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Section 1 GENERAL DESCRIPTION

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5422-R 6 Channel 2 Group Rack Mounted Console

1.2 This console is designed for standard 19 inch (48.3 cms) rack mounting in studio or outside broadcast vehicles. The console operates continuously in conjunction with the standard 19 inch (48.3 cms) rack mounted External Power Supply Unit 33643.

(a) Mechanical Arrangement
Fig.3 - Layout drawing (MR60076) - shows dimensioned plan and side elevation of the console.

The six channel amplifiers 34128 are located on the left hand side of the console with the Output and Monitor panel occupying the extreme right position.

(i) Dimensions

Height	400 mm (15.75 ins)
Length	483 mm (19.00 ins)
Width	147 mm (5.8 ins)

(b) Connector Panel Assembly
The Connector Panel Assy. is located on the rear wall of the console and an illustrated diagram identifying individual connectors is located adjacent to the panel. An illustrated view of the panel is shown on Fig. 4.

5432 8 Channel 2 Group 'Drop Thro' Console

1.3 This console is designed for studio applications and recesses into a horizontal table top or surface. The console operates continuously in conjunction with the standard 19 ins (48.3 cms) rack mounted External PSU 33643.

(a) Mechanical Arrangement
Fig.5 - Layout drawing (ML40101) - shows plan, side and end elevations of the console.

The eight channel amplifiers 34128 are located on the left hand side of the console with the Output and Monitor panel offset to the right of centre. The extreme right position is covered by blanking panel Part Number PN60049.

When Internal Power Supply Module 34613 is fitted as an option the blanking panel is removed and the module occupies the extreme right position.

(i) Dimensions

Height (overall)		240 mm (9.45 ins)
Length		632 mm (24.9 ins)
Width		448 mm (17.6 ins)
Recess	Length	605 mm (23.82 ins)
	Width	420 mm (16.54 ins)

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INTRODUCTION

1. The technical data given in this manual applies to the following range of standard consoles described in paras 1-1 to 1-4 with the exceptions stated in the individual descriptions. The consoles provide stereo and mono mixing facilities suitable for broadcast and recording mediums where each type is designed to meet specific installation requirements. Throughout, the consoles are fully modular in concept and construction and are manufactured with maximum usage of standardised components and assemblies.

   All XLR input\output connectors, with the input connectors wired for phantom powering of capacitor microphones, are located on connector panels situated in the positions stated. On all consoles appropriate circuits are wired to a multipin connector located also on the connector panel where this facility, in conjunction with extension lead part number PN60051 allows two or more consoles of any type, to be coupled together to extend the basic system to any number of input channels.

5422 8 Channel 2 Group 'Suitcase' Portable Console

1.1 This console is fully portable in application where the 34613 Internal Power Supply Module (section 5) forms an intrinsic part of the console. The console operates continuously in conjunction with External Power Supply Unit 33643 (section 5).

(a) Mechanical Arrangement

Fig. 1 - Layout drawing (ML40088) - shows dimensioned plan, side and end elevations of the console.

The eight channel amplifiers 34128 are located on the left hand side of the console with the Output and Monitor panel offset to the right of centre. Internal Power Supply Module 34613 occupies the extreme right position.

(i) Dimensions

Height (handle extended)	441 mm (17.4 ins)
Length	633 mm (24.9 ins)
Width (cover fitted)	174 mm (6.85 ins)

(ii) Weight 19.1 kg.(42 lbs) (excludes External PSU 33643)

(b) Connector Panel Assembly

Connector Panel Assy. Pt. No. PN60005 is located on the right hand sidewall of the console. An illustrated diagram identifying individual connectors is located on the underside of the detachable top cover and is shown on Fig.2.

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(b) Connector Panel

Connector Panel Assembly Part Number PN60005 is located on the rear of the console. An illustrated diagram identifying individual connectors is located adjacent to the panel. An illustrated view of the panel is shown on Fig. 2.

5442 8 Channel 2 Group Table Top Console

1.4 This console is designed for studio applications and stands on a table top horizontal surface.

The console operates continuously in conjunction with the standard 19 inch (48.3 cms) rack mounted External PSU 33643.

(a) Mechanical Arrangement

Fig. 6 - Layout drawing (ML40102) - shows plan, side and end elevations of the console.

The eight channel amplifiers 34128 are located on the left hand side of the console with the Output and Monitor panel offset to the right of centre. The extreme right position is covered by blanking panel Part Number PN60049.

When Internal Power Supply Module 34613 is fitted as an option the blanking panel is removed and the module occupies the extreme right position.

(i) Dimensions

Height	240mm (9.45 ins)
Length	632mm (24.9 ins)
Width	448mm (17.6 ins)

(b) Connector Panel

Connector Panel Assembly Part Number PN60005 is located on the rear of the console. An illustrated diagram identifying individual connectors is located adjacent to the panel. An illustrated view of the panel is shown on Fig. 2.

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FUNCTIONAL DESCRIPTION

2. Block diagram EB10881 is applicable to all consoles and shows the signal routing from the inputs, through the associated controls and processing circuits, to the outputs.

Channel Amplifier 34128

2.1 The channel amplifiers 34128 are described in detail in section 2. Each incorporates phase reversal, sensitivity controls (mic/line) and comprehensive equalisation comprising presence and HF/LF cut and boost which can be switched in or out. The channel fader with white control knob forms an integral part of the module and controls the output level via a high pass filter with selectable roll off frequencies, a pan control providing stereo distribution and mutually exclusive switching routing the processed audio signals to either programme or audition mixing busses. The audio signals, pre or post fade, are also routed via individual control switches to two auxiliary mixing busses and a pre-fade listen switch routes the signal to the audition L (left) mixing bus.

Playback 1, Playback 2

2.2 The two playback inputs can be used in association with a tape machine or for reverberation returns. Each playback channel includes individual level controls, a pan control providing stereophonic distribution and mutually exclusive switching routing the processed signal to either program or audition mixing busses.

Output and Monitor Panel

2.3 The Output and Monitor Panel described in detail in Section 3 is ergonomically designed with the various controls arranged in groups corresponding to the processing circuits of the associated printed circuit board BA683.

The controls are individually identified and are concerned with signal level and routing between the mixing busses and line, auxiliary and monitoring outputs.

Two VU meters located at the top of the panel provide indications of signal levels of line, audition and monitoring outputs via a three position selector switch.

Internal Power Supply Module 34613

2.4 The internal supply module 34613 fitted to the 5422 console as standard equipment and optionally available on the 5432 and 5442 consoles comprises a system of re-chargeable cells which, in the fully charged state, provide regulated supplies of +15 volts dc capable of maintaining optimum performance for periods up to and exceeding 4 hours. Full details are given in section 5.

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External Power Supply 33643

2.5 External Power Supply 33643 provides the ±15V dc regulated supply for continuous console operation, together with the +48V dc phantom power supply for capacitor microphones and an additional 120mA constant current source for recharging the 34613 Internal Power Supply Module where fitted. Full details are given in Section 5.

Phantom Power

2.6 The +48V dc phantom power supply is provided by external PSU 33643 and is controlled by a master ON/OFF switch located on the termination panel.

The supply appears on all channels simultaneously, irrespective of the setting of the MIC/LINE switch on individual channel amplifiers. Appropriate action should be taken if an unbalanced line input is to be connected. Transformer coupled line inputs are not affected.

SYSTEM EXTENSION

3. On all consoles Pgm L-R, Aux 1-2, and MON L-R mixing busses are wired to individual pins of the 15 way Painton socket mounted on the console connector panel.

When the console is used as a single unit the 15 way socket must be terminated by blanking plug assembly PL21104, attached to the console. This wiring arrangement, in conjunction with Extension Lead Part Number PN60051 provides facilities enabling two or more consoles of any type to be coupled together to extend the basic system to any number of input channels.

(a) Extension Lead PN60051 is shown on Fig. 7 where the cable assembly is formed to allow interconnection of two consoles. Cable ends are individually identified to correspond to the mating connector on the console connector panel.

Interconnecting Procedure

3.1 A typical system of two consoles is shown in Fig. 8. For convenience designate the consoles A and B respectively.

(a) Console B
Connect the cable ends of Extension Lead PN60051 marked **LINE L, LINE R, AUX 1, AUX 2, MON L** and **MON R** to the corresponding output connectors of the console connector panel.

(b) Console A
Remove blanking plug PL21104 from the console connector panel.

Connect the 15 way Painton plug of Extension Lead PN60051 to the 15 way connector panel socket.

Connect the two **PB1, PB2** connectors of Extension Lead PN60051 to the corresponding connectors on the console connector panel.

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Control Settings

3.2 Set the controls to the following positions:

(a) Console B

Output faders:	OdB
Auxiliary Levels:	Maximum
Monitor selected to:	Audition

(b) Console A

Playback Level Control:	Maximum
Playback 1 pan control:	Fully Left
Playback 2 pan control:	Fully Right

Operation

3.3 With the consoles interconnected and set up as described in paras 3.1 and 3.2:

(a) Channel Inputs. Use console A as master.

Line and auxiliary signals from channels 1 to 8 from console B will be mixed with the audio signals from channels 1 to 8 of console A without loss of signal level.

Audition and pfl signals from console B will be 2.5dB below the audition and pfl signals of console A.

(b) Playback Inputs: Use Console B as master.

Playback to line signals will be mixed without loss of signal level.

Playback to audition signal levels will be 2.5dB below the audition level on console A.

To monitor playback directly, select playback on both consoles. The Monitor output level will be 5dB below the input level.

SUB-FITTED CONSOLES

4. When consoles are provided with less than the established number of 34128 Channel Amplifiers:

(a) Blanking Plug CN10300 is provided to mate with the channel amplifier position and must be fitted at all times.

(b) The channel amplifier position on the front of the console is fitted with a blanking panel. Part Number MN20126/1.

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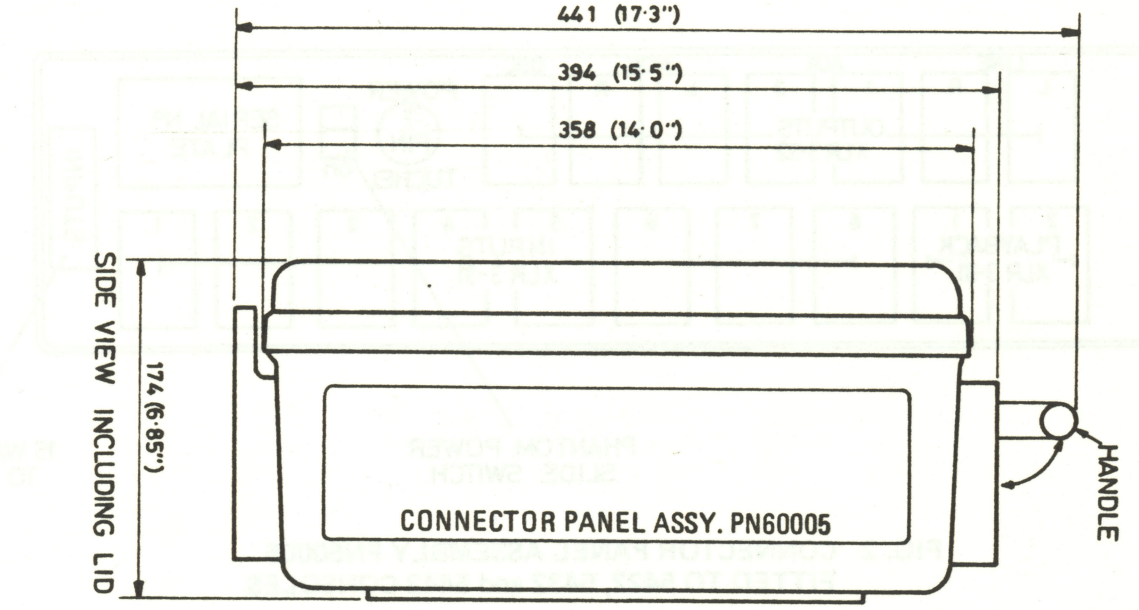

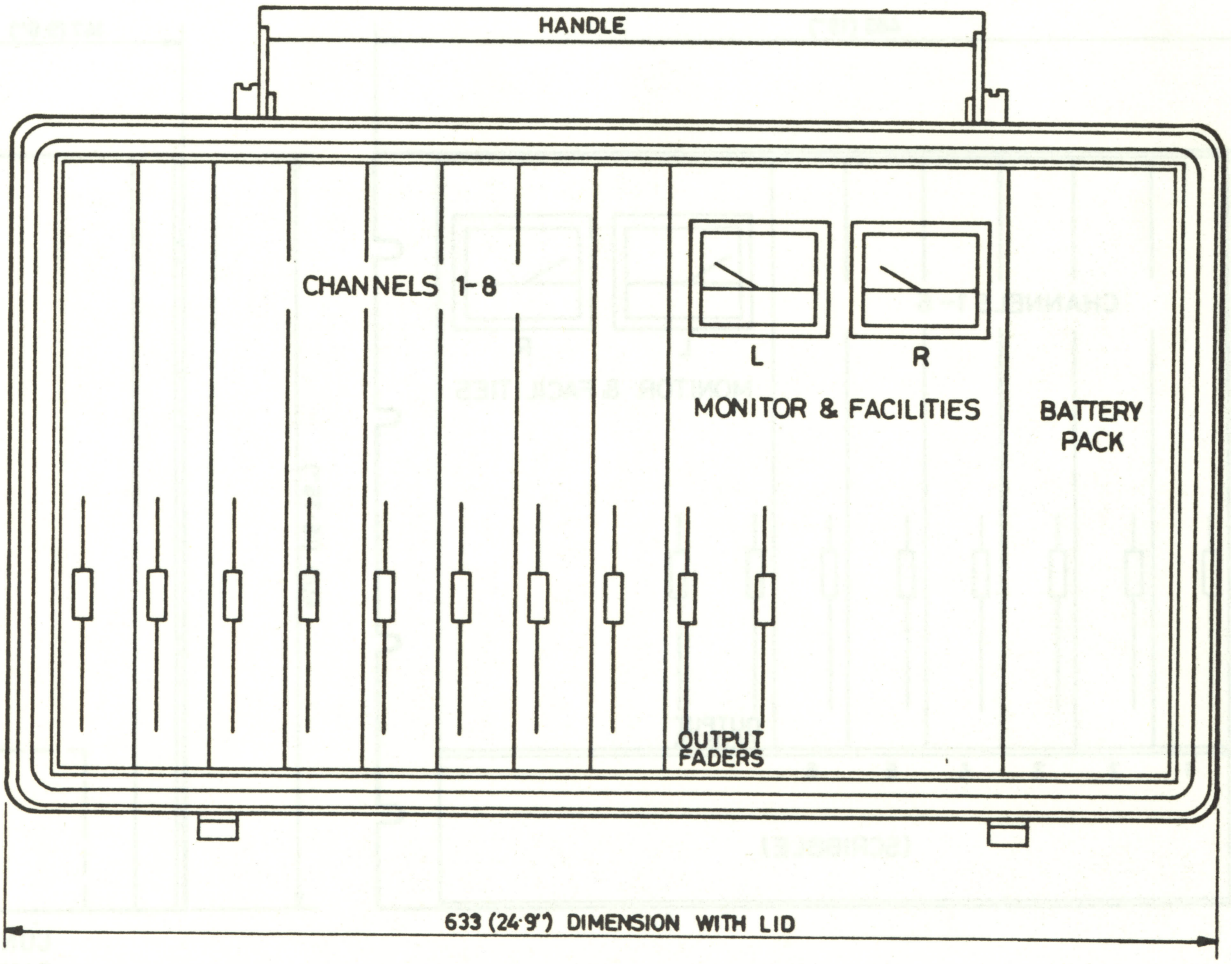

FIG. 1 5422 CONSOLE LAYOUT (ML40088)

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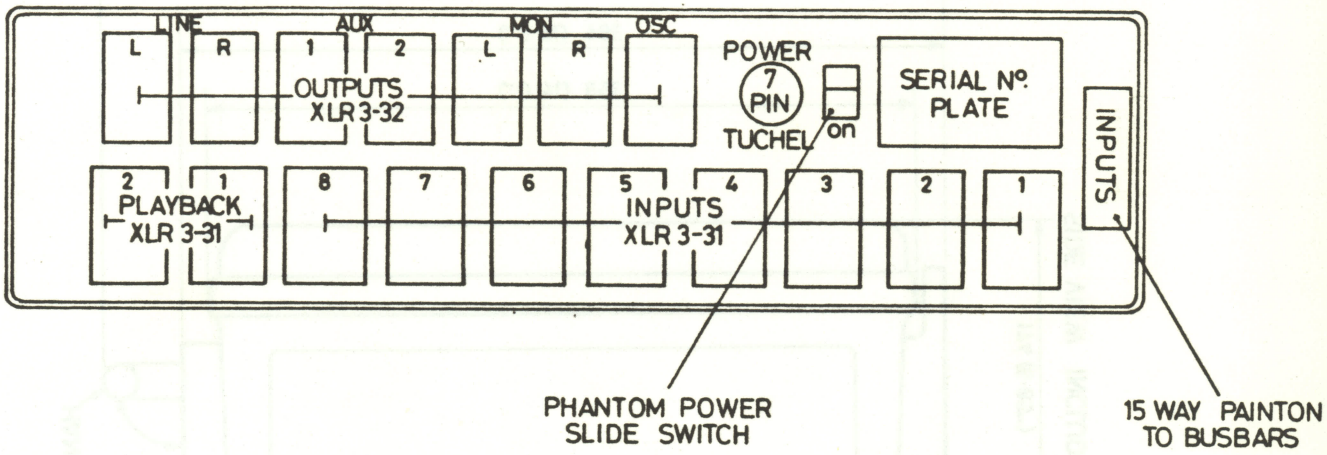

FIG. 2 CONNECTOR PANEL ASSEMBLY PN60005 FITTED TO 5422, 5432 and 5442 CONSOLES

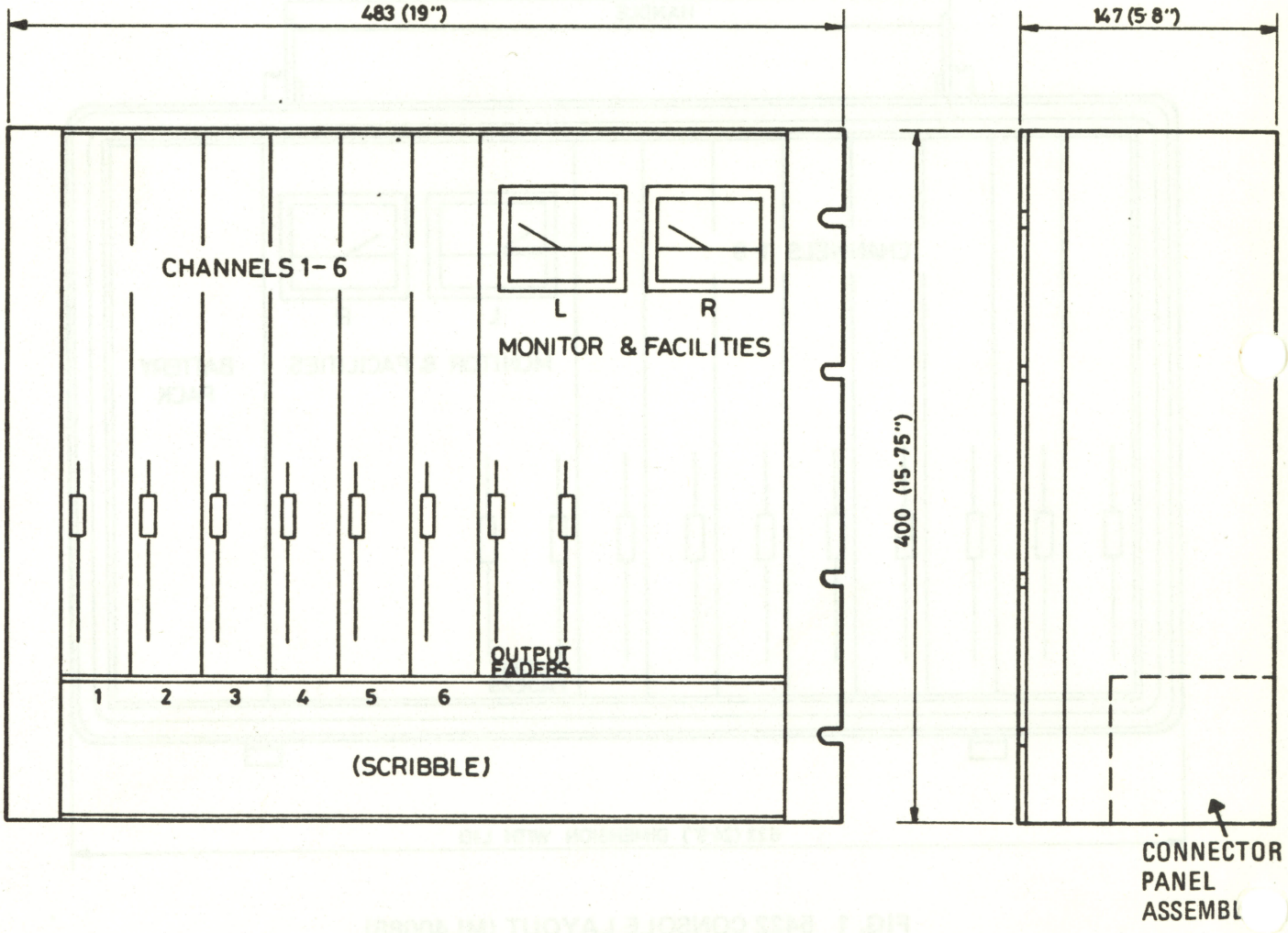

Fig. 3 5422 – R CONSOLE LAYOUT (MR60076)

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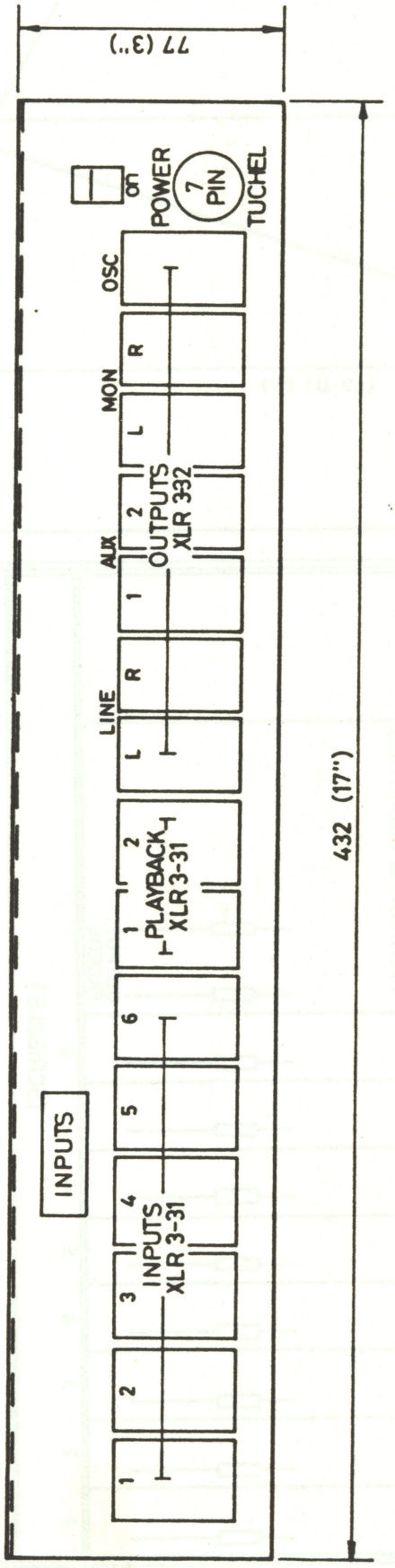

FIG. 4 5422-R CONNECTOR PANEL ASSEMBLY

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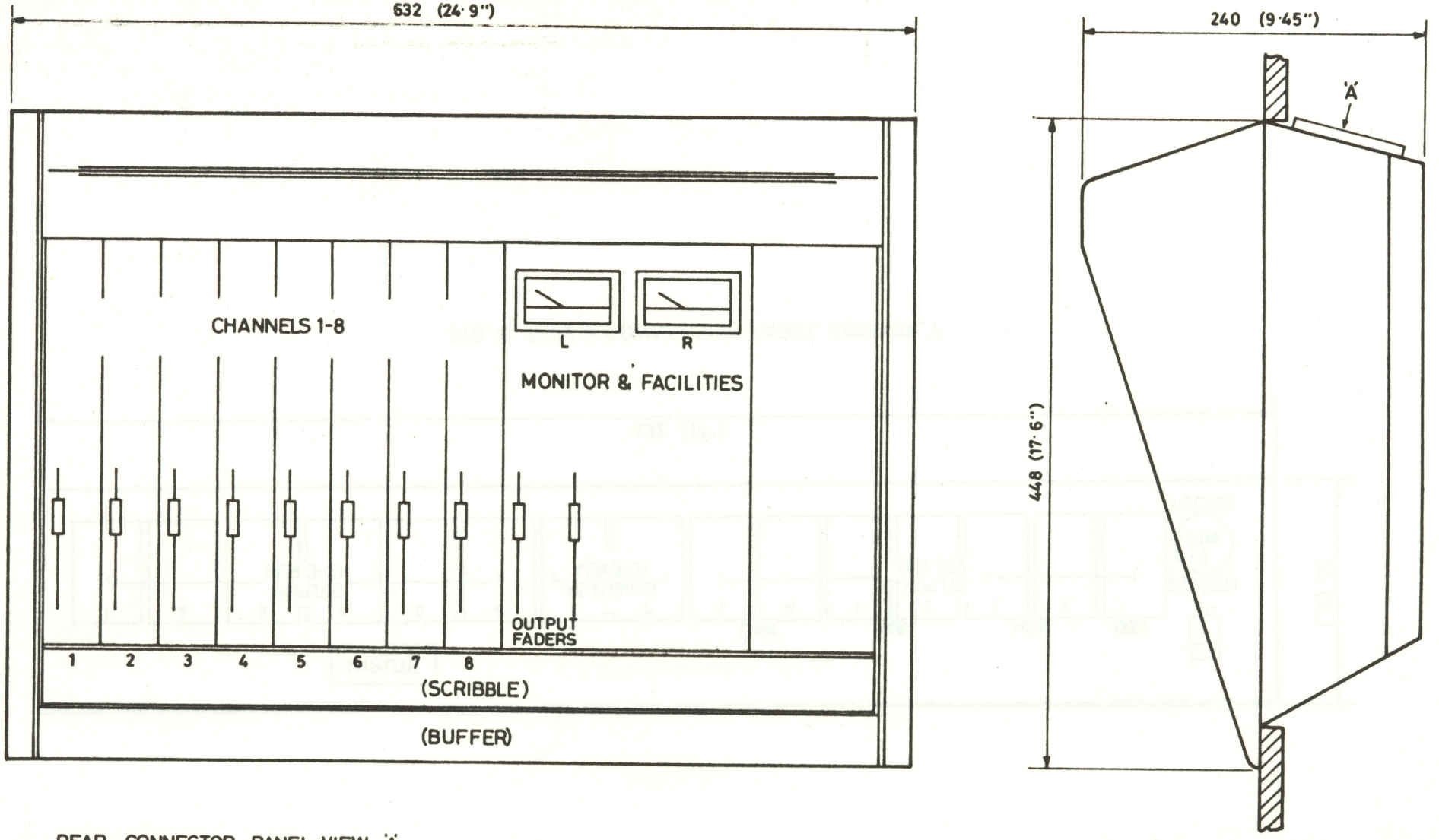

FIG. 5 5432 CONSOLE LAYOUT (ML40101)

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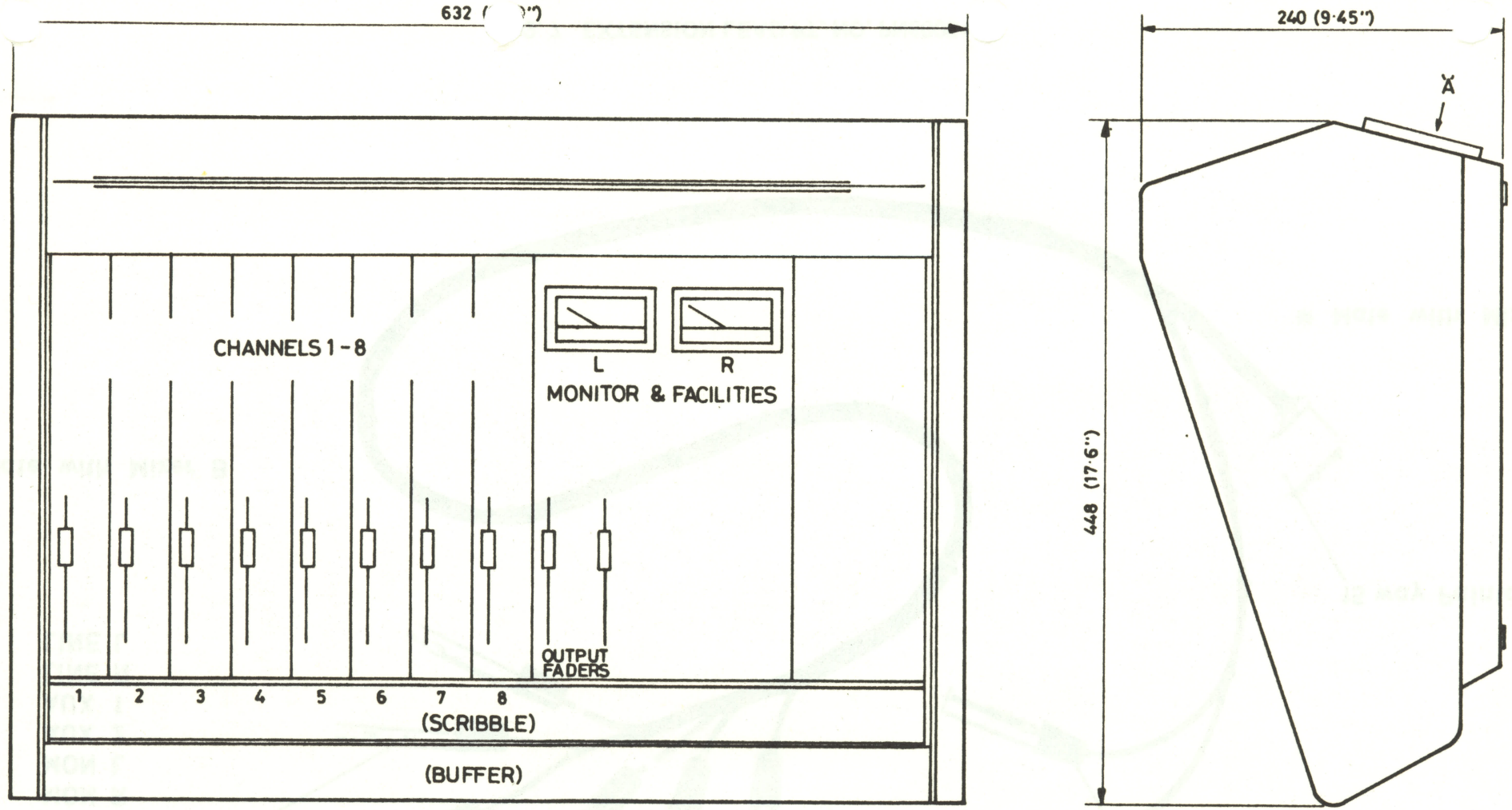

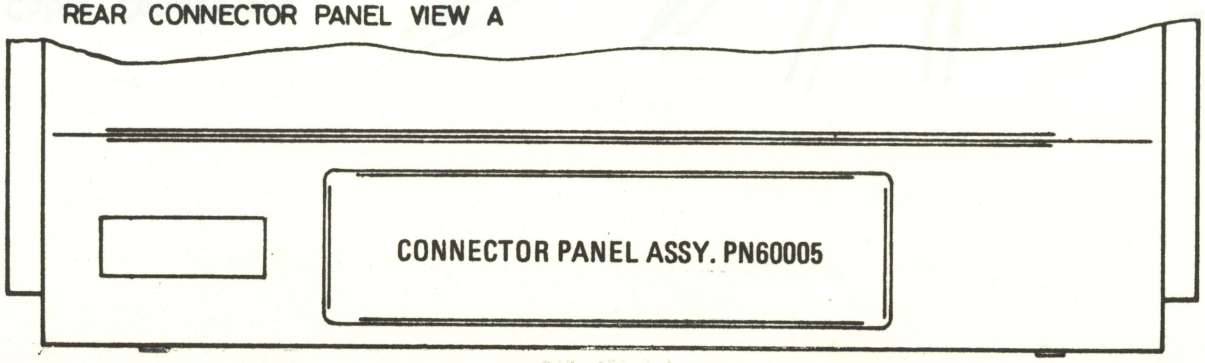

Fig. 6 5442 CONSOLE LAYOUT (ML40102)

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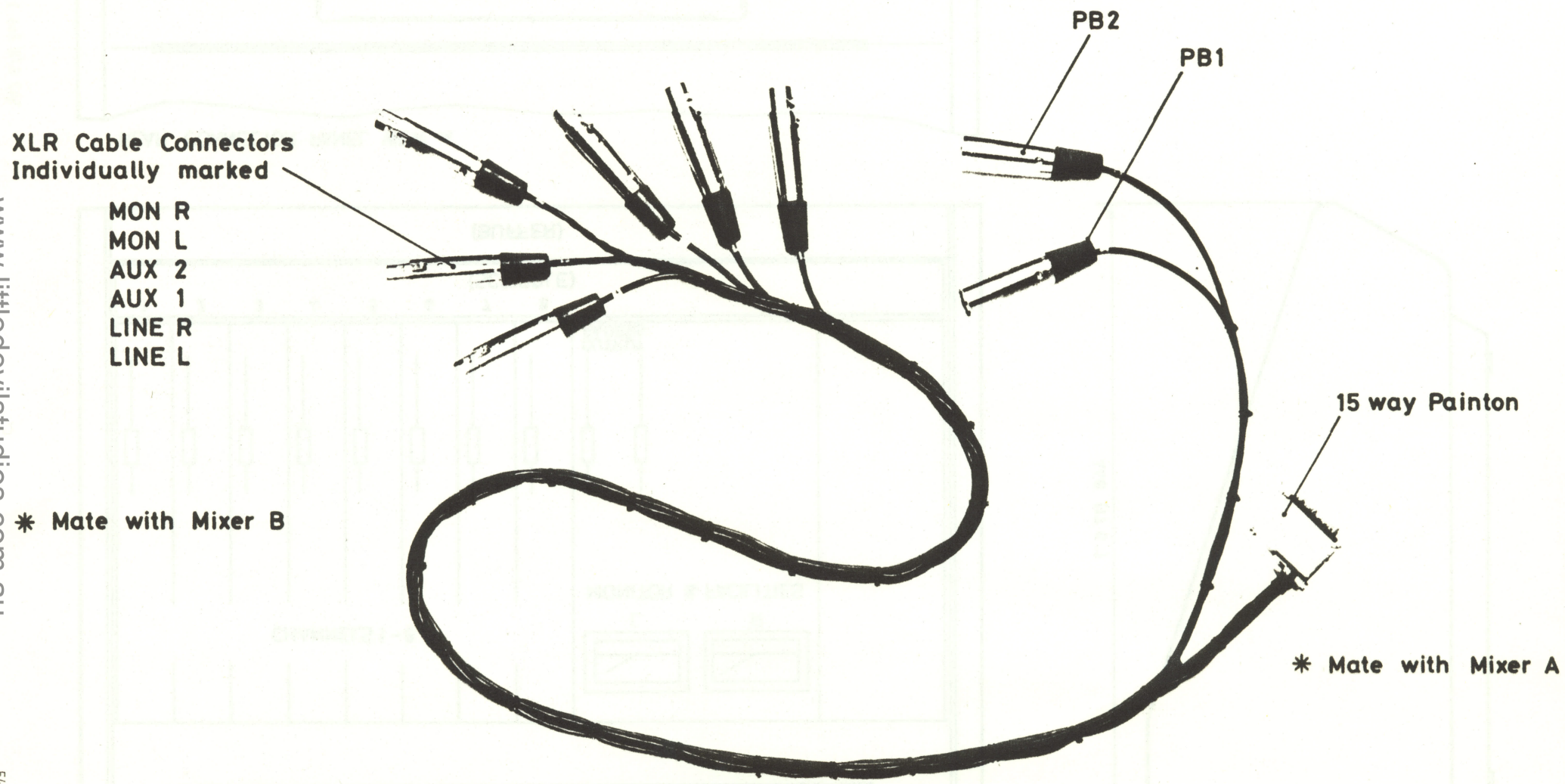

G. 7 EXTENSION LEAD PT. NO. PN60051

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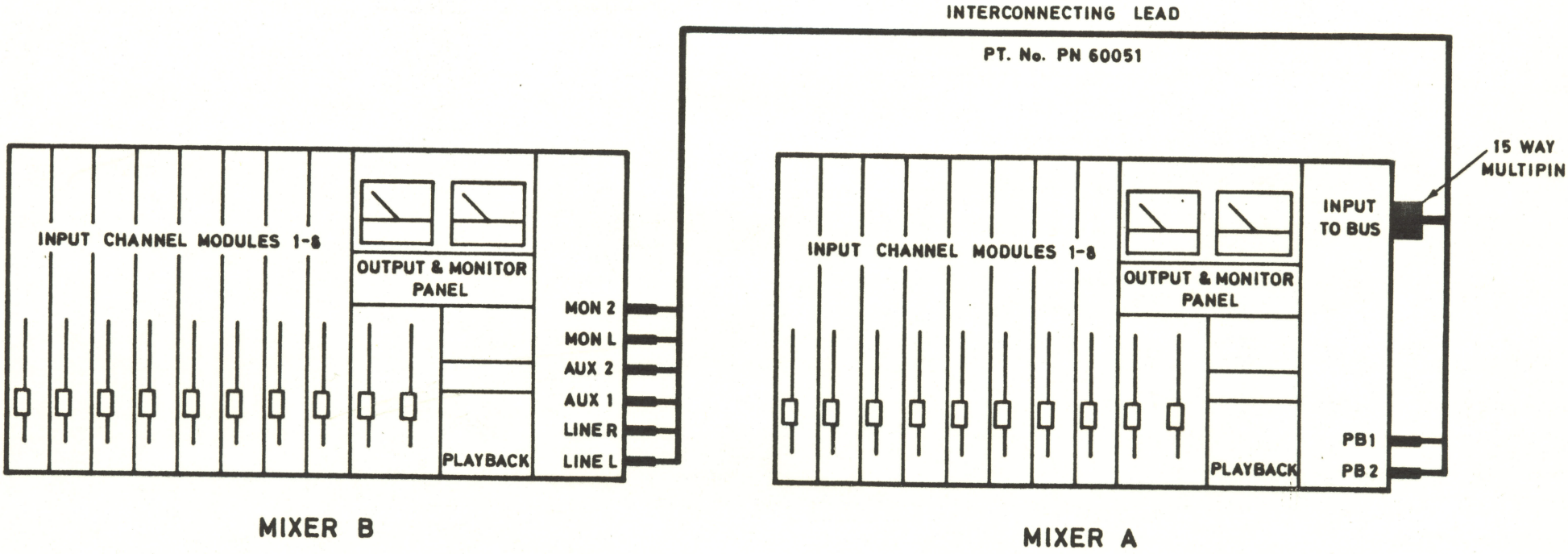

FIG. 8 INTERCONNECTED 5422 CONSOLES

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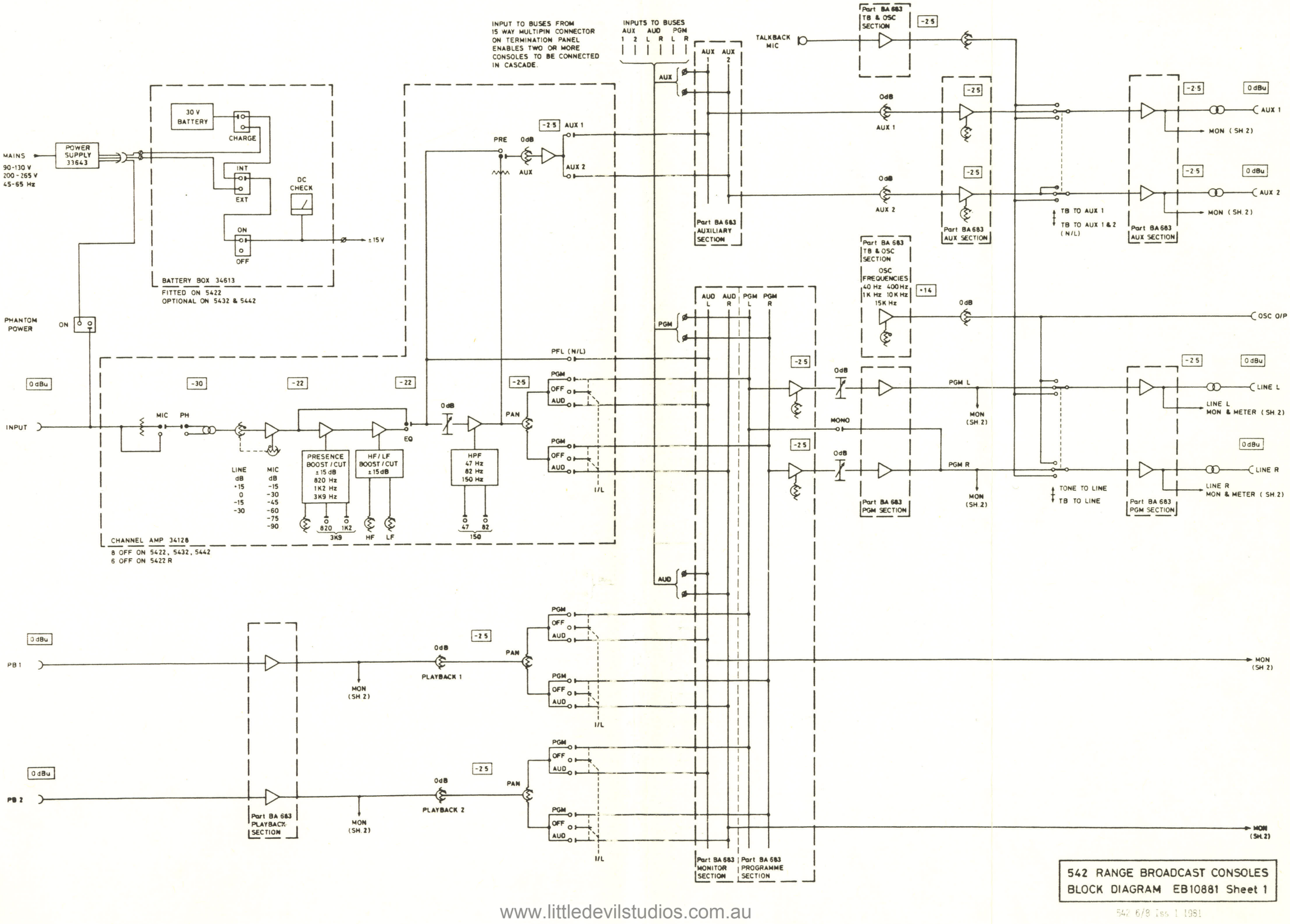

542 RANGE BROADCAST CONSOLES
BLOCK DIAGRAM EB10881 Sheet 1

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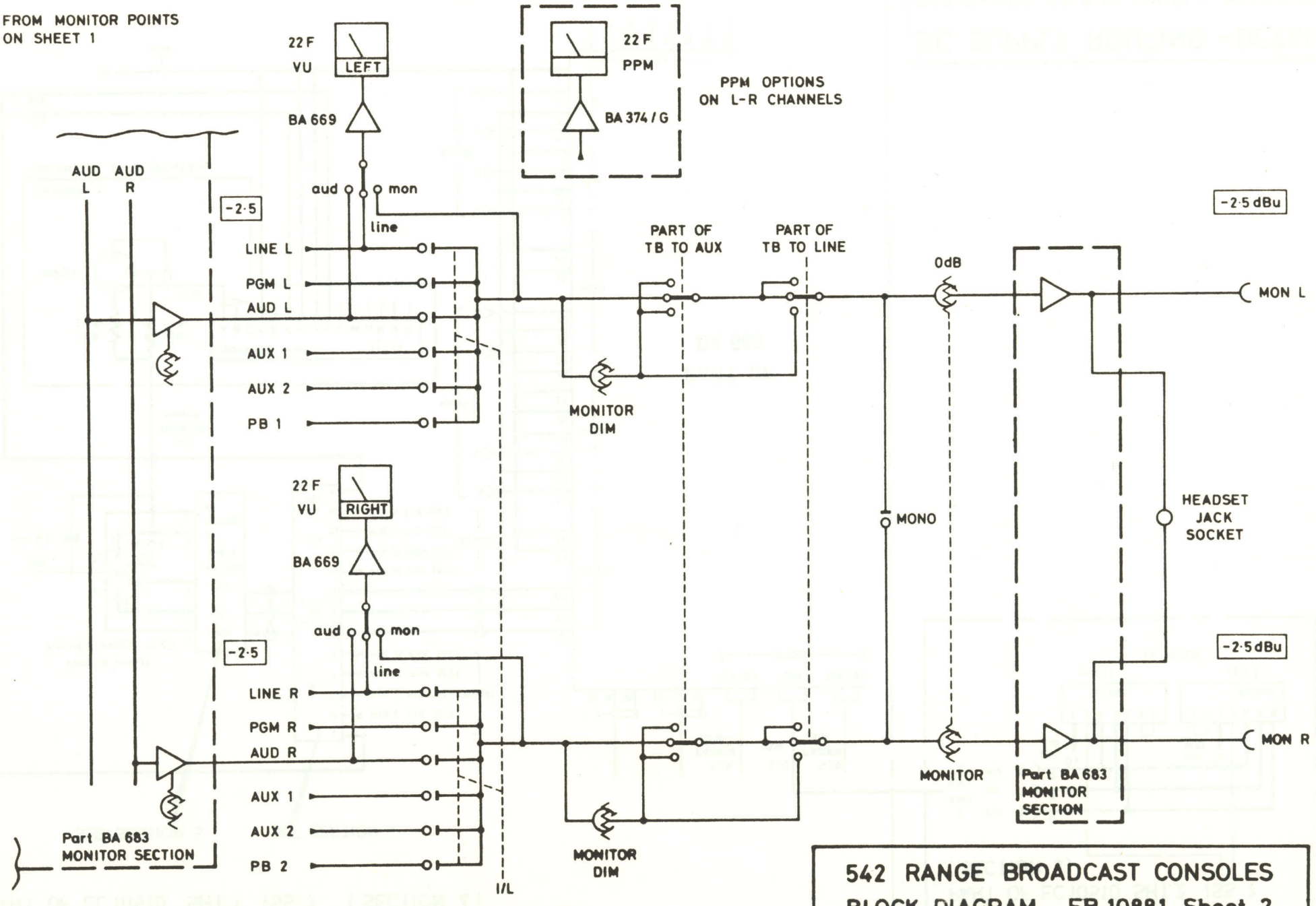

542 RANGE BROADCAST CONSOLES
BLOCK DIAGRAM EB 10881 Sheet 2

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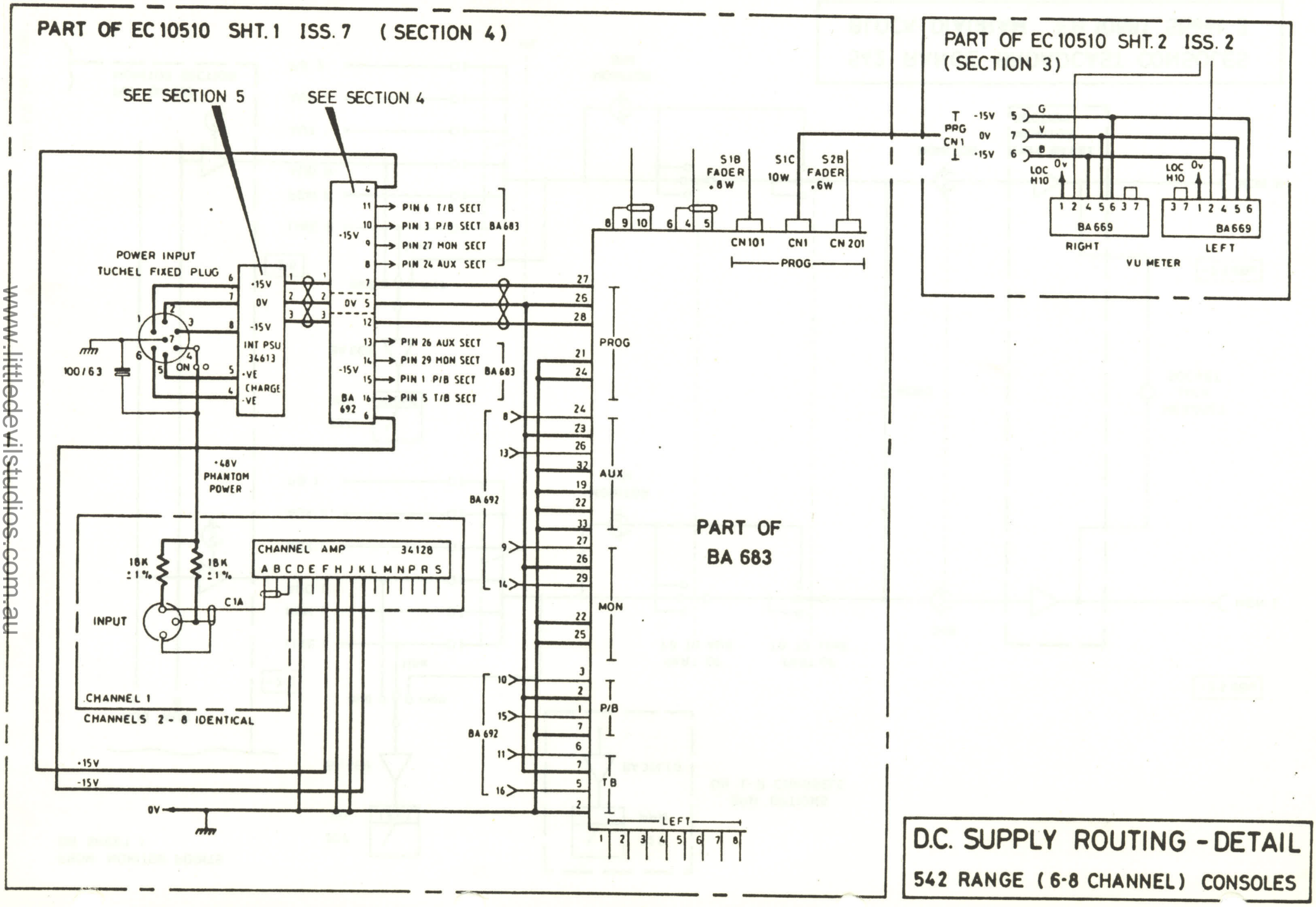

D.C. SUPPLY ROUTING - DETAIL

542 RANGE (6-8 CHANNEL) CONSOLES

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