



BROADCAST CONSOLETTA BAC-1
TYPE 2G61226

HANDBOOK 1-61226R
(ISSUE 2)

AMALGAMATED WIRELESS (AUSTRALASIA) LIMITED
Engineering Products Division

422 LANE COVE ROAD, NORTH RYDE, N.S.W.

BROADCAST CONSOLETTTE BAC-1

Type 2G61226

(Serial Number 102, onwards)

020871

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TABLE OF CONTENTS

	Page
Part 1 GENERAL INFORMATION	
1. Introduction	1/1
2. Summary of Facilities	1/1
3. Performance Data	1/2
4. Construction	1/3
5. Composition	1/3
Part 2 TECHNICAL INFORMATION	
1. Installation	2/1
1.1 General	2/1
1.2 Muting and "On Air" Circuits	2/1
2. Tests and Adjustments	2/1
2.1 Preset Adjustments	2/1
2.2 VU Meter Calibration	2/2
2.3 Replacement of Reeds in Reed Relays	2/2
3. Component Schedule	2/3
3.1 Printed Wiring Boards	2/3
3.2 Components Mounted on Console Cabinet	2/3
3.3 VU Meter Pad 4R60706	2/7
Part 3 DIAGRAMS	
Functional Schematic	Drg 61226G2
Overall Circuit Diagram	Drg 61226A5
30 dB Amplifier Module 2G60793	Drg 60793G1
50 dB Amplifier Module 2G60794	Drg 60794G3
Monitor Amplifier Module 2G60800	Drg 60800G2
Information for Desk Mounting	Drg 61226C3
Appendix Extension Housing Type 1R61228	Handbook 61228R

PART 1GENERAL INFORMATION

1. INTRODUCTION

The AWA Broadcast Console BAC-1 Type 2G61226 is a fully transistorised equipment designed for use as an announcer-operated unit providing for the control of up to ten simultaneous audio inputs.

2. SUMMARY OF FACILITIES (Refer to Drg 61226G2)

Inputs:	Six low level and four high level. The high level inputs may be connected to bridge 600 Ω program lines, or to accommodate input levels of the order of -8 dBm from cartridge tape recorders or O.B. lines.
Input Level Control:	Fader controls are provided for all inputs.
Input Channel Mixing:	All inputs can be independently fed to either of two channels.
Outputs:	Two 600 Ω program channels are provided. A normal/emergency switch interchanges the two program amplifiers ensuring continuation of line output in the event of amplifier failure.
Talkback:	One low level input and one high level input. Talkback output is directed to one of four destinations via output selector pushbuttons.
Monitor Selection:	A push-button switch selects any one of four inputs to the monitor amplifier. Three outputs are provided, two muted by the booth and studio relays respectively and one unmuted.
Muting:	Any low-level input key can be connected (by means of simple bridging on a terminal block at the rear) to mute either the booth or studio speakers; remote muting is also possible. Muting normally operates on output channel 1 only, but it can be wired internally to operate on both channels.

Level Monitoring: A VU meter is connected across the output of each of the program channels.

Utility Key: Provides changeover switching for one balanced line and one d.c. circuit.

3. PERFORMANCE DATA

Input Impedance:

- Low Level: 50Ω or 150Ω (centre tap earthed).
- High Level: 600Ω bridging (no centre tap) or 600Ω terminating by changing wiring to input transformer.

Maximum Input Level:
(for 1% distortion)

- Low Level: -30 dBm.
- High Level: +20 dBm for bridge mode; +8 dBm for terminating mode.

Insertion Gain:

- Low Level Input: 101 ± 2.5 dB
- High Level Input: 29 ± 2.5 dB in bridging mode;
 35 ± 2.5 dB in terminating mode.

Output Impedance: 600Ω balanced.

Output Return Loss: Not less than 20 dB

Output Levels:

- Normal: +8 dBm (zero VU)
- Maximum: +24 dBm

Frequency Response: Flat ± 1 dB within the range 30 Hz to 15 kHz referred to 1000 Hz.

Harmonic Distortion: Less than 1% at +24 dBm output at any frequency within the range 30 Hz to 15 kHz.

Noise and Hum: With the input terminated in the correct impedance, not greater than -120 dBm (referred to the input) within the range 30 Hz to 15 kHz.

Monitor Amplifier:

Power Output:	10 watts into a 15 Ω load.
Gain:	When connected to a line delivering +18 dBm into a 600 Ω load, the amplifier will deliver 10 watts into a 15 Ω load, i. e. an apparent gain of 22 dB.
Input Impedance:	Balanced bridging.
Frequency Response:	Flat ± 1 dB within the range 30 Hz to 15 kHz referred to 1000 Hz.
Noise and Hum:	At least 80 dB below 10 watts output.
Overall Power Consumption:	40 VA maximum from a mains input of either 105-130V a.c. or 210-250V a.c., 50-60 Hz. (A 5% variation is permitted above the nominal supply voltage when connected to the nearest transformer tapping.)
Ambient Temperature:	The equipment will meet all specifications while operating within the temperature range 0°C to 55°C.
Weight:	43 pounds.

4. CONSTRUCTION

The consolette is constructed in a desk-mounting cabinet 30 inches wide, 12.1/2 inches deep and 9.1/2 inches high.

The cabinet has a removable cover and hinged front panel to provide access to all wiring. The amplifier components are mounted on printed circuit modules which plug into the consolette.

External connections to the unit are made via screw terminal blocks mounted at the rear of the consolette. These terminals are exposed when the cover is removed.

5. COMPOSITION

The major items in the consolette are listed below.

Seven	Pre-amplifier modules (type 2G60793) each containing two 30 dB amplifiers
Two	Output amplifier modules (type 2G60794) each containing one 50 dB amplifier

1/4

1-61226R

One	Monitor amplifier module (type 2G60800)
Two	VU meters
One	Talkback loudspeaker

End of Part

PART 2TECHNICAL INFORMATION

1. INSTALLATION

1.1 General

The consolette is designed for desk mounting (four screw holes are provided at the corners of the cabinet) and provision is made at the rear of the terminal strips for the entry of cable forms as shown in Drg 61226C3. Cable screens must be kept well clear of the power transistors on modules 2G60794 and 2G60800.

Attention should be directed to the mains transformer (TR15) to ensure that tapping is appropriate for the mains supply voltage; should it be necessary to alter a tap connection, the component board mounted on TR15 must be lifted following removal of four screws.

1.2 Muting and "On Air" Circuits (Refer to Drg 61226A5)

Upon connection of terminal H7 to earth, relay RLA is energised from the -25V rail. Operation of this relay connects the -25V rail to the studio "on air" terminal H9 and also mutes the studio monitor (J5/J6).

Upon connection of terminal H8 to earth, relay RLB is energised from the -25V rail. Operation of this relay connects the -25V rail to the booth "on air" terminal H11 and also mutes both the booth monitor (J3/J4) and the cue speaker (LS1). TALKBACK buttons operate RLB via internal wiring.

Terminals H1 to H6 provide connections to earth upon operation of INPUT keys 1 to 6, respectively, in CHANNEL 1 position; for example to mute the booth speakers by operating INPUT 4 key, terminal H8 is bridged to terminal H4. Earth connections are provided only for CHANNEL 1 but may be made to CHANNEL 2 by internal wiring, e.g. for key KA connect 25 to 29.

2. TESTS AND ADJUSTMENTS

2.1 Preset Adjustments

30 dB Amplifier:	Refer to Drg 60793G1.
50 dB Amplifier:	Refer to Drg 60794G3.
Monitor Amplifier:	Refer to Drg 60800G2.

2.2 VU Meter Calibration

A standard VU meter should be connected to each of the console outputs in turn and the meter calibrating potentiometers (RV16, RV17) adjusted to equalise the readings.

2.3 Replacement of Reeds in Reed Relays

When servicing the reed relays, the following precautions must be observed:

- (i) The bias magnet must be removed prior to removing a reed.
- (ii) Inner reeds must be removed prior to removing an outer reed (RLA2 or RLB2).
- (iii) Leads must not be bent or subjected to any side forces.

Replacement of any reed necessitates readjustment of the bias magnet as detailed below. The test equipment required includes a variable d.c. supply (20V - 30V at 100 mA) and a continuity tester (buzzer or ohmmeter).

a. Readjustment of Bias Magnet in Relay RLA.

1. Connect the -ve lead of the d.c. supply to pin 1 on the relay panel.
2. Lay the bias magnet on top of the relay at right angles to the axis of the coil.
3. Temporarily connect the +ve lead of the supply to pin 7 until the magnet is aligned with the axis of the coil.
4. Mark the end of the magnet which points toward pin 2.
5. Insert the magnet into the end of a piece of 5 mm p.v.c. tubing with the marked end outward.
6. Connect the continuity tester between pins 2 and 6.
7. Insert the tubing containing the magnet into the relay coil from pin 2 end of the coil and push slowly through the coil until the continuity tester indicates that the relay contacts have just closed.
8. Mark the tubing where it enters the coil until the contacts open and then slowly withdraw the magnet until the contacts just close.

9. Mark the tubing where it enters the coil. The two marks on the tubing should be not less than 3/16 inch apart.
10. Cut the tubing midway between the marks and insert the marked end of the magnet into the relay coil from pin 2 end of the coil. Push the magnet in until the cut end of the tubing is flush with the end of the coil.
11. Perform an operational check of the equipment and secure the end of the tubing with contact adhesive.

b. Readjustment of Bias Magnet in Relay RLB

The procedure for adjusting relay RLB is the same as described above except:

- (i) the coil is energised by connecting the d.c. supply between pins 1 (-ve) and 8 (+ve), and
- (ii) the continuity tester is connected between pins 9 and 10 (after having temporarily linked pins 2 and 3).

IMPORTANT: The link between pins 2 and 3 must be removed before performing the operational check.

3. COMPONENT SCHEDULE

3.1 Printed Wiring Boards

Refer to the circuit diagrams of the respective boards.

3.2 Components Mounted on Console Cabinet

C1	2000 μ F -10+50%, 64 VDCW, electrolytic	Philips C432MRH/2000
C2	2000 μ F -10+50%, 64 VDCW, electrolytic	Philips C432MRH/2000
C3	160 μ F -10+50%, 25 VDCW, electrolytic	Philips C437AR/F160
C4	160 μ F -10+50%, 25 VDCW, electrolytic	Philips C437AR/F160
C5	160 μ F -10+50%, 25 VDCW, electrolytic	Philips C437AR/F160
FS1)	Fuse unit, single way, protected, panel	Amplifier Co.
to)	mounting	of Aust.
FS3)	Fuse link, glass cartridge, 1A	Belling Lee L1055
KA)		
to)	Switch, key telephone, APO No.198, 4C-L/4C-L	Lorimier Contacts
KK)		

Components Mounted on Console Cabinet (continued)

KL	Switch, key telephone, APO No. 73, S/4C-L	Lorimier Contacts
KM	Switch, key telephone, APO No. 198, 4C-L/4C-L	Lorimier Contacts
LS1	Loudspeaker, 3.1/2 inch, round, 15	MSP 50003/3LB/15
M1	Meter, VU, scale B, illuminated, 6.3V	Master FB-50
M2	Meter, VU, scale B, illuminated, 6.3V	Master FB-50
* MR1	Bridge rectifier assembly	Siemens B40C2200
* MR2	Bridge rectifier assembly	Siemens B80C2000
MR3)		
to)	Not used	
MR8)		
MR9	Silicon diode	AWV 1N3193
MR10	Silicon diode	AWV 1N3193
MR11	Germanium diode	Philips OA95
R1	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R2	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R3	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R4	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R5	Not used	
R6	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R7	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R8	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R9	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R10	Not used	
R11	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R12	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R13	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R14	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R15	Not used	
R16	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R17	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R18	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R19	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R20	Not used	
R21	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R22	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R23	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B

* MR1 and MR2 are Siemens B80C3200/2200 Si in late units

Components Mounted on Console Cabinet (continued)

R24	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R25	Not used	
R26	Not used	
R27	22 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R28	Not used	
R29	Not used	
R30	Not used	
R31	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R32	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R33	150 Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R34	3.3 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R35	Not used	
R36	1 k Ω \pm 5%, 1/2W, carbon film	Philips B8-305-06B
R37	Not used	
R38	Not used	
R39	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R40	Not used	
R41	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R42	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R43	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R44	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R45	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R46	4.7 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R47	1.5 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R48	1.5 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R49	1.5 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R50	Not used	
R51	1.5 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
RV1) to) RV10)	1 k Ω \pm 20%, 1W, composition, variable, log, 15/16-inch shaft, metallized track ends	Plessey E
RV11	1 k Ω \pm 20%, 1W, composition, variable, log screwdriver slot	Plessey E
RV12	1 k Ω \pm 20%, 1W, composition, variable, log 15/16-inch shaft	Plessey E
RV13	1 k Ω \pm 20%, 1W, composition, variable, log 15/15-inch shaft	Plessey E

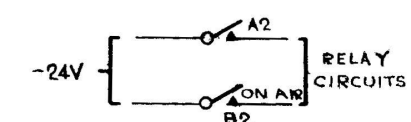
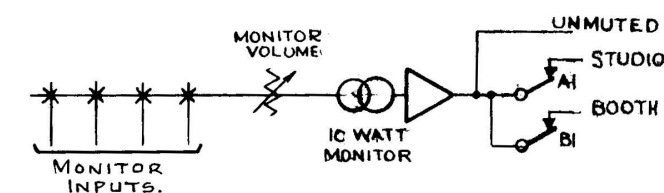
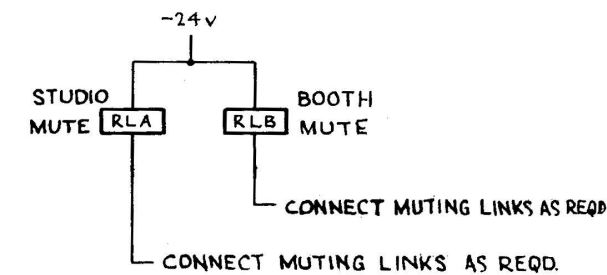
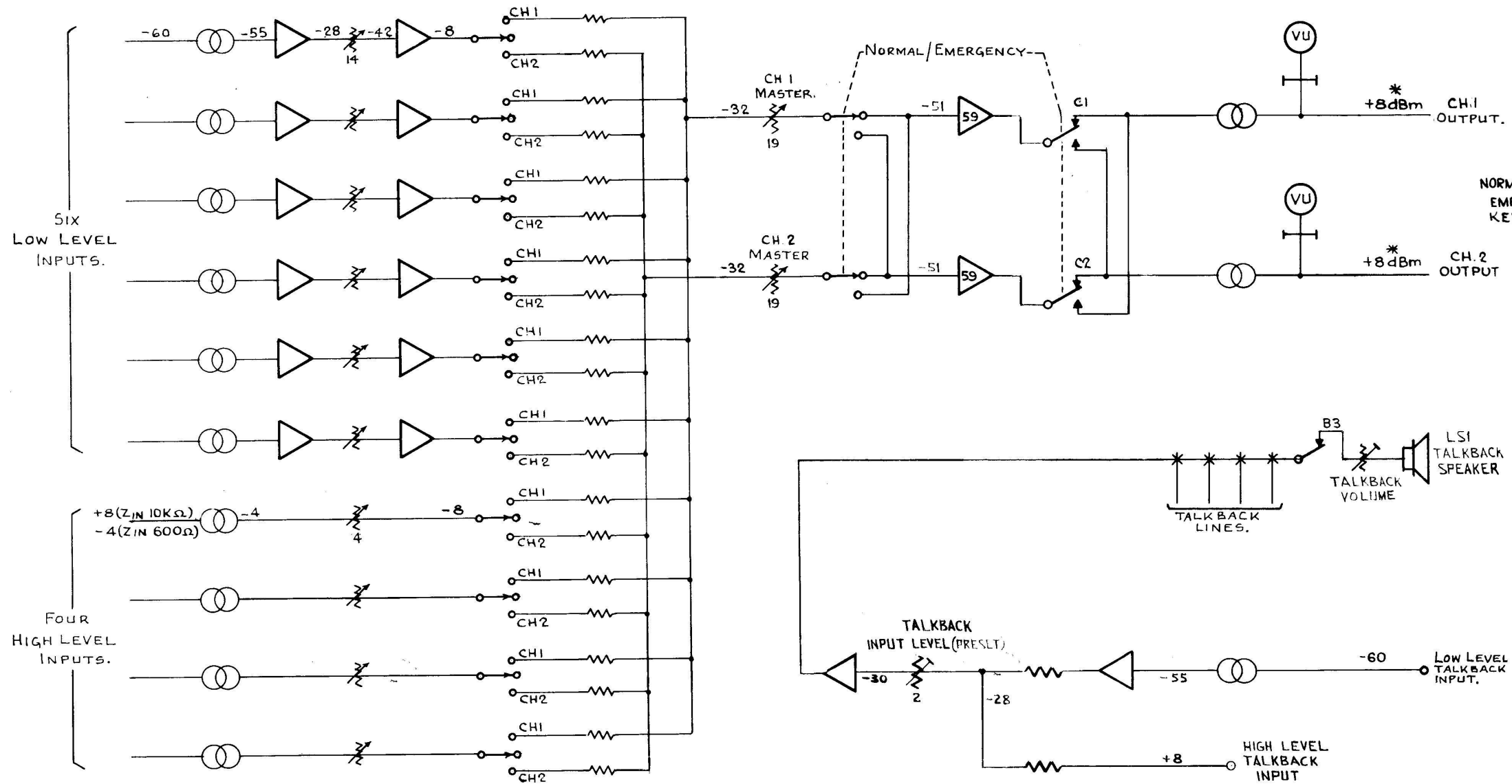
Components Mounted on Console Cabinet (continued)

RV14	1 k Ω \pm 20%, 1W, composition, variable, log 13/16-inch shaft	Plessey E
RV15	100 Ω \pm 20%, 1W, wire wound, variable, 13/16-inch shaft	Colvern CLR 4201/22F
RLA	Relay, reed Coil: 870 Ω , 210 AT, 24V Reed 1: 1M, 70+90 AT Reed 2: 1M, 90-110 AT Magnet	Osmor ST Hamlin DRS-2 Hamlin DRG-2 AWA 61226V56A
RLB	Relay, reed Coil: 516 Ω , 250 AT, 24V Reed 1: 1M, 70-90AT Reed 2: 1M, 90-110 AT Reed 3: 1M, 70-90 AT Magnet	Osmor SQ Hamlin DRS-2 Hamlin DRG-2 Hamlin DRS-2 AWA 61226V56A
RLC	Relay, magnetic, miniature, panel mounting Coil: 530 Ω Springsets: 2C	Siemens-Halske trls 154r/ TBv 65720/Tkfs1742
SKA) to) SKK)	Connector, 10-way, female, gold-plated contacts	McMurdo PS-10
SWA	Switch, Oak "80"	AWA 61226V51A
TR1) to) TR6)	Transformer	AWA 1XC61069
TR7) to) TR10)	Transformer	AWA 1XC65079
TR11	Transformer	AWA 1XC61069
TR12	Not used	
TR13	Not used	
TR14	Transformer	AWA 1XC63287
TR15	Transformer	AWA 1TS63372
VT1	Transistor	RCA 2N1183

3.3 VU Meter Pad 4R60706

R1	3.9 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R2	820 Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
R3	8.2 k Ω \pm 5%, 1/4W, carbon film	Philips B8-305-05B
RV1	1 k Ω \pm 20%, 1/8W, composition, variable, linear tab mtg	Ducon PTU

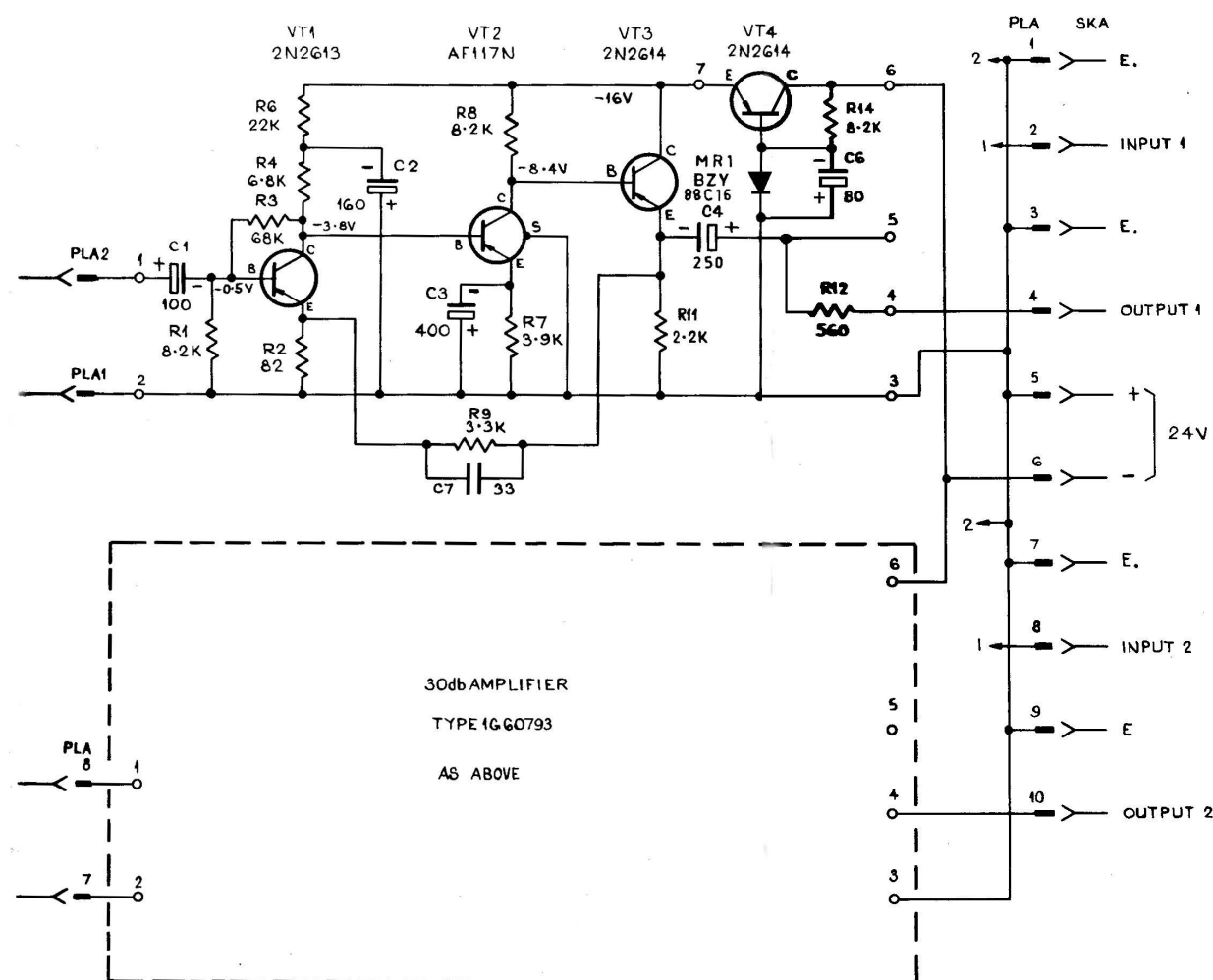
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NOTES:
ALL LEVELS REFERRED TO 0.775V
* OUTPUT LOADED IN 600Ω

AWA

BROADCAST CONSOLETTA BAC-1
FROM SERIAL NUMBER 102 WITH SEPARATE TALK BACK SYSTEM
TYPE 2G 61226
DRG 61226 G2



COMP.	GRID	DESCRIPTION	CODE NO
R1	E4	8.2K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	611853
R2	E4	8.2K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	601000
R3	E2	68K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	615505
R4	E2	6.8K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	611533
R5			
R6	D2	2.2K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	613667
R7	D4	3.9K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	610564
R8	D1	8.2K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	611853
R9	E4	3.3K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	610313
R10			
R11	C3	2.2K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	609452
R12	B5	560 Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	606851
R14	B2	8.2K Ω \pm 5% 1/10 WATT PHILIPS B8-305-00B	611853
C1	F3	100 μ F ELECTRO 6V DUCON EU0502	
C2	D2	160 μ F ELECTRO 10V DUCON EU0603	
C3	C4	400 μ F ELECTRO 10V DUCON EU0903	
C4	A2	250 μ F ELECTRO 10V PHILIPS C437	229756
C5			
C6	B3	80 μ F ELECTRO 25V DUCON EU0707	
C7	E4	33pF \pm 5% 100V DUCON DFB0133	
MR1	B3	BZY88C16 PHILIPS ZENER DIODE	
VT1	E3	2N2G13	
VT2	D4	AF117N	
VT3	C2	2N2G14	
VT4	B1	2N2G14	

AUDIO PERFORMANCE

MAX OUTPUT: (OUTPUT 1) 0dbm IN 600 Ω LOAD

GAIN: (INPUT FROM 600 Ω UNTERMINATED SOURCE,
OUTPUT TAKEN FROM OUTPUT 1 LOAD WITH 600 Ω)

INPUT IMPEDANCE: 7K Ω

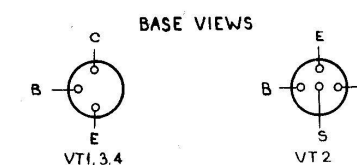
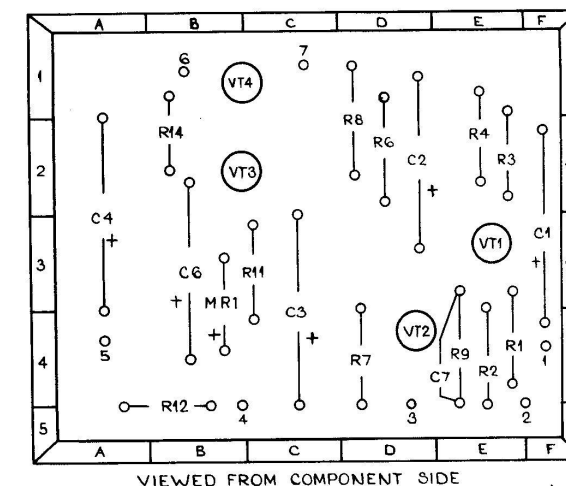
SOURCE IMPEDANCE: AT OUTPUT 560 Ω

FREQUENCY RESPONSE: AT OUTPUT LOADED IN 600 Ω
+0db TO -0.1db FROM 20c/s TO 20Kc/s

HARMONIC DISTORTION: AT MAX OUTPUT NOT GREATER THAN 0.2%
WITH IN THE RANGE 30c/s TO 20Kc/s

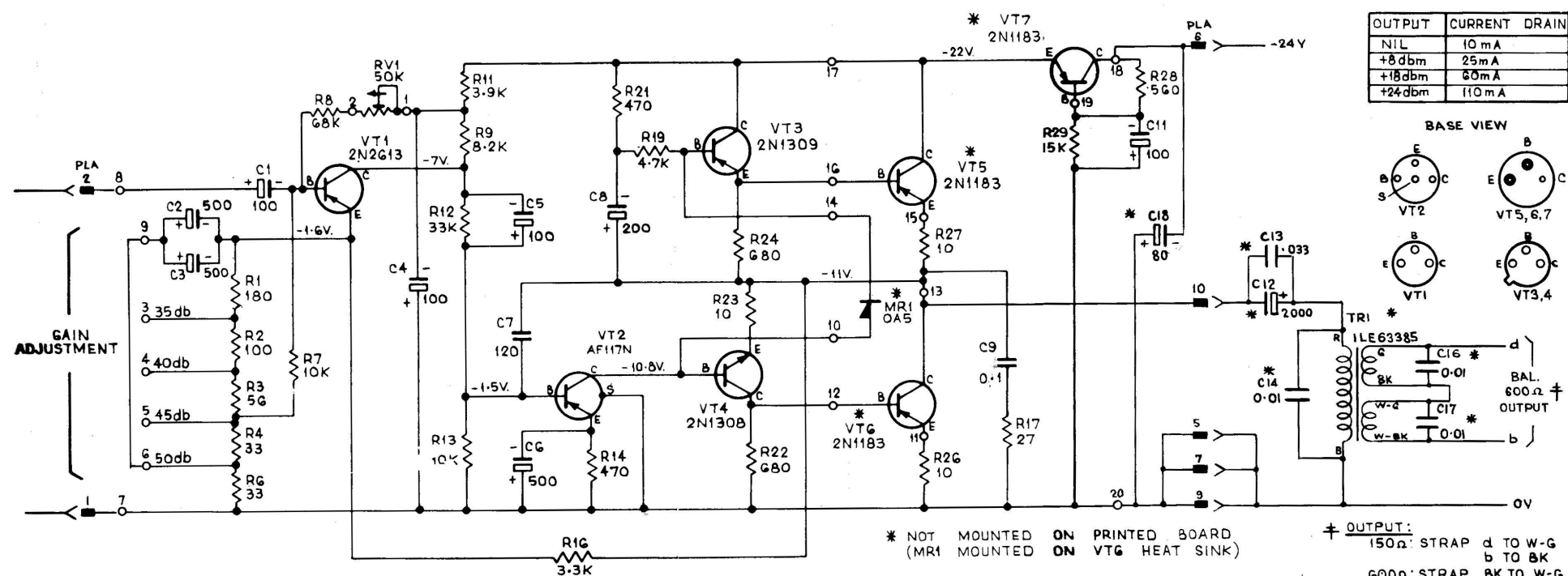
NOISE: -420dbm REFERRED TO INPUT WITHIN THE RANGE 30c/s TO 15Kc/s
INPUT TERMINATED IN 600 Ω

PRINTED CIRCUIT BOARD AWA 60793W2/1

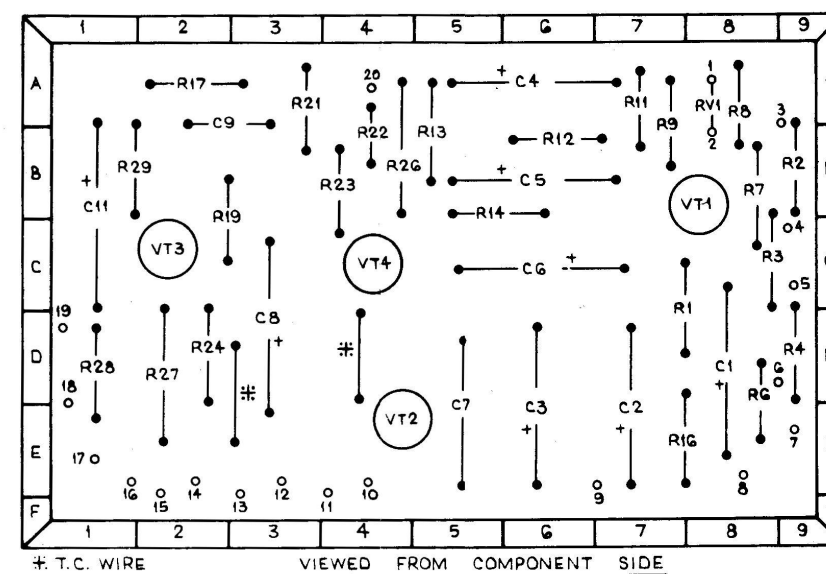


30db AMPLIFIER
TYPE 2G60793
DRG 60793G1

PV-5477-0



COMP	GRID	DESCRIPTION	CODE No	COMP	GRID	DESCRIPTION	CODE No	COMP	GRID	DESCRIPTION	CODE No
R1	C8	180 Ω	G04922	R17	A2	27 Ω	G02599	C1	D8	100 μF 6V. ELECTRO. DUCON	
R2	B9	100 Ω	G04047	R18				C2	E7	500 μF 3V. ELECTRO. DUCON	
R3	C8	56 Ω	G03369	R19	C2	4.7 KΩ	G10971	C3	E6	500 μF 3V. ELECTRO. DUCON	
R4	D9	33 Ω	G02762	R20				C4	A6	100 μF 25V. ELECTRO. DUCON	
R5		ALL RESISTORS ARE ± 5% 1/10 WATT		R21	A3	470 Ω	G06596	C5	B6	100 μF 6V. ELECTRO. DUCON	
R6	E8	33 Ω	G02762	R22	B4	680 Ω	G07288	C6	C6	500 μF 3V. ELECTRO. DUCON	
R7	B8	10 KΩ	G12045	R23	B4	10 Ω	G01105	C7	E5	120 pF 125V. STYROSEAL DUCON	
R8	A7	68 KΩ	G03578	R24	D2	680 Ω	G07268	C8	D3	200 μF 18V. ELECTRO. DUCON	
R9	B7	8.2 KΩ	G11853	R25				C9	A2	0.1 μF 250V. POLY. PHILIPS C29GAA	22G740
R10				R26	B4	10 Ω ± 5% 1/4 W. PHILIPS 88-305-05B	G01101	C10			
R11	A7	3.9 KΩ	G10564	R27	D2	10 Ω ± 5% 1/4 W. PHILIPS 88-305-05B	G01101	C11	B1	100 μF 25V. ELECTRO. DUCON	
R12	B6	33 KΩ	G14469	R28	D1	560 Ω	G06851	C12	*	2000 μF 18V. ELECTRO	
R13	B5	10 KΩ	G12045	R29	B1	15 KΩ	G12939	C13	*	0.033 μF 125V. POLY. PHILIPS C29GAA	22G370
R14	B5	470 Ω	G06596	R30				C14	*	0.01 μF 125V. POLY. PHILIPS C29GAA	22G370
R15								C16	*	0.01 μF 125V. POLY. PHILIPS C29GAA	22G370
R16	E8	3.3 KΩ	G10313					C17	*	0.01 μF 125V. POLY. PHILIPS C29GAA	22G370



AUDIO PERFORMANCE: OUTPUT TERMINATED IN 600Ω LOAD
MAX. OUTPUT: +24 dbm
GAIN: INPUT FED FROM A 600Ω TERMINATED SOURCE

GAIN	TERMINAL STRAPPING
30 db	NO CONNECTION
35 db	9 TO 3
40 db	9 TO 4
45 db	9 TO 5
50 db	9 TO 6

INPUT IMPEDANCE: NOT LESS THAN 10K
SOURCE IMPEDANCE AT OUTPUT: 600Ω
RETURN LOSS AT OUTPUT: 20db WITHIN THE RANGE 30c/s TO 15 Kc/s
FREQUENCY RESPONSE: +0 db TO -0.3 db FROM 30c/s TO 15 Kc/s.
HARMONIC DISTORTION: AT MAX. OUTPUT NOT GREATER THAN 0.5% WITHIN THE RANGE 30c/s TO 15 Kc/s.
NOISE: -120 dbm REFERRED TO INPUT WITHIN THE RANGE 30c/s TO 15 Kc/s. INPUT TERMINATED IN 600Ω

PRINTED CIRCUIT BOARD: A.W.A. DRG. No. G0794W3

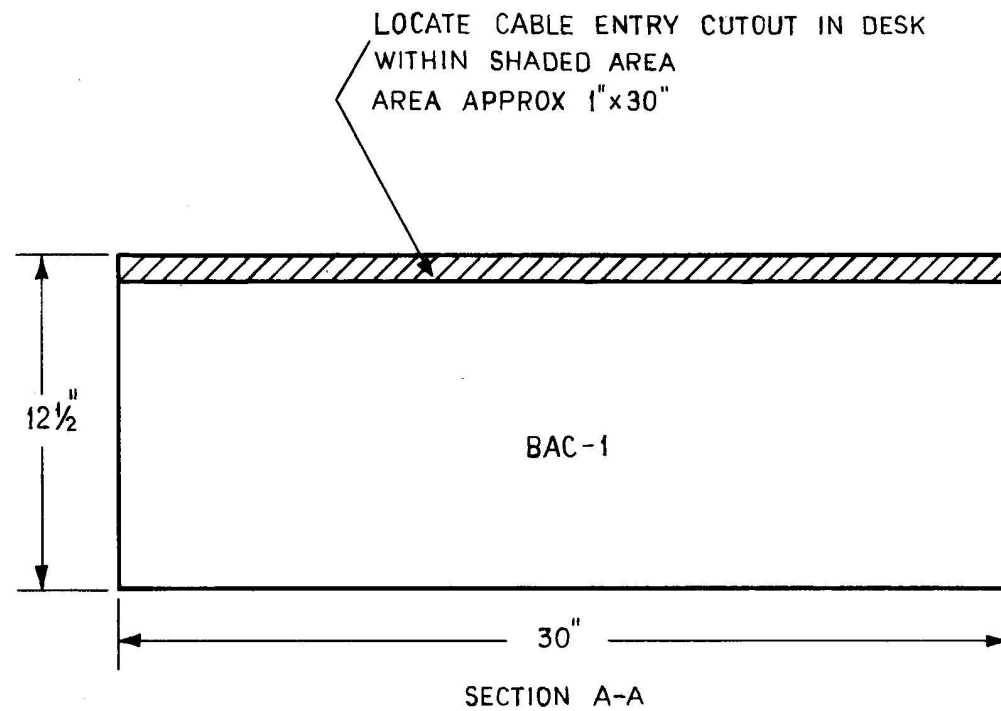
BOARD G0794W3



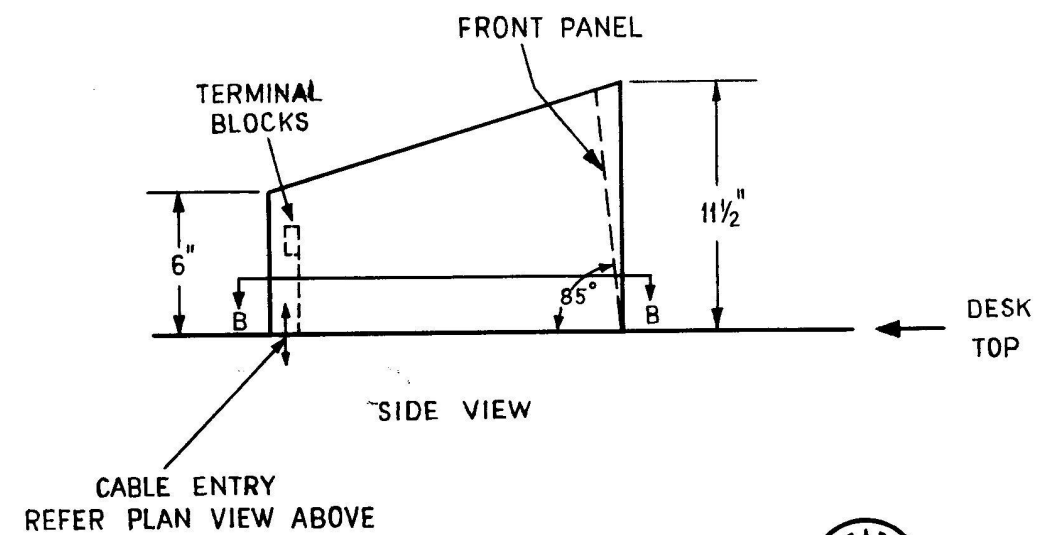
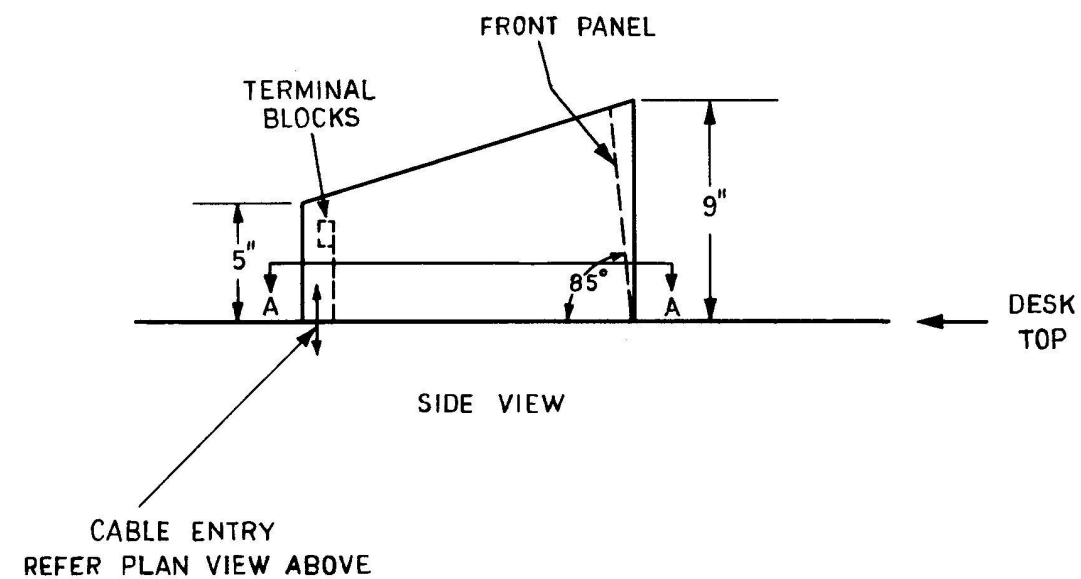
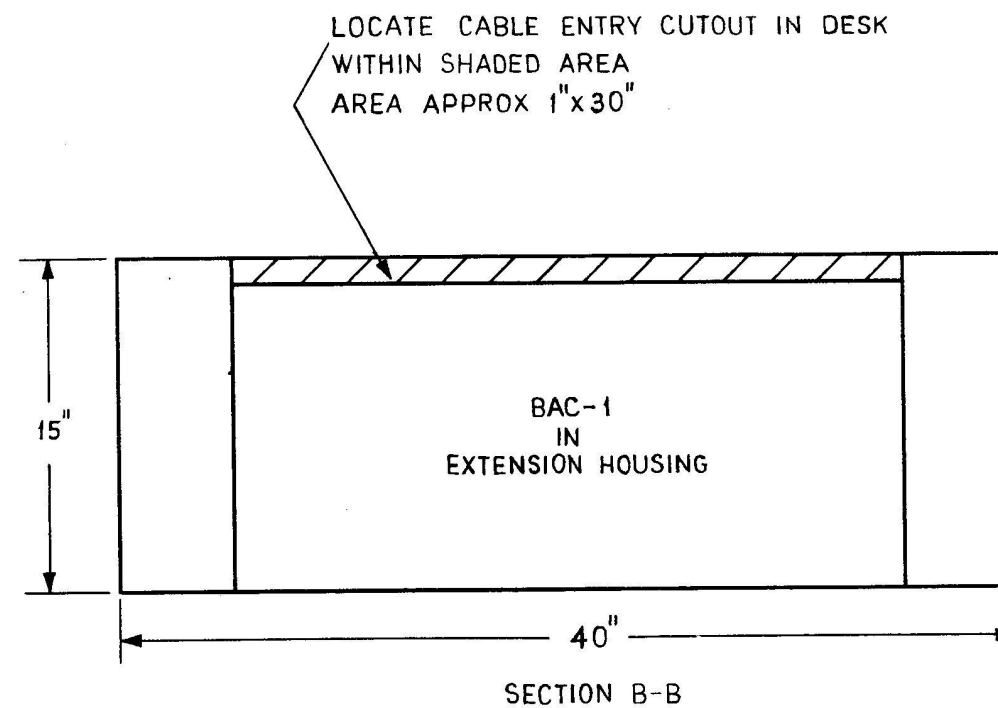
50 db AMPLIFIER
TYPE 2G0794
DRG. G0794G3

FW-04118-2

DETAILS FOR BAC-1



DETAILS FOR BAC-1 FITTED IN EXTENSION HOUSING



PV-B4121-0

INFORMATION FOR DESK MOUNTING
BAC-1 CONSOLETTTE
DRG. 61226C3.

EXTENSION HOUSING 1R61228

260966

Handbook 61228R

AMALGAMATED WIRELESS (AUSTRALASIA) LTD
Engineering Products Division
422 LANE COVE ROAD, NORTH RYDE, N.S.W.

1. APPLICATION

The Extension Housing 1R61228 is designed to accommodate ancillary equipment used in conjunction with the BAC-1 Console 2G61226.

Where it is desired to extend the facilities of an existing BAC-1 Console, the extension housing can be purchased separately.

2. FACILITIES

The extension housing consists of an aluminium framework providing space on either side of, and underneath, the broadcast console. Its design is such that ready access is available to all parts, and circuit additions can be made rapidly and conveniently.

The end and lower sections of the housing have etched and anodised aluminium front panels which can be readily punched, or drilled, engraved and filled, to give an appearance matching the broadcast console very closely.

3. CONSTRUCTION

The extension housing consists of two end assemblies, a base and a cover, all made of lightweight aluminium alloy.

The cover is removable for complete access. When installed in the central space the BAC-1 Console hinges at the bottom rear to give access to wiring or small components which may be in the base.

External connections are made to terminal blocks at the rear of the frame and extended as required to terminal blocks on the rear of the console. Removal of the cover gives access to all terminal blocks.

The overall dimensions are 40-1/4 inches wide, 15-1/2 inches deep and 11-1/2 inches high.

4. SUMMARY OF INSTALLATION PROCEDURE

The operations necessary to install a BAC-1 Console 2G61226 in the Extension Housing 1R61228 are summarised below. Detailed instructions are given in the following section.

1. Discard console cover.
2. Modify console end plates.
3. Fit hinge-pins to rear of console.
4. Fit new trim plate to front of console.
5. Fit rubbing strips for console.
6. Re-connect wiring between housing and console, or install new wiring as required.
7. Fit cover to extension housing.

Note that, when a console and housing are purchased together to provide extended facilities, one or more of these alterations may be found to have been already made.

5. DETAILED INSTALLATION INSTRUCTIONS

1. Remove and discard the consolette cover.
2. Take out the end screws in the lower trim strip.
3. Take off the two end plates. Using a suitable drill, bore out the rivetted end of the two spacers on each end plate. Discard the spacers.
4. From each end plate carefully cut off the entire front bracket which is attached to the trim strip. Make the cut flush with the front edge of the base flange. Cut off the front corner of the base flange $1/4'' \times 45^\circ$.
5. Re-fit the end plates, simultaneously attaching the two hinge plates at the rear corners. Use the longer $1/2$ -inch screws supplied with the hinge plates. The hinge pin must be at the bottom of the chassis.
6. Slacken the screws holding the front panel hinge to the base of the consolette.
7. Pull the trim strip straight out from the front of the consolette. The holes in the strip are open slots to permit this operation.
8. Insert the narrower trim strip supplied between the hinge and the bottom plate. The holes in this strip are also open slots. Leave the hinge screws slack so that the strip can be positioned later.
9. Remove the cover from the extension housing.
10. Looking at the front of the housing, remove the left-hand end section by taking out all 2BA securing screws. Do not misplace any packing strips present.
11. Slacken right-hand front panel screws of end section removed in step 10. Slide appropriate nickel-silver rubbing strip under front panel edge, with flange inwards and cut-away downwards. Lightly tighten screws. Similarly fit rubbing strip to front panel of right-hand end section of housing. After completing step 16, adjust rubbing strips to take up any gap between consolette and housing; then tighten screws firmly.
12. Holding the consolette carefully to avoid injury to the hands, insert one hinge pin into the slot in the right-hand end section of the housing. Lower the consolette until the flanges of the end plates rest on the top edge of the centre panel of the housing.
13. Position the slot in the left-hand end section of the housing over the other hinge pin and re-attach this end section to the extension housing.

WARNING: ALWAYS raise or lower the hinged consolette by GRASPING TWO OF THE FADER KNOBS. NEVER allow the fingers to PROJECT UNDER THE FRONT TRIM STRIP.

14. Now position the consolette so that its base plate butts against the rear face of the front panel of the extension housing.
15. Fit the small stop plates at the rear of the hinge pin slots. Adjust and tighten securely to prevent the consolette moving backwards.
16. Check for free movement of the consolette around the hinge pins. If any scraping occurs, check that the proper packing strips are in place between the centre and end sections of the housing.

17. Position the front trim strip so that there is approximately $1/32$ inch clearance between its lower edge and the front panel of the housing.
18. Tighten the hinge screws to secure the trim strip.
19. Re-connect the wiring from the consolette to the extension housing terminal blocks. Cut-outs in the base of the consolette permit the wiring to be taken under the base panel. Check the wiring according to the diagram supplied for the complete console.