vr-400

gpl's new color video tape recorder

GPL TV SYSTEMS
EDUCATION & TRAINING PRODUCTS GROUP
THE SINGER CO.

why this format?

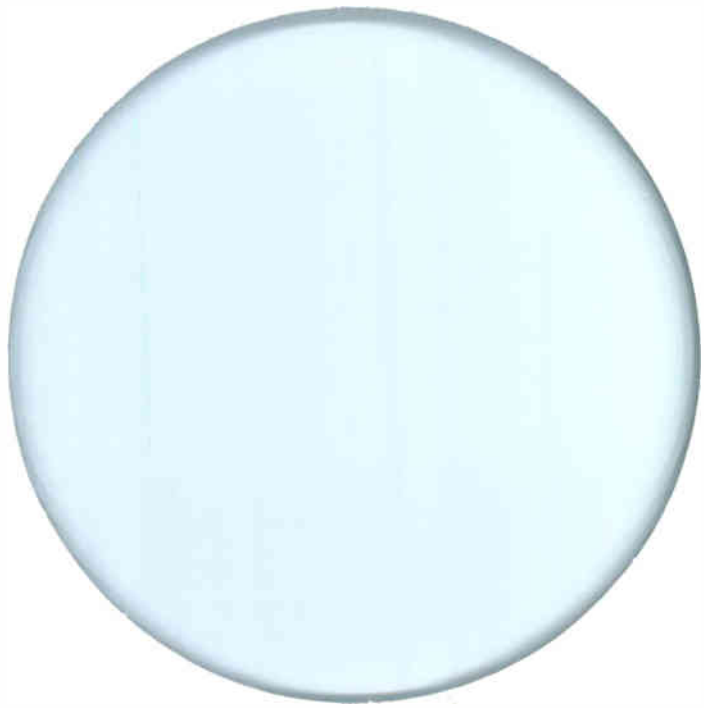
Still *another* VTR? Why? Isn't the field adequately covered with available equipment? What can a new one offer that the others don't?

An educated look around at what was currently available, and a careful examination of today's needs and tomorrow's requirements indicated that a newer, better, more versatile, moderately-priced video tape recorder was in great need throughout education and industry.

The VR-400 is the result of that examination...and the result of many years of experience in the field of video recording.

Basic design goals–such as black/white and color capability, ease of operation, maximum tape interchangeability, flexibility, and automation–became realities with this new precision video instrument.

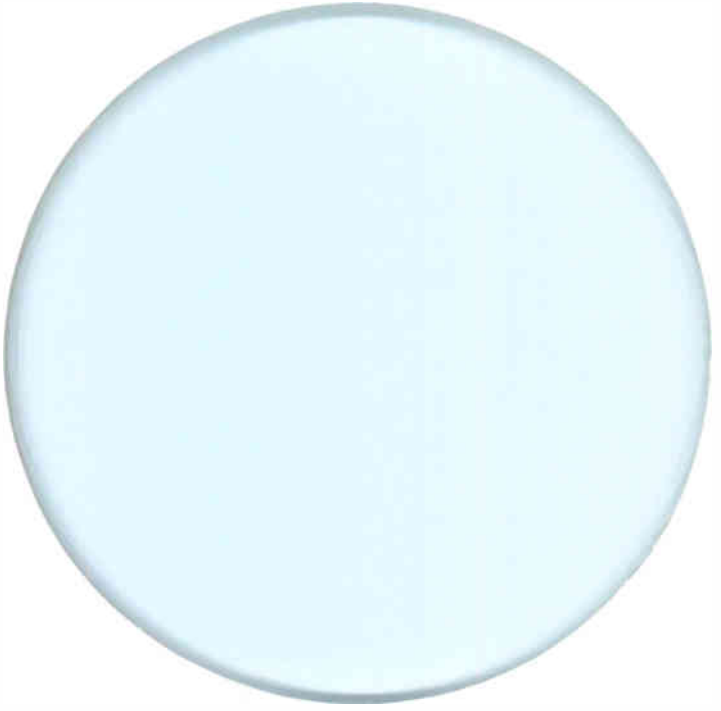
In short, the GPL VR-400 represents the current state-of-the-art in the growing field of moderately-priced, high-quality, video recorders.



The VR-400...described: The GPL VR-400 video tape recorder/reproducer is a professional, high-performance instrument offering top features at a modest cost. Actually, it is impossible to get the combination of features offered by the VR-400 at *any* cost.

The unique VR-400 helical-scan, 1″ tape, NTSC-type color system produces an extremely high quality color picture without the need for any additional color correction accessories. It's simple to use (thread it and push a button); Uses less tape (30% less) on a standard NAB 8″ reel; operates horizontally or vertically, and offers many new features and innovations. Each will be more fully described in succeeding pages.

applications



Because of its compact, portable design, this versatile, fully-transistorized VTR is ideally suited for scores of varied applications where closed-circuit television is used.

Education: For all levels–nursery through college–where demonstration, experimentation or observation are required. Excellent for teacher-training and for most remedial work such as speech training.

Management: Essential for assuring the same presentation to different groups at different times. Record important meetings, conventions, conferences. Ideal for personnel training and executive messages to employees.

Sales: Perfect for product demonstrations and presentations, case histories, sales training and simultaneous sales meetings in several different locations.

Surveillance: Use to record intruders during off-hours or when stores are normally closed.

Off-the-air and closed-circuit television: Essential for both commercial presentations and programming when preservation of material is necessary or desirable.

Advertising agencies: For presenting "live storyboards" for client screening.

Sports and arts: Wide use for athletic instruction and "scouting". Also ideal for music and drama training and casting.

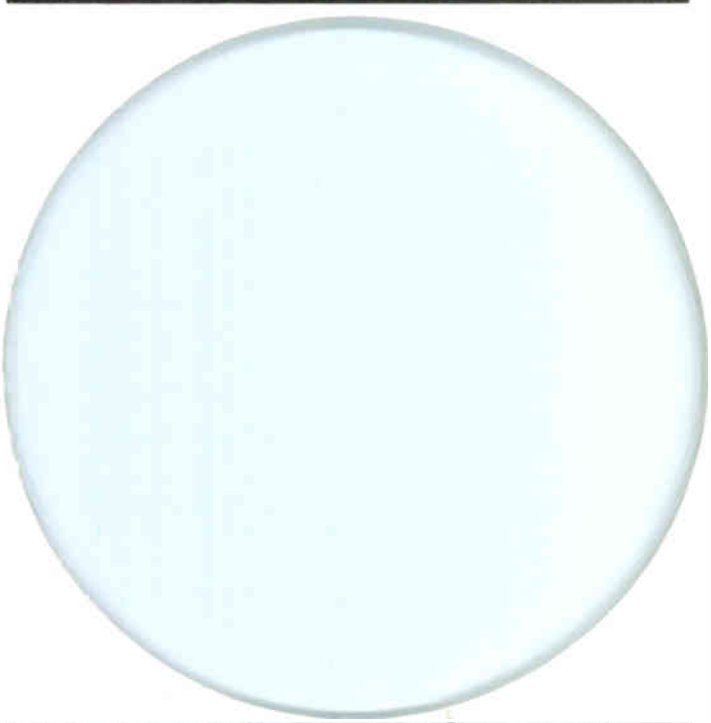
Manufacturing: Excellent for difficult inspection tasks, efficiency studies, safety and production training, security checks, intra and inter-plant communications, time-and-motion studies.

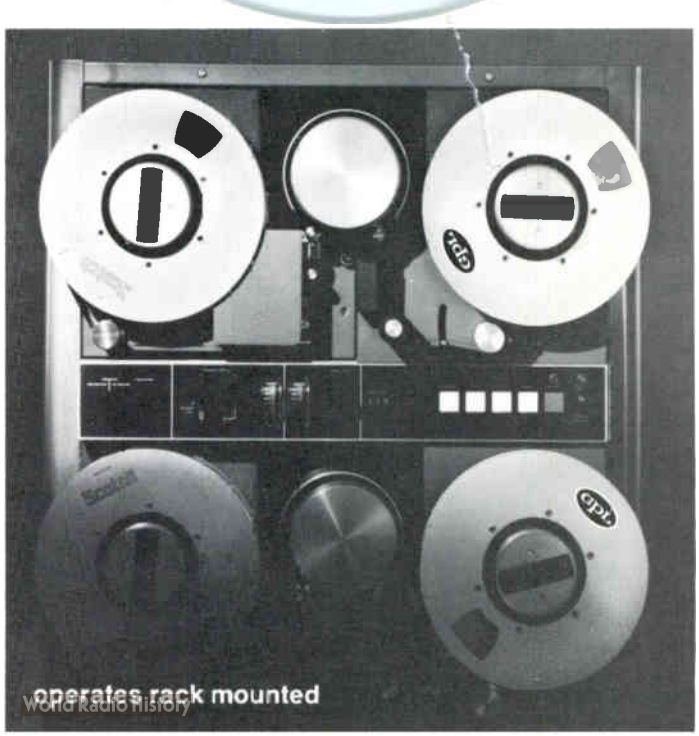
In addition, video tape has wide application in several other fields, such as: military, government, medicine, research and development, transportation, real estate, banking and others.

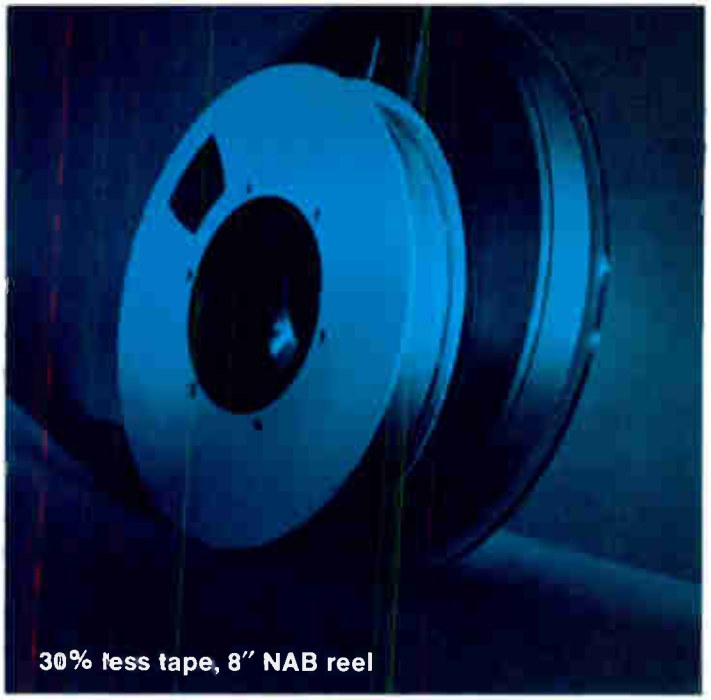
specifications

Resolution	Over 400 lines
Bandwidth	30 Hz to 3.5 MHz ±1 db
	30 Hz to 4.2 MHz $^{+1}_{-4}$ db
Signal-to-noise ratio	43 db peak-to-peak signal to rms noise.
Differential gain	Maximum deviation of 10 IRE units (10% to 90% APL).
Input level	0.5 to 2 volts PP composite.
Input signal	Any standard 60 field, monochrome or NTSC color signal. 75-ohm termination in recorder.
Outputs	Two: one for monochrome and one for color. Both are adjusted for 1 volt composite, positive going video, into 75-ohm line.
Tape speed	6.9 IPS.
Writing speed	720 IPS.
Operating positions	Horizontal or Upright.
Audio performance	
Number of channels	Two.
Bandwidth	Channel 1 80 Hz to 10 KHz ±4 db.
Bandwidth	Channel 2 250 Hz to 7 KHz ±4 db.
Signal-to-noise ratio	Channel 1 40 db. Channel 2 40 db (relative to 3% distortion at 400 Hz).
Interchannel crosstalk	−40 db minimum.
Flutter and wow	Less than 0.25% rms.
Inputs (both channels)	Microphone: 0.2 millivolts minimum, 200 ohms nominal. Line: −20 dbm to +16 dbm (+4 dbm nominal) 600 ohms balanced or unbalanced.
Outputs (both channels)	Adjusted for ±4 dbm output into 600-ohm terminated line. +20 dbm clipping level.
Size	19″ wide x 12¼″ high x 9⅝″ deep (uncased). Weighs 57 pounds.
Power requirements	110 to 130 volts. 60 Hz, 300 watts maximum. (Machines equipped for 230 V, 50 Hz available on special order).

just thread it, and push the button




operates rack mounted



30% less tape, 8" NAB reel

features

Full NTSC color capability: All monochrome machines will record NTSC color signals. Single plug-in circuit board instantly converts unit for NTSC color playback. Conversion may be accomplished by anyone in the field purchasing a plug-in circuit board.

High resolution: Patented pulse interval modulation signal system provides bandwidth exceeding 4.2 MHz resulting in a minimum of 400 lines of picture information.

Just thread it and push the button: Electrical push-button control of transport permits all tape motion functions to be remotely controlled. Advance "Alpha" helical-scan tape path configuration with precisely fixed tape guides eliminates "lost" picture information and allows easier threading.

Full electrical remote control: Electrical push-button control with interlocked logic circuit permits all tape functions to be remotely controlled. Tape is automatically released when stopped, thereby eliminating unnecessary wear. These features permit the VR-400 to be used in dial access applications.

90 second fast forward and rewind: Separate turntable motors for take-up and supply permit rapid fast forward, rewind and shuttling. Dynamic braking eliminates the possibility of tape damage. End of tape sensor activates stop circuit preventing tape spillage.

30% less tape, 8" NAB reel: Full one hour recording requires only 2150 feet of 1" tape operating at 6.9 IPS, an average saving of $15.00 per hour.

Operates rack mounted: VR-400 is the only recorder which can be rack mounted in 12 1/4" of vertical space. Maintenance is made easier through use of full-suspension, pull-out mounting slides.

60 second head replacement: Video head may be quickly replaced by anyone anywhere using the special tool that is stored under the scanner cover. The head automatically seats itself in the correct position. Advanced design ferrite head is guaranteed for 500 hours (or six months).

Audio cue track: Second audio channel is provided for secondary audio or dial access control signals.

Weighs only 52 pounds: Precision casting and state-of-the-art engineering techniques have produced a rugged, yet truly portable recorder. Dust-proof cover eliminates tape contamination possibility.

Machine-to-machine compatibility guaranteed: All tapes recorded on any VR-400 can be played back on any recorder using the 1" GPL format, including similar recorders marketed by R.C.A., Bell and Howell, and IVC. The widest guard band of any 1" recorder assures this maximum compatibility.

Stop-motion feature: All units are equipped with stop-motion as standard feature. Electronic editing and slow-motion are options.

award-winning design

vtr, cctv, and gpl

A need has been established for a new, latest state-of-the-art VTR. The GPL VR-400 answers the need of the market. What are GPL's credentials? Is GPL a "Johnny-come-lately" in the closed-circuit TV industry?

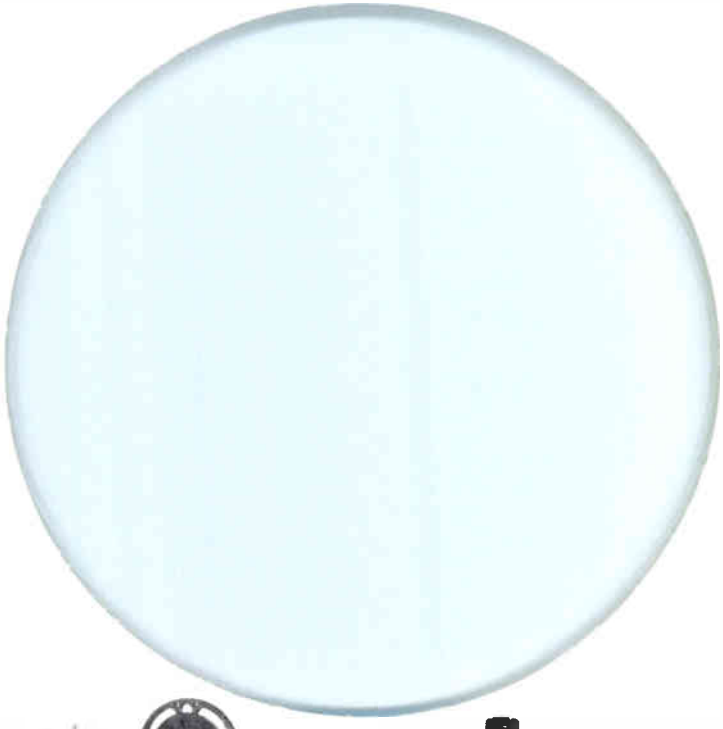
"GPL TV" has been a hallmark of quality throughout education, industry, business and government since 1945. The standards established by the founders have maintained an uncompromising position of excellence.

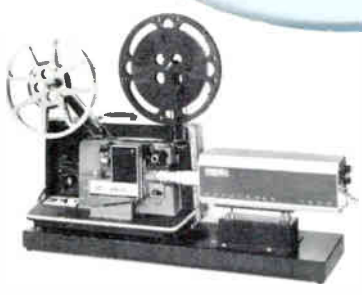
A list of GPL TV "firsts" would fill several pages.... dating back to the very start of video transmission. GPL was an initial supplier to the broadcast industry in the late forties. GPL was a pioneer in the development of vidicon equipment for the earliest closed-circuit and educational systems. GPL participated in the pioneer ETV installation–the Hagerstown Project.

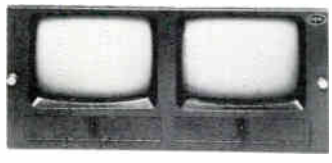
Later, GPL engineered the first high resolution TV system and, more recently introduced TVs first fully-modular, solid-state, miniaturized camera.

GPL cameras, monitors, film chains, ETV consoles, and other video systems, components and accessories are currently being used in literally hundreds of schools, industrial plants and businesses in every state in the country.

GPL field service representatives are located in over 45 cities covering the entire United States, Canada, and overseas. There's one a local phone call from you.







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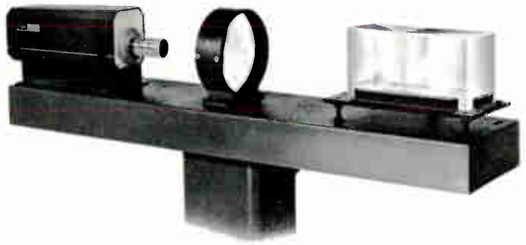
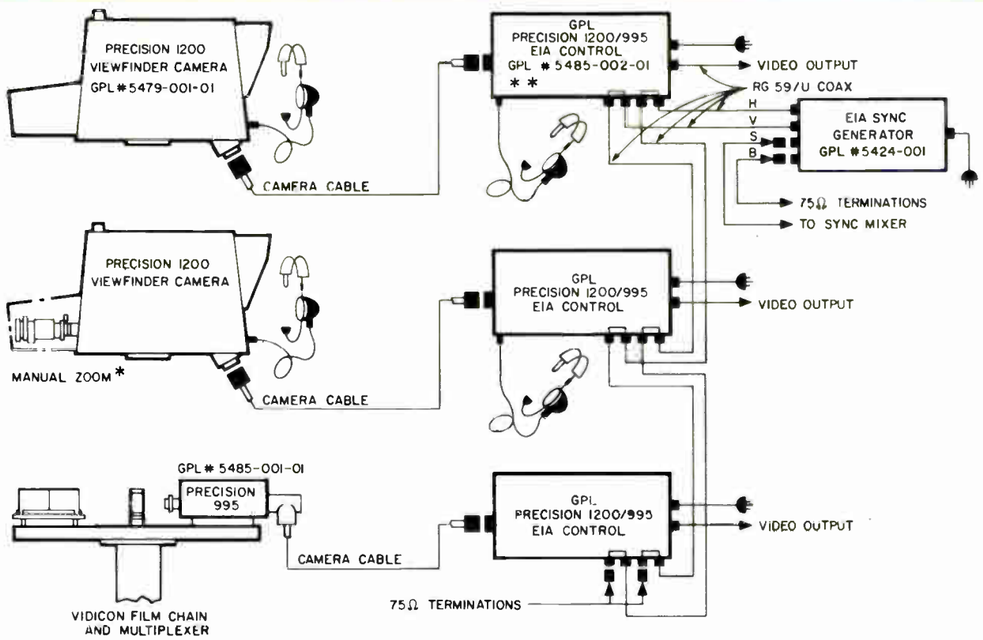


VIDICON FILM CHAIN AND MULTIPLEXER

TV 16 UNIPLEX FILM CHAIN

SYSTEM DIAGRAM



* ZOOM LENSES AVAILABLE FOR PRECISION 1200 CAMERA INCLUDE 4:1 f1.8 (25-100mm), 5:1 f2.5 (20-100mm), AND 10:1 f2.5 (15-150mm).

* * THE EIA CAMERA CONTROL IS NORMALLY SUPPLIED ON A 3 1/2" x 19" PANEL. THIS PANEL WILL ACCOMMODATE TWO CAMERA CONTROLS, GPL #5485-002-02

SPECIFY WHEN ORDERING.

ETV 1200

EDUCATIONAL TELEVISION SYSTEM

GPL

TELEVISION EQUIPMENT

ETV SYSTEMS

FEATURES

- Console provides complete control of two Studio Camera Chains, a film Chain Camera, and a VR-400 Video Tape Recorder.
- Unitized construction permits system arrangements to satisfy various control room configurations or expansion.
- System is fully solid state for maximum reliability.
- System conforms to EIA-RS170 Standards.
- Operation is simple – Controls are grouped to permit one man operation.
- Console contains all necessary equipment for professional programming, including: Switcher Fader, Special Effects Generator, Wave Form Monitor, Film Projector Control, and a Seven Input Audio Mixer.

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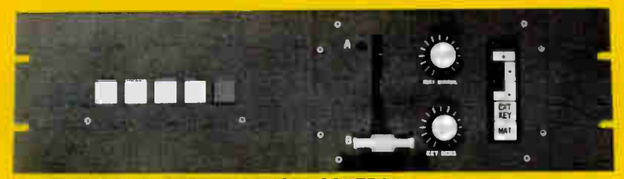
ETV 1200

EDUCATIONAL TELEVISION SYSTEM

DUAL PRECISION 1200/995 EIA CONTROL

SPECIAL EFFECTS INPUT SWITCHER



L. VIDEO TAPE RECORDER REMOTE CONTROL
R. SPECIAL EFFECTS CONTROL

SINGLE PRECISION 1200/995 EIA CONTROL

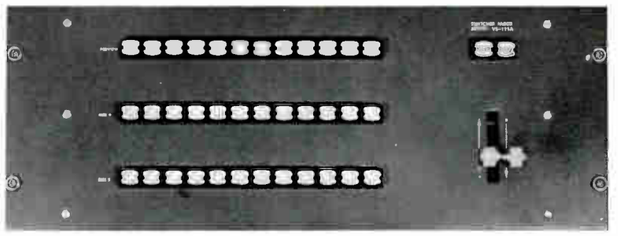
TV 16 UNIPLEX PROJECTOR CONTROL

MULTIPLEX PROJECTOR CONTROL

WAVEFORM MONITOR (HALF RACK)

CUE AMPLIFIER AND SPEAKER

7 INPUT AUDIO MIXER



SWITCHER/FADER WITH PREVIEW DECK

Five Transistorized Displays monitor the output of two Viewfinder Cameras, Film Camera, Preview Bus, and the program line.

PRECISION 950 EIA SYNC PULSE GENERATOR (INCORPORATED INSIDE CONSOLE)

SPECIAL EFFECTS GENERATOR (INCORPORATED INSIDE CONSOLE)

GPL PRECISION 990V

VIEWFINDER TV CAMERA

FOR CLOSED CIRCUIT TV STUDIO OR REMOTE PROGRAMMING IN EDUCATIONAL, MILITARY AND INDUSTRIAL TRAINING APPLICATIONS

GPL

TELEVISION EQUIPMENT

TV CAMERAS

FEATURES

- Complete solid-state, plug-in modular construction
- 850 lines horizontal resolution; 900 lines EIA version using separate mesh vidicon
- 55 db signal-to-noise ratio
- FET (Field Effect Transistor) input eliminates low frequency noise
- Essentially no change in video level from 25 to 10,000 foot candles
- Keyed clamp maintains precise black level
- Fully automatic, simple to operate
- Weighs only 19½ pounds
- Sync options include: random interlace crystal controlled, binary 2:1 interlace, H&V drives from external sync generator or EIA RS-170 operation from external sync generator
- Selectable bandwidth—optimized for video tape recording
- 5″ solid-state viewfinder with 450 line horizontal resolution
- Back focus control on rear of camera
- Tally light
- Rear control of zoom and focus with 4:1 or 10:1 zoom lens (optional)

DESCRIPTION

The GPL PRECISION 990V Viewfinder TV Camera is a self-contained, compact, high quality camera, moderately priced for education, military and industrial training applications. The PRECISION 990V is completely solid-state, using plug-in silicon transistors and micrologic circuits throughout. It's high performance include 900 line horizontal resolution, 55 db signal-to-noise ratio, and reproduction of 10 shades of gray.

The PRECISION 990V Viewfinder Camera is available for self-contained operation with random crystal controlled interlace, 2:1 interlace or H & V drives from an external sync generator. The camera is also available in a remotely controlled version for EIA RS-170 operation with H & V drives from an external EIA sync generator.

TECHNICAL SPECIFICATIONS

SYSTEM ..... 525, 625 lines/frame; 60 fields and 30 frames per second or 50 fields and 25 frames per second

ELECTRICAL

Input Power ..... 105-130 V AC, 50/60 Hz, 33 Watts

Sync Options ..... Random Interlace, Crystal Controlled
Internal 2:1 Interlace
H and V Drives from External Sync Generator
Internal 2:1 Interlace with optional H and V outputs for driving additional cameras
EIA RS-170 operation from external sync generator through remote 1200/995 EIA Control Panel

Video Bandwidth .... 10 MHz

Horizontal Resolution . 900 lines with separate mesh—8507A vidicon
850 lines with 9900 vidicon

Video Output ..... 1/1.4 V nominal, composite, video plus sync

Video Polarity ..... Black negative. Polarity reversal by internal connection

Signal-to-Noise Ratio .. 50 db for 10 MHz bandwidth
55 db/5 MHz bandwidth

Aperture Correction .. 0 to 6 db, adjustable—phase compensated

Automatic Light Compensation .... Automatic or manual control of vidicon target, switch selectable. Automatically compensates for variations in light level of 5.000:1. Less than 1db change in video level from 10,000 to 25 foot-candles

Sweep Linearity 2%

Sweep Geometry 3%

Solid-State Circuitry .. Silicon micrologic circuits and transistors used throughout

Gray Scale ..... Reproduces 10 shades of gray from standard EIA test chart

Keyed Clamp ..... Maintains precise black level

Sweep Loss Protection . Protects vidicon from damage in case of loss of either horizontal or vertical sweep

Vidicon ..... Supplied with GPL 9900 vidicon tube. Accepts any standard 1" electromagnetic vidicon tube (including separate mesh) without any modification

Lens ..... Accepts any standard 16 mm "C" mount fixed lens and 4:1 or 10:1 zoom lenses with rear zoom and focus control (optional)

CONTROLS

Camera ..... Power On switch, Target, and optical Back Focus control. Factory pre-set internal controls include Beam, electrical Focus, pedestal and gain

Viewfinder ..... Brightness, Horizontal Hold, Vertical Hold and Contrast

MECHANICAL

Size ..... 10⅞" high x 6 7/16" wide x 17⅝" long, excluding lens

Camera Mounting ... Standard ¼-20 mounting hole in base plate

Lens Mount ..... Accepts any standard 16 mm "C" mount lens

Weight ..... 19½ pounds

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TECHNICAL SPECIFICATIONS

SYSTEM ..... 525 lines, 60 fields, 30 frames or 625 lines, 50 fields, 25 frames with horizontal and vertical drive provided by EIA sync generator. It can be operated optionally from internal 2:1 industrial sync generator at either 525 or 675 lines, 60 fields, 30 frames.

ELECTRICAL

Horizontal Resolution .. 1000 lines with separate mesh—8507A vidicon
800 lines at 525 lines/frame—9900 vidicon
620 lines at 675 lines/frame—9900 vidicon

Video Bandwidth ..... 12 MHz

Viewfinder Resolution .. 600 lines horizontal in center.

Gamma Correction ..... 0.5 0.7, or 1.0 Switch selectable on Control Panel (optional)

Dynamic Range ..... 10 shades of gray on EIA Test Chart

Sweep Linearity 2%

Sweep Geometry 2%

Sweep Loss Protection ..... Solid state circuit provides automatic vidicon protection in case of either horizontal or vertical sweep failure.

Keyed Clamp ..... Maintains precise black level.

Video Output ..... 0.7 V nominal, noncomposite video. (1.0 V composite optional).

Video Polarity ..... Black negative. Polarity reversal by internal connection.

Signal-to-Noise Ratio .. 45 db for 12 MHz bandwidth. 50 db/ 6 MHz bandwidth.

Aperture Correction .... 0 to 6 db, adjustable

Automatic Light Compensation ..... Automatic or manual control of vidicon target, switch selectable. Automatically compensates for variations in light level of 5,000:1. Less than 1 db change in video level from 25 to 10,000 foot-candles.

Sweep Reversal ..... Horizontal and vertical switch selectable with automatic centering correction (optional).

Signal Inputs ..... Seperate horizontal and vertical drive pulses from industrial or EIA sync generators—negative 3.5 to 4.5 volts volts p-p into 75 ohms.

Power Requirements .... 105 to 130 volts ac, 50/60 cps, 80 watts

OPTICS ..... Camera supplied with the following optional lenses, all with rear lens focus control on rear panel and zoom controls on side of camera: 4X, 5X, and 10X zoom lenses.

CONTROLS

Camera ..... Power ON-OFF switch, beam, electrical focus, target, auto-target switch, pedestal, gain, local-remote switch, tally light, zoom lens control. Also rear panel control for camera back focus and zoom lens focus.

Viewfinder ..... Power ON-OFF switch, brightness, contrast. H. hold, V. hold, and height are screwdriver adjusted.

Remote Camera Control Panel ..... Power ON-OFF switch, beam, target, auto-target switch, electrical focus, pedestal, gain, tally light, split intercom jack, automatic black level compensation, and (gamma selector and video polarity switch, optional).

MECHANICAL

Camera Mounting ..... One ⅜-16 and one ¼-20 tapped holes in camera base.

Finish ..... Viewfinder lens hood, monitor hood and top panel are black vinyl with grain finish. Upper side panels are coated in blue epoxy enamel. Lower side panels and trim are satin finished.

Weights ..... Camera—42 lbs. without lens. Camera Control Panel 4½ lbs.

REQUIRED BUT NOT INCLUDED

Vidicon ..... 8507A, 7735B, or 9900

Zoom Lens ..... 4:1 f1.8—25 to 100 mm
5:1 f2.5—20 to 100 mm
10:1 f2.5—15 to 150 mm

Power/Video Cable Assy. .. For self-contained operation.

2:1 Interlace Module ..... For self-contained operation.

REQUIRED FOR REMOTE OPERATION BUT NOT INCLUDED

Camera Control Panel ..... Single camera control—3½" x 19" rack panel. Dual Camera Control on single 3½" x 19" rack panel (optional).

Camera Cable ..... GPL #5447-066—(specify length).

Camera Cable Connectors ..... Standard broadcast type LK (24 conductor)

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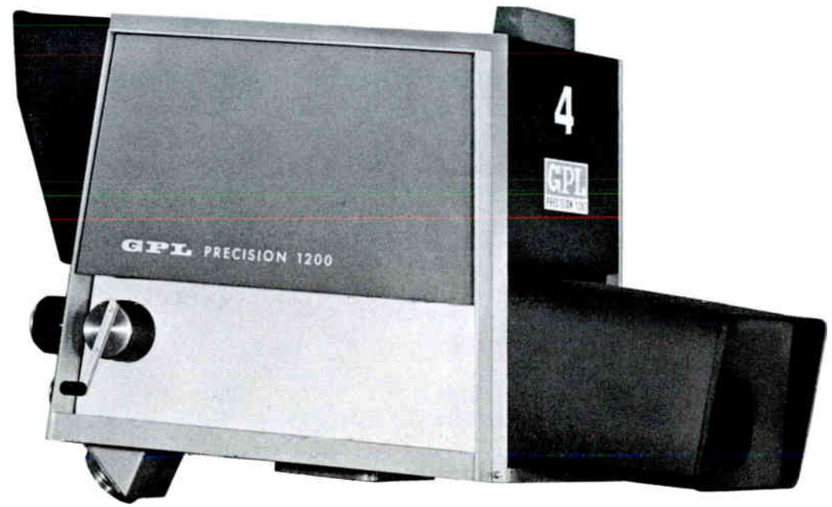
GPL PRECISION 1200

VIEWFINDER TV CAMERA

FOR OPEN OR CLOSED CIRCUIT TV PROGRAMMING IN EDUCATIONAL, COMMERCIAL, BROADCAST OR MILITARY APPLICATIONS.

GPL
TELEVISION EQUIPMENT



FEATURES

- Completely solid-state, plug-in modular construction
- Superior Resolution—1000 lines horizontal resolution with 8507A Vidicon, 900 lines horizontal resolution with 7735B Vidicon
- Provides full EIA RS-170 output when driven by an EIA sync generator
- 50 db signal-to-noise ratio
- MOSFET (Field Effect Transistor) input eliminates low frequency noise
- Essentially no change in video level from 25 to 10,000 foot-candles
- Automatic black level compensation
- Choice of built-in integral zoom lenses—built-in camera back focus control
- Solid-state 9" American-made viewfinder monitor
- Keyed clamp maintains precise black level
- Sync options include: EIA-RS-170 external H and V drive or self-contained 2:1 interlace
- Solid-state intercom amplifier with adjustable gain
- Easy access to all modules—plug-in transistors
- Camera controls and accessories may be operated remotely
- Selectable bandwidth-optimized for video tape recording

DESCRIPTION

CAMERA The GPL Precision 1200 is a high quality viewfinder TV camera that is moderately priced for a broad range of broadcast, educational, military and industrial training applications. One of several latest state-of-the-art camera systems by GPL, the Precision 1200 has silicon transistors and micrologic circuits throughout. Its high performance ratings include 1000 lines horizontal resolution, signal-to-noise ratio of 50 db and reproduction of 10 shades of gray on a standard EIA Test Chart. Back focus, optical focus and side operated zoom control are conveniently located to facilitate operation and permit smooth, professional programming.

Operation is simple. Just turn ON the Precision 1200 and commence programming. It automatically compensates for variable light levels, even when the scene illumination varies up to 5000 to 1. Manual control of target voltage is available at the flip of a switch.

Other operator controls include beam, electrical focus, pedestal, gain, zoom focus, back focus, and a local-remote switch which transfers control from the camera to the Remote Control Panel. Also included are dual, split intercom-program jacks, a tally indicator light and a top mounted tally light.

The 1200 camera is available for many modes of operation. It may be operated as a driven camera with a remote control panel accepting H and V drives from either an EIA or industrial external sync generator. It may be operated as a self-contained camera by incorporating a plug-in 2:1 interlace module and a Power/Video cable assembly. A switch is provided internal to the camera which permits switching between self-contained 2:1 interlace operation and external EIA-RS-170 H and V drives. This feature allows the camera to be removed from the studio and operated independently for remote taping and other programming. Available as options are H and V sweep reversal switches with automatic centering correction.

VIEWFINDER

A new solid-state 9″ viewfinder is incorporated in the camera. The big 9″ display makes optical focusing easier, eliminates squinting, resulting in less operator fatigue. Monitor controls include On-Off-Brightness, Contrast and screwdriver controls for H hold, V hold, and V size. Horizontal resolution is 600 lines in the center of the picture area. The aluminized picture tube has a clear bonded safety glass shield.

REMOTE CONTROL PANEL

A remote Precision 1200/995 EIA Control is available for mounting in a control console or standard 19″ relay rack. Control functions include power On-Off switch, beam, target, electrical focus, pedestal and gain. Also included is a tally indicator light and dual intercom-program jacks. Available as options are a video polarity reversal switch and a variable gamma control for 0.5, 0.7, 1.0 correction.

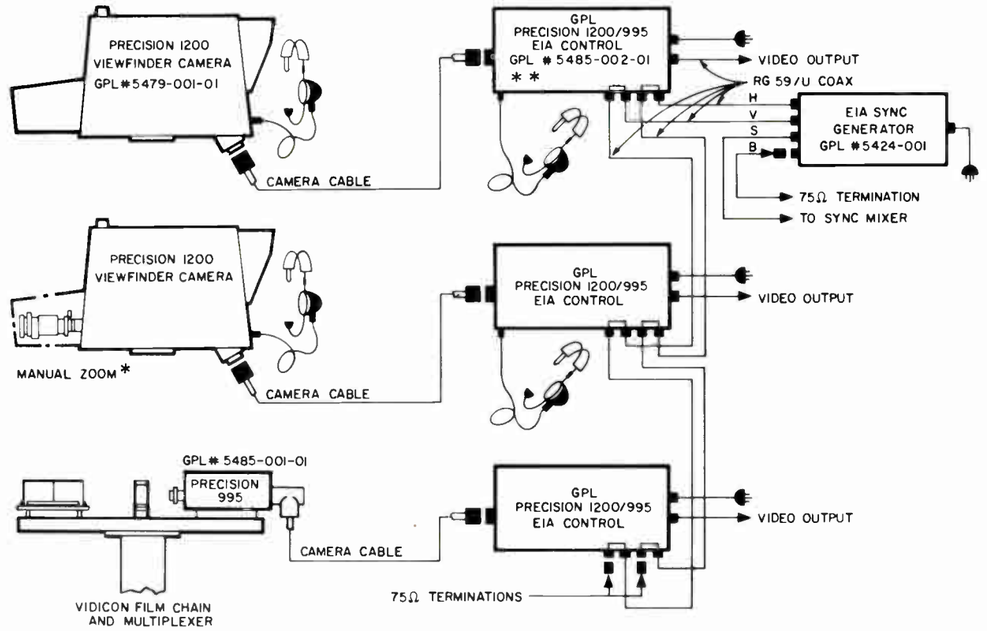
A dual Precision 1200/995 EIA Control on a single 3½″x19″ panel is also available for controlling two 1200 cameras or one 1200 and a 995 film camera.

Incorporated in the control panel are solid-state pulse isolation amplifiers permitting loop-through of external EIA signals. Also included is circuitry which provides automatic black level compensation.

ACCESSORIES

Building block design simplifies expansion from a single portable camera to a complete multiple camera studio installation. System accessory items include video tape recorders, film cameras, multiplexers, waveform monitors, sync generators, video switcher-faders, distribution amplifiers, 8″ to 25″ display monitors and large screen auditorium TV projectors. Camera Control Consoles are available as stock items or may be custom designed to meet your specific requirements.

SYSTEM DIAGRAM



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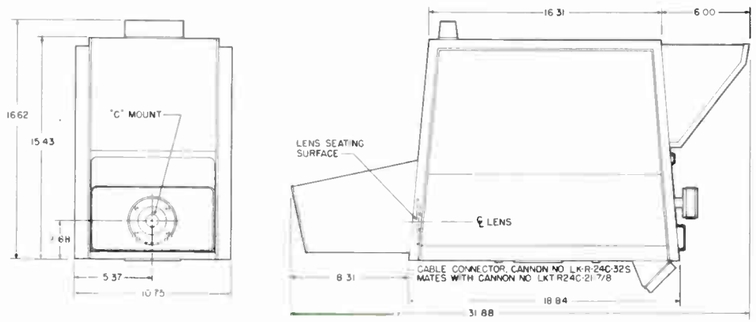
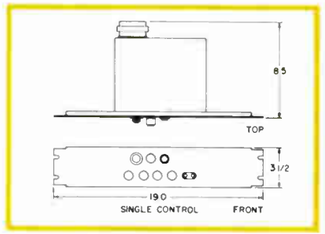
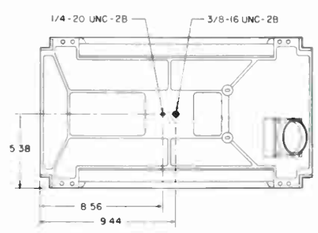
* * THE EIA CAMERA CONTROL IS NORMALLY SUPPLIED ON A 3 1/2" x 19" PANEL. THIS PANEL WILL ACCOMMODATE TWO CAMERA CONTROLS, GPL#5485-002-02 *SPECIFY WHEN ORDERING.*

DIMENSIONAL DRAWINGS

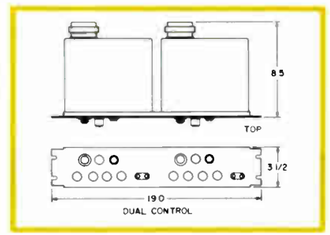




CAMERA CONTROL PANEL



VIEWFINDER CAMERA



CAMERA CONTROL PANEL

GPL PRECISION 990 TV CAMERA

MODEL PRECISION 990

TELEVISION EQUIPMENT

TV CAMERAS

FEATURES

Self-contained, solid-state TV camera for Security, Industrial and Educational applications. Maximum reliability at a moderate price. Designed for continuous duty under rugged conditions.

- FET (Field Effects Transistor) input—*eliminates* low frequency noise. First American-made camera with this innovation.
- 55 db signal-to-noise ratio.
- Minimum 850 lines horizontal resolution; Optional 900 lines horizontal resolution.
- No change in video level from 10,000 to 25 foot-candles.
- Selectable bandwidth – optimized for video tape recording.
- Plug-in transistors and printed circuit boards.
- Multiple scan-rate capability.
- Fully automatic, lightweight and simple to operate. Rear controls include on-off switch, target and a back focus control.
- All controls and accessories may be remotely operated.
- Ideal for unattended installations.
- Keyed clamp maintains precise black level.
- Sync options include random interlace, or binary 2:1 interlace with optional horizontal and vertical outputs for driving additional cameras.
- Unique packaging design allows easy access.

DESCRIPTION

The GPL Precision 990 camera answers the need for a high quality television system at a moderate price. Designed for Security, Industrial and Educational applications, the Precision 990 has solid-state construction and will provide exceptional performance in the most demanding environment. It is the newest in a series of latest state-of-the-art Precision cameras by GPL that can be tailored to meet specific requirements.

Of modular construction, with silicon transistors and microelectronic circuits throughout, the Precision 990 weighs only 11 lbs. and measures a compact 5⅜" high, 5⅜" wide and 13⅛" long. Readily accessible at the rear of the camera is an ON-OFF switch and a simple adjusting knob for automatic or manual TARGET control and a BACK FOCUS control which moves the vidicon, yoke, and focus coil assembly with respect to the lens. This control simplifies lens calibration and provides greater flexibility in the use of both standard and zoom type lenses. Factory pre-set internal controls include: BEAM, FOCUS, PEDESTAL and GAIN. The camera operation can be remotely controlled.

The Precision 990 accepts any standard 16mm "C" mount lens. An automatic target control circuit compensates for light level changes of 5000:1, which makes the camera ideal for unattended installations where scene illumination varies over a wide range.

Use of a 10 MHz video bandwidth plus excellent deflection components enables a horizontal resolution of better than 850 lines. A selectable bandwidth contributes to improved signal-to-noise ratio for higher quality video tape recording. A keyed clamp maintains a precise black level and thus allows the reproduction of 10 shades of gray from standard EIA test chart.

The camera can function with any standard 1" electromagnetic vidicon tube, including separate mesh. Among major options of the Precision 990 are: interlace binary sync generator module, lenses of all types, pan-and-tilt units, environmental housing, and TV displays.

TECHNICAL SPECIFICATIONS

ELECTRICAL

Input Power ..... 105-130 V AC, 50/60 Hz, 18 Watts (400 Hz – Optional)

Scanning Standards .... 525, 625, 675 lines/frame; 60 fields and 30 frames per second or 50 fields and 25 frames per second

Sync Options ..... Random Interlace, Crystal Controlled
Internal 2:1 Interlace
Horizontal and Vertical Drive from External EIA Sync Generator
Internal 2:1 Interlace with optional Horizontal and Vertical outputs for driving additional cameras

Video Bandwidth ..... 10 MHz

Horizontal Resolution .. 900 lines with separate mesh—8507A vidicon
850 lines at 525 lines/frame 9900 vidicon
650 lines at 675 lines/frame 9900 vidicon

Video Output ..... 1/1.4 V nominal, composite, video plus sync

Video Polarity ..... Black negative. Polarity reversal by internal connection

Signal-to-Noise Ratio ... 50 db for 10 MHz bandwidth and vidicon signal current of 1.0 microampere
55 db / 5 MHz bandwidth and vidicon signal current of 1.0 microampere

Aperture Correction ..... 0 to 6 db, adjustable

Automatic Light Compensation ..... Automatic or manual control of vidicon target, switch selectable. Automatically compensates for variations in light level of 5,000:1. Less than 1db change in video level from 10,000 to 25 foot-candles

Sweep Linearity 2%

Sweep Geometry 3%

Solid-State Circuitry .... Silicon microelectronic circuits and transistors used throughout

Gray Scale ..... Reproduces 10 shades of gray from standard EIA test chart

Keyed Clamp ..... Maintains precise black level

Sweep Loss Protection .. Protects vidicon from damage in case of loss of either horizontal or vertical sweep

Vidicon ..... Supplied with GPL 9900 vidicon tube. Accepts any standard 1" electromagnetic vidicon tube (including separate mesh) without any modification

ENVIRONMENTAL

Ambient Temperature ... –20°C to +60°C
–40°C to +70°C, reduced performance

Ambient Humidity 95%

Ambient Noise ..... Up to 135 db – 175 db in suitable enclosure

Altitude ..... 20,000 feet

MECHANICAL

Size ..... 5⅜" high x 5⅜" wide x 13⅛" long, excluding lens

Camera Mounting ..... Standard ¼-20 mounting hole in base plate

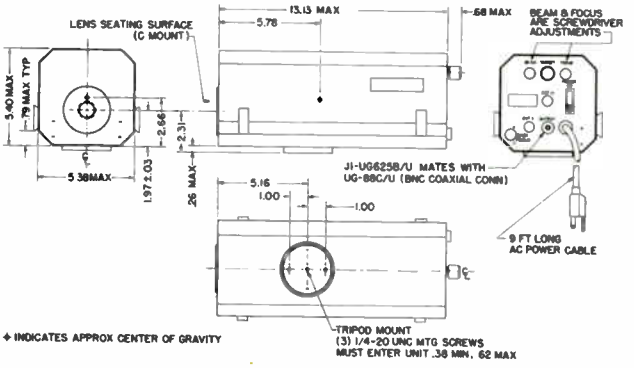
Lens Mount ..... Accepts any standard 16 mm "C" mount lens. Adjustable for optimizing optical focus

Weight ..... 11 pounds

ACCESSORIES

Pan-and-Tilt Units • Interlace Binary Sync Generator Module • Lenses of all types, including Zoom Models • Environmental Housings • TV Displays • Remote Control Panel (Optional)

DIMENSIONAL DRAWING



GPL DIVISION

GENERAL PRECISION SYSTEMS INC.

KEARFOTT GROUP

PLEASANTVILLE, NEW YORK 10570 Tel.: 914 769-5000 Cable: PRELAB TWX: 710-572-2194

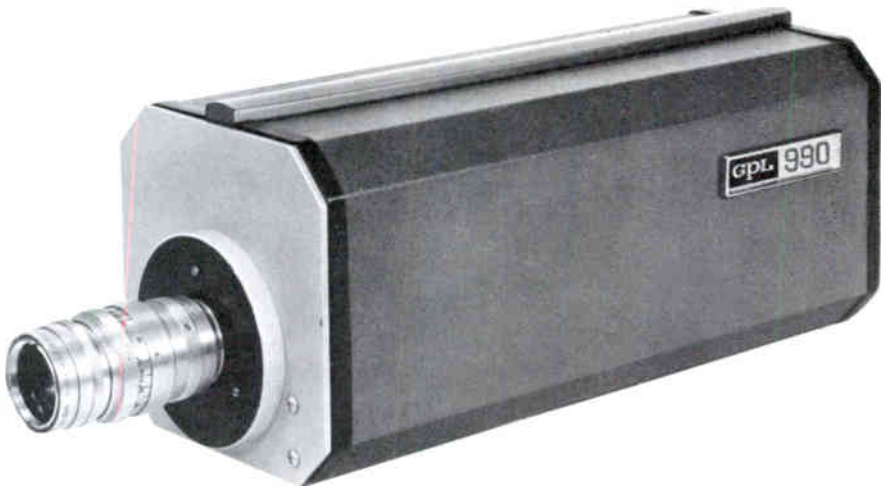
GPL PRECISION 990 TV CAMERA

MODEL PRECISION 990

GPL

TELEVISION EQUIPMENT

TV CAMERAS



FEATURES

Self-contained, solid-state TV camera for Security, Industrial and Educational applications. Maximum reliability at a moderate price. Designed for continuous duty under rugged conditions.

FET (Field Effects Transistor) input—*eliminates* low frequency noise. First American-made camera with this innovation.

55 db signal-to-noise ratio.

Minimum 800 lines horizontal resolution; Optional 900 lines horizontal resolution.

No change in video level from 10,000 to 25 foot-candles.

Selectable bandwidth — optimized for video tape recording.

Plug-in transistors and printed circuit boards.

Multiple scan-rate capability.

Fully automatic, lightweight and simple to operate. Rear controls include on-off switch & target.

All controls and accessories may be remotely operated.

Ideal for unattended installations.

Keyed clamp maintains precise black level.

Sync options include random interlace, or binary 2:1 interlace with optional horizontal and vertical outputs for driving additional cameras.

External adjustment for optical focus.

Unique packaging design allows easy access.

DESCRIPTION

The GPL Precision 990 camera answers the need for a high quality television system at a moderate price. Designed for Security, Industrial and Educational applications, the Precision 990 has solid-state construction and will provide exceptional performance in the most demanding environment. It is the newest in a series of latest state-of-the-art Precision cameras by GPL that can be tailored to meet specific requirements.

Of modular construction, with silicon transistors and microelectronic circuits throughout, the Precision 990 weighs only 11 lbs. and measures a compact 5¼″ high, 5¼″ wide and 12¾″ long. Readily accessible at the rear of the camera is an ON-OFF switch and a simple adjusting knob for automatic or manual TARGET control. Factory pre-set internal controls include: BEAM, FOCUS, PEDESTAL and GAIN. The camera operation can be remotely controlled.

The Precision 990 accepts any standard 16mm "C" mount lens. An automatic target control circuit compensates for light level changes of 5000:1, which makes the camera ideal for unattended installations where scene illumination varies over a wide range.

Use of a 10 MHz video bandwidth plus excellent deflection components enables a horizontal resolution of better than 800 lines. A selectable bandwidth contributes to improved signal-to-noise ratio for higher quality video tape recording. A keyed clamp maintains a precise black level and thus allows the reproduction of 10 shades of gray from standard EIA test chart.

The camera can function with any standard 1" electromagnetic vidicon tube, including separate mesh. Among major options of the Precision 990 are: remote focus kit, interlace binary sync generator module, EIA RS-170 sync adapter, lenses of all types, pan-and-tilt units, environmental housing, and TV displays.

TECHNICAL SPECIFICATIONS

ELECTRICAL

Input Power ..... 105-130 V AC, 50/60 Hz, 18 Watts (400 Hz – Optional)

Scanning Standards .... 525, 625, 675 lines/frame; 60 fields and 30 frames per second or 50 fields and 25 frames per second

Sync Options ..... Random Interlace, Crystal Controlled
Internal 2:1 Interlace
Horizontal and Vertical Drive from External EIA Sync Generator
Internal 2:1 Interlace with optional Horizontal and Vertical outputs for driving additional cameras

Video Bandwidth ..... 10 MHz

Horizontal Resolution .. 800 lines at 525 lines/frame 9900 vidicon
650 lines at 675 lines/ frame 9900 vidicon
900 lines with separate mesh – 8507A vidicon

Video Output ..... 1/1.4 V nominal, composite, video plus sync

Video Polarity ..... Black negative. Polarity reversal by internal connection

Signal-to-Noise Ratio ... 50 db for 10 MHz bandwidth and vidicon signal current of 1.0 microampere
55 db / 5 MHz bandwidth and vidicon signal current of 1.0 microampere

Aperture Correction ..... 0 to 6 db, adjustable

Automatic Light Compensation ..... Automatic or manual control of vidicon target, switch selectable. Automatically compensates for variations in light level of 5,000:1. Less than 1db change in video level from 10,000 to 25 foot-candles

Sweep Linearity 2%

Sweep Geometry 3%

Solid-State Circuitry .... Silicon microelectronic circuits and transistors used throughout

Gray Scale ..... Reproduces 10 shades of gray from standard EIA test chart

Keyed Clamp ..... Maintains precise black level

Sweep Loss Protection .. Protects vidicon from damage in case of loss of either horizontal or vertical sweep

Vidicon ..... Supplied with GPL 9900 vidicon tube. Accepts any standard 1" electromagnetic vidicon tube (including separate mesh) without any modification

ENVIRONMENTAL

Ambient Temperature ... –20°C to +60°C
–40°C to +70°C, reduced performance

Ambient Humidity 95%

Ambient Noise ..... Up to 135 db – 175 db in suitable enclosure

Altitude ..... 20,000 feet

MECHANICAL

Size ..... 5¼" high x 5¼" wide x 12¾" long, excluding lens

Camera Mounting ..... Standard ¼-20 mounting hole in base plate

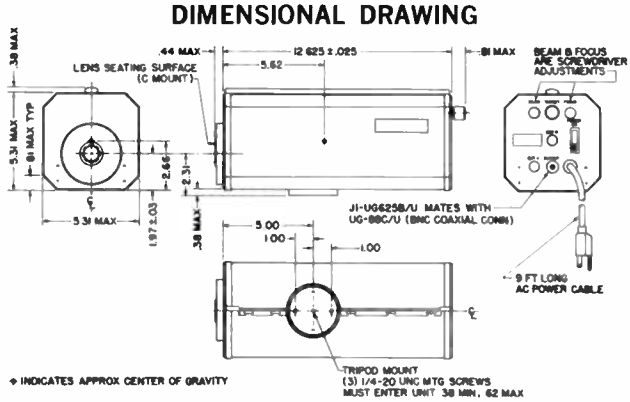
Lens Mount ..... Accepts any standard 16 mm "C" mount lens. Adjustable for optimizing optical focus

Weight ..... 11 pounds

ACCESSORIES

Remote Focus Kit • Pan-and-Tilt Units
Interlace Binary Sync Generator Module
Lenses of all types, including Zoom Models
Environmental Housings • TV Displays
Remote Control Panel (Optional)

DIMENSIONAL DRAWING



GENERAL PRECISION SYSTEMS INC.

GPL DIVISION

PLEASANTVILLE, NEW YORK 10570 Tel.: 914 769-5000 Cable: PRELAB TWX: 710-572-2194
General Precision Systems Inc., is a Subsidiary of General Precision Equipment Corporation.

TELEVISION EQUIPMENT

TV CAMERAS

TECHNICAL SPECIFICATIONS

SYSTEM ..... 525, 625 lines/frame; 60 fields and 30 frames per second or 50 fields and 25 frames per second

ELECTRICAL

Input Power ..... 105-130 V AC, 50/60 Hz, 22 Watts (400 Hz—Optional)

Video Bandwidth .... 6 or 12 MHz

Horizontal Resolution . 1000 lines with separate mesh—8507A vidicon
850 lines with 9900 vidicon

Signal Inputs ..... Separate horizontal and vertical drive pulses from industrial or EIA sync generators—negative 3.5 to 4.5 volts p-p into 75 ohms.

Video Output ..... 1/1.4 V nominal, composite, video plus sync

Video Polarity ..... Black negative. Polarity reversal by internal connection, or remote relay controlled (optional)

Signal-to-Noise Ratio . 45 db for 12 MHz bandwidth
50 db/6 MHz bandwidth

Aperture Correction .. 0 to 6 db, adjustable—phase corrected

Automatic Light Compensation .... Automatic or manual control of vidicon target, switch selectable. Automatically compensates for variations in light level of 5,000:1. Less than 1db change in video level from 10,000 to 25 foot-candles

Sweep Linearity 2%

Sweep Geometry 2%

Solid-State Circuitry .. Silicon micrologic circuits and plug-in transistors used throughout

Gray Scale ..... Reproduces 10 shades of gray from standard EIA test chart

Gamma Correction ... 0.5, 0.7 or 1.0 switch selectable (optional)

Keyed Clamp ..... Maintains precise black level

Sweep Loss Protection . Protects vidicon from damage in case of loss of either horizontal or vertical sweep

Sweep Reversal ..... H & V sweep reversal switches with automatic centering correction (optional)

MECHANICAL

Camera Mounting .... Standard ¼-20 mounting hole in base plate

Lens Mount ..... Accepts any standard 16 mm "C" mounts lens

Weight ..... 11 pounds

REQUIRED BUT NOT INCLUDED

Vidicon ..... 8507A, 7735B, or 9900

Single or Dual 1200/995 EIA Control Panel

Camera Cable

Lens ..... 16 mm "C" mount

SINGER
EDUCATION & TRAINING PRODUCTS

GPL TELEVISION DIVISION
PLEASANTVILLE, NEW YORK 10570 Tel.: 914 769-5000 Cable: PRELAB TWX: 710-572-2194

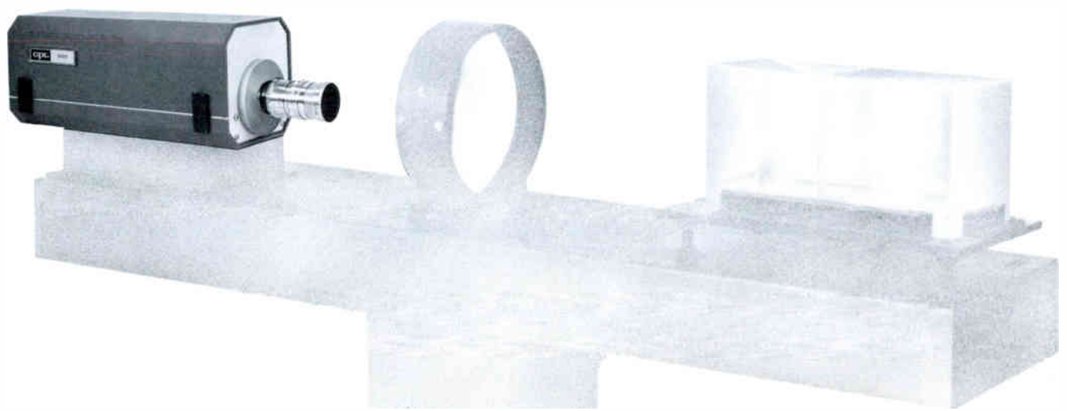
GPL PRECISION 995

FILM CHAIN CAMERA

GPL

TELEVISION EQUIPMENT

TV CAMERAS



The GPL Precision 995 Film Chain Camera represents the latest state-of-the-art in solid-state camera design. The camera provides the highest quality in reproduction of 16 and 35 mm film, 2"x2" slides and 35 mm film strips.

FEATURES

- Completely solid-state plug-in modular construction
- Superior horizontal resolution—up to 1000 lines
- 12 MHz video bandwidth
- 50 db signal-to-noise ratio
- Automatic light compensation—5000 to 1
- Plug-in silicon transistors used throughout
- Meets broadcast requirements and EIA RS-170 standards
- H & V sweep reversal switches with automatic centering correction (optional)
- MOSFET (Field Effect Transistor) input eliminates low frequency noise
- Back focus control on rear of camera
- Adjustable gamma correction, 0.5-0.7 or 1.0 (optional)
- Keyed clamp maintains precise black level
- Video polarity reversal remotely controlled (optional)
- Selectable bandwidth 6 or 12 MHz—optimized for video taping recording
- Dual or single remote control panels available
- Ideal for non-viewfinder studio applications
- Automatic black level compensation

DESCRIPTION

CAMERA The GPL Precision 995 Film Chain Camera is a broadcast quality TV Camera moderately priced for application in the broadcast, education, military and industrial training fields. The latest state-of-the-art cameras, the GPL Precision 995 has silicon transistors and micrologic circuits throughout. Video engineers will appreciate the many technical features of the Precision 995 Film Chain Camera including 1000-line horizontal resolution, signal-to-noise ratio of 50 db and reproduction of 10 shades of gray on a standard EIA Test Chart. Other features include sweep-loss protection for the vidicon, adjustable and phase compensated aperture correction, automatic light compensation, adjustable gamma correction and back focus control. The Precision 995 Camera, remotely controlled, is ideal for use as a fixed camera in the studio or classroom for pick-up from microscopes, viewing charts and viewgraph slides and close-in shots of experiments. Sweep reversal switches and centering controls (optional) simplify the transition from film chain to other uses.

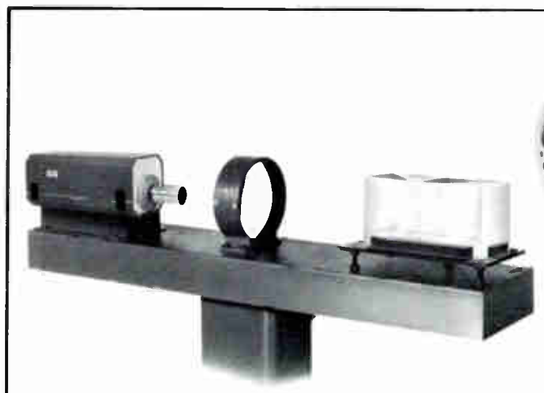
REMOTE CONTROL PANEL A remote Precision 1200/995 EIA Control is available for mounting in a control console or standard 19″ relay rack. Control functions include power On-Off switch, beam, target, electrical focus, pedestal and gain. Also included is a tally indicator light. Available as options are a video polarity reversal switch and a selectable gamma control for 0.5, 0.7, 1.0 correction.

A dual Precision 1200/995 EIA Control on a single 3½″ x 19″ panel is also available for controlling two Precision 1200 Viewfinder Cameras or one Precision 1200 and one Precision 995 Film Chain Camera.

Incorporated in the control panel are solid-state pulse isolation amplifiers permitting loop-through of external EIA signals. Both single and dual panels include the circuitry which provides adjustable automatic black level compensation.

Single Camera Control Panel

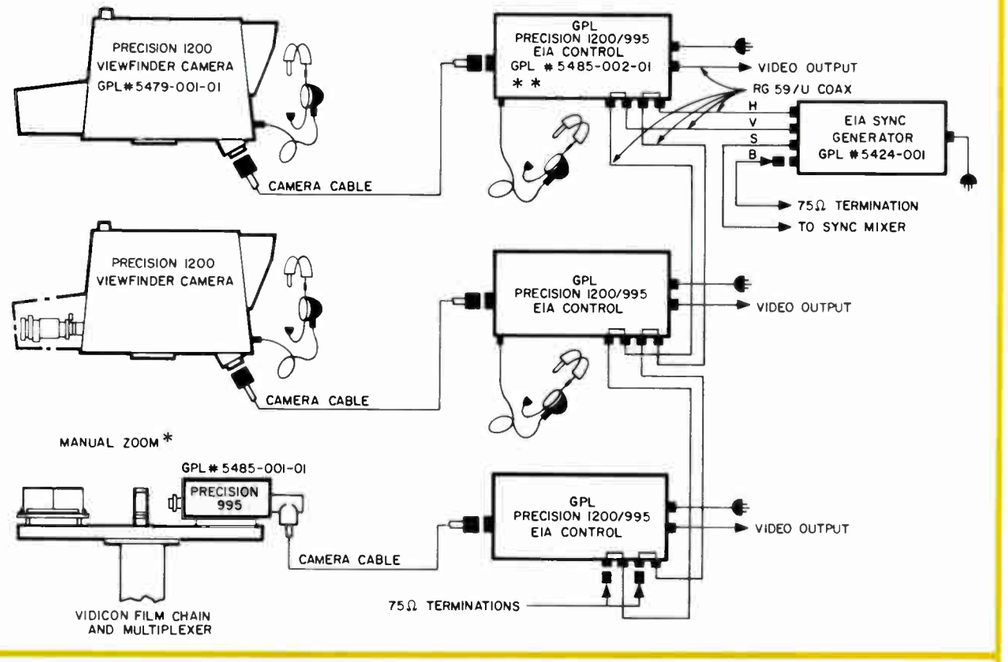
Dual Camera Control Panel



Vidicon Film Chain Camera and Multiplexer

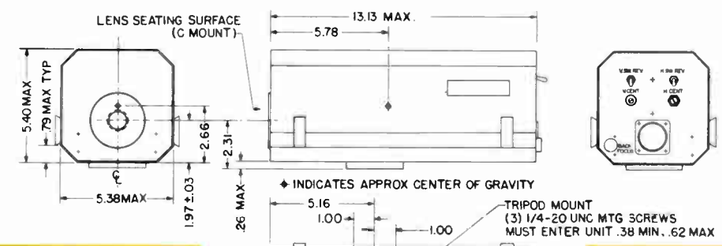
TV 16 Uniplex Film Chain

SYSTEM DIAGRAM

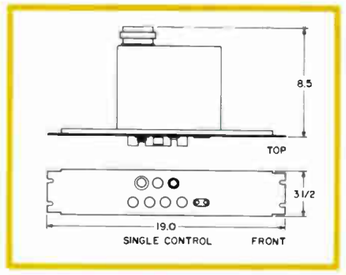


*ZOOM LENSES AVAILABLE FOR PRECISION 1200 CAMERA INCLUDE 4:1 f1.8 (25-100mm), 5:1 f2.5 (20-100 mm), AND 10:1 f2.5 (15-150mm).
**THE EIA CAMERA CONTROL IS NORMALLY SUPPLIED ON A 3½″ x 19″ PANEL. THIS PANEL WILL ACCOMMODATE TWO CAMERA CONTROLS, GPL #5485-002-02 *SPECIFY WHEN ORDERING.*

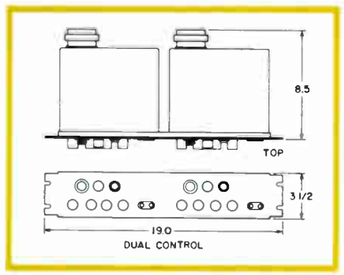
DIMENSIONAL DRAWINGS



CAMERA



CAMERA CONTROL PANEL



CAMERA CONTROL PANEL

GPL VIDEO TAPE RECORDER

VR-400

TELEVISION EQUIPMENT

VTR TAPE EQUIPMENT

FEATURES

- Widest guard band of any helical-scan recorder assures machine-to-machine compatibility.
- Fast-forward and rewind takes less than 90 seconds.
- Full electrical push-button transport permits tape motion function to be remote controlled.
- Portable or standard 19″ EIA rack-mounting configurations.
- Advanced "Alpha" helical tape path configuration with precisely fixed tape guides.
- Any tape can be used to check tape entry and exit guide alignment.
- Completely transistorized electronic circuitry.
- Modular design, interchangeable circuit boards.
- Single ferrite video head replaceable in minutes without complex tools or alignment procedure.
- Compact design, uses standard 8″ NAB reels.
- One hour recording with only 2150 feet of 1″ tape operating at 6.9 ips.
- Stop motion standard on all machines.
- Separate video and audio record level meters.
- Rapid "lockup" and stability.
- Electronic editing, slow-motion, and dial access accessories available.
- All machines will, without modification, record NTSC color. Single plug-in (optional) color card provides NTSC color playback capability.
- American-made machine utilizes readily available American-made components.

DESCRIPTION

Newly introduced VR-400 by GPL Division is an NTSC color, and monochrome, helical-scan magnetic tape video recorder/reproducer. Ideal for school and industrial training applications, the VR-400 is the only machine in its price class that has self-contained full NTSC color capability. This capability provides faithful color reproduction and results in chroma and hue stability previously not attainable in helical-scan recorders.

Transistorized circuitry in the VR-400 contributes to its compactness and exceptional reliability. Several design innovations aid quality performance. Widest guard band of any 1" helical-scan machine and precisely fixed tape guides assure machine-to-machine compatability.

All tape motions on the VR-400 are controlled by five momentary control pushbuttons—REWIND, FWD, PLAY, STOP, RECORD. These controls are fully interlocking which makes it impossible to break, throw, or spill tape, and/or accidentally activate record function.

Versatile in many ways, the VR-400 has two audio channels for student and instructor applications. A unique feature is the tape timer which accurately reads program time in minutes and tenths. Slow motion, editing, and other options add to the VR-400's substantial value as a training instrument.

TECHNICAL SPECIFICATIONS

Horizontal Resolution ..... Over 400 lines

Bandwidth ..... 30 Hz to 3.5 MHz ±1 db
30 Hz to 4.2 MHz $\pm\frac{1}{4}$ db

Signal-to-Noise Ratio ..... 40 db peak-to-peak signal to rms noise

Differential Gain ..... Maximum deviation of 10 IRE units (10% to 90% APL)

Input Level ..... 0.5 to 2 volts PP composite

Input Signal ..... Any standard 60 field, monochrome or NTSC color signal. 75-ohm termination in recorder

Outputs ..... Two: one for monochrome and one for color. Both are adjusted for 1 volt composite, positive going video, into 75-ohm line

Tape Speed ..... 6.9 IPS

Writing Speed ..... 720 IPS

Operating Position ..... Horizontal or Upright

Audio Performance

Number of Channels ..... Two

Bandwidth ..... Channel 1. 80 Hz to 10 KHz ±4 db

Bandwidth ..... Channel 2. 250 Hz to 7 KHz ±4 db

Signal-to-Noise Ratio ..... Channel 1. 40 db

Channel 2. 40 db (relative to 3% distortion at 400 Hz)

Interchannel Crosstalk —40 db minimum

Flutter and Wow ..... Less than 0.25% rms

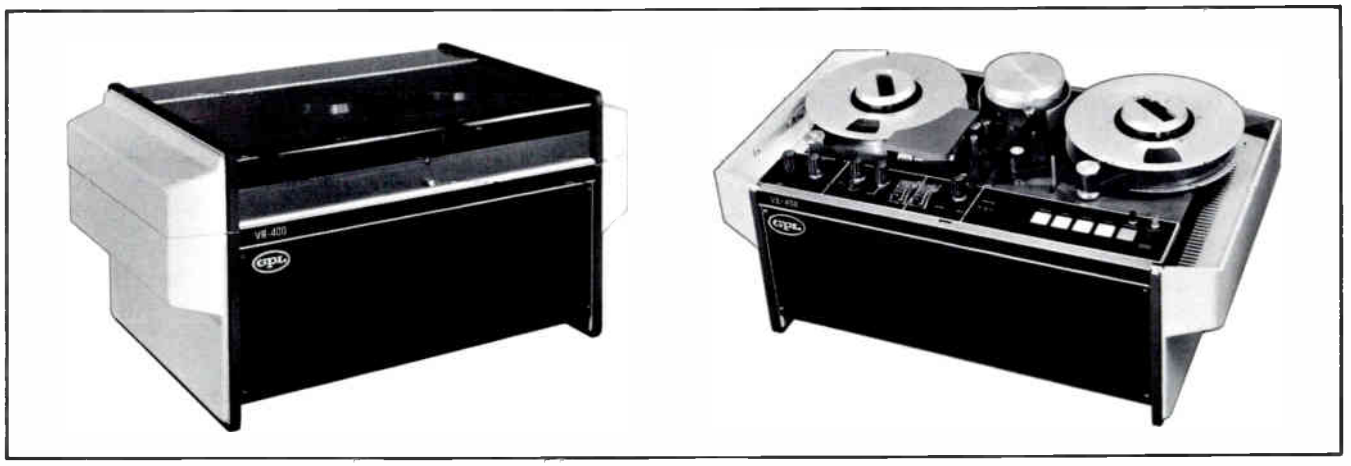
Inputs (both channels) ..... Microphone: 0.2 millivolts minimum, 200 ohms nominal.

Line: —20 dbm to +16 dbm (+4 dbm nominal) 600 ohms balanced or unbalanced.

Outputs (both channels) ..... Adjusted for +4 dbm output into 600-ohm terminated line. +20 dbm clipping level

Size ..... 19" wide x 12¼" high x 9⅝" deep (uncased). Weighs 57 pounds

Power Requirements ..... 110 to 130 volts, 60 Hz, 300 watts maximum. (Machines equipped for 230 V, 50 Hz available on special order.)



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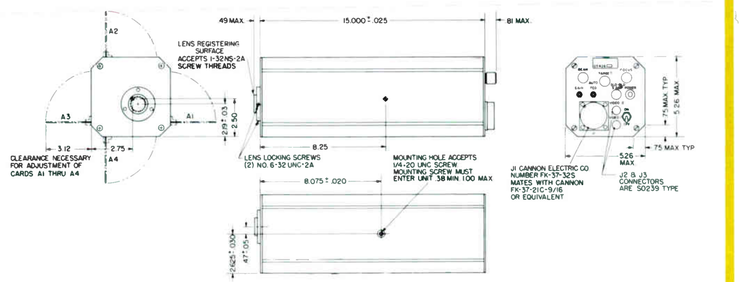
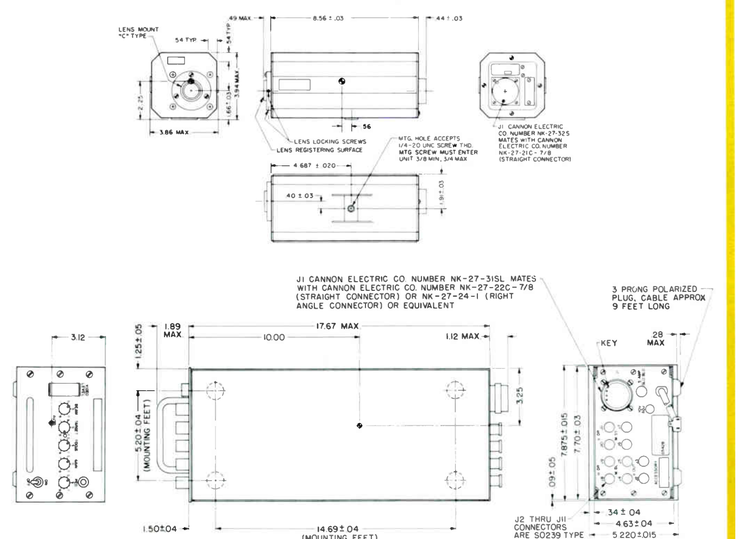
DIMENSIONAL DRAWINGS

PRECISION 1000 SELF-CONTAINED SOLID-STATE TV CAMERA



PRECISION 1000 TWO-UNIT SOLID-STATE TV CAMERA



TELEVISION EQUIPMENT

TV CAMERAS

TECHNICAL SPECIFICATIONS

ELECTRICAL

Input Power ..... 100-130 V AC, 50/60/400 Hz, 30 Watts – (DC optional).

Scanning Standards ..... 525, 625, 675, 837, 875, 945, or 1023 lines per frame; 60 fields and 30 frames per second, or 50 fields and 25 frames per second.

Sync Options ..... Random Interlace – Industrial Sync.
2:1 Interlace – Industrial Sync. Internal EIA RS170 Sync. External EIA RS170 Sync. Driven 2:1 Interlace (Two-Unit Camera only).

Video Bandwidth ..... 15 MHz or 30 MHz ±3 db.

Resolution

Horizontal Line Rate	Horizontal Resolution Video Bandwidth		Vertical Resolution
	15 MHz	30 MHz	
525	1100 lines	1200 lines	350 lines
625	1050 "	1200 "	440 "
675	975 "	1200 "	470 "
837	875 "	1200 "	585 "
875	825 "	1200 "	610 "
945	775 "	1200 "	660 "
1023	725 "	1200 "	715 "

Video Output ..... Two isolated composite or non-composite video outputs into 75 ohm loads. 0 to 2 volts peak-to-peak composite video. Sync. adjustable.

Video Polarity ..... Black negative, polarity reversal by internal switch. (Remote control optional).

Signal-to-Noise Ratio ..... 42 db - 15 MHz bandwidth. 40 db - 30 MHz bandwidth.

Aperture Correction ..... Phase compensated, adjustable 0 to 15 db for 15 MHz bandwidth. 0 to 10 db for 30 MHz bandwidth.

Vidicon Target Control ..... Automatic or Manual Control switch selectable. Automatically compensates for variations in light level of 10,000:1. Manual control adjustable by operator.

Sweep Linearity ..... ±1%

Sweep Geometry ..... ±2%

Solid-State Circuitry ..... Silicon transistors used throughout.

Gray Scale ..... Reproduces 10 shades of gray from standard EIA test chart.

Focus Field ..... 60 gauss - nominal.

Balanced Keyed Clamp ..... Maintains precise black level.

Sweep Loss Protection ..... Protects vidicon from damage in case of loss of either horizontal or vertical sweep.

Set-up Meter ..... Simplifies set-up of proper levels for sync, blanking and video. (Provided on Two-Unit CCU only).

Vidicon ..... Type 8507A, 8507, 7735B, 7038, 7226A (Ruggedized) or equivalents.

Gamma Correction ..... 0.5, 0.7, 1.0, Adjustable. (15 MHz version only).

Peak White Clipper (optional) ..... Adjustable.

ENVIRONMENTAL

Ambient Temperature ..... –25°C to +55°C. Two-Unit Camera Head to +60°C.

Ambient Humidity ..... 95%.

Ambient Noise ..... Up to 135 db - 175 db in suitable enclosure.

Altitude ..... 30,000 ft.

MECHANICAL

Description	Size H W L	Weight
Self-contained Camera	5-1/4" x 5-1/4" x 15" (excluding lens)	15 lbs.
Two-Unit Camera	3-13/16" x 3-13/16" x 8-1/2" (excluding lens)	5 lbs.
Two-Unit CCU	4-5/8" x 7-3/4" x 17-1/2" (excluding connectors)	14 lbs.

Camera Mounting ..... Standard 1/4-20 mounting hole in base plate.

Lens Mount ..... Accepts any standard 16 mm "C" mount lens.

ACCESSORIES

Remote Control Panel (Self-Contained Camera Only).
EIA Sync Generator.
Explosion-Proof, Underwater, Acoustical and Weather-proof Environmental Housings.
Pan and Tilt Units.
Lenses of all types, including zoom models.
19" CCU Rack-Mounting Kit.
TV Display Units.

EQUIPMENT REQUIRED BUT NOT INCLUDED:

Self-Contained Camera	Two-Unit Camera
Vidicon	Vidicon
Lens	Camera Cable
Video Cable	Lens
TV Displays	Video Cable
	TV Displays

SINGER
EDUCATION & TRAINING PRODUCTS

GPL TELEVISION DIVISION
PLEASANTVILLE, NEW YORK 10570 Tel.: 914 769-5000 Cable: PRELAB TWX: 710-572-2194

GPL PRECISION 1000 TV CAMERA SYSTEM

TELEVISION EQUIPMENT

TV CAMERAS

PRECISION 1000
TWO-UNIT SOLID-STATE TV CAMERA

PRECISION 1000
SELF-CONTAINED SOLID-STATE TV CAMERA

FEATURES

- Completely solid-state, plug-in modular construction
- Superior resolution – up to 1200 lines
- 15 MHz or 30 MHz bandwidth video plug-in modules
- Selection of seven horizontal line rates between 525 and 1023 on single plug-in circuit board
- Automatically compensates for variations in light level of 10,000 to 1
- 42 db signal-to-noise ratio
- Sync options include: random or 2:1 interlace industrial, internal or external EIA RS170, or driven 2:1 interlace
- Unexcelled reliability and stability
- Silicon transistors used throughout including the input stage of the preamplifier
- Gold plated contacts on all transistor sockets and plug-in circuit boards
- All plug-in modules are interchangeable between single and two-unit cameras

DESCRIPTION

The GPL PRECISION 1000 Television System represents the latest state-of-the-art in solid state television camera design. A completely new concept permits you to select a TV system, tailored to your specific requirements, from off-the-shelf modules, without paying premium prices usually associated with small quantity custom production.

The PRECISION 1000 is available in two basic configurations: A single unit self-contained camera and a two-unit camera. Both cameras are ruggedly constructed and offer the same excellent picture quality and reliability. Options are available in both cameras to provide almost unlimited variations to meet specific system requirements.

Major options include: 15 or 30 Megaherz video bandwidth, choice of seven horizontal scan rates, random interlace sync, 2:1 interlace industrial sync, internal or external EIA RS170 sync. Also, for multiple camera systems, plug-in modules are available which permit many cameras to be slaved from the 2:1 or EIA sync, generated in the first camera control unit. Battery operation of the PRECISION 1000 is also optional. All of the above options can be added in the field at a later date should your operational requirements change after the initial installation.

The solid-state power supply module develops seven independently regulated d.c. outputs to insure maximum picture resolution and stability. Plug-in silicon transistors are used throughout for greater reliability and serviceability. Gold plated contacts are standard on all transistor sockets and plug-in modules. There is complete interchangeability of modules between the self-contained camera and the two-unit camera. This excellent design flexibility simplifies maintenance requirements. Your service personnel need only to understand one basic camera design regardless of application.

The new GPL PRECISION 1000 equipment is finished in satin aluminum and textured, scratch resistant blue epoxy enamel.

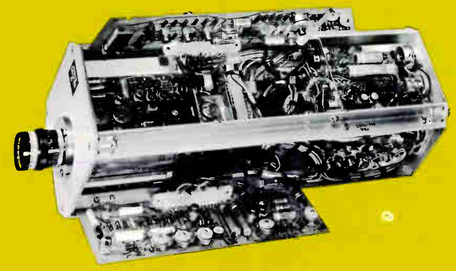
PRECISION 1000 SELF-CONTAINED SOLID-STATE TV CAMERA

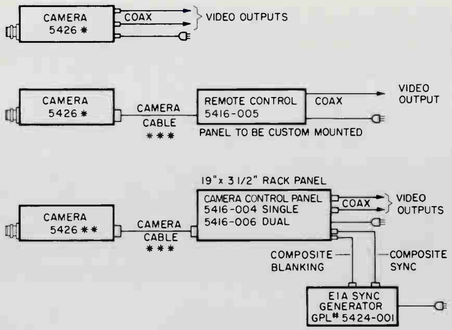
The PRECISION 1000 Self-Contained Camera is a completely solid-state highly reliable unit designed for continuous, automatic, round-the-clock operation.

Operational controls, located on the rear of the camera, include: ON-OFF switch, BEAM, TARGET, electrical FOCUS, GAIN, and PED (pedestal). All controls may be remoted up to 4000 feet from the camera through a single control cable which plugs into the connector on the rear of the camera. To service the remotely located camera, simply unplug the remote control cable at the camera and substitute a standard GPL 8 foot power cable. This automatically transfers camera control to the rear of the camera.

Automatic target control compensates for light level changes of up to 10,000 to 1, making the PRECISION 1000 ideal for unattended installations where scene illumination varies over a wide range.

Plug-in circuit board modules are hinged to provide easy access to all plug-in transistors and circuit components—a feature your service personnel will appreciate.





SYSTEM DIAGRAMS — PRECISION 1000 SELF-CONTAINED CAMERA

SPECIFY	*	A	15 or 30 MHz Bandwidth
		B	Horizontal Scan Rate
		C	Type of Vidicon
		D	Random, 2:1 Interlace or EIA Sync
	**	A	15 or 30 MHz Bandwidth
		B	Horizontal Scan Rate
		C	Type of Vidicon
	***	A	Cable Length
		B	Straight or Right Angle Connectors

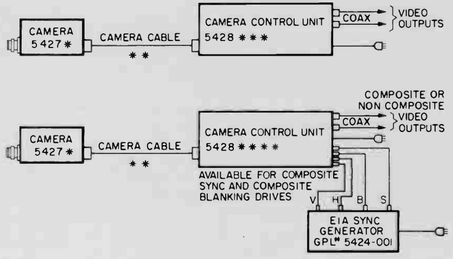
PRECISION 1000 TWO-UNIT SOLID-STATE TV CAMERA

The PRECISION 1000 Two-Piece Camera consists of a minimum sized, light weight camera and a separate Camera Control Unit. The camera head is only 3-13/16" wide x 3-13/16" high x 8-1/2" long and weighs only 5 lbs. It is ideal for remote installations where space is critical or where camera will be subjected to a hazardous environment.

The Camera Control Unit may be remoted up to 250 feet from the camera. This distance can be increased up to 2500 feet as an option.

In addition to the controls found on the self-contained camera, the Camera Control Unit is equipped with a set-up meter which assists the operator in setting proper levels for sync, blanking, and video.

The Two-Piece Camera is ideally suited for multiple camera installations. The Camera Control Unit is equipped with parallel coax connectors on the rear panel for looping through sync, blanking, H drive and V drive. Two isolated video outputs are also provided.



SYSTEM DIAGRAMS — PRECISION 1000 TWO-UNIT CAMERA

SPECIFY	*	A	15 or 30 MHz Bandwidth
		B	Horizontal Scan Rate
		C	Type of Vidicon
	**	A	Cable Length
		B	Straight or Right Angle Connectors
	***	A	Random 2:1 Interlace or EIA Internal Sync
	****	A	15 or 30 MHz Bandwidth
		B	Horizontal Scan Rate
		C	4 Wire or 2 Wire EIA Drive