

PHILIPS



BROADCASTING EQUIPMENT

PCP-90 'Minicam' wireless portable Plumbicon color television camera



True broadcast quality pictures

Encoded video signals sent to base station

New digital command system to control several cameras from one base station

Lightest portable colour TV camera

Microwave control link operated with provision for coaxial cable control link

Camera freed from control functions—can concentrate on picture composition

Viewfinder indication of video level and lens stop

Excellent performance, advanced design and faithful colour reproduction are all found in the Philips PCP-90 "Minicam". It is the lightest portable television camera available.

The "Minicam" was developed by CBS Laboratories and under agreement with CBS it is being manufactured and marketed worldwide by Philips.

Known as the PCP-90 "Minicam", this camera, with back-pack, produces an encoded signal suitable for direct broadcasting without further processing.

The transmission signals of the PCP-90 are beamed to a base station and are less

susceptible to data link noise and multipath effects than conventional raw video signals.

The key developments making all this possible are a new digital command system based on spacecraft data transmission technology and a new 1 inch, high resolution, Plumbicon camera tube. The command system permits radio control of all functions from a base station located as far as 10 miles away, depending on the transmission path. The camera can be linked to its base station by a triaxial cable if terrain features interfere with wireless communication. However, cable losses limit hookup to one mile between camera and station.

Unlike other portable colour cameras which send separate red, blue and green signals to their base stations for processing, the Philips PCP-90 "Minicam" does all the signal processing in the back-pack. This reduces the possibility of noise pick-up and cuts down on colour errors caused by multipath effects.

An additional feature of the PCP-90 allows a television programme to be recorded with a portable video recorder at the camera location. For on-the-spot recording, a local control box plugged into the back-pack allows the operator to perform all functions of the digital command system.

The advent of the Philips PCP-90 "Minicam" will lead to lighter and smaller studio cameras, cables and gear, and—because the digital command system makes many of the necessary adjustments automatically—will enable a single console operator to control several cameras over a single VHF channel. The quality of the PCP-90 "Minicam" pictures during remote broadcasts equals that of the pictures produced by present colour studio cameras under the same conditions.

APPLICATIONS

- Instantaneous news coverage on-the-spot pick-up of current events
- Ideal for use in Helicopters
Handles as easily as a movie camera
- Unrestricted mobility
No cables to confine activities
- Operates in areas where cables are prohibited
Historical meetings, diplomatic functions, and political conventions
- Close-in action shots of Sports events
Golf and tennis tournaments, football and soccer side-line shots, and swimming and gymnastic events.

SPECIFICATION

Scanning System:

EIA 525-line, 60 Hz

AC Power Input to Base Station

(less picture and waveform monitor):
117 V nominal; 60 Hz, 400 W (approx.)

DC Power Input to Head/Back-Pack:

24 V/3 Amp—Batteries or via cable

Picture Monitor: 180 W

Waveform Monitor: 80 W

Sensitivity:

Colour reproduction holds below 10 ft candles incident illumination. 125–250 ft candles scene illumination for studio quality pictures

Viewfinder Display Size:

3 inch picture diagonal

Viewfinder Brightness:

Better than 100 ft—Lamberts

Lens: Cannon 6 to 1 f/2.8 Zoom lens

Camera Cable Length:

RG8 up to 5,000 ft (1530 m)
RG59 up to 2,000 ft (610 m)
Triax equal to above on remote power mode. Cable from camera back-pack: 6 ft or 100 ft (2 or 30 m)

Pulse Requirements:

4 V nominal horizontal drive into 75 Ω
4 V nominal composite sync 75 Ω



External Signal to Viewfinder and Picture Monitor:

1 V non-composite 75 Ω

Video Output:

One: 1 V composite 75 Ω . All necessary picture and waveform monitor feeds: 1 V non-composite

Picture Quality:

Horizontal Resolution:

100% modulation at 400TV lines in centre Y Channel when properly registered

Limiting Horizontal Resolution:

550 TV Lines in Centre Y Channel

Signal-to-Noise Ratio (peak signal to rms noise):

Better than 42 dB over 5 MHz bandwidth in Y Channel

Amplitude Transfer Characteristic (Gamma):

Adjustable to any value between 0.45 and 1.0 (unity)

Scanning Linearity:

0.5% within a circle having a diameter equal to picture height. Less than 2% elsewhere

Dimensions and Weights:

Camera Head:

Height: 17 inches (43 cm)
Width: 4 inches (10.8 cm)
Length: 17 inches (with lens) (43 cm)
Weight: 18½ pounds (8.4 kg)

Back Pack:

(mounts to Bell hip-back harness):
Height: 15 inches (including battery) (38 cm)

Width: 15 inches (38 cm)
Depth: 7 inches (18 cm)
Weight: 32 pounds (with battery) (14.5 kg)
12 pounds (without battery) (5.5 kg)

Note: Microwave package adds 3 inches (6.75 cm) to height

Auxiliary Control Box:

Height: 7 inches (18 cm)
Width: 12 inches (30 cm)
Depth: 3 inches (7.5 cm)

Base Station Units:

All fit standard 19 inch rack width or in special transport case take up 36 inches or rack space exclusive of monitoring equipment. Approximate weight: 150 pounds (68 kg)

Specification details subject to change without notice



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