AUDIO MIXING UNIT

TYPE 5705

INSTRUCTION AND MAINTENANCE MANUAL

Supplied for use with
Equipment Serial No(s)
Made on Order No.
Customer's Order No.

RRAG

PYE T.V.T.LTD.
CAMBRIDGE
ENGLAND

PUBLICATION 2008
B.B.C.

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C O N T E N T S

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SECTION 6 - PARTS LIST

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SECTION 1 - GENERAL DESCRIPTION

1.1 INTRODUCTION

Audio Mixing Unit Type 5705 is a 20-channel mixer specially developed for use in a mobile control room.

All units in the system are fully transistorised, including the specially designed peak programme meter amplifiers, tone generator, and all audio amplifiers.

20 channels are provided, each capable of accepting either a microphone or a high level input and mixing it to the 3 system outputs. The channels are arranged in three groups, of 10, 6 and 4 channels, respectively. Channel, group, and main faders are of the plug-in quadrant type.

3 group amplifiers are included, which act independently of the main outputs, and give group clean feed outputs controlled by individual potentiometers. The inputs to the group amplifiers are switchable.

Each channel can also be switched to a public address (P.A.) system, having three independently adjustable outputs.

Facilities are included in the audio mixing unit for group working, prefade listening, visual and aural monitoring, talkback, etc. The facilities are described in section 4.

A number of standard units are incorporated in the audio mixing unit, such as audio amplifiers, etc. Such units are the subjects of separate handbooks, and are listed for convenient reference. A cable schedule giving the details of unit interconnection is given in this handbook.

1.2 CONSTRUCTION

The audio mixing unit is constructed to give the maximum facilities possible in the small space available in a mobile control room. Operational controls, switches, and meters are mounted on a compactly designed control panel, within easy reach of the audio mixer.

Plug-in amplifiers for channels, groups, public address, and main outputs, also the tone generator and the peak programme meter amplifiers, are fitted into compartments of the desk unit. All the amplifier units are easily removed and replaced, each being fitted with a spring catch which is ready to hand as the front handle is gripped. Each unit is connected into circuit via plugs, which engage automatically with mating sockets when the unit is slid into place.

The power units supplying the amplifiers etc. in the audio mixing unit are part of the auxiliary audio desk unit, which is described in a separate handbook. Details of the connections are given in the cable schedule (see section 5).

SECTION 2 - INSTALLATION

2.1 INITIAL INSTALLATION

When the audio mixing unit is supplied as part of a mobile control room, the installation will have taken place at the factory, and acceptance trials will have established the correctness of the installation. In this case, all connections to associated apparatus will have been made, and no installation work by the customer's engineers is required.

2.2 TEMPORARY REMOVAL

If it is necessary to remove the audio mixing unit and install it in a temporary position elsewhere, proceed as follows.

(a) Ensure that the main breaker and the auto-transformer switch (in the A.A.U.) are in the "OFF" position. Disconnect all cables from the back of the unit. (Do not remove cables from ducts).

(b) Unfasten the catches fastening the audio mixing unit to the floor and to the adjacent units.

(c) Lift the unit from its place and transport it to its new position.

(d) If it is not practicable to fasten the unit to the floor in the temporary site, make sure that it is firmly and levelly sited.

(e) Connect the separate set of "de-rig" cables supplied.

(f) Connect the a.c. mains via the auxiliary audio desk unit, and ensure that the auto-transformer unit is correctly set. The voltage tapping inside the auto-transformer unit must correspond to the incoming mains voltage reading shown on the meter with the switch in the OFF position. All associated equipment must be in place and cabled before the audio equipment is switched on.

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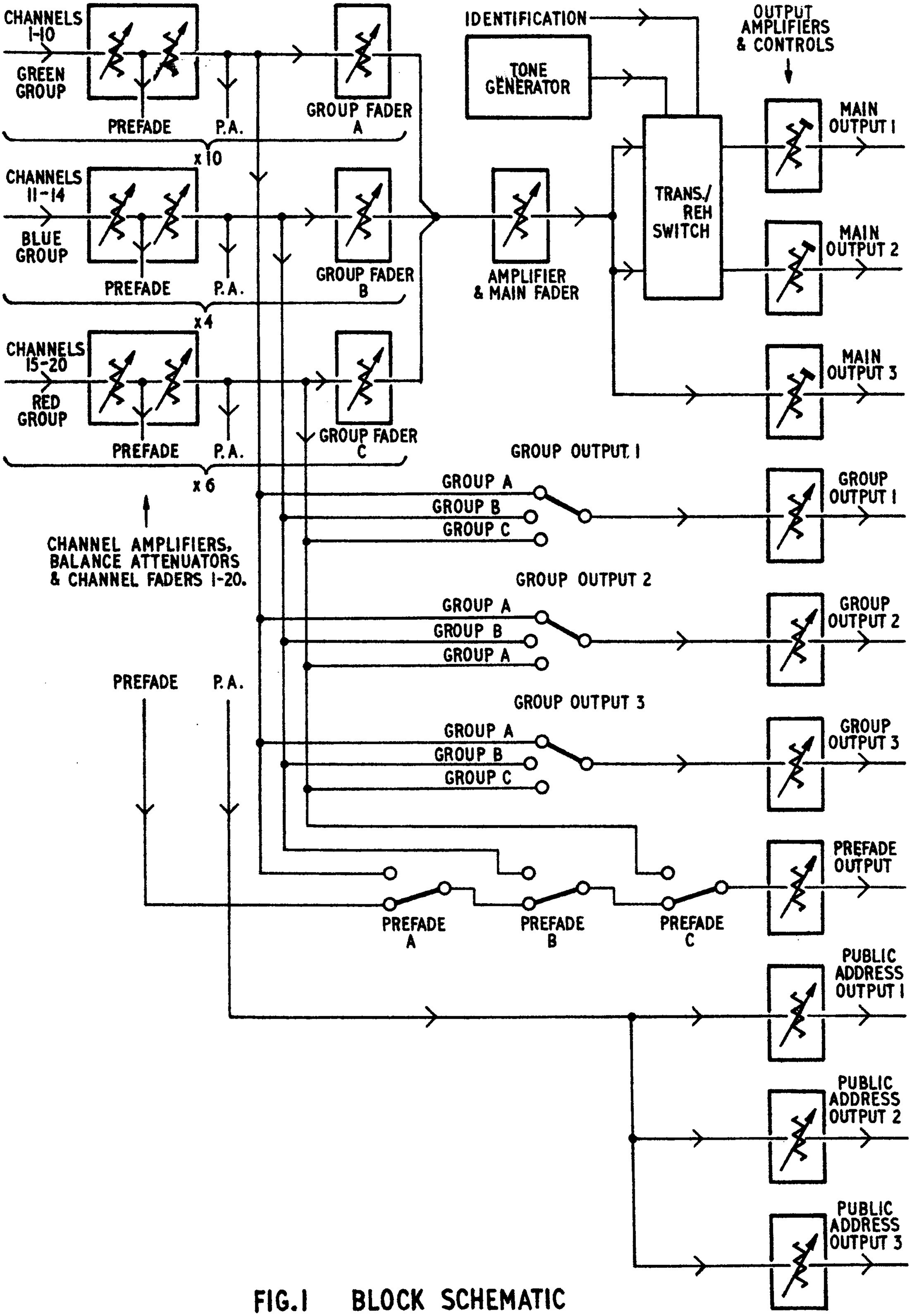

FIG.1 BLOCK SCHEMATIC

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SECTION 3 - SWITCHING ON AND SETTING UP

3.1 SWITCHING ON

3.1.1 Cautionary Note

It is important to ensure before switching on the audio mixing equipment that a.c. mains are properly connected to the mains unit, and that the auto transformer unit tappings are adjusted to suit the mains voltage.

NOTE: All separate power supply units are normally on 240V.

18V and 24V d.c. supplies from external sources must also be connected via the appropriate connectors if emergency battery-operation is required.

All inter-unit plugging and connections between the audio mixing desk and auxiliary equipment should be correctly completed (see Section 2).

3.1.2 External Switching

Switch on the control room main breaker feeding a.c. to the audio equipment. Switch on the automatic voltage regulating unit and the battery supplies.

3.1.3 Audio Suite Switching

All supplies to the three main audio units (i.e. including the audio mixing unit) are controlled by the auto transformer unit in the audio auxiliary unit. Before initially switching on, read the incoming mains voltage on the meter in the front of the audio auxiliary unit. Pull out the auto transformer unit, and check that the transformer tapping is correct. Replace the unit, and switch it on. Check that the meter reads 240V.

NOTE: The switch on the auto transformer unit is interlocked with the catch so that the unit cannot be withdrawn whilst it is switched on.

3.1.4 Power Unit Switching

(a) Check that the B- switch on the audio mixing unit is in the released position.

(b) Switch on the two power units (P.U.1 and P.U.2) in the auxiliary desk unit. Press the green "re-set" buttons.

The B- supply indicator on the desk should now show as follows:

continued over

P.U.1 ... ... Green

P.U.2 ... ... Green

Emergency ... ... Green

(c) Press the "B-" button below the indicator panel. This button should lock in and illuminate. The B- indicator should now show:

P.U.1 ... ... Amber

P.U.2 ... ... Green

Emergency ... ... Green

NOTE: In the event of failure of P.U.1, P.U.2 will automatically take over; the indicator will then show:

P.U.1 ... ... No light

P.U.2 ... ... Amber

Emergency ... ... Green

If <u>both</u> power units fail, the emergency supply will automatically take over, and the indicator will show:

P.U.1 ... ... No light

P.U.2 ... ... No light

Emergency ... ... Red

If either power unit is restored to operation it will automatically take over from the emergency supply, provided the B- switch is released and switched on again. Repaired power units should be switched on but <u>not</u> reset, until the B- switch can be temporarily released.

If P.U.1 is restored to operation when P.U.2 is in use P.U.1 will automatically take over from P.U.2 under the same condition. If P.U.1 is working, P.U.2 can be switched on and reset at any time. The operating light on the supply indicator will show amber against the operating supply unit, or red against the emergency supply, and green against those supplies available for service; no light will show for any unit that is out of service.

3.1.5 <u>Unit Switching</u>

Switch on all amplifiers and other units incorporated in the audio auxiliary unit.

3.1.6 Warming-up Period

Allow a period of ten minutes to elapse so that the large capacitors in the circuit can reach a steady charge before commencing the setting-up.

3.2 SETTING-UP PROCEDURE

The system as a whole will be set up to conform to the standards in use by the customer.

The S.Tel.E's telephone battery charging circuit should be set to give an open circuit reading (i.e. with batteries removed and phone-rest depressed) of 6V, by adjusting the potentiometer, R82.

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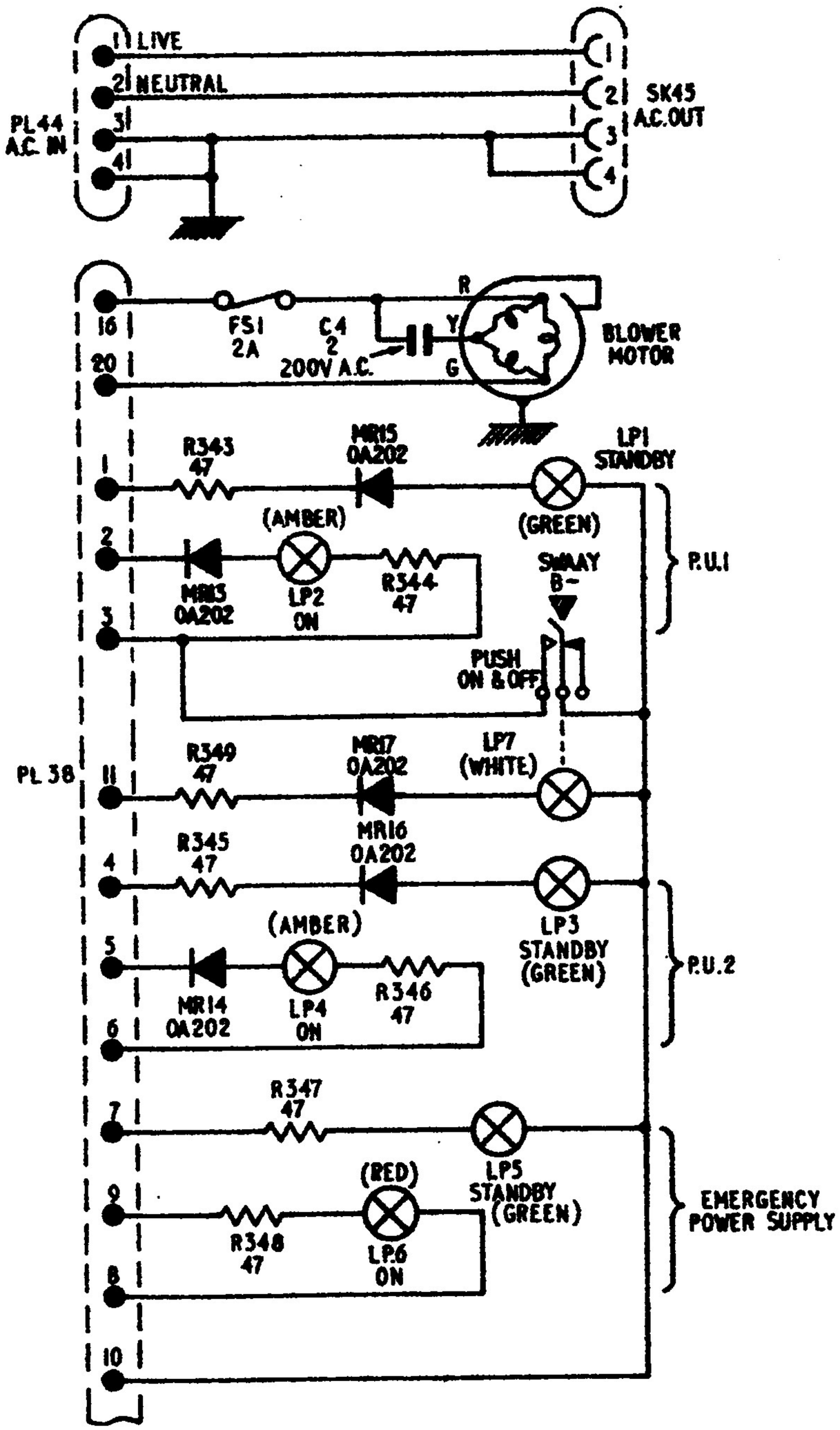

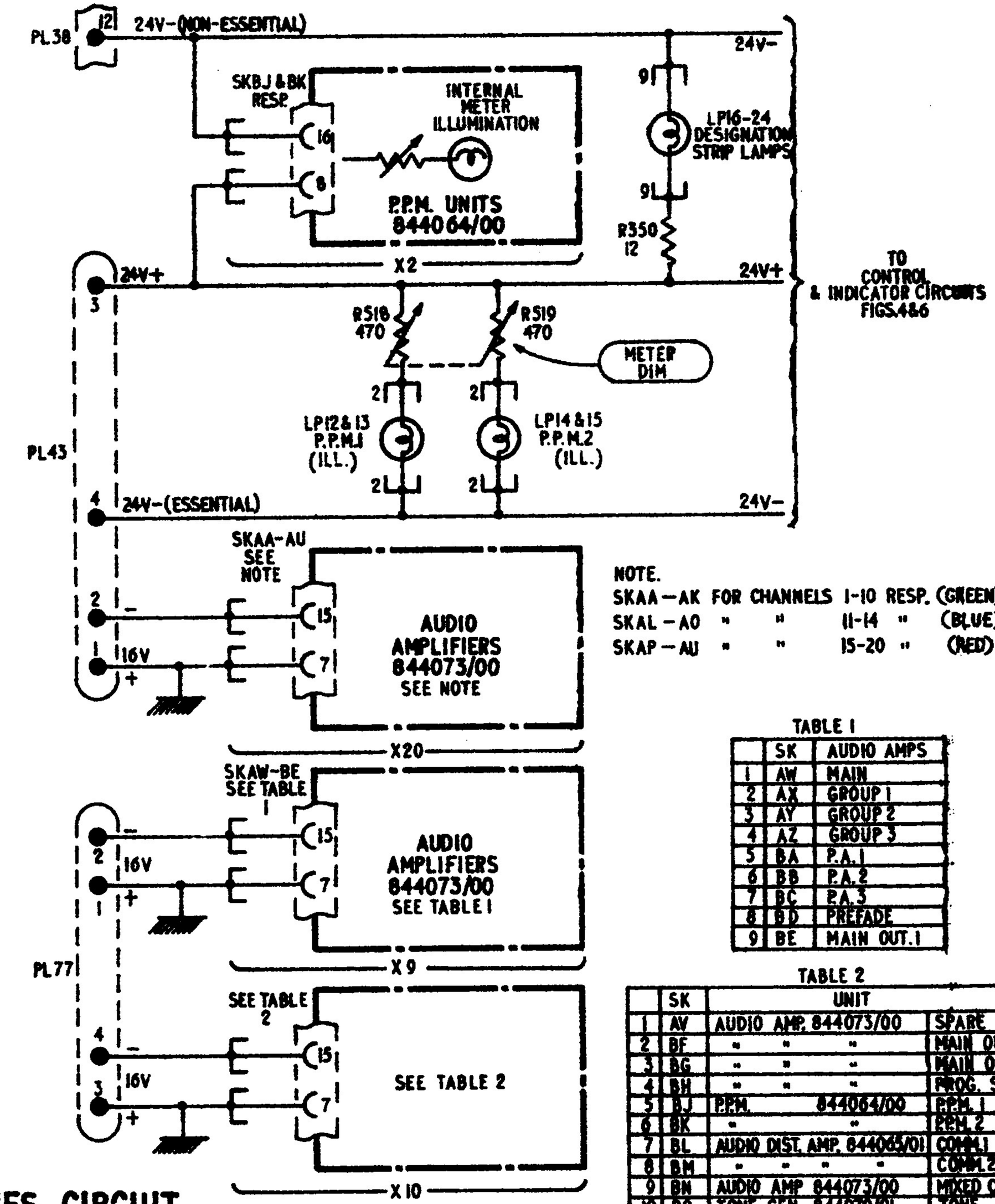

NOTE.
SKAA–AK FOR CHANNELS 1-10 RESP. (GREEN)
SKAL–AO " " 11-14 " (BLUE)
SKAP–AU " " 15-20 " (RED)

TABLE 1

	SK	AUDIO AMPS
1	AW	MAIN
2	AX	GROUP 1
3	AY	GROUP 2
4	AZ	GROUP 3
5	BA	P.A.1
6	BB	P.A.2
7	BC	P.A.3
8	BD	PREFADE
9	BE	MAIN OUT.1

TABLE 2

	SK	UNIT	
1	AV	AUDIO AMP. 844073/00	SPARE
2	BF	" " "	MAIN OUT 2
3	BG	" " "	MAIN OUT 3
4	BH	" " "	PROG. SND.
5	BJ	P.P.M. 844064/00	P.P.M. 1
6	BK	" "	P.P.M. 2
7	BL	AUDIO DIST. AMP. 844065/01	COMM.1 TELE.
8	BM	" " " "	COMM.2 TELE.
9	BN	AUDIO AMP 844073/00	MIXED CAM. TB
10	BO	TONE GEN. 844070/01	TONE

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FIG. 2 POWER SUPPLIES CIRCUIT

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SECTION 4 - DESCRIPTION AND OPERATING

4.1 PROGRAMME ROUTING

Microphone inputs can be connected to the audio mixing unit either singly or through multiple connectors. When the unit is de-rigged, a separate patch-panel is used, and in the van there are patching arrangements on the forward termination panel. This gives great flexibility of input plugging arrangements and is provided so that only those sources to be used will occupy mixer channels.

Outputs from a tape reproducing machine and an identification unit may be linked into audio mixing unit channels via connections in the audio mixing desk jackfield.

4.2 AUDIO MIXING SYSTEM

4.2.1 Audio Mixing Unit

The audio mixing unit is built into a desk, and contains the necessary channel, group, and output amplifiers for programme routing, also the mixing control panel, and units concerned with monitoring, tone generation, programme and talkback distribution, prefade, and public address system. All the amplifiers are fully transistorised, and are described in individual handbooks.

4.2.2 Audio Mixing Control Panel

The audio mixing control panel is mounted on the top of the desk, and is fitted with all controls necessary for selecting, controlling and monitoring the signals forming the system output.

4.2.3 Audio Transmission Chain

Signals from the programme sources for the inputs to the channel amplifiers; up to 20 separate sources can be accommodated. The input to each channel may be switched to any one of its following three conditions:

(a) 600 ohms with 60 dB attenuation.

(b) 600 ohms with no attenuation.

(c) 30 ohms with no attenuation.

Inputs are made by plug and socket connections at the rear of the audio mixing desk, or via the audio jackfield directly into the channel amplifier and avoiding the input switches. Each channel amplifier has an additional 25 dB switch and a 25 dB variable control on its input, and is associated with a separate quadrant fader, mounted on the control panel. The 20 channel faders are arranged in 3 groups; of 10, 4 and 6 faders, respectively. The channel amplifiers are capable of operating at a level about 20 dB above the required normal mixing level, so that the channel faders may be set at positions giving up to 20 dB below the maximum for certain applications. The faders are connected after the channel amplifiers, with the balance controls between so that optimum noise and distortion levels can be achieved at all times.

Each group is controlled by a group fader, the output of which goes to the main amplifier for inclusion in the main system output. Another output is taken off before the group fader, via the group amplifier selection switch to a group amplifier (see item 4.2.4).

Thus, the main amplifier receives the mixed output of the three groups. This amplifier is controlled by the main gain fader, and the output is divided into three. Main outputs 1 and 2 are routed via the audio transmission switch; a three-position switch which selects the output from one of three sources, i.e. the tone generator, an identification signal unit, or the main programme amplifier. Main output 3 is fed directly from the main programme amplifier. Each of the three main outputs may be separately balanced by a potentiometer control (±3 dB) on the audio mixing unit, and each is fed to a separate output amplifier, thence to a separate output socket.

4.2.4. Group Clean Feed Outputs

The three group amplifiers receive their inputs via individual three-position switches which select the output of any of the three channel groups. Thus it is possible for all three group amplifiers to have the same input, or for each to have a different input, as required. For this reason, the channel groups are denominated by letter (A, B, and C) and the clean feed groups (i.e. the group amplifier outputs) are numbered (1, 2, 3). It is not possible to feed any one group amplifier from more than one source.

The output of each group amplifier is available by a separate plug and socket connection as an individual clean feed.

4.2.5 Public Address

The audio mixing system incorporates three public address amplifiers, which are fed in parallel from the channel amplifiers via keys; each public address amplifier has a separate output with a level control. Any channel that is faded up can be selected for input to the public address system whether the group and main faders are faded up or not. The selector switches are mounted above the channel faders (see section 4.2.6).

4.2.6 Prefade

Any channel or group on the audio mixing unit can be selected for input to the prefade amplifier. The prefade output from each of the 20 channels and the groups is taken from a point preceding the fader concerned, and is fed to the prefade amplifier via a non-locking prefade switch. Thus, any channel or group can be monitored before fading it into the transmission chain. No two signals can be selected at once.

On the channels, the prefade switch is part of a two-way switch, of which the public address selector switch is the other part. Each individual channel may therefore either be switched to "Prefade" (P.F.) (non-locking) or to "Public Address", (P.A.) (locking), but not to both. Such selection does not prevent the channel from being faded to transmission, nor does it affect the equipment performance. Only prefade is available to the group amplifiers.

4.2.7 Audio Jackfield

A two-row audio jackfield is provided on the audio mixing desk, below the fader control panel; each row consists of 20 jacks.

The upper ("A") row of jacks contains source, tone monitoring, and tie line jacks. These can be used to monitor the outputs etc. by means of headphones plugged into the appropriate jack (see section 4.3.3).

The lower ("B") row of jacks contains break-jacks to the inputs of the 20 channel amplifiers, the signal from any jack on the "A" row can be routed into any channel (in place of the usual source for that channel) by patching the "A" row source to the "B" row input jack selected.

4.3 MONITORING

4.3.1 Peak Programme Amplifier Monitoring

Two large peak programme meters (P.P.M.1 and P.P.M.2) are mounted on the audio mixing unit at approximately eye level. The peak programme meters and their amplifiers are described in a separate handbook. P.P.M. 1 is normally operating, whilst P.P.M.2 is a spare; changeover between the two amplifiers is made by relays, operated by the P.P.M. changeover switch on the meter panel.

The input to the operating peak programme meter is from a push-button operated selector switch. By selection on this switch, any of the following may be monitored on the peak programme meter:

continued over..

Main outputs 1, 2 and 3,

Group clean feed outputs 1, 2, and 3,

Public Address outputs 1, 2, and 3.

The peak programme amplifiers are mounted in the audio mixing desk. Each has a small peak programme meter embodied in its front panel, which operates in parallel with the large one, and is of use in setting-up. Sockets are provided at the back of the audio mixing unit for connection of additional (external) peak programme meters.

An input jack to the second peak programme meter circuit is provided on the audio auxiliary unit, and there is a break-jack on the input to P.P.M.1 amplifier for use in setting up etc. A maximum of two meters (in addition to the meter incorporated in the peak programme meter amplifier) may be operated by each amplifier.

4.3.2 Loudspeaker Monitoring

The signal fed to the loudspeaker unit is selected by a switch on the audio mixing unit (Monitor L.S. switch). This has three positions; in the central position the loudspeaker input is from the main output; in the "up" position the output of the radio check receiver is monitored, and in the "down" position the loudspeaker unit receives the same input from the monitor selector switch as the peak programme meter.

This key also controls the illumination of an optical peak programme meter mounted above the vision monitors and worked from either of the two "External P.P.M." sockets at the rear of the audio mixing unit. When the switch is in the RADIO or MAIN OUTPUT positions, MAIN OUTPUT 1 is selected on the pushbutton selector switch (see section 4.3.1).

Attenuation facilities are provided by a keyswitch with three positions, "NORMAL", "L.S. DIM" and "L.S. CUT", plus a 20 dB compensated step-attenuator.

Facilities are provided for an external loudspeaker amplifier to be connected in parallel with the main loudspeaker input.

4.3.3 Headphone Monitoring

Monitoring by headphones to prefade and other listening points, including talkback and main amplifier output, is achieved by plugging the headphone set into the appropriate jack on the jackfield on the audio mixing unit, or on the audio auxiliary unit (jack 20A) which provides a "split" signal with programme sound in one earphone and production talkback in the other.

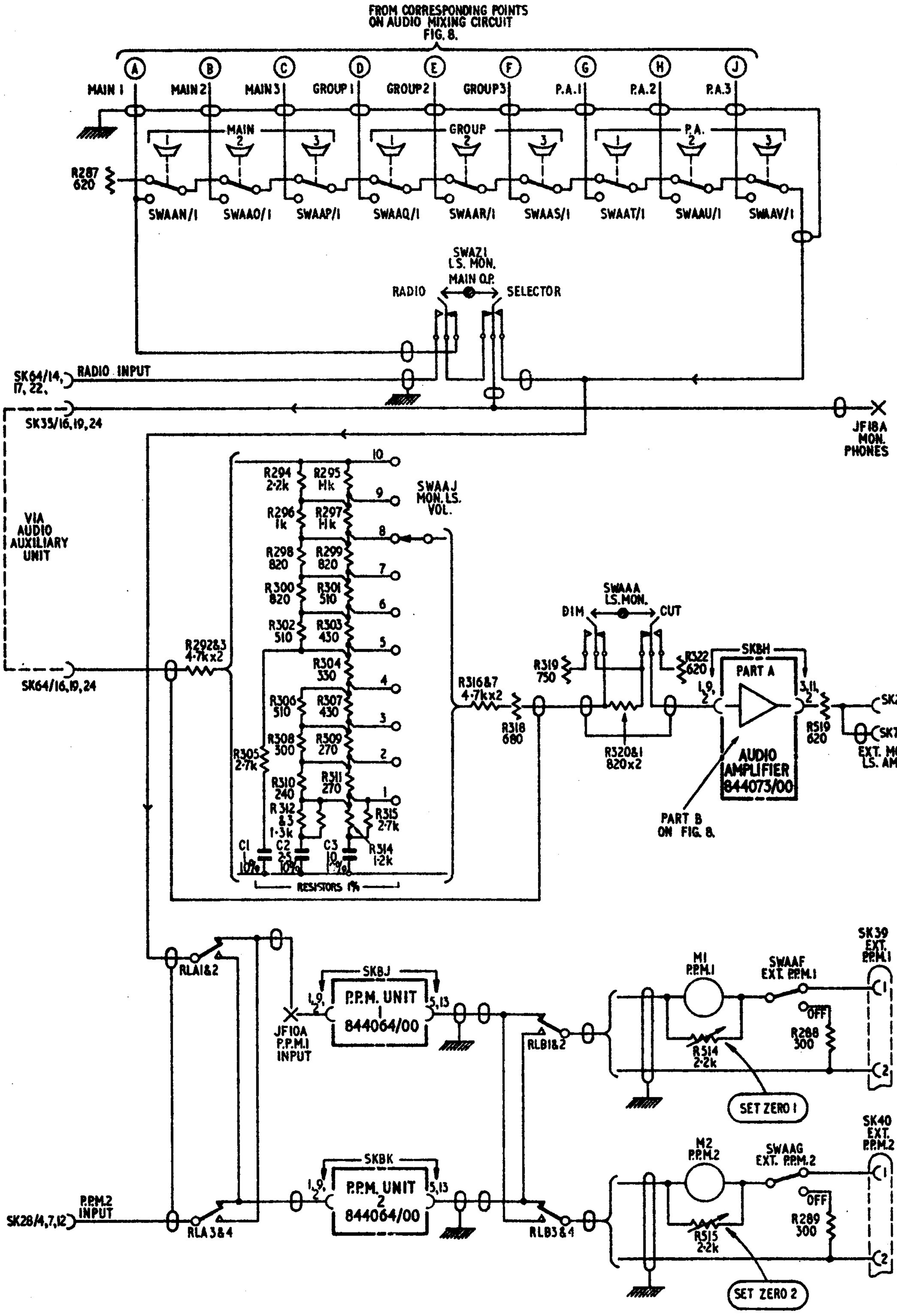

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FIG.3 MONITORING CIRCUITS

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4.4 TALKBACK

Comprehensive talkback circuits are included in the audio mixing system to enable the audio mixer to communicate with the producer and boom operators. Mixed camera talkback is also available at the audio mixing desk.

Information regarding the talkback facilities on the units in the system will be found in the handbooks on the individual units.

4.5 FADER INTERLOCK

Two output sockets are provided on the audio mixing unit for cue loudspeaker units. Such units can be driven from any of the following sources as selected on the audio auxiliary unit:

(a) Programme Sound
(b) Production Talkback
(c) Radio (check receiver)
(d) External Input 1 (Jack on A.A.U.)
(e) " " 2 (" " ")

The signals from the cue loudspeaker sockets will be muted if any one of the 20 channel faders is moved off its bottom stop when selected by the fader interlock switches on the audio mixing unit, (provided that the main fader and the appropriate group fader are also faded up).

4.6 PROGRAMME SOUND DISTRIBUTION

A distribution amplifier supplies a large network in the audio mixing unit and other units with a signal derived from the main amplifier.

4.7 SPARE AMPLIFIERS

Two spare amplifiers are housed in the audio mixing unit; one of these is connected so that it may be substituted electrically by means of relay switching for any of the group, public address, or output amplifiers, or the main amplifier. The second spare amplifier is for physical substitution in place of any amplifier of the same type.

Two spare amplifier half-sections are wired to jacks to provide means of extra amplification when required for various circuits, or to act as distribution amplifiers.

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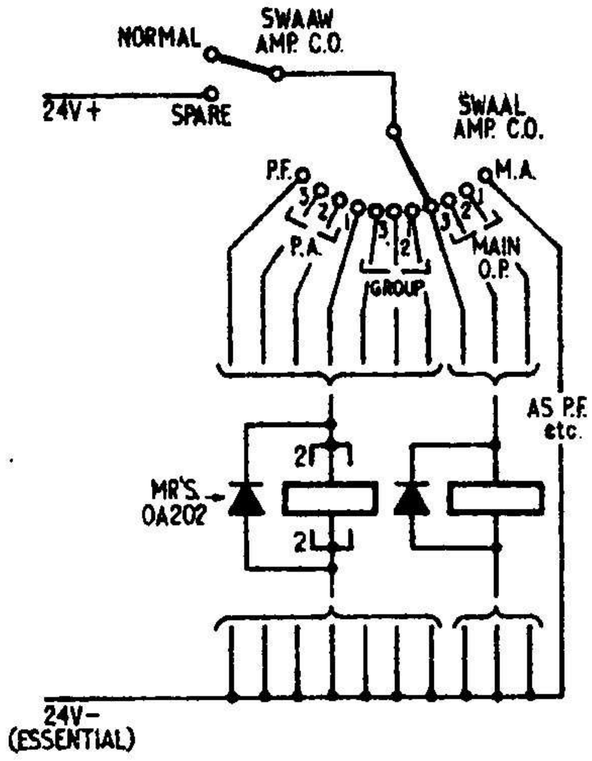
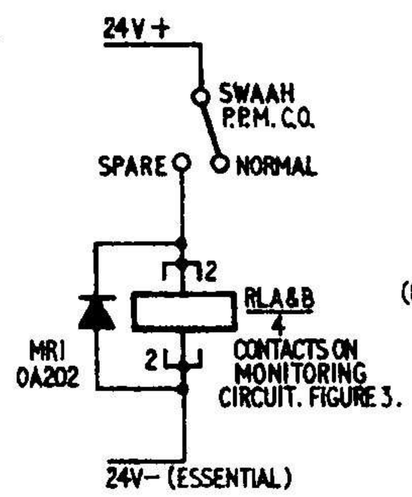


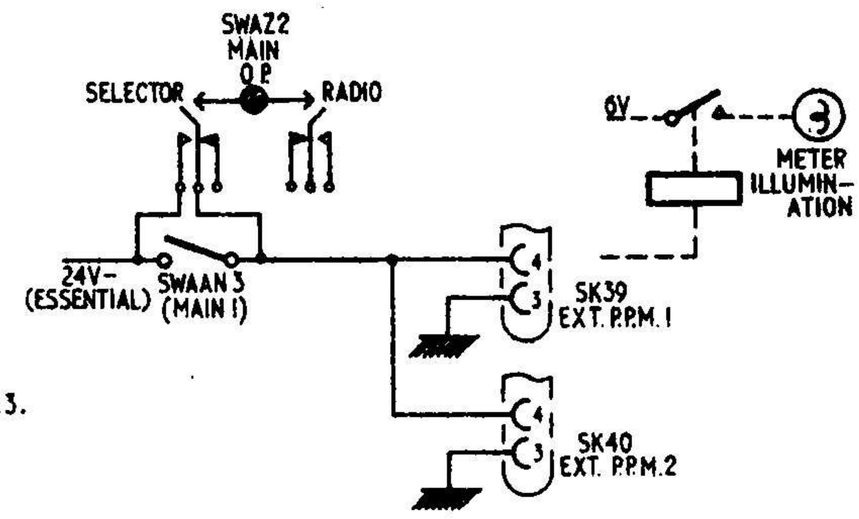
AMPLIFIER CHANGEOVER

POS'N.	RL/4	MR'S.
P.F.	KA & B	12
P.A.3	JA & B	11
P.A.2	HA & B	10
P.A.1	GA & B	9
GROUP 3	FA & B	8
GROUP 2	EA & B	7
GROUP 1	DA & B	6
MAINS O.P. 3	NA	5
MAINS O.P. 2	MA	4
MAINS O.P. 1	LA	3
M.A.	CA & B	2

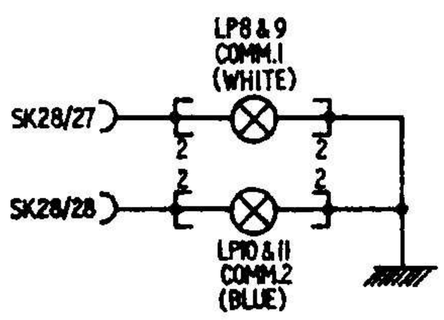
RELAY CONTACTS ON AUDIO MIXING CIRCUIT. FIGURE 8.



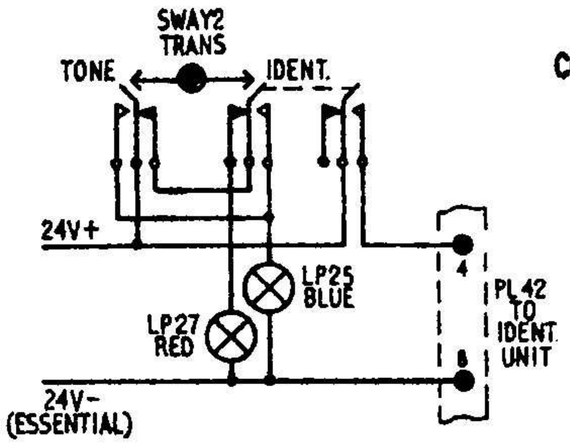
P.P.M. CHANGEOVER



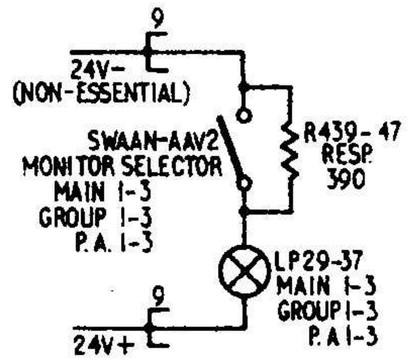
EXTERNAL P.P.M. ILLUMINATION CONTROL



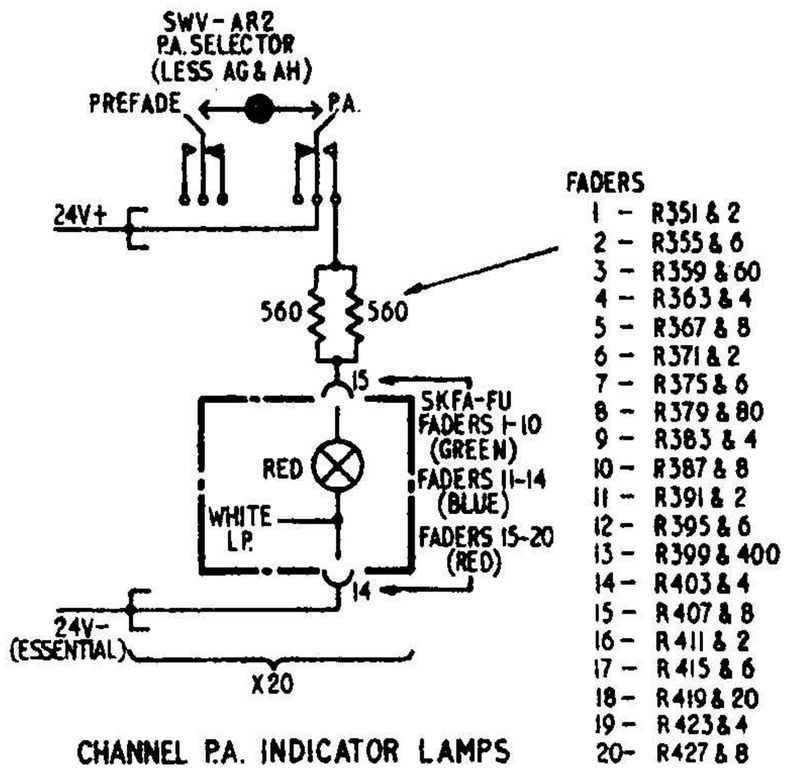
COMMENTATORS 1 & 2 CUEING LAMPS



TRANS./TONE - IDENT. INDICATION

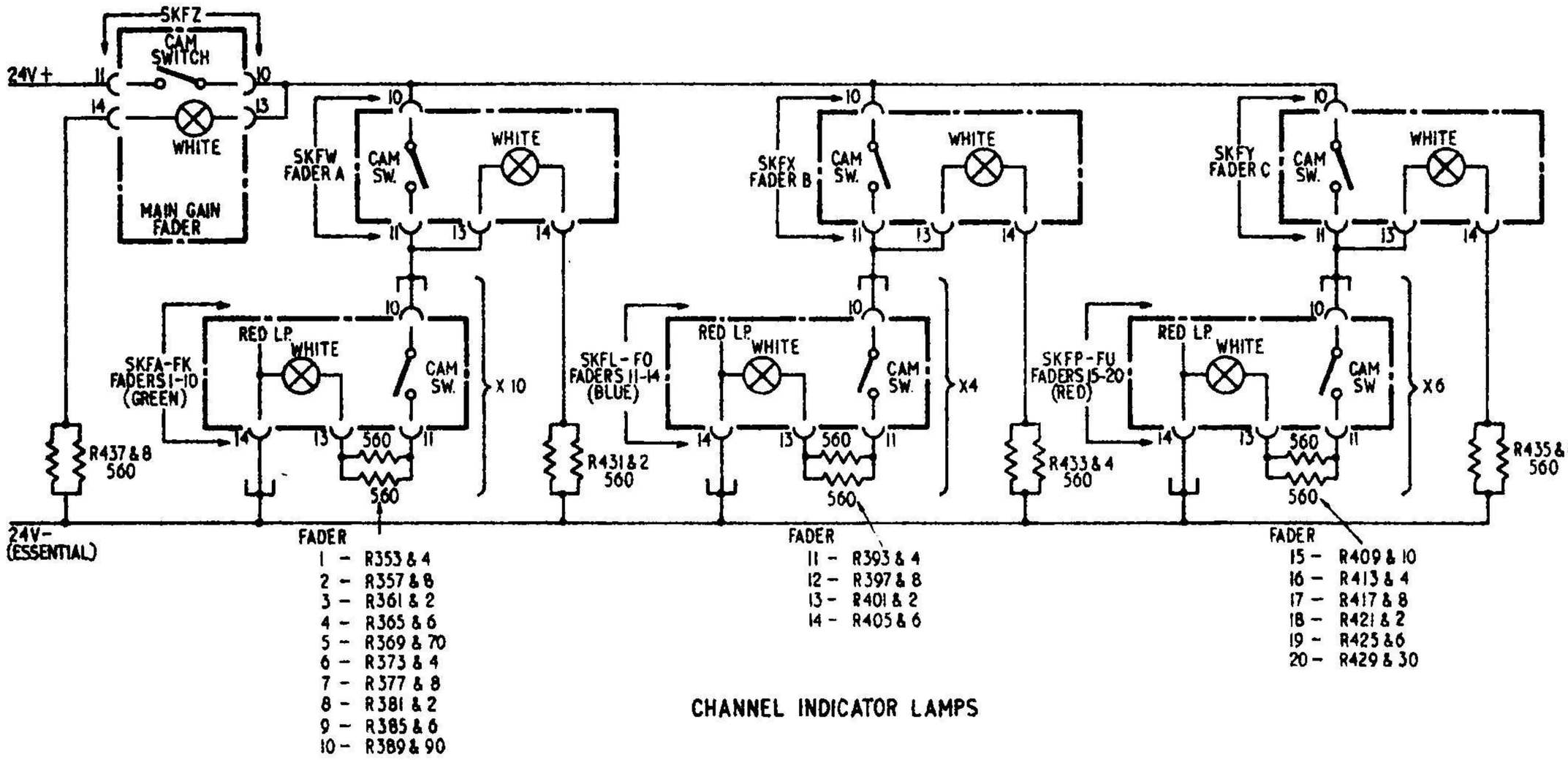


MONITOR SELECTOR ILLUMINATION



FADERS
1 - R351 & 2
2 - R355 & 6
3 - R359 & 60
4 - R363 & 4
5 - R367 & 8
6 - R371 & 2
7 - R375 & 6
8 - R379 & 80
9 - R383 & 4
10 - R387 & 8
11 - R391 & 2
12 - R395 & 6
13 - R399 & 400
14 - R403 & 4
15 - R407 & 8
16 - R411 & 2
17 - R415 & 6
18 - R419 & 20
19 - R423 & 4
20 - R427 & 8

CHANNEL P.A. INDICATOR LAMPS



FADER
1 - R353 & 4
2 - R357 & 8
3 - R361 & 2
4 - R365 & 6
5 - R369 & 70
6 - R373 & 4
7 - R377 & 8
8 - R381 & 2
9 - R385 & 6
10 - R389 & 90

FADER
11 - R393 & 4
12 - R397 & 8
13 - R401 & 2
14 - R405 & 6

FADER
15 - R409 & 10
16 - R413 & 4
17 - R417 & 8
18 - R421 & 2
19 - R425 & 6
20 - R429 & 30

CHANNEL INDICATOR LAMPS

NOTE. FADERS 1-20, A, B, C & MAIN GAIN B10792/X

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FIG.4 CONTROL & INDICATOR CIRCUITS

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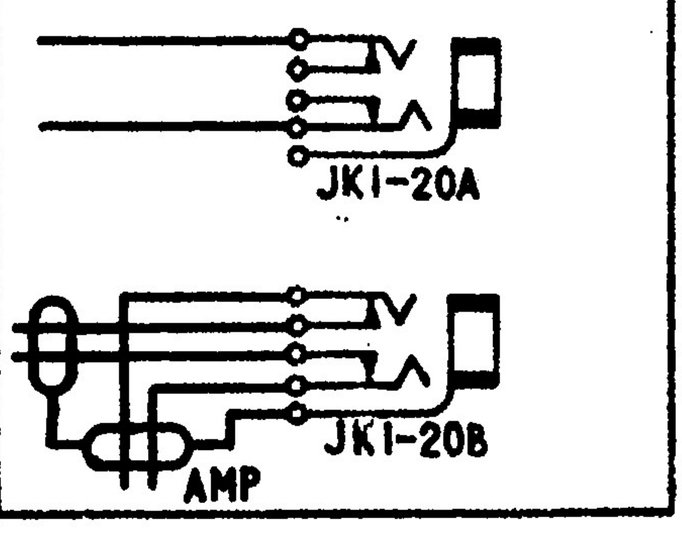
JACKFIELD LOCATION						OUTERS - EXTERNAL CONNECTIONS	
JACK	TERMINATION	DESIGNATION	ROUTING FROM CONTACTS TIP	RING	SLEEVE	FUNCTION	NOTES
1A	WIRE		620Ω			TONE	TYPE OF TERMINATION TB - TAGBLOCK PL - PLUG SK - SOCKET JF - JACKFIELD (& No.)
2A	"		"			"	
3A	SK	64	1	6	9	TIE LINE 1	
4A	"	"	2	5	10	" " 2	
5A	"	"	3	8	11	" " 3	
6A		"	4	7	12	" " 4	
7A	PL	41	2	5	—	TAPE OUTPUT 1	DESIGNATION PL OR SK PIN No. - P TB LINE & TAG No. - T WHERE 2 OR MORE NUMBERS APPEAR IN THE DESIGNATION COLUMN, THE JACK IS ROUTED TO THE TERMINATIONS SO INDICATED IN PARALLEL.
8A	"	36	"	"	—	" " 2	
9A	"	42	"	"	—	IDENT. UNIT OUTPUT	
10A	SK/RL	BJ/A	1/1	9/2	2/-	P.P.M. INPUT	
11A	RELAY	CB	3	4	—	MAIN AMP. OUTPUT	
12A	PL	37	1	6	—	PROD. TB. LISTEN	
13A	SK	78	13	18	—	M.C. TB. "	
14A							
15A							
16A	SK	BH	1	9	2	PROG. SND. 1ST HALF	
17A	"	"	3	11	—	" " " "	
18A	"	35	16	19	—	MONITORING PHONES	
19A	WIRE		ATTN. FROM JK7A			TAPE OUTPUT (LOW LEVEL)	
20A	"		PROG. SND. & PROD. TB. CCT.			TALKBACK	
1B	SK/SK	AA/1	1/2	9/3	2/1	MICROPHONE 1	
2B	"	AB/2	"	"	"	" 2	
3B	"	AC/3	"	"	"	" 3	
4B	"	AD/4	"	"	"	" 4	
5B	"	AE/5	"	"	"	" 5	
6B	"	AF/6	"	"	"	" 6	
7B	"	AG/7	"	"	"	" 7	
8B	"	AH/8	"	"	"	" 8	
9B	"	AJ/9	"	"	"	" 9	
10B	"	AK/10	"	"	"	" 10	
11B	"	AL/11	"	"	"	" 11	
12B	"	AM/12	"	"	"	" 12	
13B	"	AN/13	"	"	"	" 13	
14B	"	AO/14	"	"	"	" 14	
15B	"	AP/15	"	"	"	" 15	
16B	"	AQ/16	"	"	"	" 16	
17B	"	AR/17	"	"	"	" 17	
18B	"	AS/18	"	"	"	" 18	
19B	"	AT/19	"	"	"	" 19	
20B	"	AU/20	"	"	"	" 20	

FIG.5 AUDIO JACKFIELD SCHEDULE

D.T.P.2520

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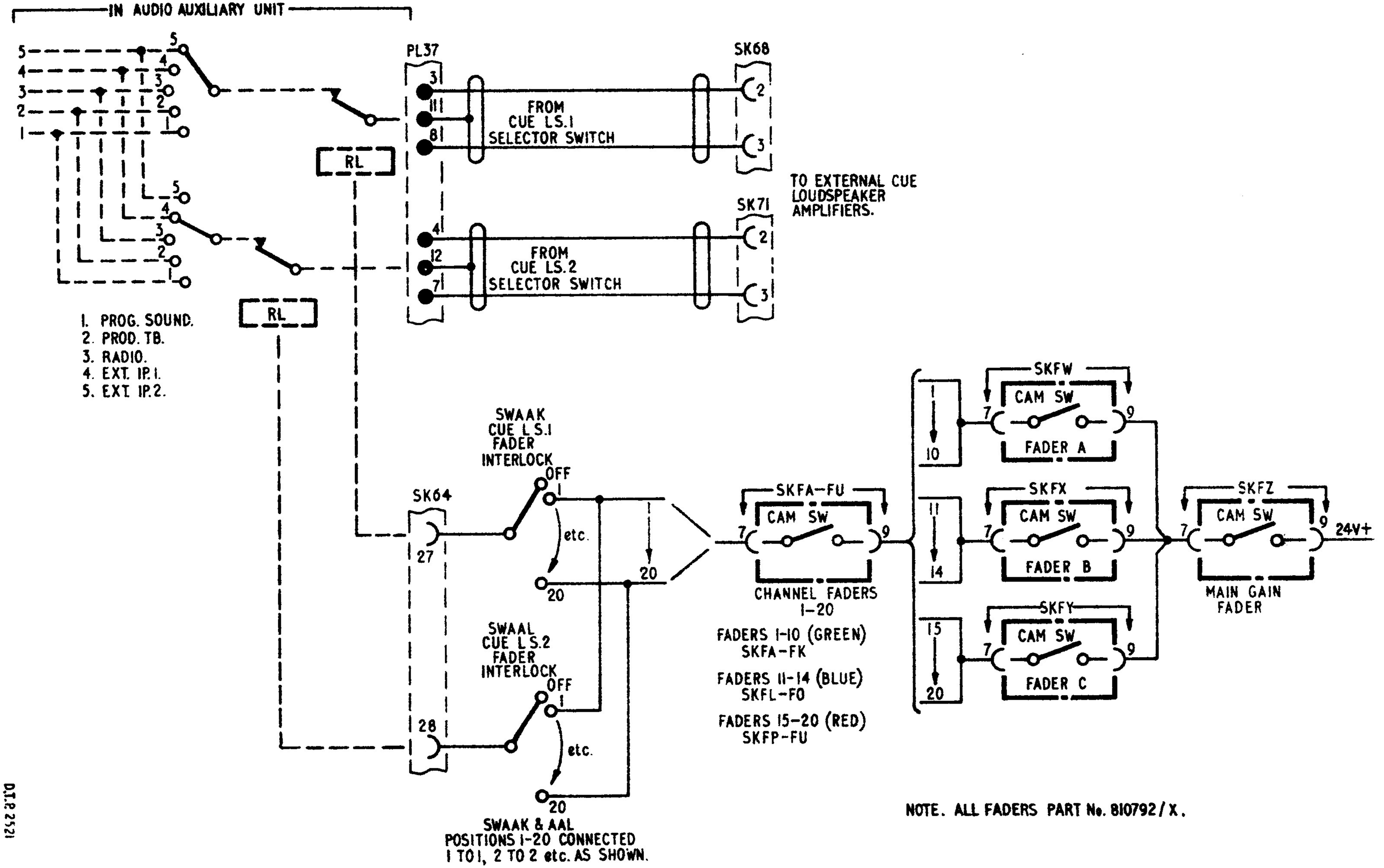

D.T.P. 2521

AUDIO MIXING UNIT 845705/00
PYE T.V.T. LTD. CAMBRIDGE, ENGLAND.

FIG. 6 CUE LOUDSPEAKERS FADER INTERLOCK CIRCUIT

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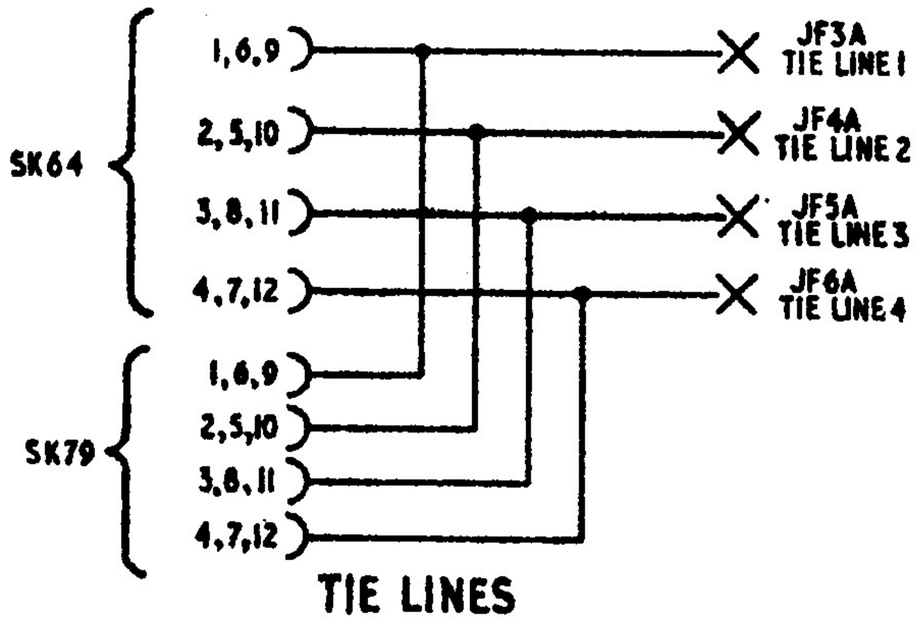
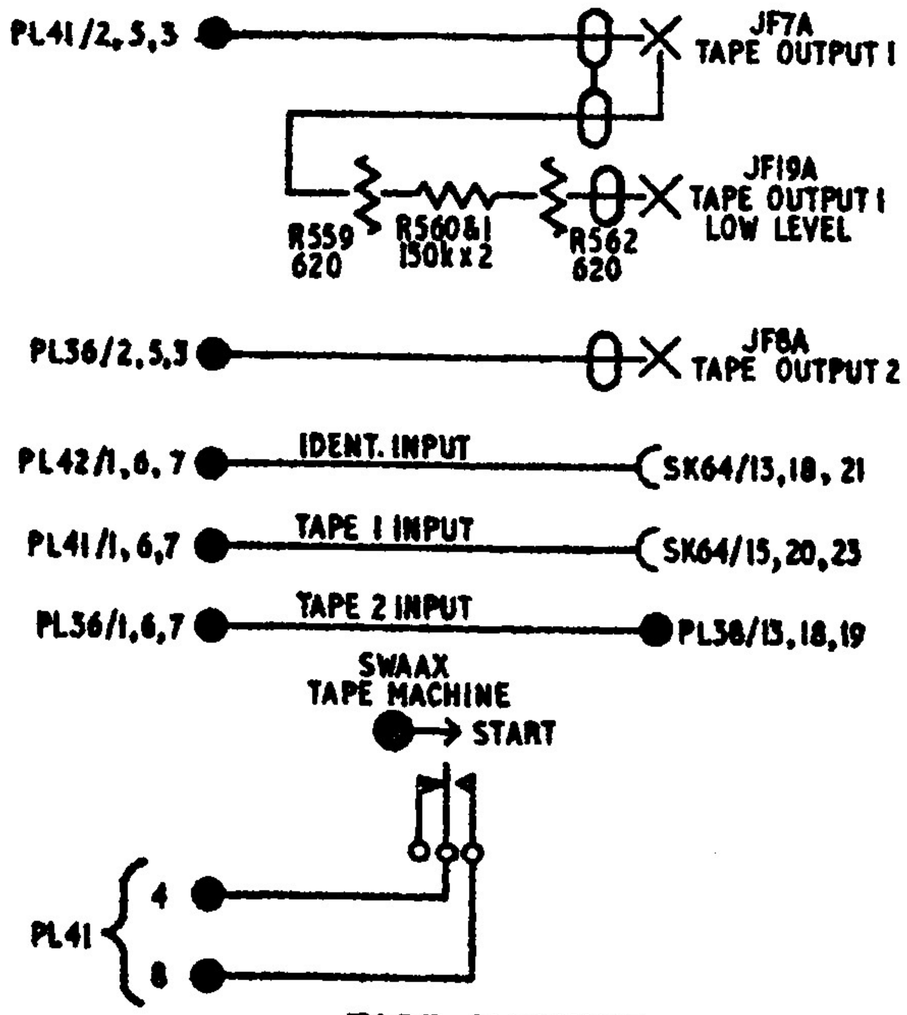
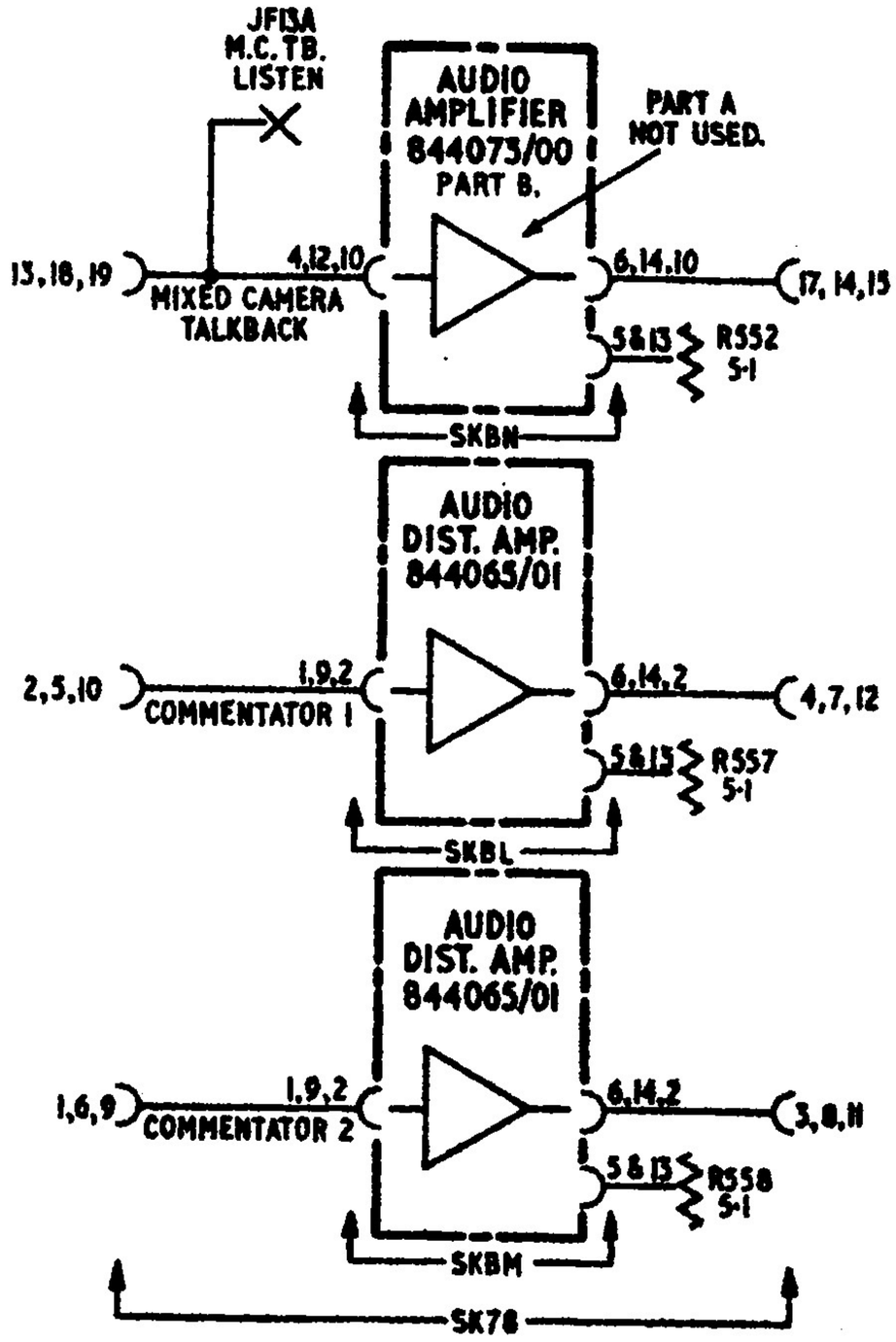


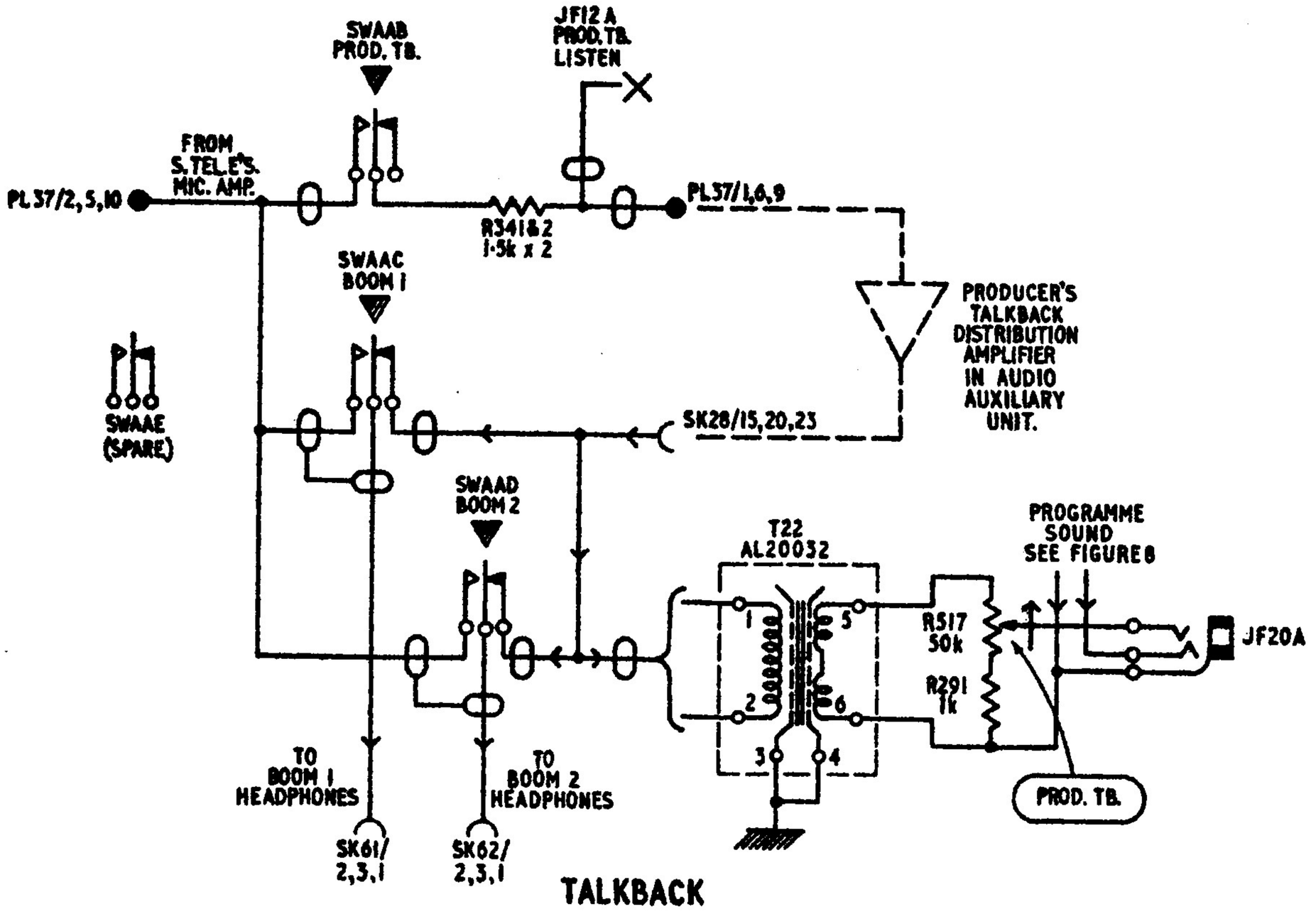
TIE LINES



TAPE MACHINE



MIXED CAMERA & COMMENTATORS 1&2 DISTRIBUTION AMPLIFIERS



TALKBACK

AUDIO MIXING UNIT 845705/00
PYE T.V.T. LTD. CAMBRIDGE. ENGLAND.

FIG. 7 MISCELLANEOUS CIRCUITS

D.T.P. 2522

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SECTION 5 - MAINTENANCE

WARNING: Before commencing work on equipment containing semi-conductors, read the appendix "Maintenance Precautions on Semi-Conductor Units".

5.1 GENERAL

Maintenance information for units embodied in the audio mixing unit is given in the individual handbook for the units concerned.

Most routine testing may be carried out by using equipment provided as part of the audio mixing unit notably the tone generator, peak programme meters, etc. A 20000 ohms per volt multi-range meter should also be carried for use in testing.

Spares for all items listed in the parts lists may be obtained from Pye T.V.T. Ltd. The Pye reference number should be quoted when ordering.

5.2 TRANSISTORISED EQUIPMENT

It is emphasized that careful attention should be given to any special instruction contained in handbooks dealing with the transistorised units. Special maintenance techniques are formulated for such units in order to avoid damage to the components.

5.3 CABLES

Units within the audio-mixing system are interconnected by cables as shown in the cable diagram. Periodic inspection should be carried out to see that no damp or other undesirable element has entered. If at any time cables are removed from the equipment, great care should be taken to replace them so that the cable and terminations reach their proper receptacles without strain or pulling at the connections.

External cables to microphones, etc. should be examined before and after every period of use for signs of damage through being coiled for long periods, or through dragging or other rough treatment in the field. Suspect sections of cable should be removed and tested for continuity and insulation.

5.4 CABLE SCHEDULE

Termination	No.of Pins	Function	Destination
SK 1	3	Microphone Input	Channel Amp.1 (A)
SK 2	"	" "	" " 2 "
SK 3	"	" "	" " 3 "
SK 4	"	" "	" " 4 "
SK 5	"	" "	" " 5 "
SK 6	"	" "	" " 6 "
SK 7	"	" "	" " 7 "
SK 8	"	" "	" " 8 "
SK 9	"	" "	" " 9 "
SK 10	"	" "	" " 10 "
PL 21	28	Multi-Mic. Input	" Amps 1-8"
PL 22	"	" "	" " 9-10"
SK 11	3	Microphone Input	" Amp. 11(B)
SK 12	"	" "	" " 12 "
SK 13	"	" "	" " 13 "
SK 14	"	" "	" " 14 "
PL 23	12	Multi-Mic.Input	"Amps 11-14 "
SK 15	3	Microphone Input	" Amp.15 (C)
SK 16	"	" "	" " 16 "
SK 17	"	" "	" " 17 "
SK 18	"	" "	" " 18 "
SK 19	"	" "	" " 19 "
SK 20	"	" "	" " 20 "
PL 24	20	Multi-Mic Input	"Amps 16-20 "
SK 25	3	Main Output No.1	Termination Panel
SK 26	"	" " 2	" "
SK 27	"	" " 3	" "

Termination	No.of Pins	Function	Destination
SK 28	28	Mains Output Monitoring	Audio Auxiliary Unit.
SK 29	3	Group Output No.1	Termination Panel
SK 30	"	" " 2	" "
SK 31	"	" " 3	" "
SK 32	"	Public Address O/P No.1	" "
SK 33	"	" " " 2	" "
SK 34	"	" " " 3	" "
SK 35	28	Prefade Listen	Audio Auxiliary Unit Monitor Selector
PL 36	8	Jackfield Input	Tape Machine (O/P2)
PL 37	12	Cue Loudspeaker	Audio Auxiliary Unit
PL 38	20	Tie line	" " "
SK 39	4	Monitoring	Extension P.P.M.1
SK 40	4	"	" " 2
PL 41	8	Jackfield Input	Tape Machine (O/P1)
PL 42	8	" "	Identification Unit
PL 43	4	" "	Audio Auxiliary "
PL 44	4	A.C. INPUT	A.C. MAINS
SK 45	4	A.C. Bridging	As required.
SK 61	3	Talkback (Boom 1)	Termination Panel
SK 62	"	" (" 2)	" "
SK 64	28	Tie lines	Audio Auxiliary Unit
SK 68	3	Cue Loudspeaker (1)	Termination Panel
SK 71	"	" " (2)	" "
SK 76	"	Monitoring	External Loudspeaker
SK 78	20	Commentator's Talkback	Audio Auxiliary Unit
SK 79	12	Tie lines	Tie line panel

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PARTS LIST
FOR
AUDIO MIXING UNIT
TYPE 5705

Item	Pye Part No.	Manufacturer	Type
6.1 RESISTORS			
12 ohms 5% 1·5W	JS.00530	Painton	MV1A
26·1 " 1%	P.21141	"	ML1
47 " 5% ½W	PE.47067	Electrosil	CJ.20
68 " " "	PE.68067	"	"
150 " " "	PE.15167	"	"
240 " 1% 1/8W	PC.24165	"	NJ.60
270 " 1% "	PC.27165	"	"
300 " " "	PC.30165	"	"
300 " 5% ½W	PE.30167	"	CJ.20
330 " 1% 1/8W	PC.33165	"	NJ.60
330 " 5% ½W	PE.33167	"	CJ.20
390 " " "	PE.39167	"	"
430 " 1% 1/8W	PC.43165	"	NJ.60
470 " 5% ½W	PE.47167	"	CJ.20
510 " 1% 1/8W	PC.51165	"	NJ.60
560 " 5% ½W	PE.56167	"	CJ.20
620 " " "	PE.62167	"	"
680 " " "	PE.68167	"	"
750 " " "	PE.75167	"	"
820 " 1% 1/8W	PC.82165	"	NJ.60
820 " 5% ½W	PE.82167	"	CJ.20
1k " 1% 1/8W	PC.10265	"	NJ.60
1k " 5% ½W	PE.10267	"	CJ.20
1·1k " 1% 1/8W	PC.11265	"	NJ.60
1·2k " " "	PC.12265	"	"
1·2k " 5% ½W	PE.12267	"	CJ.20
1·3k " 1% 1/8W	PC.13265	"	NJ.60
1·5k " 5% ½W	PE.15267	"	CJ.20
2·2k " 1% 1/8W	PC.22265	"	NJ.60
2·7k " 1% "	PC.27265	"	"
3·3k " 5% ½W	PE.33267	"	CJ.20
4·7k " " "	PE.47267	"	CJ.20
5·6k " " "	PE.56267	"	"
6·8k " " "	PE.68267	"	"
15k " " "	PE.15367	"	"
150k " " "	PE.15467	"	"
10k " " "	PE.10367	"	"
6.2 POTENTIOMETERS			
300+300 ohms ±10% Log	PL.01002	Plessey	EC.2¾"Slotted Spindle
470+470 " ±10% Lin	PL.01009	"	" " " "

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Item	Pye Part No.	Manufacturer	Type
Potentiometers Cont'd			
1k+1k ohms ±10% Lin	PL.02491	Plessey	EC.2¾"Slotted Spindle
2·2k " ±20% "	PL.04209	"	E " " "
2·5k+2·5k " ±10% "	PL.02490	"	EC " " "
47k " ±20% "	PL.04220	"	E " " "
6.3 CAPACITORS			
0·47µF ±10% 125V	PQ.34050	Mullard	C296AA/A470K
1µF " "	PQ.37500	"	C296AA/A1M
2µF " 200V a.c.	668189	Hunts	W351
10µF ±20% 25V	PS.23026	Dubilier	TFR 25310D
6.4 AMPLIFIERS ETC.			
P.P.M. Amplifiers	844064/00	Pye T.V.T.	4064/00
Audio Distribution Amplifier	844065/01	"	4065/01
Tone Generator	844070/01	"	4070/01
Audio Amplifier	844073/00	"	4073/00
6.5 MISCELLANEOUS			
Transformer	AL.20032	Pye	B.9179
Diode	FV.09009	Mullard	OA.202
Audio Jackfield Assembly	AG.21770	Pye T.V.T.	AG.21770
Switch, Toggle d.p.d.t.	FS.04700	N.S.F.	8373/K6
Switch, Push-button, 2 c/o locking	831293/C	Autophone	114 AB White
Switch, rotary lp. 11-way	FS.02010	D.N.S.F.	DM
Switch, rotary lp. 10-way	FS.02014	D.N.S.F.	"
Switch, rotary lp. 21-way	FS.03020	Painton	CS/IP/21/1B
Switch, push-button, illuminated, 2p c/o n/l	FS.03000	T.M.C.	S.525595
Relay, 4p c/o	FR.07025	Siemens	TRLS154D/TBV65421/1 34e
Meter (P.P.M.) Scale 1-7	EA.19066	Taylor Elect. Instr.	Model 50 Int. Illumination
Fuseholder	722393	Bulgin	DF.826/250V/ Water Clear

Item	Pye Part No.	Manufacturer	Type
Miscellaneous Cont'd			
Fuse, 2A	FF.00819	Belling & Lee	L1055
Lamp, 24V. 1·3W.	FL.01000	T.M.C.	S.525554
" 12V. 1·2W. 0·1A	FL.01020	Thorn (Atlas)	Cartridge Cap S6/8 999-9120
" 28V. 1·12W 0·04A	FL.01021	" "	Cartridge Cape S6/8 995-9118
Lens, round white (opal)	FL.02000	T.M.C.	S.525511
" " amber	FL.02001	"	S.525513
" " red	FL.02002	"	S.525514
" " green	FL.02003	"	S.525512
Knob, black	551403	A.E.I.	2285/17 K85
Fader knob, red	FK.00001/A	Painton	318554
" " blue	FK.00001/E	"	318552
" " green	FK.00001/G	"	318553
Push " round black	FK.00003	T.M.C.	S.525510
Key, Min.lever, L/S, 4 c/o N/S	FS.04222	Ericsson	N.9320AT
" " " 4 c/o N/L	FS.04227	"	N.9321AT
2C2K/2C2K	FS.04233	"	N.9318AT
" " " L/L 4C/4C	FS.04239	"	N.9315AT
Handle, white	FH.00050	"	N.95222
" red	FH.00051	"	N.95223
" black	FH.00052	"	N.95224
" yellow	FH.00053	"	N.95225
" blue	FH.00054	"	N.95226
" grey	FH.00056	"	N.95228
" maroon	FH.0005B	"	N.95230
" dark green	FH.00059	"	N.95231
Insert, Ivory	FH.00060	"	N.90103
" black	FH.00061	"	N.90104
" dark green	FH.00064	"	N.93861
" yellow	FH.00065	"	N.96075
Fan meter	BJ21031	Pye modified	BJ21031
Plug Assembly, 4-way	734480	Magnetic Devices Ltd	4-way
" " 8-way	734481	"	8-way
" " 12-way	734482	"	12-way
" " 20-way	734483	"	20-way
" " 28-way	734484	"	28-way
Plug 4-way	FP00876	Cannon Ltd	EP-4-14
Socket Assembly 4-way	737910	Magnetic Devices Ltd	4-way
" " 12-way	737912	"	12-way

Item	Pye Part No.	Manufacturer	Type
Miscellaneous Cont'd			
Socket Assembly 20-way	737913	Magnetic Devices Ltd	20-way
" " 28-way	737914	"	28-way
Socket, 3-way	FS17409	Cannon Ltd	XLR-3-13
" 4-way	FS17431	"	EP-4-13