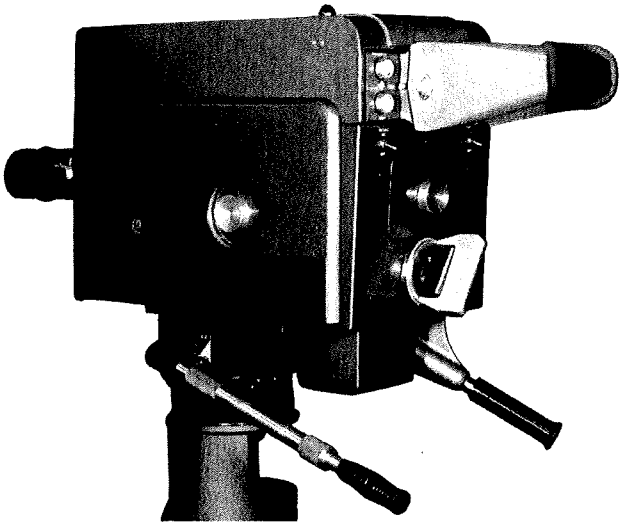
Studio Camera PC-3-A/B

SALES BULLETIN

INSTRUCTION BOOK EBI-2053



APPLICATION—A high-sensitivity television camera which, as part of the G-E camera chain, will produce a non-composite picture signal.

INTERCHANGEABILITY—No part of the Camera Chain is interchangeable with competitive equipment, but the chain as a unit can be used with switching and transmitting facilities of other manufacture.

COMPLIANCE—FCC Standards of Good Engineering Practice.

FEATURES—Completely accessible components reduce maintenance costs.

Easy focusing assured by handlebar grip control.

Easy operation with less strain on operator and less chance for mistakes made possible by "on line lights" in front, rear, and inside.

Safety to personnel increased since high voltage components are shielded.

Steps and time are saved with the dual jacks for talk-back headphones.

Longer camera tube life and quick recovery in emergency (saves time and money) are obtained with the high voltage "on-off" or standby switch.

Convenient alignment is assured since alignment yoke adjustment is accessible from rear of camera.

Conveniently and quickly removable tube and yoke assembly (no tools needed) simplify maintenance.

Quick disconnects on blower are time savers.

Picture focus is constant since high voltage is independent of sweep.

Time is saved by leather pouch tool kit, with all necessary tools, attached to side door of cabinet.

Quicker initial tube adjustment is made because there are less control adjustments.

Noise is held at a minimum because the amplifier corrects for poor beginning response of image orthicon load circuit. Bright, "easy-to-see" picture in the electronic viewfinder is framed exactly the same as the receiver picture.

Emergency tube warmup cuts outage time.

Clear, sharp picture video response up to 7 mc.

Time, money saved by having viewfinder easy to take off for tube replacement.

Long service without capacitor breakdown made possible by Pyranol capacitors used whenever possible.

MECHANICAL SPECIFICATIONS

Units:

Item		*Model Number*
Studio Camera (I.O. Tube shipped separately.)		4PC3Ac, 4PC3A2 or 4PC3B2
*Cover Assembly		ML-7771731-G1
*1 Lens Holder		ML-7771931-G1
*1 Friction Head		ML-7664545-G1
*1 Optical Viewfinder		ML-7771277 EBI 3122
4 Lenses	Ord. No.	Optical distance between camera Front Plate and RMA Chart
1—3-inch f2.3	M-7483834	57 inches
1—4-inch f2.3	M-7483835	78 inches
1—6-inch f2.7	M-7483836	120 inches
1—10-inch f3.7	M-7479250	200 inches
(other sizes on request)		
**1 Electronic Viewfinder		4TV20A1 for PC-3-A or 4TV20B1 for PC-3-B
Refer to Data Book E210.21 and EBI-3119		
1 Friction Head		P-7772414 or P7772494
(used with Electronic Viewfinder only and obtainable on separate order.)		

*Included in Model 4PC3A1 but not in Models 4PC3A2 or 4PC3B2.

**Order separately.

Dimensions: Type PC-3-B with Electronic Viewfinder

Height	16 inches
Width	12½ inches
Length	22 inches (less eye shade)
Weight	103 lbs. (less tilt head)

Mounting: Any standard pan and tilt head.

Operating Conditions: Camera operates properly up to 95% relative humidity with external ambient temperature of 40°C. Camera is equipped with special, ultra-quiet 10 CFM motor blower unit mounted on vibration isolating mountings to prevent microphonics.

Electrical Connections: Special 24 pin (3 coax) connector is provided for power control and coaxial circuits. Safety Provisions: All voltages in equipment over 400 V are suitably protected and marked, or interlocked to prevent accidental contact.

ELECTRICAL SPECIFICATIONS

Type of Circuit: Image orthicon tube circuit with associated horizontal sweep and blanking circuits. High voltage supply uses a separate oscillator and rectifier in a tightly shielded case. To account for different characteristics of different orthicons, screwdriver adjustment is available for varying the high voltage. A five stage video amplifier is used to amplify and cathode couple the signal to coaxial cable leading back to the channel amplifier rack. Note that this amplifier has response characteristics correcting the poor characteristics of the image orthicon load circuit to give a more nearly true picture.

Performance: Frequency response of amplifier $\pm\frac{1}{2}$ db at $6\frac{1}{2}$ mc. RMA geometric distortion does not exceed 2%.

Input:

Power:

	Camera Only	*Camera & Viewfinder*
115/120 volts AC, 50/60 cycles	0.55 amp	1.10 amp
+300 volts DC	110 ma	190 ma
+400 volts DC	100 ma	140 ma
−105 volts DC	4 ma	7 ma
−6 volts DC (centering)	0.4 amp	1.0 amp

Signals: Positive Blanking.
Negative horizontal driving.
Sawtooth vertical deflection.

Output:

Output signals: Picture video to electronic viewfinder 0.3 volt peak-to-peak minimum, black negative.
Output picture video 0.1 volts, peak-to-peak minimum, black negative. Signal is later clamped at line frequency in channel amplifier.

−500 volts to Camera Control Console desk for photo cathode control.

Internal Power Supplies: +1200 V to 1500 V filtered & regulated −400 V to −500 V filtered & regulated.

Control Voltages: Focus Current, Beam Control, Multiplier Focus, Beam Focus, Target Control, Photo Cathode Control, On Line Light, Preview Light, Telephone (talkback).

Controls and Adjustments:

1. Horizontal sweep linearity and amplitude (4 controls called LIN and SIZE)
2. Low frequency compensation in blanking circuit (called BLANKING)
3. Horizontal centering (HOR CENT)
4. Alignment (2 controls—ALIGN and no label)
5. Deceleration (DECEL) (G5)
6. Horizontal Shading (SHADING)
7. High Voltage Control (HI VOLTAGE)
8. High Voltage Switch (HV)
9. Image Accelerator (ACCEL) (G6)

Tube Complement: 11

5820/5826	1	6AS7	1
1B3/8016	1	6BG6G	1
6AK5	5	6J6	1
6AQ5	1		

One-man Dolly, Type PD-3-A

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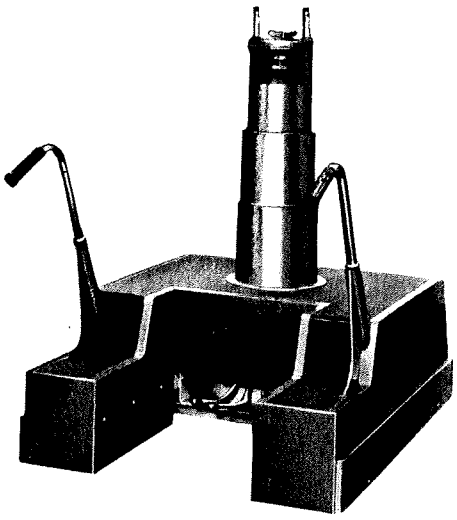

APPLICATION Provides smooth, professional, moving camera coverage for TV studio work.

INTERCHANGEABILITY Can be used to support any camera with standard pan and tilt head fitting.

COMPLIANCE

FEATURES Many different and interest-holding camera angles and effects are possible with the PD-3-A. Smooth vertical movement is made by a silent electro-hydraulic lift controlled by easy-to-operate foot pedals.

Smooth horizontal movement in any direction is provided by rubber covered, Timken tapered-roller bearing wheels.

Attractive, practical styling provides two platform levels from which the camera operator can work.

Only maintenance necessary is occasional lubrication.

Ease of operation assured by the adjustable dolly handles.

MECHANICAL SPECIFICATIONS

Units: Type number covers dolly only, does not include pan and tilt heads.

Mounting: Dolly rolls on 2 five-inch diameter rigid fork and 4 four-inch diameter, swivel-fork, rubber tired, Timken tapered-roller bearing casters. Can be turned about vertical axis to roll in any direction.

Dimensions:		
	Height	38–56 inches
	Depth	45½ inches
	Width	34¾ inches
	Weight	450 lbs.

Operating Conditions: Maximum ambient temperature 50° C, at 95% relative humidity.

Electrical Connections: Twist-tite two connector plugs into camera housing.

Safety Provisions: Heavy, abrasion-resistant power cord. Mechanism completely enclosed.

ELECTRICAL SPECIFICATIONS

Type of Circuit: 1/6 hp, 725 RPM, AC motor runs hydraulic elevator pedestal.

Performance: Rate of ascent 1.5 inches per second.
Rate of descent 0–1.5 inches per second.

Input: 115 volts AC, 60 cycles, 2.8 amps.

Output: None.

Controls and Adjustments:

(1) 2 pedals (one for each foot) for variable descent.
(2) 2 pedals (one for each foot) for ascent.
(3) Lowering speed may be adjusted by a regulating screw.

Tube Complement: None.

Two-man Dolly, Type PD-1-A

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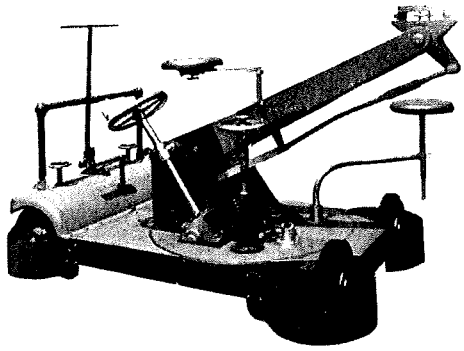

APPLICATION Provides smooth, professional, moving camera coverage for TV studio work.

INTERCHANGEABILITY Can be used to support any camera with standard pan and tilt head fitting.

COMPLIANCE

FEATURES Brake stops hold dolly in fixed location.

Easy operation of boom assured by balancing springs.

Quiet, smooth trucking provided by large, rubber-tired wheels.

Wheel skirts prevent running over cables.

Rear wheels can be manually steered to rotate 90°.

Unusual maneuverability is provided by a fifth wheel which can be lowered into place to provide sideslipping of dolly.

Convenient headphone outlet box placed on the dolly for best co-ordination and communication between operators.

MECHANICAL SPECIFICATIONS

Units: Two-man Dolly, Type PD-1-A, is a standard Fearless Panorama Camera Dolly with wheel skirts, headphone outlet box, and fifth wheel added to permit motion 90° to normal line of travel.

Mounting: Dolly rolls on four rubber-tired wheels with a fifth wheel which can be lowered to allow transverse movement of the camera.

Dimensions:

Height (of camera mounting surface)	13½–70 inches
Depth	68½ inches
Width	43 inches
Weight	790 lbs.

Operating Conditions: Maximum ambient temperature 50° C, at 95% relative humidity.

Electrical Connections: Standard phone jack and two leads to on-air light.

Safety Provisions: Shielded mechanism protects operators.

Controls and Adjustments:

(1) Hand crank wheel to turn boom clockwise or counterclockwise.

(2) Hand crank wheel to raise and lower boom.

(3) 2 hand crank wheels to lower brakestops.

(4) Crank to lower fifth wheel and turn front wheels 90°.

(5) Cart handle to move and steer dolly.