

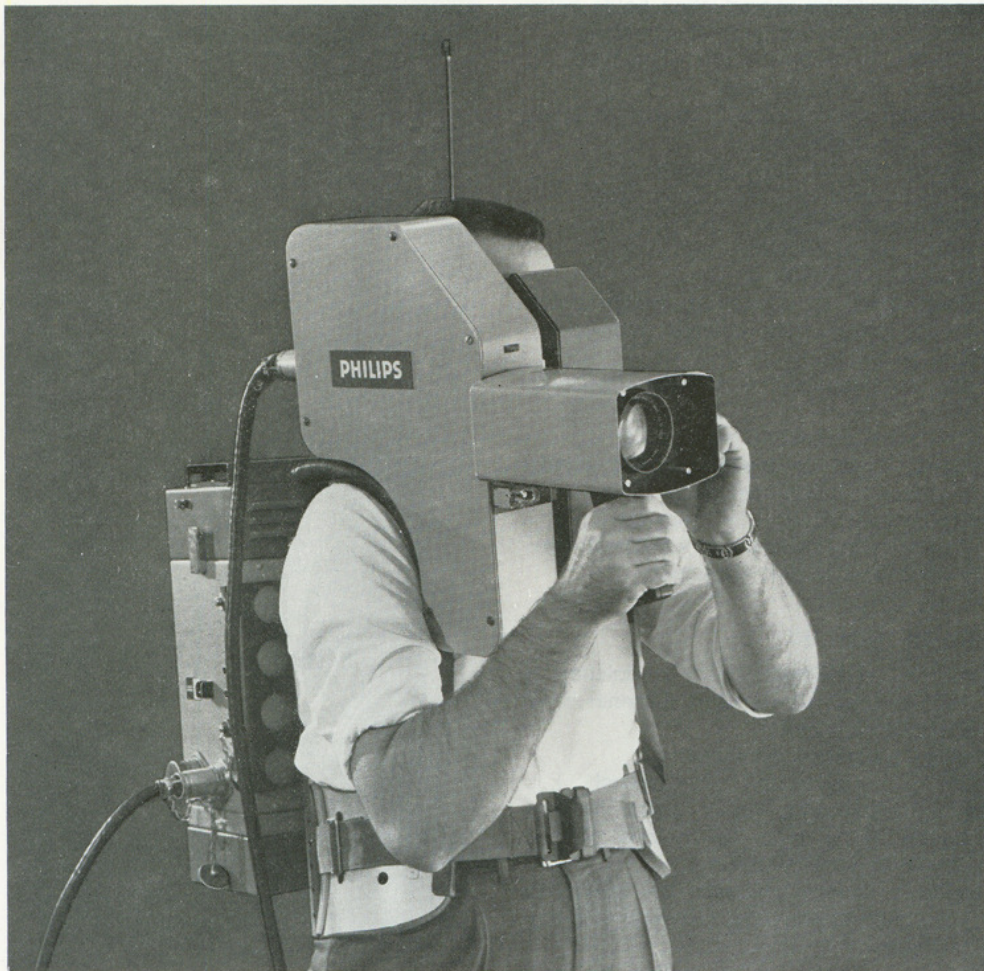
PHILIPS



TELEVISION EQUIPMENT

Preliminary Data

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 color TV camera

**Cameraman freed from control functions -
can "shoot" scene with concentration**

**Viewfinder indication of video level and
f. stop**

Wireless operation

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

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 wireless 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

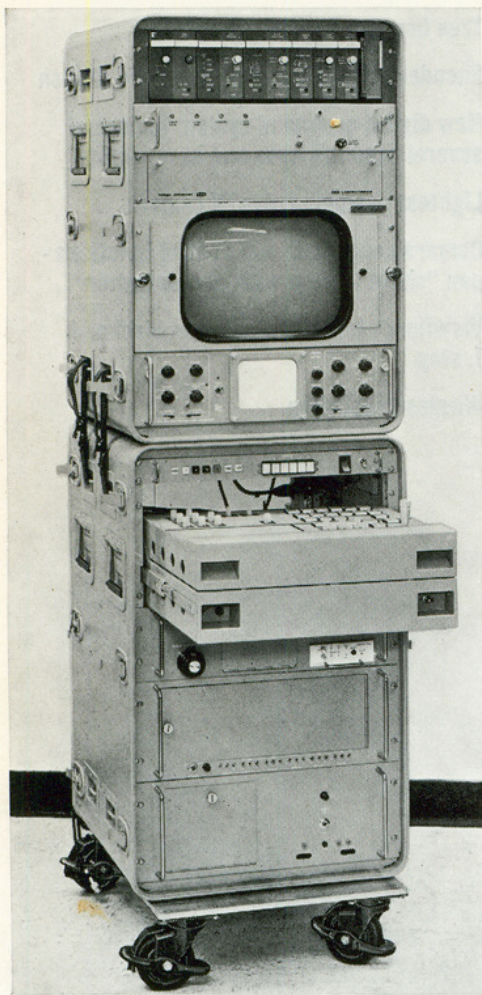
* Registered trade mark for television camera tubes.

if terrain features interfere with wireless communication. However, cable losses limit hookup to one mile between camera and station.

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

An additional feature of the PCP-90 allows a television program 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"



Base Station Units

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 color 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 easy as a movie camera.
- **Unrestricted mobility.**
No cables to confine activities.
- **Operates in areas where cables are prohibitive.**
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 meets.

PCP-90 SPECIFICATIONS

PRELIMINARY DATA

Scanning system: EIA 525-line, 60 Hz
AC Power input to base station (less picture and waveform monitor): 117 V nom; 60 Hz 400 W (app.)

DC Power input to head/back-pack:
24 V/3 amp. — Batteries or via cable

Picture monitor: 180 W

Waveform monitor: 80 W

Sensitivity: Color reproduction holds below 10 ft candles incident illumination; 125-250 ft candles scene illumination for studio quality pictures

Viewfinder display size: 3" picture diagonal

Viewfinder brightness:

Better than 100 ft - Lamberts

Lens: Canon 6 to 1 f/2.8 Zoom lens

Camera cable length:

RG 8 up to 5000 ft

RG 59 up to 2000 ft

Triax equal to above on remote power mode. Cable from camera back-pack - 6 ft or 100 ft

Pulse requirements: 4 V nom. horizontal drive 75 Ω

4 V nom. 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 400 TV Lines in center Y Channel when properly registered.

Limiting horizontal resolution:

550 TV Lines in center 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

Width: 4 inches

Length: 17 inches (with lens)

Weight: 18½ pounds

Back-Pack

(mounts to Bell hip-back harness):

Height: 15 inches (including battery)

Width: 15 inches

Depth: 7 inches

Weight: 32 pounds (with battery)

12 pounds (without battery)

NOTE: Microwave package adds 3 inches to height.

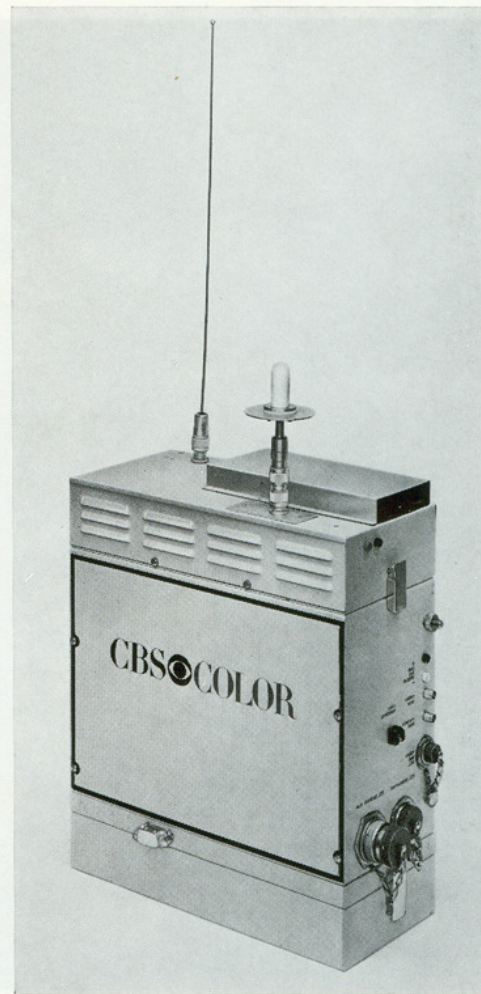
Auxiliary Control Box:

Height: 7 inches

Width: 12 inches

Depth: 3 inches

Base Station Units: All fit standard 19" rack width or in special transport case take up 36 inches of rack space exclusive of monitoring equipment. Approximate weight: 150 pounds.



Back-Pack