

## BUSH HOUSE TRAFFIC POSITION

### Introduction

The Traffic Position consists of 8 independent channels, each capable of handling two-way programme or telephone commitments with ISPC, BH or the GPO. Telephone balancing facilities convert a telephone circuit into a 4-wire circuit to the studio via the programme circuits.

The channels have local source-selection access to the 150-way Source Multiple, and selection facilities for up to 8 PABX subscriber circuits. The channel outputs appear on the 150-way multiple, and are routed away by MSP. All unselector levels except 9, 10 & 11 are used. Both the incoming and feedback programme circuits (levels 1/2 and 3/4 respectively) are equipped with panel-mounted preset controls. The incoming programme circuit is also equipped with a Main Gain Control and optional AGC and Voice-Over facilities. Voice-Over is applied automatically when handling an incoming telephone call. Control line facilities (levels 5/6) are standard and include source and destination ANSWER/RING keys and common ANSWER/LISTEN key.

Provision is made for diverting outgoing music lines from levels 1/2 of its source switch to levels 3/4 of the source multiple for cue programme purposes. A similar facility is provided on the associated control lines. Incoming music lines are permanently available on the source multiple, but may be disconnected from wipers 3/4 of the associated o/g line source switch.

A selection of PABX and EMX circuits is made available in the Traffic Position by a special key which is operated while the Traffic Position is manned. This key prevents incoming calls on these circuits from appearing on EMX.

Aural monitoring is provided on a quality loudspeaker and on headphones at each channel position. Visual monitoring is 'married' to the aural monitoring and is by PPM's incorporated in the Telephone Balancing Units. The loudspeaker arrangement includes a 'capture' circuit.

Telephone headset sockets are provided for individual operators (one per two channel positions) and a common headset socket, for telephone circuits only, is fitted at the l.h. end of the desk for a single operator.

### Construction

The equipment is housed in two desks, DK 2/9, fronted by a full-width writing desk. The headset sockets are mounted in the leading edge of the writing desk. The l.h. desk houses the telephone selection, line divert and telephone answering controls and channels 1 - 4. The r.h. desk houses channels 5 - 8, the 50v 'available' and fuse alarm lamps, intercom unit, 'telephone divert' key and controls for 6 remote tape recorders. All amplifiers are incorporated in the Telephone Balancing Units, which are constructed in pairs on a common 'mother' p.c.b. Two units share a common power supplier which has plug & socket connection with the mains. The units may be withdrawn from the front of the desk for maintenance.

### Channel Positions & Controls

Each position consists of a Telephone Balancing Unit manufactured by Glenn Sound Services, with source selection key and locking push-buttons (shared with the adjacent channel) above, and a panel carrying the source indicator window, signalling, telephone and H/P monitoring keys below.

Following is a summary of the controls and their function.

LS CONN	captures LS to the channel and un-dims the LS
Lev 1/2 (key)	connects monitoring to channel incoming programme circuit
Lev 3/4	connects monitoring to channel cue programme circuit
LS DIM	captures LS to the channel and dims the LS
MAIN (key)	connects monitoring to channel main output or channel feedback output depending on the position of LS CONN key
PFL	connects monitoring to output of LEV 1/2 pre-set control (q.v.) or feedback circuit from destination depending on the position of the LS CONN key (above)
LEVS 1/2 GAIN (pot)	adjusts programme level on levels 1/2 for an input between +6dB and -28dB. Observed on PPM with LS CONN key set to 'LEVS 1/2' and LS DIM key to 'PFL'
LEVS 3/4 GAIN (pot)	adjusts programme level on feedback circuit (levels 3/4), as for LEVS 1/2 GAIN, but observed on PPM when LS CONN key set to 'LEVS 3/4' and LS DIM key to 'MAIN'
R BAL & X BAL	functional only when TELE key operated. Set for best null on PPM when BAL key operated. R BAL is a variable resistor - X BAL is a switch which selects an external capacitor.
MAIN GAIN	continuously variable pot'meter, arbitrarily calibrated - normal stop = '7'.
AUX I/P	connects Levels 1/2 input and Levels 3/4 output to Auxiliary input tags not yet wired.
S/M	connects main programme input (levels 1/2) to levels 1/2 of the source switch, and cue programme output to levels 3/4 of the source switch.
TELE	connects Tele Hybrid unit to levels 1/2 input and levels 3/4 output. The Voice-Over facility is automatically selected
BAL *	connects l.u. tone to levels 3/4 & disconnects cue programme. Tone fed via TELE key (q.v.) - used for setting R BAL & X BAL.
AGC	inserts AGC amplifier into levels 1/2 - controls level to +8dB. (Normally, AGC amplifier is bypassed & cue programme circuit is undisturbed). *Monitoring of levels 1/2 o/p is automatic.

VO applies levels 3/4 to Voice-Over amplifier in levels 1/2 as control voltage. (VO amplifier permanently in circuit, only the control voltage is switched.) Programme volume on levels 1/2 reduces as programme volume on levels 3/4 increases. Control voltage adjustable within the Telephone Balance Unit.

LEVS 1/2 MUTE mutes input of levels 1/2 o/p amplifier  
" " T/B connects operator's headset to input of levels 1/2 o/p amplifier (talkback to destination therefore not adjustable).

LEVS 1/2 IDENT connects Ident circuit to levels 1/2 o/p (after amplifier)  
" " TONE " l.u. tone " " " " " " (neither of these signals is adjustable).

LEVS 3/4 MUTE mutes input of levels 3/4 send amplifier  
" " T/B connects operator's headset to levels 3/4 send amplifier input (Talkback to source is therefore adjustable by LEVS 3/4 GAIN).

LEVS 3/4 IDENT connects Ident circuit to input of levels 3/4 send amplifier via BAL and T/B keys above - disconnects cue programme.  
" " TONE connects l.u. tone to input of levels 3/4 send amplifier via BAL and T/B keys above - disconnects cue programme. (Ident & tone to source therefore adjustable by LEVS 3/4 GAIN).

F/B to C/L connects output of levels 3/4 send amplifier to source levels 5/6 via TELE and AUX keys (above) and a ringing suppressor.

Q/CF operates QCF relay on Bay 144 via Source Mult. level 11. QCF relay connects studio outside source C/F to Sce. Sw. wipers 3/4 instead of cue programme.

The panel above the Telephone Balance Unit mounts the source selection coded buttons (common to two channels) and two Select keys (one per channel).

The panel beneath the Telephone Balance Unit mounts the the source indicator window (coded display) and studio signalling key (the system "buzzes back" if Red light is applied to non-studio source but not if Sce. Sw. is 'home').

source RING/ANSWER ) keys and common ANSWER/LISTEN key for levels 5/6  
destination RING/ ANSWER) telephone- overrides local monitoring/talkback.  
MONITOR CH x/CH y connects individual operator's headset to the monitor and talkback circuits of selected channel - does not affect levels 5/6 telephone circuits, OPERATOR MAY answer telephones of either channel irrespective of key position except OFF.

HEADSET SOCKET - headset plugged in removes levels 5/6 telephone circuits from common headset socket (q.v.)

L.h. Panels

- Top panel mounts 8 rows (one per channel) of 9 push-buttons and LED. Buttons select PABX circuit to the channel - LED lights to show channel engaged, and is extinguished when Off button pressed. Buttons provided for OFF PABX 2880/~~2881~~/2883/2884 + 4 spare. 2881
- 2nd Panel mounts the 'line divert' keys in two rows of 10:  
top row operate relays on Bay 144 which transfer o/g music lines<sup>(1)</sup> from MSP switch wipers 1/2 to Sce. Mult. levels 3/4 of circuit associated with the i/c line. (For example, transfers ISPC 01 from levels 1/2 of its Sce. Sw. to Sce. Mult levels 3/4 of ISPC 06)  
bottom row operates relays on Bay 144 which disconnect i/c line<sup>(2)</sup> from wipers 3/4 of the Sce. Sw. of associated o/g line. (For example, removes ISPC 06 from Sce. Sw. levels 3/4 of ISPC 01).
- 3rd Panel mounts 5 keys which operate relays on Bay 144 which transfer control lines<sup>(3)</sup> (ISPC) from wipers 5/6 of the MSP Sce. Sw. to Sce. Mult. levels 5/6 of the associated i/c line. (For example, removes ISPC 21 from Sce. Sw. for ISPC 01 and transfers it to Sce. Mult. for ISPC 06).

- NOTES (1) ISPC 01 to 04, ISPC 13 & 14, BH 1 to 3 and 1 spare  
(2) ISPC 06 to 09, ISPC 11 & 12, BH28 to 30 and 1 spare  
(3) ISPC 21 to 24 and 1 spare

Bottom Panel mounts 8 EMX telephone ANSWER keys & 8 PABX telephone HOLD/ANSWER keys. PABX keys have priority. Both PABX and EMX keys override channel telephones on the common headset.

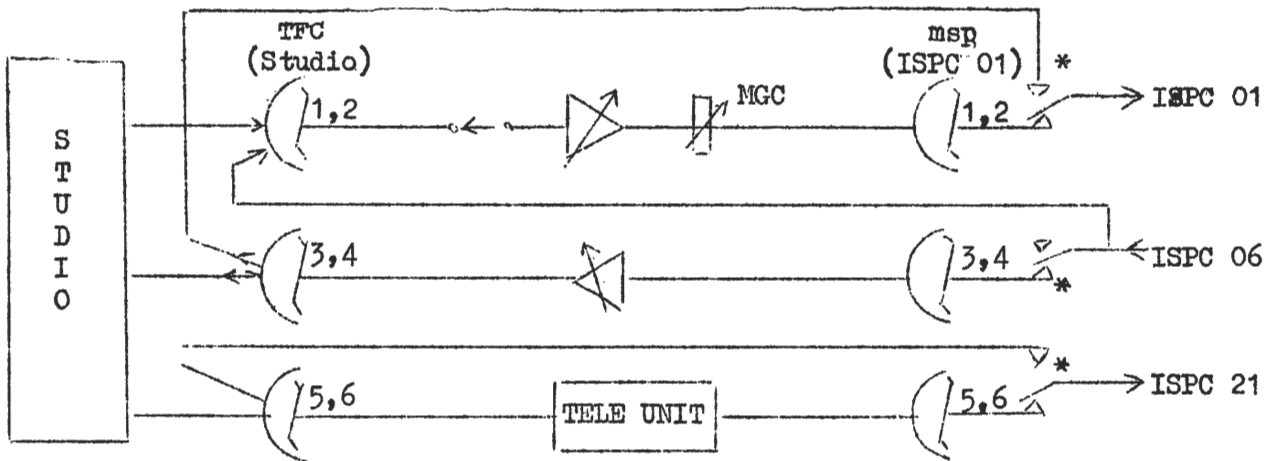
COMMON HEADSET SOCKET - used to answer any channel telephone (except if individual headset socket occupied) & PABX/EMX telephones.

Misc. Panels (r.h.)

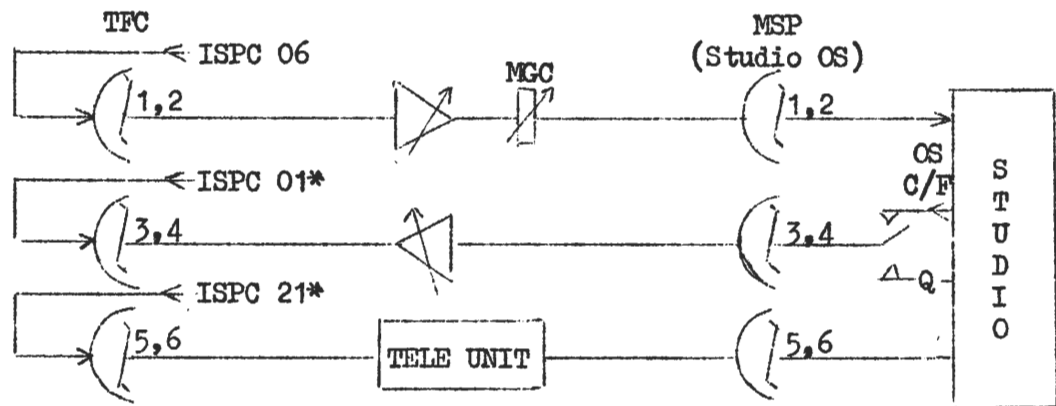
Top Panel mounts 50v. indication lamp, 50v. Alarm lamp, 24-way selector switch for second L.S. circuit and Night Switch key.

2nd Panel Intercomm.

3rd Panel }  
Bottom Panel } Record select switches, remote & run indicators and START key for 6 tape machine (3 per panel).

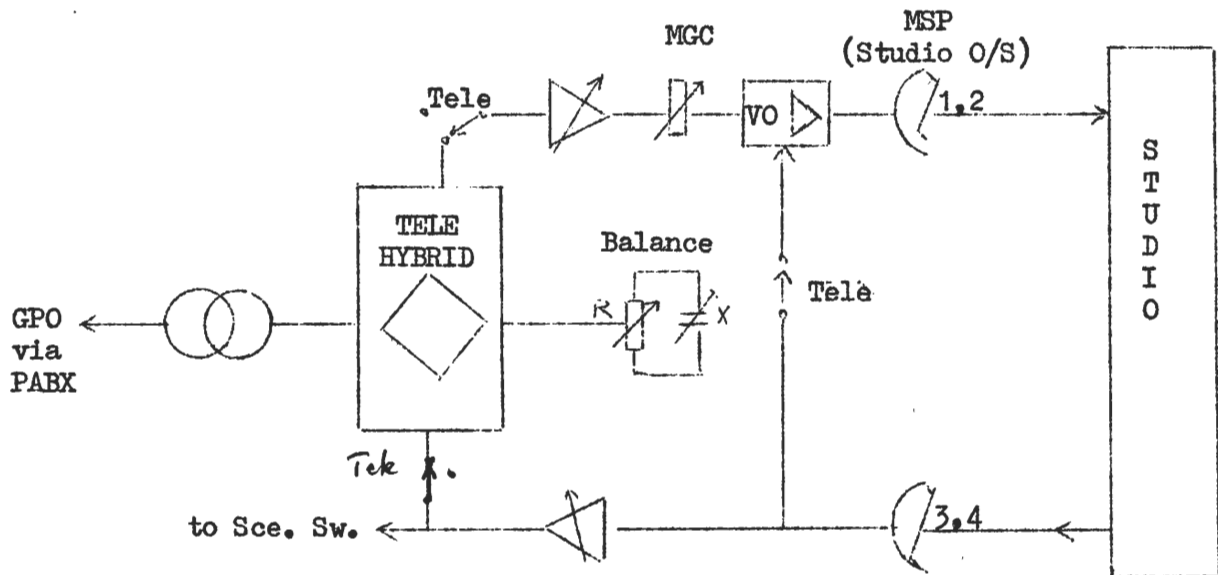


(a) Studio to Out-going line - studio selected by TFC



\* 'Divert' keys operated

(b) Incoming circuit - ISPC 06 selected by TFC



(c) Telephone Call Arrangements