "INFINITY". Carefully adjust the FREQUENCY CONTROL for MAXIMUM SIGNAL CUT. The attenuation should be -40DBv or GREATER. Return the -DB+ Control to "0" Center and push the IN/OUT Switch OUT.

Push the Range #3 IN/OUT Switch IN and rotate the -dB+ Control to its MAX Clockwise position. Rotate the FREQ Control for a PEAK in the OUTPUT Signal Level. The OUTPUT Level should be +17DBv(± 1 DBv). The reading should be 150 (X10) and the RED +10 L.E.D. should come on at about +10DBv. Rotate the -dB+ Control to its MAX counter clockwise Position BEFORE the Switch clicks. The OUTPUT Level should be -17DBv (± 1 DBv).