



Communications Equipment for Television Studios

THE whole success of a television production depends upon the rapid and accurate distribution of instructions to operational crew and communication between studio, telecine, master control, recording and other areas. The range of equipment described is flexible and capable of being adapted to any production procedure or organizational system. The basic camera communications (camera to camera control and camera control to camera) are incorporated in each camera channel in the Mk. IV series, using transistor amplifiers mounted in the power units.

Communication Unit Type BD 887

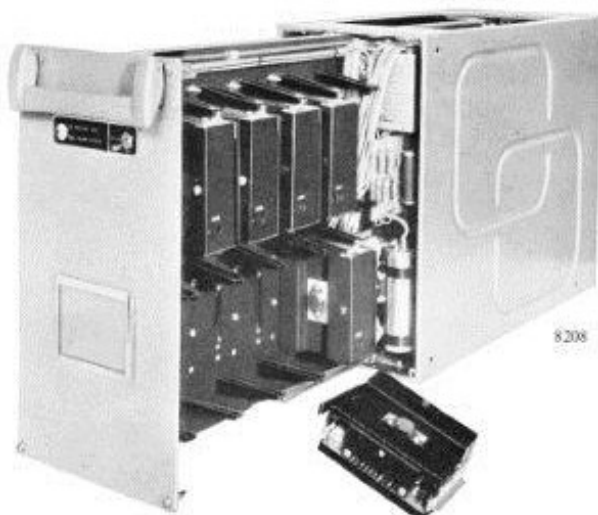
This draw-out printed-wiring case, suitable for rack or mobile use, will house up to ten plug-in transistor amplifier units. It contains in addition, ten relays and power supplies for the amplifiers, relays and cue circuits. It is provided as standard with facilities for a four-camera studio or outside broadcasting unit as described below, but additional or alternative facilities are easily arranged by extra plug-in amplifiers and connections made to existing tagboards.

This unit also serves to distribute cues to cameras, etc., and can be wired for central standards switching.

STANDARD FACILITIES (with 4 amplifiers provided)

- Programme sound (PS) to all cameras and operational control positions.
- Production talk-back (TB) from the producer or technical director and others to cameras and control positions, etc.
- Mixed camera talk-back (MCTB) from all cameras to producer, technical director, etc. On 'omnibus' working MCTB is fed to all camera control positions.
- Mixed control room talk-back (MCRTB) to all cameras on 'omnibus' working from all camera controls or a technical supervisory position.
- Switching 'omnibus/normal' for four camera channels and calling facilities for three locations (e.g. telecine, master control, dressing rooms, etc.). Studio loudspeaker, switching to TB with muting of control room loudspeaker to prevent howl-round.
- Routing of cues from vision mixer to four

Communication Unit
Type BD 887.



cameras and associated picture and wave-form monitors (from which production monitors can in turn be supplied with cues).

A communications distribution panel is available for mounting in the rack cabinet for terminating permanent wiring to other talk-back units.

Amongst the wide variety of additional facilities which have been provided by this unit, the following are typical:

- (a) Microphone boom TB from sound mixer.
- (b) Lighting TB from lighting director to switchboard, patching panel and grid.
- (c) Communications for eight camera channels.
- (d) Commentators TB circuits for two-way communication with producer.
- (e) Engineering TB circuits isolated from production circuits.
- (f) Talk-back to telecine operators, presentation control, etc.

DATA SUMMARY

Inputs: Mains 100-125 or 200-250 V, 50 or 60 c/s approx. 300 VA (5 V steps).

Communications connections from four camera channels, cues from vision mixer, PS - 600 Ω balanced input at zero level from sound console, TB - two inputs at microphone level, MCRTB - input from vision engineer etc., at microphone level. Switching connections to production and engineering TB panels.

Outputs: Communications to four camera channels, TB, PS, MCTB, and MCRTB to several connectors.

Dimensions:

Height	Width	Depth	Weight
15½ in.	8½ in.	22 in.	50 lb.
(40.5 cm)	(23 cm)	(56 cm)	(23 kg)

Communications Amplifier Type 6216A

This transistor amplifier normally plugs into the Type BD 887 Communications Unit but it has been used in other assemblies for special applications. Four transistors are used in a circuit which, by means of alternative feedback connections determined by the wiring of the socket into which the unit is plugged, can be used with moving coil or carbon microphone inputs. Approx. ¼ W output is produced for feeding a loudspeaker or about 20 pairs of headphones or headsets. A pre-set gain control is provided.

DATA SUMMARY

Inputs: D.C 16 V at 0.3A.

Gain: Power gain, High - approx. 90 dB
Low - approx. 56 dB

Dimensions:

Height	Width	Length	Weight
5¼ in.	2¼ in.	4 in.	1 lb.
(13.3 cm)	(5.2 cm)	(10.2 cm)	(0.4 kg)

Communication Auxiliaries

Because of the way in which communication facilities must be closely integrated with the operating techniques of a television studio, it is inevitable that special control and outlet panels must be produced. However, a series of standard panels have been made which will satisfy a large proportion of operating positions.

Engineering TB Panel Type 6200A

Intended to be mounted in a console well behind a camera control panel or the equivalent, this panel provides switching of four camera talk-back circuits from 'private' to 'omnibus', a headset socket, level controls for PS, TB, MCTB, and an external loudspeaker.

Production TB Panel Type 6213A

This 8 in. x 4 in. (20.3 x 10.2 cm) panel can be built into a control position in front of the Producer and has keys for:

- Call A } TB calling circuits to
- Call B } telecine room, dressing
- Call C } rooms, etc.

Rehearsal loudspeaker (in studio)

Cut mic. (to isolate TB microphone).

A control room loudspeaker volume control is provided and level controls for PS, MCRTB and MCTB.

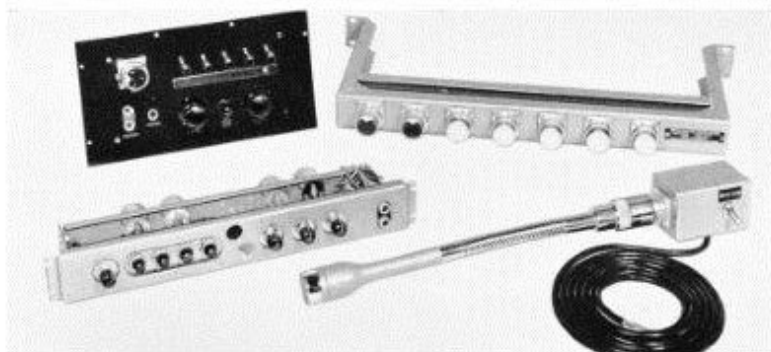
Communication Systems Panel Type 6203K

This inexpensive 19 in. panel routes talk-back between cameramen and camera con-

The plug-in amplifier unit of the Type BD 887.



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Communication panels and microphone.

8681

trol operators on up to four camera channels. It also permits talk-back between these and the producer/engineer in charge. On-air cues can be directed through the unit. Rack space requirement is 1 1/2 in. (3.2 cm).

Lightweight headset

Designed for use by cameramen, these headsets are normally supplied with a camera channel. They have separate high-impedance earpiece circuits and a carbon microphone fitted on a small boom connected into circuit by a twin jack plug.

Clear plastic ear discs are the standard supply but rubber ear pads are available as an alternative.

Lightweight headphones

These have the same earpieces as the above, supported on a single headband. Plastic ear discs are fitted. A separate circuit is connected to each earpiece and connection is by a single jack plug.

Wireless talk-back system

To overcome the restriction imposed by trailing cables a wireless talk-back system has been developed for use by floor managers and other studio staff.

The producer's talk-back is applied to a modulator which frequency-modulates a carrier between 25 and 50 kc/s. Different frequencies may be used for different studios to give complete separation. The carrier is then multiplied in frequency and radiated by a miniature transmitter unit. The receiver is a self-contained unit which may be carried in the pocket. It employs transistor circuits and uses rechargeable nickel-cadmium batteries for power supplies. A deaf-aid type earpiece provides ample sound level with the minimum danger of pick-up by programme microphones.

The aerial is a telescoping wire of 11 in. (28 cm) maximum length.

The normal coverage provided extends to between 40 and 50 yards in all directions from the central transmission point.

Charging racks are available which are designed to take banks of complete receivers and re-charge their batteries automatically.

Communication Patching Panel Type BD 657

This panel provides six-way patching facilities for communication or cueing circuits. It consists of two rows of six 10-way sockets mounted on a standard panel, suitable for rack mounting.

Dimensions:

Type	Height	Width	Depth	Weight
Type BD 887	10 1/2 in. (27 cm)	19 in. (48 cm)	8 1/2 in. (22 cm)	10 lb (4.6 kg)
Type 2701	8 in. (20 cm)	4 in. (10 cm)		
Talk-back system				
Modulator	18 in. (46 cm)	15 in. (38 cm)	6 in. (15 cm)	
Transmitter	5 in. (13 cm)	5 in. (13 cm)	5 in. (13 cm)	
Receiver	5 1/2 in. (14.5 cm)	2 1/2 in. (7.5 cm)	1 in. (2.5 cm)	
Type BD 698	7 in. (18 cm)	19 in. (48 cm)	8 1/2 in. (22 cm)	19 lb (8.6 kg)
Type BD 657	7 in. (18 cm)	19 in. (48 cm)	5 1/2 in. (14.5 cm)	5 lb (2.3 kg)

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