



Portable Television Radio-camera Channel Type BD 609

FOR maximum manoeuvrability in mobile applications this portable vidicon television camera and radio link is unsurpassed, providing the cameraman with perfect freedom of movement.

Features

- Cameraman completely free from trailing cables, a radio link being substituted for a cable connection.
- Operating distance from control point limited only by transmitter range.
- Versions available for operation in the VHF, UHF and SHF bands.
- Suitable for 625, 525 or 405-line standards.
- Pack-set link transmitting equipment (as illustrated). Fixed or portable link receiving equipment.

EQUIPMENT

- The complete channel consists of the following:
- (a) Vidicon camera (hand or tripod-held).
 - (b) Pack assembly consisting of Sync. generator.
Camera output circuits.
Link transmitter and batteries.
 - (c) Mobile transmitting aerial.
 - (d) Receiving aerial.
 - (e) Link receiving equipment.
 - (f) Receiver power unit.

When the output is to be connected to a broadcasting system of normal standards, an additional Stabilizing Amplifier Type AS 114 is required.

The unit gives one main composite or non-composite output and two monitoring outputs. It is a 19-inch unit for rack-cabinet mounting.

It is desirable that the system should incorporate a genlock or slaving unit so that sync. may be locked to the portable camera.

Data Summary

PORTABLE EQUIPMENT

Camera: Tube, standard 1-inch vidicon (P.820) sync. pulses, standard but no equalizing pulses generated. Rise time less than 0.25 μ s (at receiver output).

Vision output: 1 V p-p into 75 Ω .

Bandwidth: 7 Mc/s.

This equipment is designed and manufactured by the Compagnie Général de T.S.F. as their Type CP.102 and is marketed under licence by Marconi's.

Transmitters:

	Type TV 302	Type TV 402	Type TV 702
Frequency range (Mc/s)	174-223	450-500	6900-7400
Output (W)	1	0.5	0.1
Modulation	AM	AM	FM
RF bandwidth at 3 dB (Mc/s)	± 5	± 5	—
Aerial	Vertical $\frac{1}{4}\lambda$	Vertical $\frac{1}{4}\lambda$	Helix
Aerial gain, horizontal	Almost 1	Almost 1	10 dB
Approx. range at ground level	2 miles	$\frac{3}{8}$ mile	1 $\frac{1}{4}$ miles

Power supply: 12 V 20 AH batteries, giving life of 4 hours approx.

Receiving equipment:

	174-223	450-500	6900-7400
Frequency range (Mc/s)	174-223	450-500	6900-7400
Modulation	AM	AM	FM
Polarity	Positive	Positive	—
Input impedance	75 Ω	75 Ω	75 Ω
Sensitivity	100 μ V	400 μ V	—
AGC	3 dB output change for 40 dB input variation	3 dB output change for 40 dB input variation	—
AFC	—	—	1 Mc/s for 10 Mc/s
Vision bandwidth (at 3 dB points)	10 Mc/s	10 Mc/s	10 Mc/s
Aerial	Yagi	Double $\frac{1}{2}\lambda$ two doublet	4 ft horn
Aerial gain	As required	9 dB	34 dB
Power supply	220 VA at 220 V AC	220 VA at 220 V AC	350 VA at 220 V AC

Dimensions:

	Height	Width	Depth	Weight
Camera (less lens)	3 $\frac{1}{4}$ in. (8.3 cm)	4 in. (10.3 cm)	7 $\frac{1}{2}$ in. (19 cm)	3 $\frac{1}{2}$ lb (1.6 kg)

Pack unit

13 $\frac{1}{2}$ in. (34.2 cm)	13 $\frac{1}{2}$ in. (34.2 cm)	5 $\frac{1}{2}$ in. (14 cm)	28 $\frac{1}{2}$ lb (13 kg)
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Receivers RP 302 and RP 402

5 in. (13.2 cm)	19 in. (48 cm)
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Receiver RP 702 aerial

13 $\frac{3}{4}$ in. (35 cm)	12 in. (30 cm)	24 in. (60 cm)
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Receiver RP 702 power unit

19 $\frac{3}{4}$ in. (50 cm)	12 in. (30 cm)	21 $\frac{3}{4}$ in. (55 cm)
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Stabilizing amplifier Type AS 114

15 $\frac{3}{4}$ in. (40 cm)	19 in. (48 cm)
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Stabilizing amplifier power unit

7 in. (18 cm)	19 in. (48 cm)
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Marconi

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