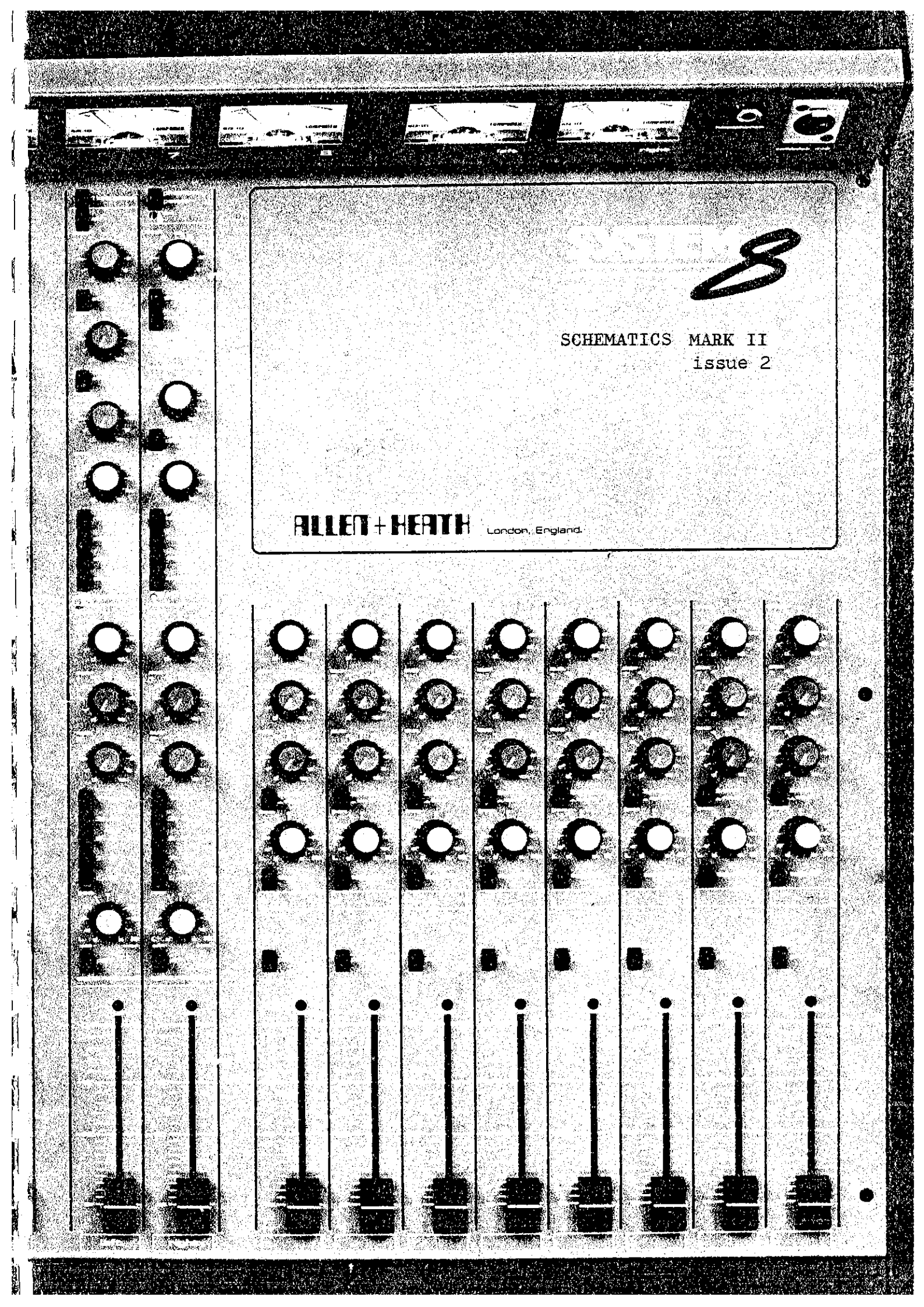


SCHEMATICS MARK II

issue 2

ALLEN + HEATH London, England.

AHB SYSTEM 8 SCHEMATICS MARK II ISSUE II

THIS VERSION INCLUDES UP-DATED DRAWING COPIES
WHERE KNOWN ERRORS HAVE BEEN CORRECTED.

T E C H N I C A L B U L L E T I N

AHB SYSTEM 8 JANUARY 1985

SUBJECT: VU METER SERVICE REPLACEMENT

As a result of supply difficulties it has been necessary to introduce a variation in the type of meter fitted. In order to ensure correct supply to you of a replacement should this be necessary it is essential for us to be advised of the SERIAL NUMBER of your unit. This will be checked against records kept by AHB and used to provide you with the correct service part.

AHB

19.1.85

T.R.

AHB SYSTEM 8 PRODUCT RANGE: ALL MODELS

Improvement to the features offered on this range of products have been introduced as follows, the models are referred to as System 8 Mk II and replace the original models.

1. Channel input, group output and left/right faders are now 100mm travel ultra smooth type with improved attenuation characteristics and longer life.

2. Channel input sections all now include an additional push button EQ CUT for switching the equaliser out of action.

3. Connection of the multitrack recorder output is now required only at the TAPE INPUT jack sockets. Internal connections automatically route the programme to channel line inputs. Tape input 1 is internally connected to line input 1 and Tape 2 to line 2 etc. Insertion of a jack plug in the channel line input socket defeats the internal connection and allows the line input to receive a new programme source. See CONNECTIONS section of the OWNER HANDBOOK for details.

4. Power supplies now include +48v Phantom Power as standard.

5. Level matching for low level operation now adopts the nominal standard of 0.30v RMS at OVU in place of 0.32v RMS.

6. Push button 1kHz SLATE has been made white to distinguish it from adjacent controls.

7. TAPE INPUT gain is now increased to boost the loudness of off-tape programme in the stereo mix.

8. General specifications and performance other than the details above are unaltered.

9. Operator' Handbook Mk II and schematics book Mk II are now in use.

AHB Brighton
21.2.84

AHB PARTS DESCRIPTION : SYSTEM 8 RANGE MARK II SPRING 1984

To order spare parts for service replacement specify the items as described below.

FUNCTION	ITEM	AHB STOCK REF
Fader	100mm 10k Alps	AI0091
Fader knob	Black Alps	AJ0048
Fader screw	M3 CSK 5mm	AB0070
Meter	SQ10	AD0011
Meter lamp	8v 50MA SQ10	AD0013
Knob	6mm Brown	AJ0044
Knob cap	Red	AJ0045
	Brown	AJ0046
	Green	AJ0047
Pushbutton cap	4748 Black	AJ0028
Base screw	6AB x $\frac{3}{8}$ PAN	AB0062
Base clip		AB0111
Input Pot Gain	10KC metric bkt	AI0049
H.F.	100KA metric	AI0047
L.F.	100KA metric	AI0047
Mid	100KA metric	AI0047
Mid Freq	100KC x 2 metric	AI0048
Aux 1	47KB metric	AI0050
Aux 2	47KB metric	AI0050
Aux 3	47KB metric	AI0050
Pan	10KA metric bkt	AI0046
Output Pot Level	10KB metric	AI0043
Aux 1	47KB metric	AI0050
Aux 2/3	47KB metric	AI0050
Pan	10KA metric bkt	AI0046
Master Pot Aux 1	47KB metric bkt	AI0045
Aux 2	47KB metric	AI0050
Aux 3	47KB metric	AI0050
Cue	10KB x 2 metric	AI0044
Level	47KB metric	AI0050
Aux 1	47KB metric	AI0050
Aux 2	47KB metric	AI0050
Pan	10KA metric bkt	AI0046
Talkback level	47KB metric bkt	AI0045
Headphone level	10KB x 2 metric	AI0044
Monitor level	10KB x 2 metric	AI0044
Level	47KB metric	AI0050
Aux 1	47KB metric	AI0050
Aux 2	47KB metric	AI0050
Pan	10KA metric bkt	AI0046
Pushbutton Switch	Single	AL0076
Pushbutton Switch	Dual	AL0077
Pushbutton Switch	Four way	AL0082
Pushbutton Switch	Five way	AL0079
Pushbutton Switch	Talkback	AL0078
IC op-amp	TL072CP	AE0046
Input transistor	ZTX214C	AE0031
Red LED	T1 Red	AE0086
Relay, PFL	NF2-24	AM0205

The following items are not common to Mark II and are still available for service replacement on Mark I models.

FUNCTION	ITEM	AHB STOCK REF
Fader	90mm 5k TBM	AI0089
Fader knobs	Black TBM	AJ0038
Fader screw	M3 CSK 10mm	AB0075
Spacer	M3 CLEAR x 6mm	AB0137

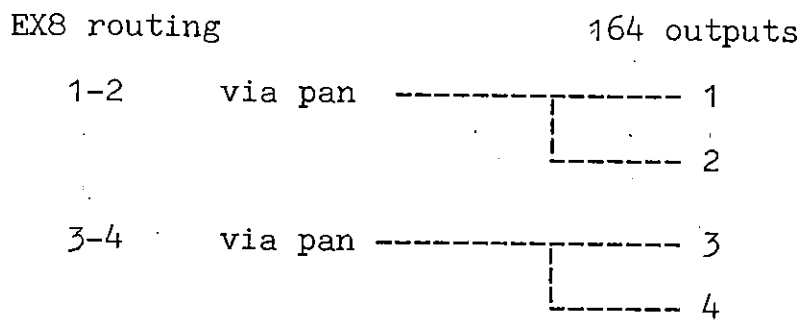
Technical Bulletin:

AHB System 8: Expanding the 164 model

Input routing on the 164 model uses four pushbuttons 1, 2, 3, 4 for assigning inputs to outputs. The pan selects one of the pair chosen if two assigns are made.

Input routing on the EX8 input expander uses four pushbuttons 1-2, 3-4, 5-6, 7-8 for assigning inputs to outputs.

When an EX8 is added to a 164 using the standard Tie Line connector inputs on the EX8 are assigned to the four outputs of the 164 as follows:



EX8 routing pushbuttons 5-6, 7-8 are not used.

If this arrangement is not wanted a modification can be made within the EX8 to match the 164 input routing style, however the function will disagree with the panel markings on the EX8.

Reconnect the internal EX8 pcb harness to the output mix busses so that

mix bussbar 4 goes to EX8 pcb input 2 (cct. K)

mix bussbar 5 goes to EX8 pcb input 3 (cct. H)

mix bussbar 8 goes to EX8 pcb input 4 (cct. I).

Leave mix bussbar 1 as it is. Disconnect mix bussbars 2, 3, 6, 7 from the EX8 pcb.

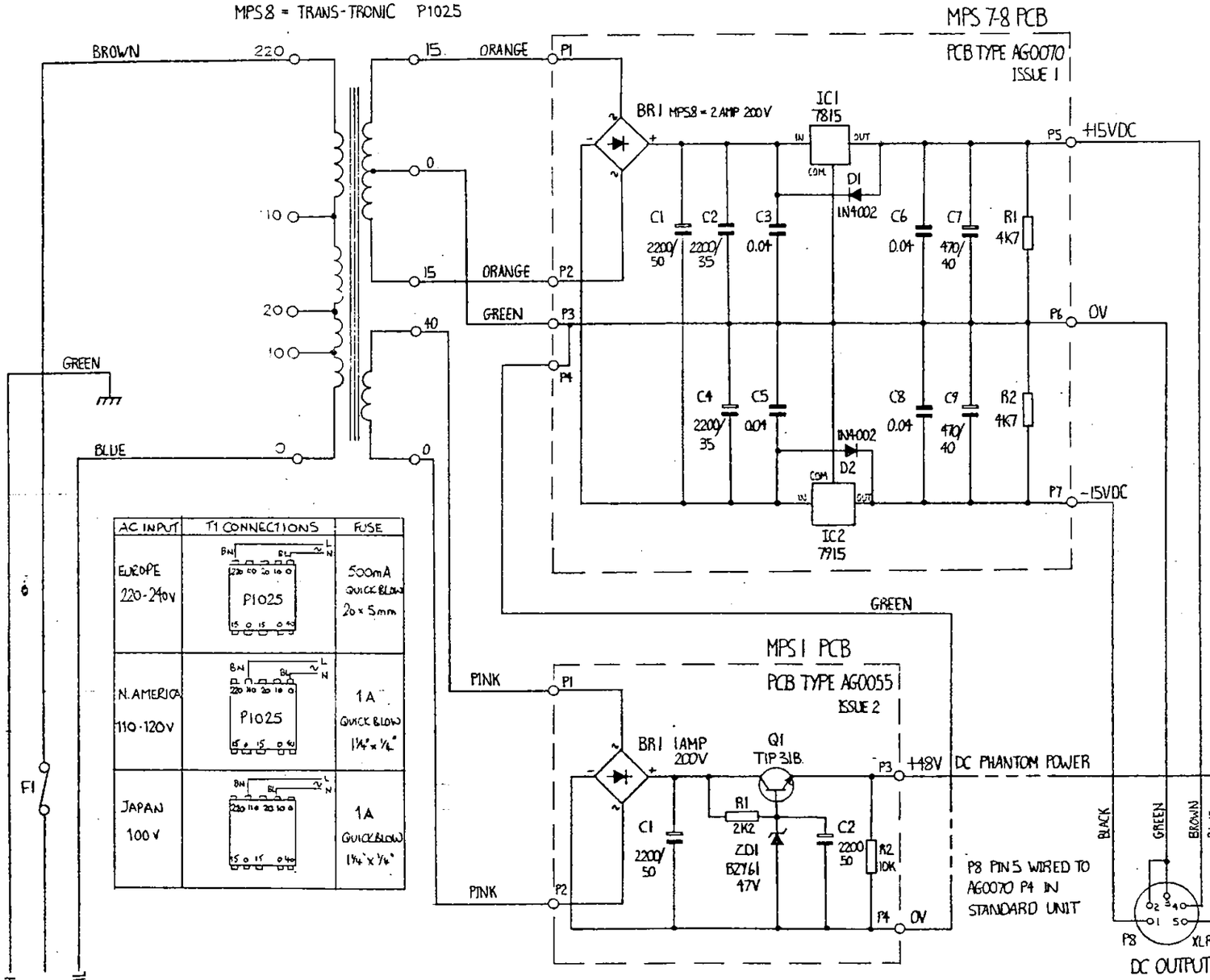
Allen and Heath Brenell Ltd.,
69 Ship Street,
BRIGHTON,
East Sussex.

20th May 1983

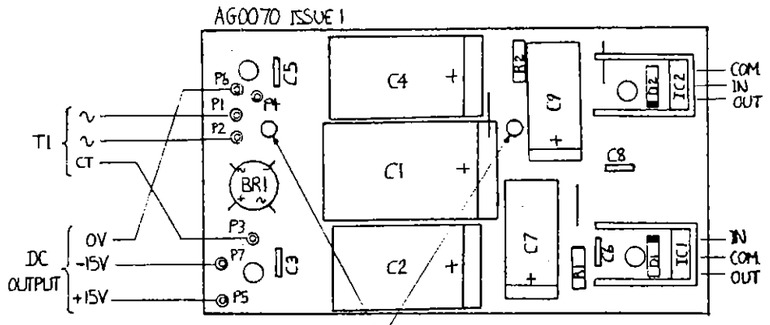
DRG. No. 283 ISS 5

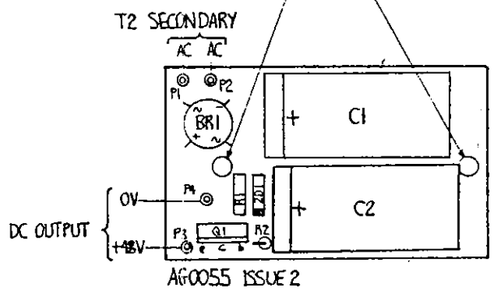
T1

MPS8 = TRANS-TRONIC P1025



AC INPUT	T1 CONNECTIONS	FUSE
EUROPE 220-240V		500mA QUICK BLOW 20 x 5mm
N.AMERICA 110-120V		1A QUICK BLOW 1¼" x ¼"
JAPAN 100V		1A QUICK BLOW 1¼" x ¼"





MPS8P DETAIL.

No.	DESCRIPTION	CHKD	APP'D	DATE
5	MPS8P ONLY.		TR	12.84

REVISIONS

AHB POWER SUPPLY MPS8P CIRCUITS AND GENERAL ARRANGEMENT INCLUDING PHANTOM POWER.

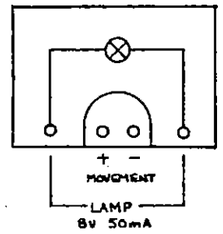
DRAWN	TRACED	CHECKED	APPROVED	DATE	SCALE
CD				9-9-82	

DRAWING No. 283 ISSUE 5

594 x 420 mm A2

SYSTEM 8 : METERPOD & BUSBAR CONNECTIONS DWG. 282 iss. 1

DRG. No. 282 iss. 1



METER TYPE SQ10

	MODELS		
	164	128 & 168	1616
+15v SUPPLY Meter lamps connected in series across supply	Left & Right 3 & 4	Left & Right 7 & 8	9 & 13 10 & 14 11 & 15 12 & 16
−15v SUPPLY Meter lamps connected in series across supply	1 & 2	1 & 2 3 & 4 5 & 6	Left & Right 1 & 5 2 & 6 3 & 7 4 & 8

RED
GREEN
BLACK
TALKBACK MIC.
BLUE L
RED R
HEADPHONE
GN.
GN. JACK & XLR EARTHS
D.C. POWER INPUT
BLUE +48V
T L R HP.
9 10 11 12 13 14 15 16
OUTPUT PCB ASSEMBLIES (PART-LOADED VERSION)
MODEL 1616 ONLY.
GREY
BLACK
RED
PP
VIOLET
MIX
CONNECTIONS FOR MODEL 164 ONLY. BUSSBARS 2,3,6,7 NOT FITTED. CONNECTIONS FOR OTHER MODELS SHOWN THUS . AND ALL BUSSBARS FITTED.
GN.
INPUT PCB ASSEMBLIES
MASTER LEFT PCB ASSEMBLY.
MASTER RIGHT PCB ASSEMBLY.
1 2 3 4 5 6 7 8
OUTPUT PCB. ASSEMBLIES

COMMON BUSBARS	
FUNCTION	CODE
PHANTOM POWER SUPPLY +48V.	P.
ELECTRONIC SUPPLY Ov.	Ov.
" " +15v.	+15v.
" " −15v.	−15v.
AUXILIARY MIX 1	A1.
" " 2	A2.
" " 3	A3.
OUTPUT MIX 1	1.
" " 2	2.
" " 3	3.
" " 4	4.
" " 5	5.
" " 6	6.
" " 7	7.
" " 8	8.
STEREO MIX LEFT	L.
" " RIGHT	R.
PRE-FADE LISTEN MIX	PFL MIX.
" " D.C.	PFL D.C.
FADER EARTH	—

No.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

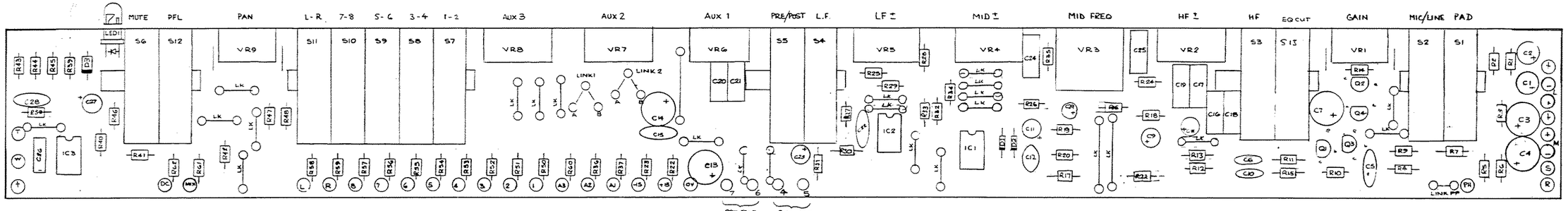
SYSTEM 8 Mk. II

ALLEN & HEATH BRENELL LTD.

METERPOD & BUSBAR CONNECTIONS

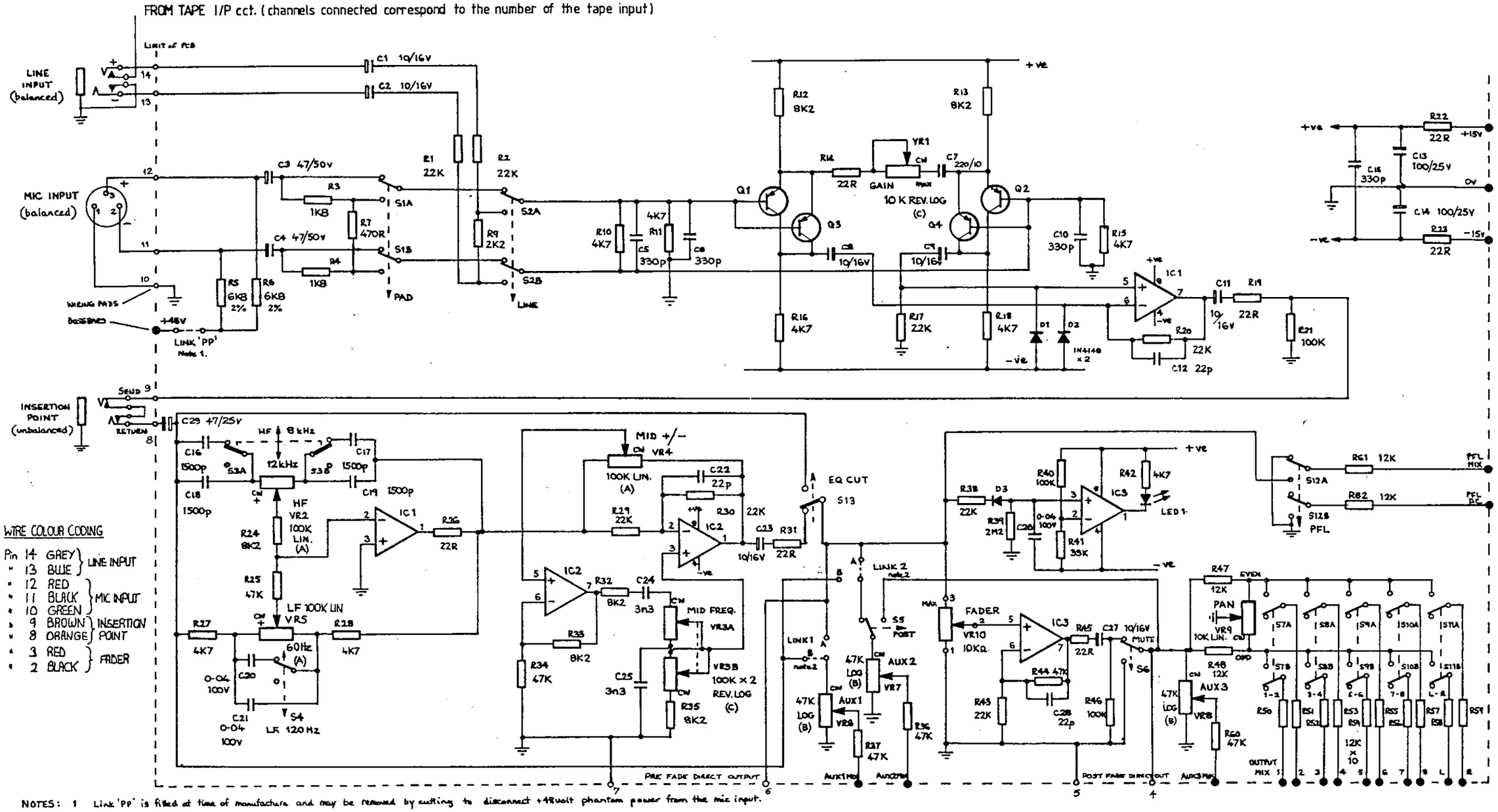
DRAWN	TRACED	CHECKED	APPROVED	DATE	SCALE
R		R	R	2.84	

DRAWING No. 282 issue 1



PCB ASSEMBLY DIAGRAM: INPUT PCB TYPE A60060 ISSUE 2 NOV 83 AHB Ltd.

DRG. No. 277 Iss. 3



NOTES:
1. Link 'PP' is fitted at time of manufacture and may be removed by cutting to disconnect +48volt phantom power from the mic input.
2. Link 1 is fitted at time of manufacture in position A (AUX1 POST-EQ) and may be changed by soldering to position B (AUX1 PRE-EQ)
   Link 2 . . . . . positionA (AUX2 POST-EQ) . . . . . to position B (AUX2 PRE-EQ)
3. Switches are shown in the OUT position.
4. R8, C28 not fitted.
5. Resistors ¼W 5% unless specified.
6. After S/N 513 added and VR10 changed to 10KΩ (ALPS).

SYSTEM 8 : INPUT CHANNEL CIRCUIT

DWG 277 iss 3 PCB TYPE AG0060 iss.2 NOV 1983

No.	DESCRIPTION	CHK'D	APP'D	DATE
3 iss. 3	CORRECTIONS AND EQ CUT SWITCH ADDED	G.M.R.	G.M.R.	11-83
2 iss. 2	CORRECTIONS	[illegible]	[illegible]	1-83.

REVISIONS

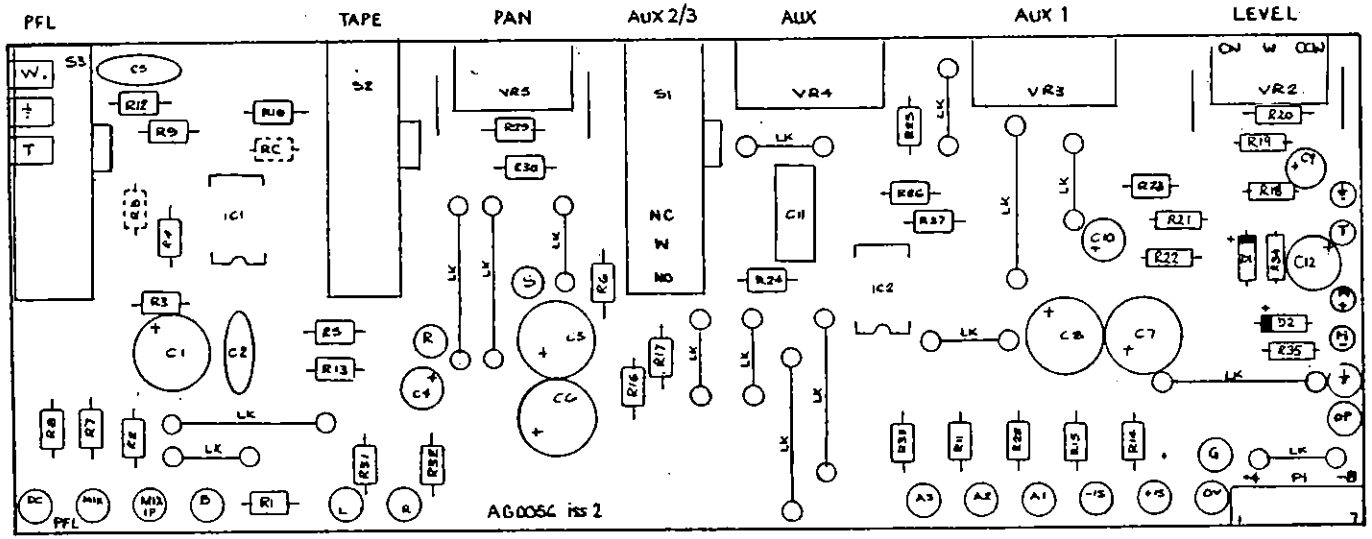
ALLEN & HEATH SYSTEM 8 Mk II

CIRCUIT DIAGRAM : INPUT PCB AG0060 iss 2.

DRAWN	TRACED	CHECKED	APPROVED	DATE	SCALE
R	R	R	R	2.84	-

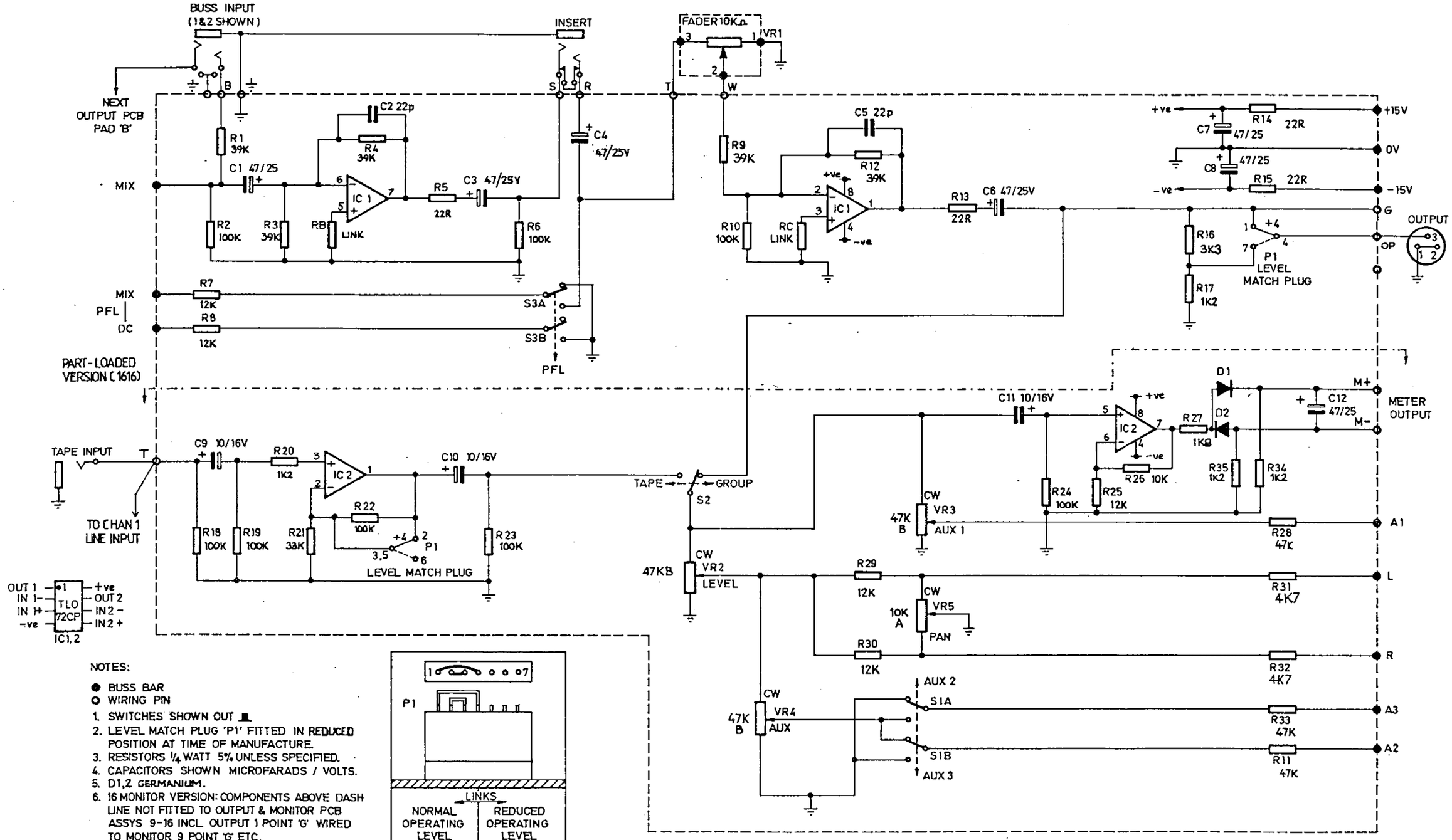
DRAWING No. 277. iss. 3

OUTPUT PCB



PCB ASSEMBLY DIAGRAM: OUTPUT PCB TYPE AG0056 issue 2 Nov. 1992. AMR Ltd.

DRG. No. 278 ISS 3.



NOTES:

- ● BUSS BAR
- ○ WIRING PIN

1. SWITCHES SHOWN OUT
2. LEVEL MATCH PLUG 'P1' FITTED IN REDUCED POSITION AT TIME OF MANUFACTURE.
3. RESISTORS 1/4 WATT 5% UNLESS SPECIFIED.
4. CAPACITORS SHOWN MICROFARADS / VOLTS.
5. D1,2 GERMANIUM.
6. 16 MONITOR VERSION: COMPONENTS ABOVE DASH LINE NOT FITTED TO OUTPUT & MONITOR PCB ASSYS 9-16 INCL. OUTPUT 1 POINT 'G' WIRED TO MONITOR 9 POINT 'G' ETC.
7. C2 NOT FITTED.

ALLEN & HEATH : SYSTEM 8 : OUTPUT PCB CCT.DETAIL. PCB TYPE AG0056 ISS 2. DWG : 278 ISS 3. NOV 1982.

No.	DESCRIPTION	CHK'D	APP'D	DATE
	REVISIONS FOR Mk II MODEL			

REVISIONS

ALLEN & HEATH SYSTEM 8 mk II

CIRCUIT DETAIL ; OUTPUT PCB
TYPE AHB 82 OUTPUT
AG0056 ISS. 2.

DRAWN	TRACED	CHECKED	APPROVED	DATE	SCALE
TR	RAG. WDS	TR	TR	FEB 84	—

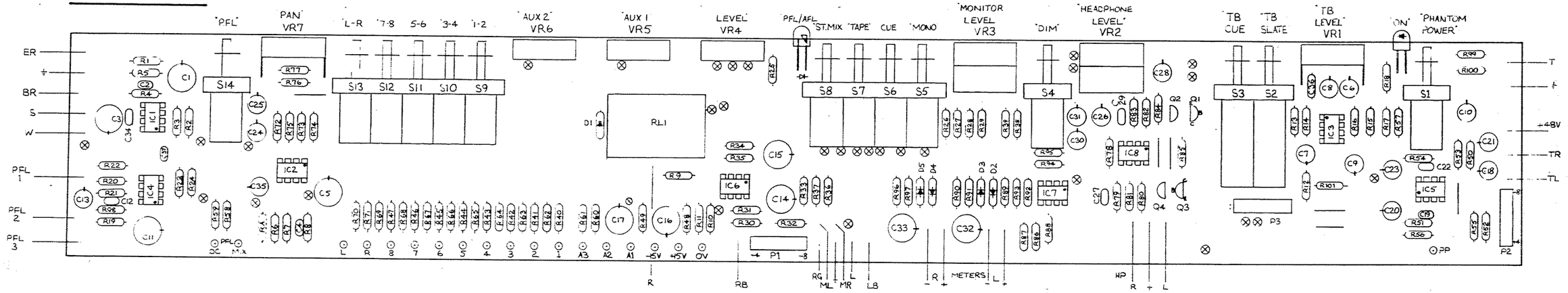
DRAWING No. 278 ISS. 3.

A PRODUCT OF THE UNO RANGE — ENGINEERS. CAT. No. 7302

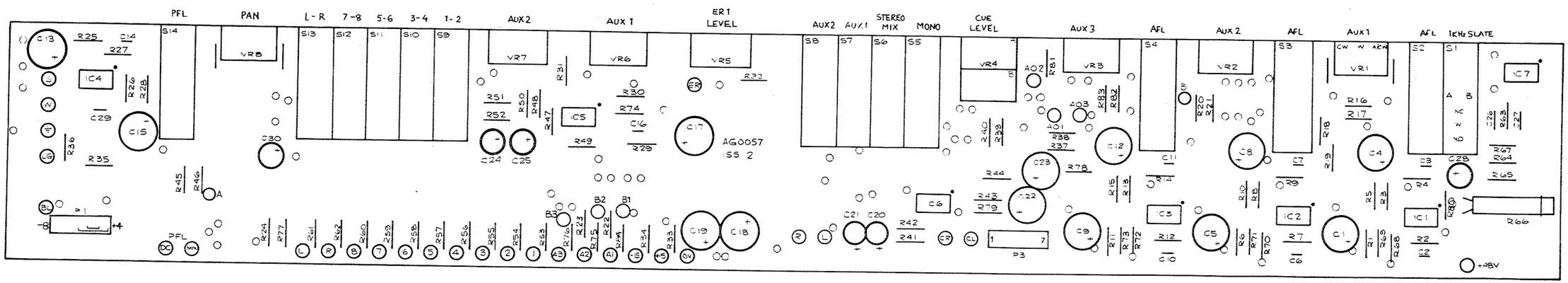
594 X 420 mm A2

MASTER RIGHT PCB

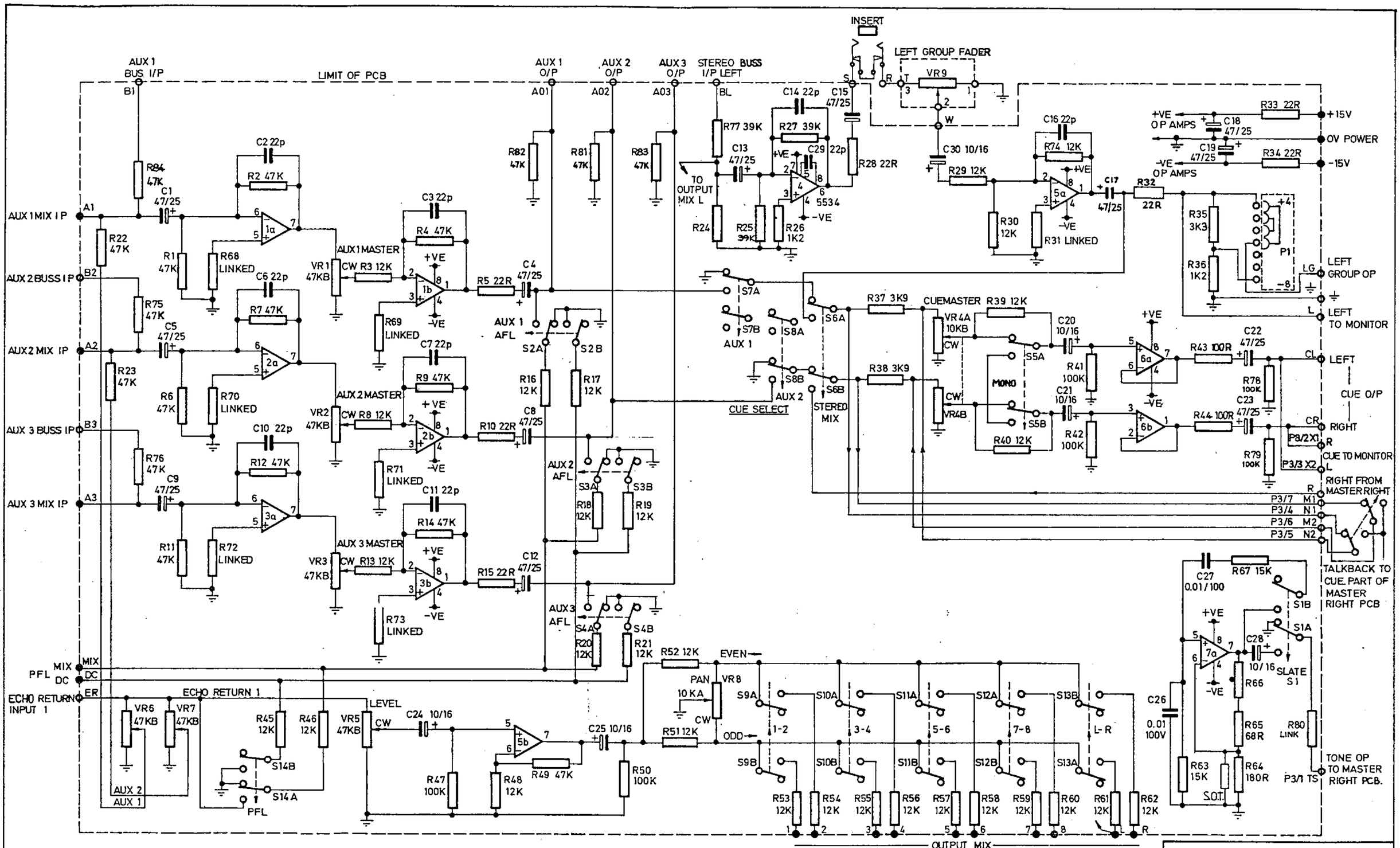
PCB ASSEMBLY DIAGRAM : MASTER RIGHT PCB TYPE AG0058 ISSUE 3



MASTER LEFT PCB



PCB ASSEMBLY DIAGRAM: MASTER LEFT PCB TYPE AG0057 ISSUE 3 Nov. 1984 AHB Ltd.



© 1982

- ○ WIRING PAD
- ● BUS BAR

Switches shown in OUT position.
Resistors 1/4W 5% unless specified.
P1 fitted -8 position in manuf'r.

ICs 1,2,3,5&7. TL072CP.
IC 4 NE5534.

Capacitors C3,7,11,29 not fitted.
Resistor R24 not fitted.

WIRE COLOUR CODING

- Pin 1 ORANGE, 2 BROWN, 3 VIOLET } AUX O/P
- ECHO RETURN - BLUE
- STEREO BUSS I/P LEFT - VIOLET
- INSERT SEND - BROWN
- " RETURN - ORANGE
- FADER TOP - ORANGE
- " WIPER - BLACK
- LEFT O/P - BLACK
- LEFT TO MON - GREY
- CUE O/P LEFT - BLACK
- —"— RIGHT - RED

ALLEN AND HEATH BRENELL LTD

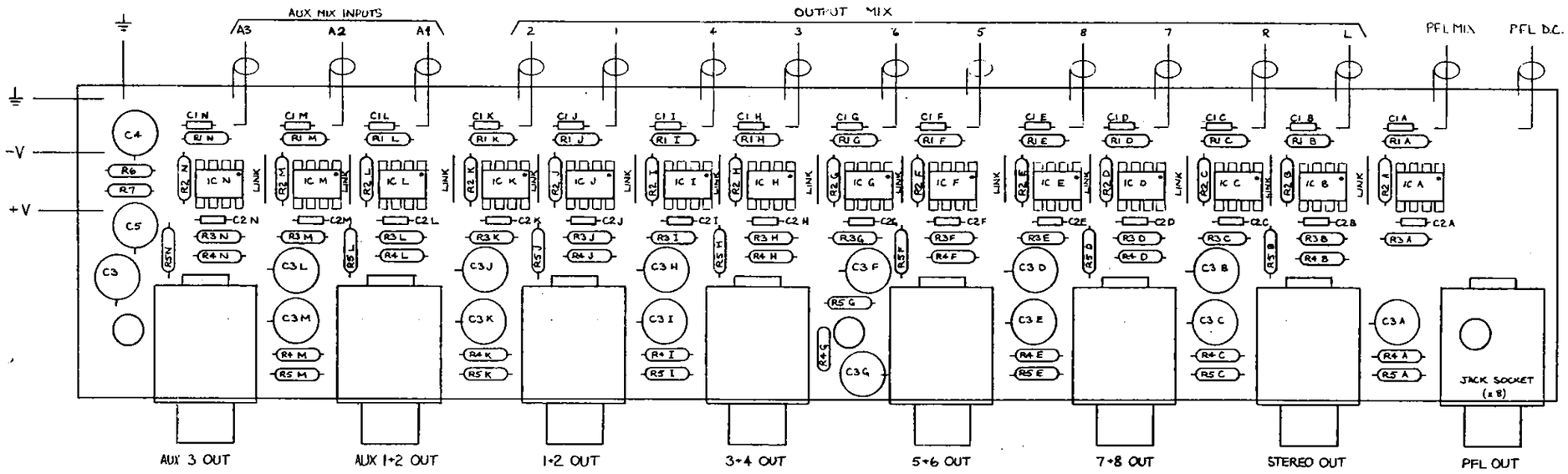
NEXT: R 85 C 31	FINISH	
DRN	RAG WDS	DATE 2.84.
CHKD		ISSUE 3

TITLE SYSTEM 8 PCB TYPE MASTER LEFT. AG0057 Iss 3. MK.II

SCALE | DRG N° 279 iss. 3

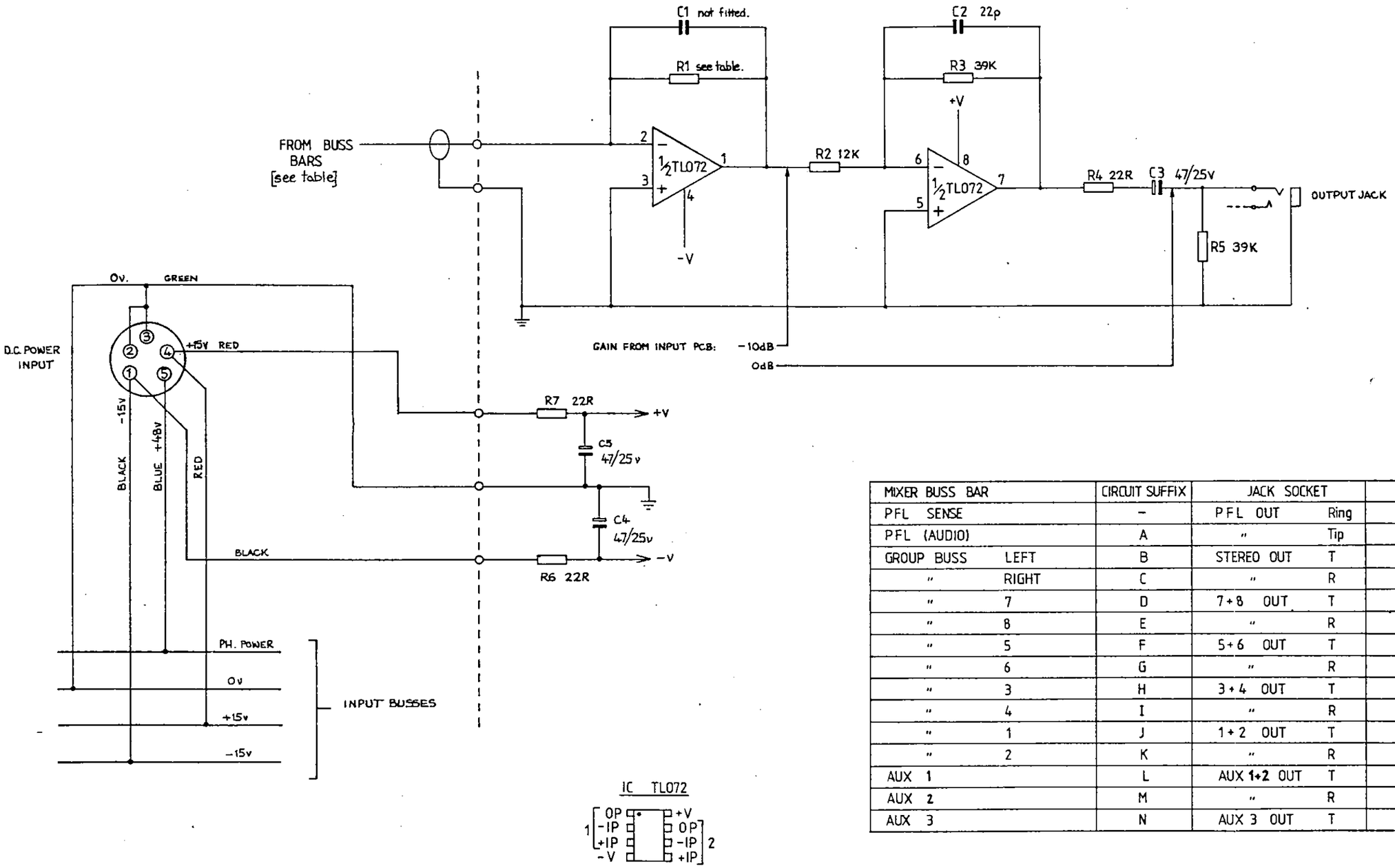
STEREO BUSS IN
INSERT RIGHT
STEREO BUSS OUT
SEND
RTN.
RIGHT GROUP FADER VR8 5K LOG
RIGHT TO MASTER LEFT PCB
RIGHT OUTPUT
TALKBACK MIC INPUT
FROM MASTER L PCB
MASTER LEFT PCB BL
Q1,3 ZTX109C NPN
Q2,4 ZTX214C PNP
E B C
LIMIT OF PCB
WIRE COLOUR CODING
ECHO RET I/P 2 = BLUE
STEREO TAPE I/P
LEFT = GREY
RIGHT = BLUE
+15v POWER = RED
-15v " = BLACK
0v " = GREEN
PFL DC = GREY
" I/P = BLUE
" O/P = ORANGE
STEREO BUSS
I/P LEFT = VIOLET
I/P RIGHT = PINK
INSERT SEND = BROWN
" RETURN = ORANGE
FADER TOP = ORANGE
" WIPER = BLACK
STEREO BUSS
O/P LEFT = BLACK
O/P RIGHT = RED
R1 39K
R2 39K
R3 1K2
R4 39K
R5 22R
R6 12K
R7 12K
RA LINKED
R8 12K
R9 22R
R10 3K3
R11 1K2
C1 47/25
C2 22p
C3 47/25
C4 22p
C5 47/25
C34 22p
C35 10/16
TO OUTPUT MIX R
PFL OUT
PFL IN
PFL1
PFL2
PFL3
PFL MIX
PFL D.C.
IC1 5534
IC2A TL072
IC2B TL072
IC4A TL072
IC4B TL072
PI OUTPUT LEVEL MATCH PLUG
+4
-8
R19 12K
R20 12K
R21 12K
R22 100K
R98 22R
C11 47/25
C12 22p
C13 10/16
MONITOR SELECT
STEREO MIX
TAPE
CUE
PFL
AFL
RL1
RELAY TYPE NF2-12V
D1
-15v
R24 100R
R25 1K2
LED 2 PFL/AFL
C37 0·04 100V
R23 100K
R26 1K2
R27 1K2
MONO
S1 S2 S3 S4 S5 S6 S7 S8
DIM
R28 1K2
R29 1K2
R38 100R
R39 100R
TB CUE
TB SLATE
A
P3/1 TS
P3/5 N2
P3/6 M2
P3/7 M1
P3/4 N1
TO MASTER L PCB P3
D.C. CONDITION:
NOT PFL: -13V
PFL: -1V
+48V TO PHANTOM POWER SW. S1
DC POWER INPUT
+15V
0V
-15V
R48 22R
R49 22R
C16 47/25
C17 47/25
+ve
-ve
C6 10/16
C7 10/16
C8 10/16
C9 10/16
C36 180p
TALKBACK LEVEL
TLO 72 IC3A
IC3B
R12 100K
R13 100R
R14 12K
VR1 47KB
R15 100R
R16 3K9
R17 100K
R99 1K2
R100 12K
R101 1K2
S1
+48V
PHANTOM POWER
LED1
PH POWER ON
R18 12K
C10 47/50V
RIGHT O/P XLR = RED
MONITOR O/P
LEFT = VIOLET
RIGHT = PINK
HEADPHONE LEVEL
R82K R83
C29 22p
C28 10/16
R82 12K
IC8A
R84 470R
Q1
Q2
R85 100R
VR2
R78 12K
C27 22p
C26 10/16
IC8B
R79 82K
R80 470R
Q3
Q4
R81 100R
10KB
CW
R72 100K
R73 12K
R74 47K
R75 100K
R76 12K
PAN VR7 10KA
R77 12K
C24 10/16
CW AUX1
CW AUX2
47KB VR5
47KB VR6
47KB VR4 LEVEL
CW
MONITOR LEVEL 5 10KB
IC6A TL072
R30
VR3
R31 LINK
C14 47/25
R32 100R
R33 100K
ML
L
MONITOR OUTPUT
IC6B
R34
R35 LINK
C15 47/25
R36 100R
R37 100K
MR
LEFT METER DRIVE
+L
-L
VU
D2
D3
R90 1K2
C32 47/25
R91 1K2
IC7A
C30 10/16
R86 100K
R87 12K
R88 10K
R89 1K8
CALIBRATION WITH VALUES SHOWN AND METER TYPE SO10 IS OVU = +4dBm.
IC7B
C31 10/16
R92 100K
R93 12K
R94 10K
R95 1K8
D4
D5
R96 1K2
C33 47/25
R97 1K2
+R
RIGHT METER DRIVE
L STEREO TAPE IP R
TL
TR
C18 10/16
C19 22p
C20 10/16
C21 10/16
C22 22p
C23 10/16
R50 100K
R51 100K
R52 33K
R53 100K
R54 100K
R55 33K
R56 100K
R57 100K
TAPE INPUT LEVEL MATCH PLUG P2
P2
IC5A TL072
IC5B
S9 1-2
S10 3-4
S11 5-6
S12 7-8
S13 9-10
R60 47K
R61 47K
R62 12K
R63 12K
R64 12K
R65 12K
R66 12K
R67 12K
R68 12K
R69 12K
R70 12K
R71 12K
R40 39K
R41 39K
R42 39K
R43 39K
R44 39K
R45 39K
R46 39K
R47 39K
HP
R L
HEADPHONE OUTPUT
ECHO RETURN INPUT 2
ER
S14
R58 12K
R59 12K
TO PFL MIX
TO PFL DC
PFL
AUX MIX
A1 A2
OUTPUT MIX
NOTES:
SWITCHES SHOWN NC OUT POSITION B.
RELAY SHOWN RELAXED.
O WIRING PADS.
● COMMON BUSSBARS.
RESISTORS 1/4W 5% UNLESS SPECIFIED.
C19, 22, 34, R30, 34 not fitted.
P1, P2 fitted -8 position in manuf'r.
D1 Silicon.
D2-5 Germanium.
ALLEN AND HEATH BRENELL LTD
NEXT R 102 C 38
FINISH
DRN WDS
DATE 2.84
CHKD T.R.
ISSUE 1
TITLE CIRCUIT DIAGRAM:
SYSTEM 8 PCB TYPE MASTER RIGHT 1953
Mk. II AG005B
SCALE
DRG N° 280 iss. 3

EX 8 PCB



PCB ASSEMBLY DIAGRAM: PCB TYPE EX8 AG0059 iss1 AHB Ltd. Nov 1982.

DRG. No. 281 iss 2



MIXER BUSS BAR		CIRCUIT SUFFIX	JACK SOCKET		R1
PFL SENSE		–	PFL OUT	Ring	–
PFL (AUDIO)		A	"	Tip	3K9
GROUP BUSS	LEFT	B	STEREO OUT	T	12K
"	RIGHT	C	"	R	12K
"	7	D	7+8 OUT	T	12K
"	8	E	"	R	12K
"	5	F	5+6 OUT	T	12K
"	6	G	"	R	12K
"	3	H	3+4 OUT	T	12K
"	4	I	"	R	12K
"	1	J	1+2 OUT	T	12K
"	2	K	"	R	12K
AUX 1		L	AUX 1+2 OUT	T	15K
AUX 2		M	"	R	15K
AUX 3		N	AUX 3 OUT	T	15K

IC TL072

SYSTEM 8 : CIRCUIT DIAGRAM PCB TYPE EX8 AG0059 iss1. DWG. 281 iss.2. DEC. 1982.

No.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

CIRCUIT DIAGRAM: PCB TYPE AG0059 EX8 iss 1.

ALLEN & HEATH SYSTEM 8

AHB LTD. DEC. 1982.

DRAWN	TRACED	CHECKED	APPROVED	DATE	SCALE
MA.		R	R	2.84	

DRAWING No. 281 issue 2

594 x 420 mm A 2

DRG. No. 276 ISS 2

MIC INPUT
MIC PAD
MIC - LINE SELECT
+ PREAMP -
GAIN
CHANNEL INSERTION POINT
EQUALISER
EQ CUT
CHANNEL FADER
PFL SW
PEAK INDICATOR
MUTE SW
PAN
ROUTING 1-2 3-4 5-6 7-8 L-R
LINE INPUT
FROM TAPE INPUT
LINK "P.P."
POST EQ
PRE EQ
AUX PRE-POST SW
AUX 2 OPTION
AUX 1 OPTION
PRE EQ
POST EQ
AUX 3
AUX 2
AUX 1
INPUT CHANNEL
1 OF 12 OR 16 OR 24.
0V
-15V
+15V
D.C. POWER INPUT
+48V
PHANT POWER SW.
+48V MIC PHANTOM
POWER PROVIDED BY POWER SUPPLY MPS 8P

PH PWR
PFL MIX
GROUP MIX DC 1 — 8
STEREO MIX L R
AUX MIX 1 2 3

MIX BUSS CONNECTION SHOWN FOR O.P.1
GROUP INSERTION POINT
LEVEL MATCH OPTION :-
INTERNAL LINKS SELECT
+4dBm OR -8dBm
OPERATING LEVEL FOR 0VU
OUTPUT GROUP FADER
PFL SW
LEVEL MATCH OPTION
GROUP OUTPUT
TO LINE INPUT
VU
MONITOR METER
GROUP TAPE SW
LEVEL MATCH OPTION
TAPE INPUT
MONITOR LEVEL
AUX
AUX 2-3 SELECT
PAN
AUX 1
OUTPUT & MONITOR 1 of 4 or 8
16 MONITOR VERSION HAS 8 ADDITIONAL TAPE INPUTS & MONITOR SECTIONS
TO MIX 2
BUSS IN 1+2

ECHO RETURN INPUTS 1 2
REPEAT ER1 CIRCUIT
ER TO AUX 2
ER TO AUX 1
ER LEVEL
PAN
ROUTING 1-2 3-4 5-6 7-8 L-R
PFL OUT TIE-JACK
TO PFL D.C.
PFL IN TIE-JACK
TO PFL MIX
STEREO MIX INPUT TIE-JACK
TO STEREO MIX
AUX 1&2 INPUT TIE-JACK
TO AUX 1&2 MIX
AUX 3 INPUT TIE-JACK
TO AUX 3
STEREO TAPE INPUT
LEVEL MATCH OPTION
AUDIO
D.C.
TO PFL RELAY
BUSS SENSE
AUX OUTPUTS
STEREO OUTPUT
AUX 1
AUX 2
STEREO O.P.
MONO
CUE SOURCE
CUE LEVEL
FROM TB TO CUE
CUE OUTPUT
VU L
VU R
MASTER METERS
STEREO OUTPUT
AUDIO
D.C.
TO 1-8 MIX
TO CUE
TAPE
STEREO
CUE
PFL RELAY
MONO
MONITOR SOURCE
DIM
MONITOR LEVEL
MONITOR OUTPUT
HEADPHONE OUTPUT
HEADPHONE LEVEL
TALKBACK MIC INPUT
TB LEVEL
TB TO CUE
TB TO SLATE
OSC SW
1kHz
MONITOR DIM

STEREO GROUP INSERTION POINTS
STEREO GROUP FADERS
L
R
TO CUE & MONITOR
STEREO OUT TIE-JACK
LEVEL MATCH OPTION
LEFT
STEREO GROUP OUTPUT
RIGHT
AUX 1 MASTER
AUX 2 MASTER
AUX 3 MASTER
TO CUE
PFL SW
AUX 1 OUTPUT
AUX 1+2 OUT TIE-JACK
AUX 2 OUTPUT
AUX 3 OUT TIE-JACK
AUX 3 OUTPUT

No.	DESCRIPTION	CHK'D	APP'D	DATE
REVISIONS				

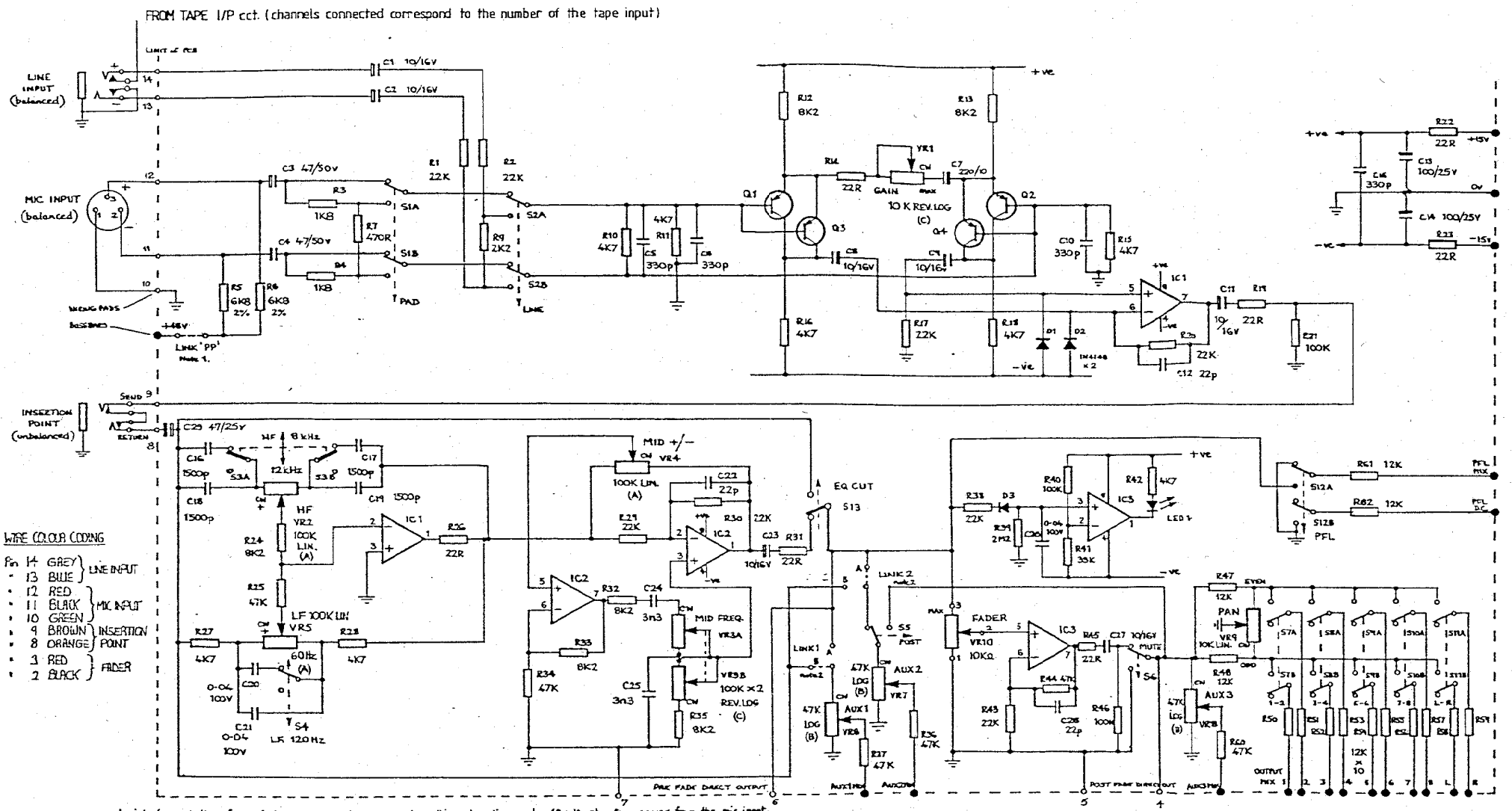
SYSTEM 8: SYSTEM SCHEMATIC mk II

DRAWN	TRACED	CHECKED	APPROVED	DATE	SCALE
R	MA	R	R		

DRAWING No. 276 ISS 2 2·84

A PRODUCT OF THE UNO RANGE — ENGINEERS CAT. No. 7302

594 X 420 mm A 2



NOTES:
1. Link 'PP' is fitted at time of manufacture and may be removed by cutting to disconnect +48volt phantom power from the mic input.
2. Link 1 is fitted at time of manufacture in position A (AUX1 POST-EQ) and may be changed by soldering to position B (AUX1 PRE-EQ)
   Link 2 . . . . . position A (AUX2 POST-EQ) . . . . . to position B (AUX2 PRE-EQ)
3. Switches are shown in the OUT position.
4. R8, C28 not fitted.
5. Resistors ¼W 5% unless specified.
6. After S/N 513 added and VR10 changed to 10K.Ω (ALPS).

SYSTEM 8: INPUT CHANNEL CIRCUIT
DWG 277 iss 3
PCB TYPE AG0060 iss 2 NOV 1983

DRG. No. 277 iss 3

No.	DESCRIPTION	CHKD	APPD.	DATE
2 iss 3	CORRECTIONS AND EQ CUT SWITCH ADDED	R.M.R.	R.M.R.	11-83
1 iss 2	CORRECTIONS	[illegible]	[illegible]	1-83.

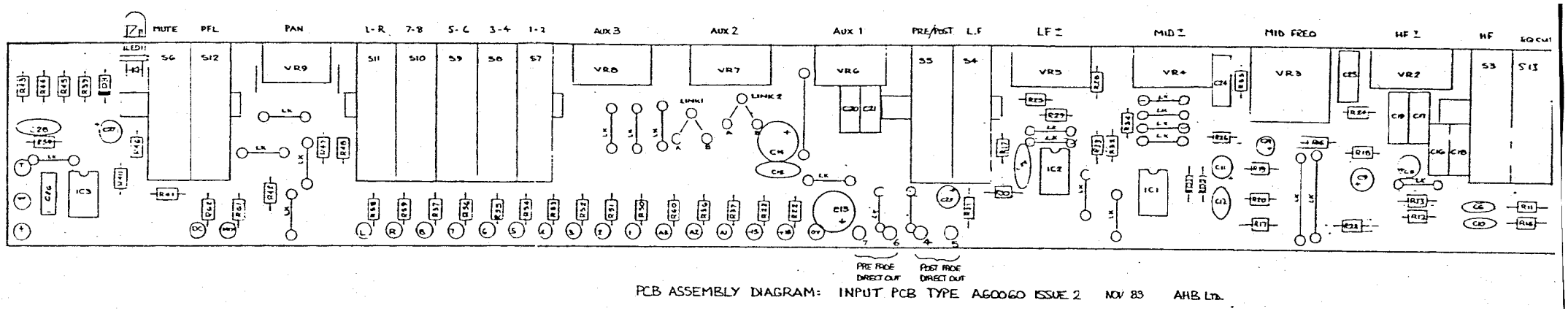
REVISIONS

ALLEN & HEATH SYSTEM 8 MkII

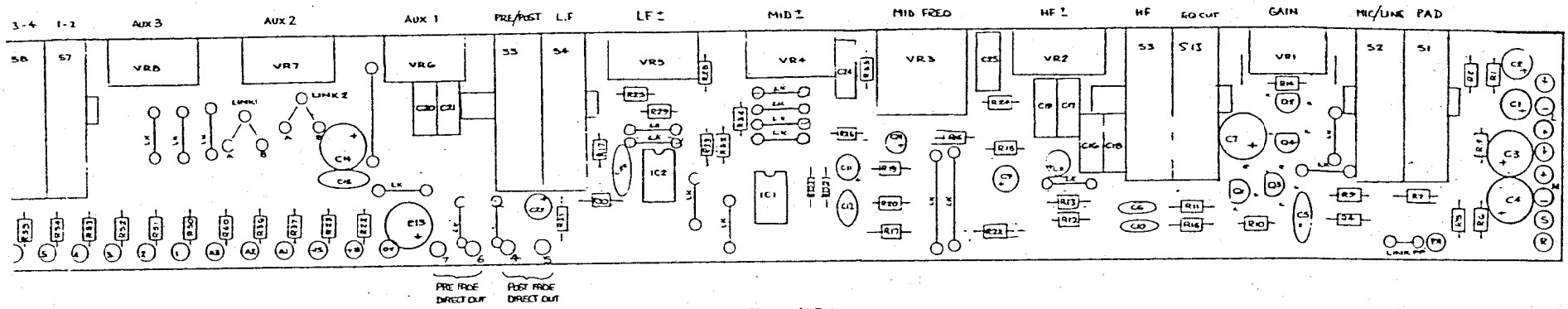
CIRCUIT DIAGRAM: INPUT PCB AG0060 iss 2.

DRAWN	TRACED	CHECKED	APPROVED	DATE	SCALE
R	R	R	R	2.84	–

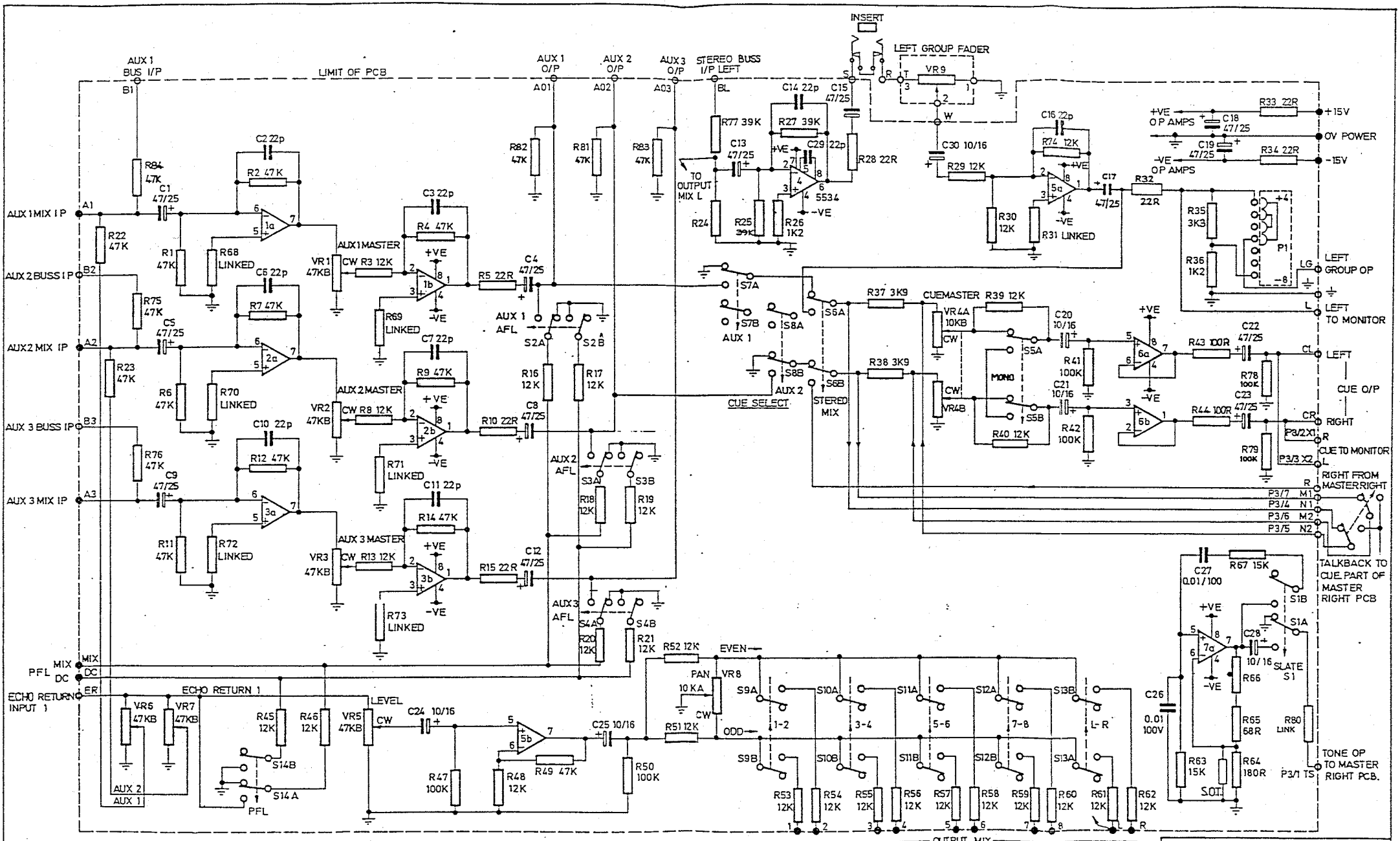
DRAWING No. 277. iss 3



PCB ASSEMBLY DIAGRAM: INPUT PCB TYPE A6006O ISSUE 2 NOV 83 AHB Ltd.



PCB ASSEMBLY DIAGRAM: INPUT PCB TYPE A60060 ISSUE 2 NOV 85 AHB Ltd.



© 1982

- ○ WIRING PAD
- ● BUS BAR

Switches Shown in OUT position.
Resistors 1/4w 5% unless specified.
P1 fitted -8 position in manuf'r.

ICs 1,2,3,5,6,7, TL072CP.
IC 4 NE5534.

Capacitors C3,7,11,29 not fitted.
Resistor R24 not fitted.

WIRE COLOUR CODING

Pin 1	ORANGE } AUX O/P
" 2	BROWN }
" 3	VIOLET }
ECHO RETURN	BLUE
STEREO BUSS I/P LEFT	VIOLET
INSERT SEND	BROWN
" RETURN	ORANGE
FADER TOP	ORANGE
" WIPER	BLACK
LEFT O/P	BLACK
LEFT TO MON	GREY
CUE O/P LEFT	BLACK
—"— RIGHT	RED

ALLEN AND HEATH BRENELL LTD			
NEXT:	R 85 C 31	FINISH	
DRN	RAG WDS	DATE	2.84.
CHKD	A	ISSUE	3
TITLE SYSTEM 8 PCB TYPE MASTER LEFT. AG0057 iss 3. MK.II			
SCALE		ORG N° 279 iss. 3	

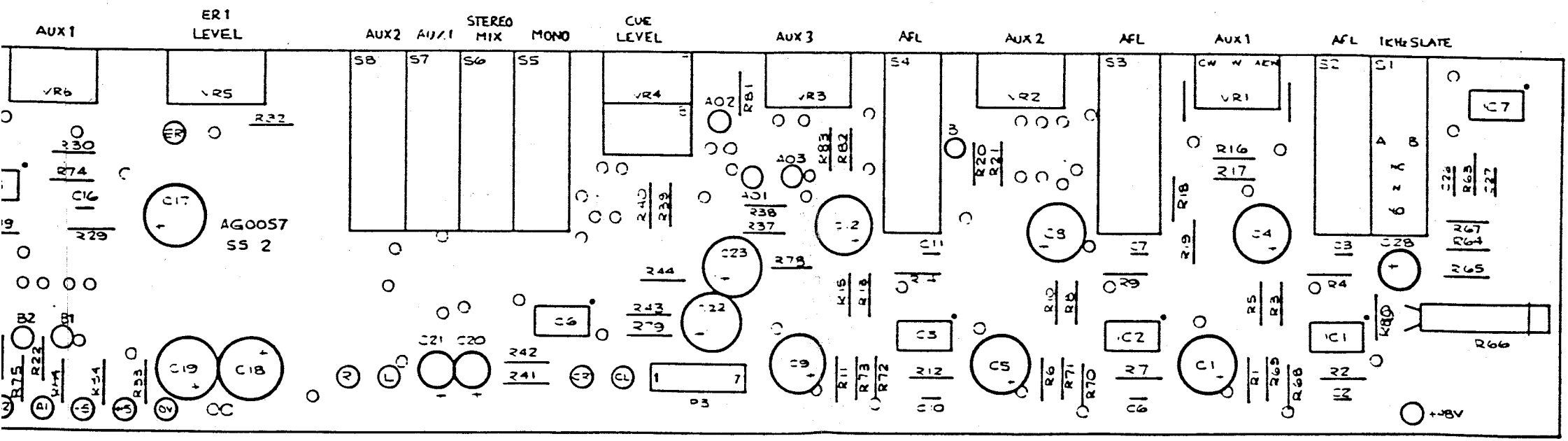
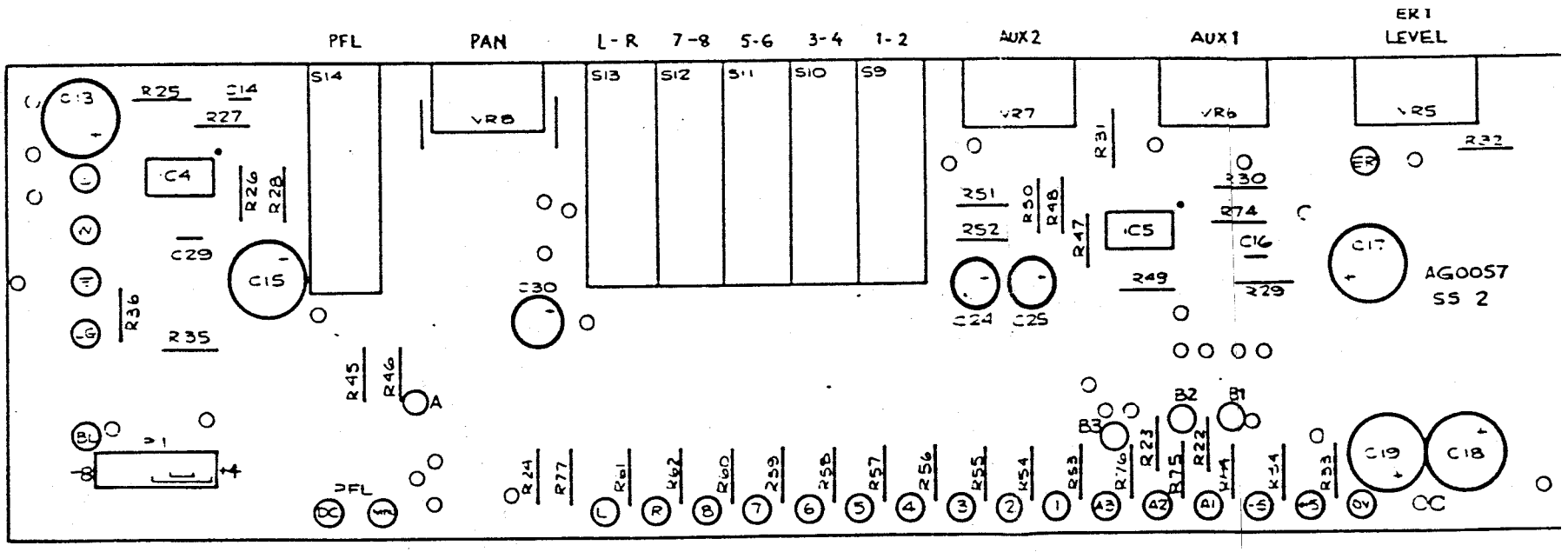
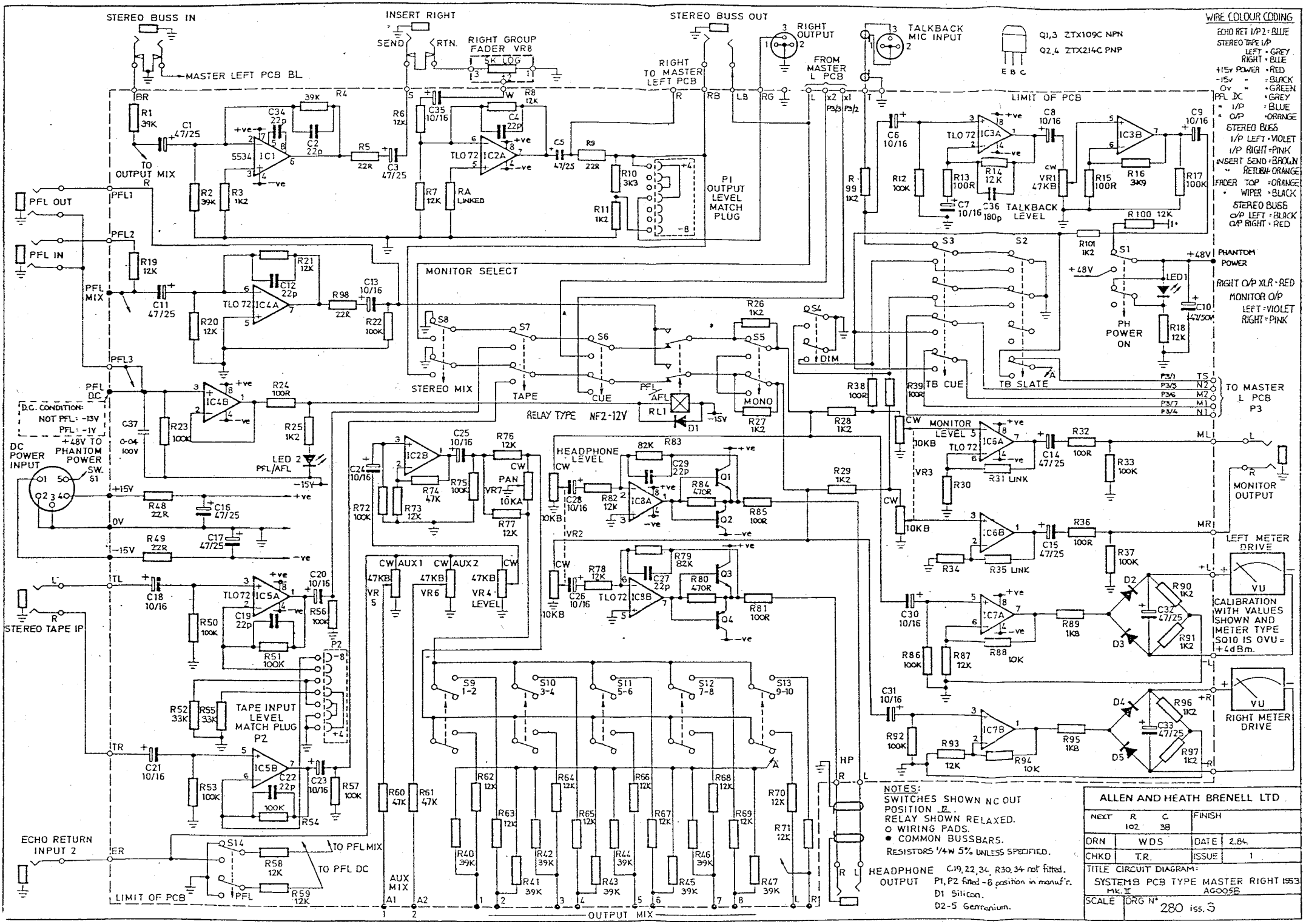


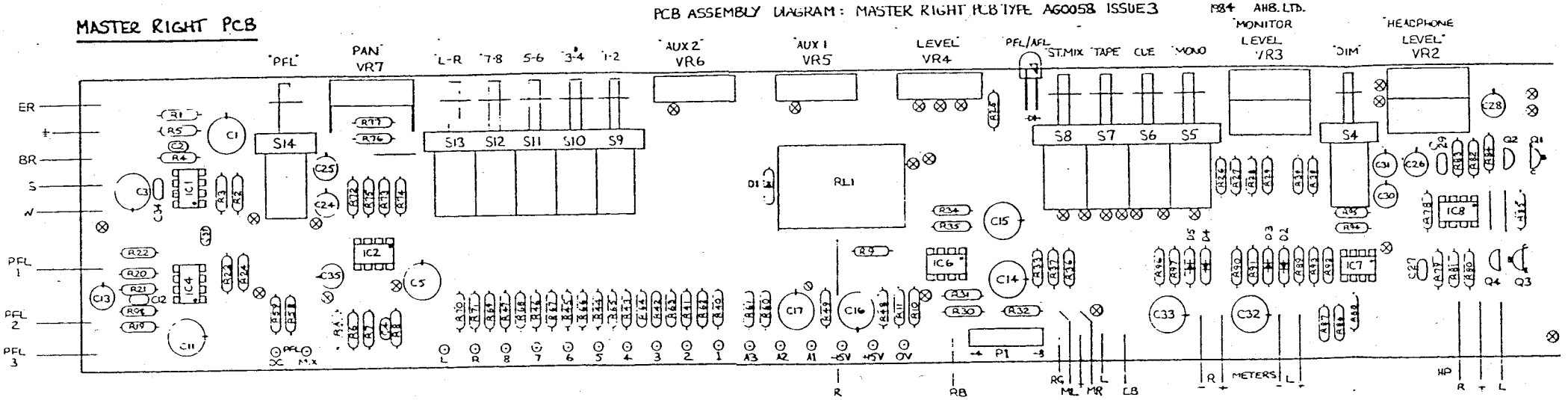
DIAGRAM: MASTER LEFT PCB TYPE AG0057 ISSUE 3 Nov. 1984 AHB Ltd.

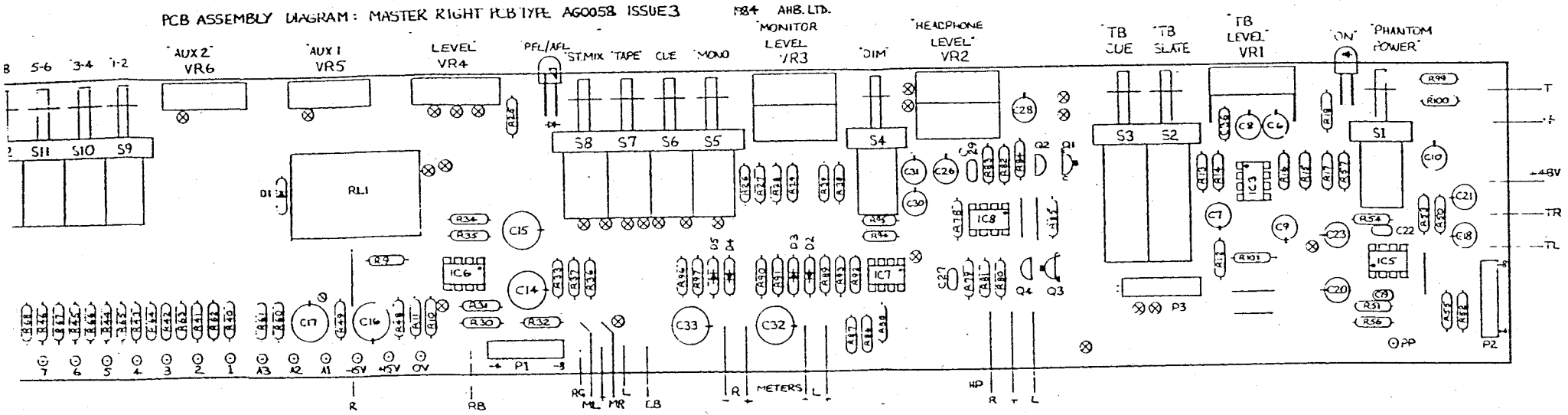


PCB ASSEMBLY DIAGRAM: MASTER LEFT PCB TYP


STEREO BUSS IN
INSERT RIGHT
STEREO BUSS OUT
SEND
RTN.
RIGHT GROUP FADER VR8
5K LOG
MASTER LEFT PCB BL
RIGHT TO MASTER LEFT PCB
RIGHT OUTPUT
TALKBACK MIC INPUT
FROM MASTER L PCB
Q1,3 ZTX109C NPN
Q2,4 ZTX214C PNP
E B C
WIRE COLOUR CODING
ECHO RET I/P1 = BLUE
STEREO TAPE I/P
LEFT = GREY
RIGHT = BLUE
+15V POWER = RED
-15V = BLACK
0V = GREEN
PFL DC = GREY
I/P = BLUE
O/P = ORANGE
STEREO BUSS
I/P LEFT = VIOLET
I/P RIGHT = PINK
INSERT SEND = BROWN
RETURN = ORANGE
FADER TOP = ORANGE
WIPER = BLACK
STEREO BUSS
O/P LEFT = BLACK
O/P RIGHT = RED
LIMIT OF PCB
TO OUTPUT MIX
PFL OUT
PFL IN
PFL MIX
PFL DC
PFL1
PFL2
PFL3
PI OUTPUT LEVEL MATCH PLUG
MONITOR SELECT
STEREO MIX
TAPE
CUE
PFL
AFL
RELAY TYPE NF2-12V
RL1
D1
MONO
DIM
TB CUE
TB SLATE
TALKBACK LEVEL
PHANTOM POWER
+48V
PH POWER ON
LED1
RIGHT O/P XLR = RED
MONITOR O/P
LEFT = VIOLET
RIGHT = PINK
TO MASTER L PCB P3
P3/1 TS
P3/5 N2
P3/6 M2
P3/7 M1
P3/4 N1
D.C. CONDITION:
NOT PFL: -13V
PFL: -1V
+48V TO PHANTOM POWER SW. S1
DC POWER INPUT
LED 2 PFL/AFL
HEADPHONE LEVEL
MONITOR LEVEL
MONITOR OUTPUT
LEFT METER DRIVE
RIGHT METER DRIVE
CALIBRATION WITH VALUES SHOWN AND METER TYPE SQ10 IS OVU = +4dBm.
STEREO TAPE IP
TAPE INPUT LEVEL MATCH PLUG P2
ECHO RETURN INPUT 2
TO PFL MIX
TO PFL DC
AUX MIX
OUTPUT MIX
HP
HEADPHONE OUTPUT
NOTES:
SWITCHES SHOWN NC OUT POSITION 1.
RELAY SHOWN RELAXED.
O WIRING PADS.
• COMMON BUSSBARS.
RESISTORS 1/4W 5% UNLESS SPECIFIED.
C19,22,34, R30,34 not fitted.
P1, P2 fitted -8 position in manuf'r.
D1 Silicon.
D2-5 Germanium.
ALLEN AND HEATH BRENELL LTD
NEXT R 102 C 38
FINISH
DRN WDS
DATE 2.84
CHKD T.R.
ISSUE 1
TITLE CIRCUIT DIAGRAM:
SYSTEM 8 PCB TYPE MASTER RIGHT 1953 Mk. II AG0058
SCALE
DRG N° 280 iss. 3

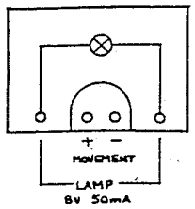
MASTER RIGHT PCB




PCB ASSEMBLY DIAGRAM: MASTER RIGHT PCB TYPE AG0058 ISSUE 3
1984 AHB. LTD.
AUX 2 VR6
AUX 1 VR5
LEVEL VR4
PFL/AFL
ST.MIX
TAPE
CUE
MONO
MONITOR LEVEL VR3
DIM
HEADPHONE LEVEL VR2
TB CUE
TB SLATE
TB LEVEL VR1
ON
PHANTOM POWER
S11
S10
S9
S8
S7
S6
S5
S4
S3
S2
S1
RL1
IC3
IC5
IC6
IC7
IC8
P1
P2
P3
METERS
+48V
T
TR
TL

SYSTEM 8 : METERPOD-BUSBAR CONNECTIONS DWG. 282 iss. 1

DRG. No. 282 iss. 1



METER TYPE SQ10

	MODELS 164	128 & 168	1616
+15v SUPPLY Meter lamps connected in series across supply	Left & Right 3 & 4	Left & Right 7 & 8	9 & 13 10 & 14 11 & 15 12 & 16
−15v SUPPLY Meter lamps connected in series across supply	1 & 2	1 & 2 3 & 4 5 & 6	Left & Right 1 & 5 2 & 6 3 & 7 4 & 8

RED
GREEN
BLACK
TALKBACK MIC.
BLUE L
RED R
HEADPHONE
GN.
JACK & XLR EARTHS
D.C. POWER INPUT
BLUE
+48v
T L R
HP.
BLACK
RED
9 10 11 12 13 14 15 16
OUTPUT PCB ASSEMBLIES (PART-LOADED VERSION)
MODEL 1616 ONLY.
GREY

COMMON BUSBARS FUNCTION	CODE
PHANTOM POWER SUPPLY +48V.	P.
ELECTRONIC SUPPLY 0v.	0v.
" " +15v.	+15v.
" " −15v.	−15v.
AUXILIARY MIX 1	A1.
" " 2	A2.
" " 3	A3.
OUTPUT MIX 1	1.
" " 2	2.
" " 3	3.
" " 4	4.
" " 5	5.
" " 6	6.
" " 7	7.
" " 8	8.
STEREO MIX LEFT	L.
" " RIGHT	R.
PRE-FADE LISTEN MIX	PFL MIX.
" " " D.C.	PFL D.C.
FADER EARTH	—

PP
1 VIOLET
2 -
3 -
4 -
5 -
6 -
7 -
8 -
MIX
CONNECTIONS FOR MODEL 164 ONLY. BUSSBARS 2,3,6,7 NOT FITTED. CONNECTIONS FOR OTHER MODELS SHOWN THUS . AND ALL BUSBARS FITTED.
GN.
INPUT PCB ASSEMBLIES
MASTER LEFT PCB ASSEMBLY.
MASTER RIGHT PCB ASSEMBLY.
1 2 3 4 5 6 7 8
OUTPUT PCB. ASSEMBLIES

No.	DESCRIPTION	CHKD	APPD	DATE
REVISIONS				

SYSTEM 8 Mk. II

ALLEN & HEATH BRENELL LTD.

METERPOD & BUSBAR CONNECTIONS

DRAWN	TRACED	CHECKED	APPROVED	DATE	SCALE
R		R	R	2.84	

DRAWING No. 282 issue 1

A PRODUCT OF THE UNO RANGE — ENGINEERS. CAT. No. 7302

594 x 420 mm A2