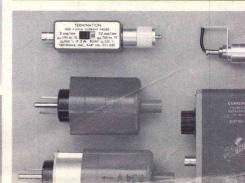




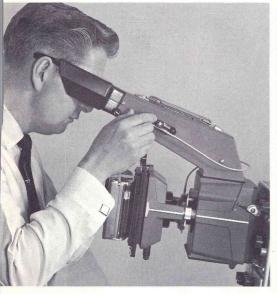


FOR TEKTRONIX OSCILLOSCOPES



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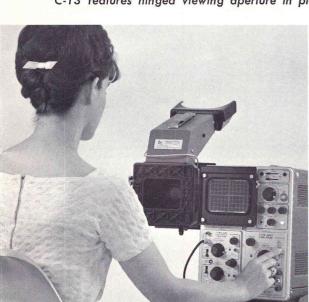




DESIGN FEATURES

- Lift-On Mounting and Swing-Away Hinging—unrestricted crt viewing for normal oscilloscope operation
- Easily-Accessible Shutter Controls—no groping or camera removal necessary for adjustment
- Comfortable Binocular Viewing—with or without glasses*
- Locking Focus Control—quick adjustment for use on more than one oscilloscope
- Sliding Back—nine positive detent positions for multiple exposures
- Rotating Back—horizontal or vertical mounting for most efficient use of film

*C-13 features hinged viewing aperture in place of viewing hood.











A WORD ABOUT LENSES

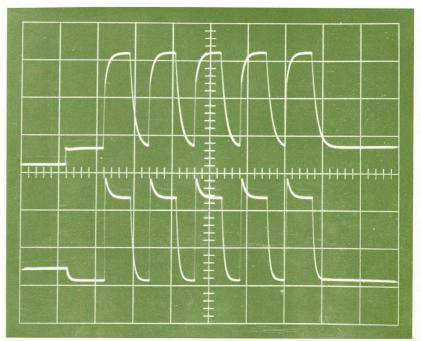
Seven interchangeable lenses are available for use with the Polaroid Land or Graflok Film Backs. The Type 350 Camera Attachment contains its own lens.

Lens optics are designed to meet the strict requirements of precision oscillography: flat field, low distortion, and high resolution even at maximum aperture openings.

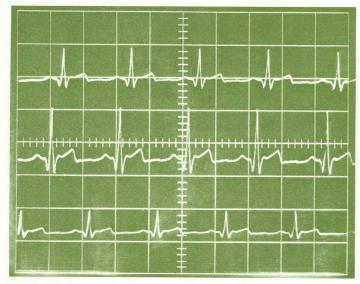
Lenses are set for precise object-to-image ratios in prefocused mounts, for easy interchange in camera.

The wide range of object-to-image ratios and maximum apertures permits selection of the lens which is most right for your application.

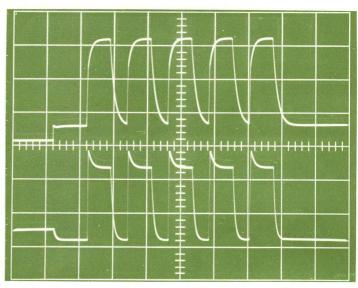
*Writing Rate Factor (WRF) is an arbitrary indication of the relative light-gathering capability of the various lenses. A WRF of 4 indicates four times as much light-gathering ability as a WRF of 1.



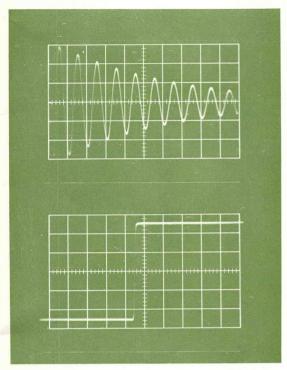
PRECISE FULL-SIZE IMAGE—f/1.4, 1:1 object-to-image ratio . . . for precise full-size records . . . measurements can be scaled directly off photograph with maximum resolution . . . WRF* of 7.



GENERAL PURPOSE—f/1.9, 1:0.85 object-to-image ratio . . . image brightness sufficient for most applications. When photographing 8×10 cm graticules or 10×10 division graticules, such as used on Tektronix Types 570, 575, and 536, we recommend use of the f/1.9, 1:0.85 lens to provide the largest size image that will still fall within the 73.4×97 mm maximum recording area of $3\frac{1}{4} \times 4\frac{1}{4}$ size Polaroid film . . . WRF* of 4.

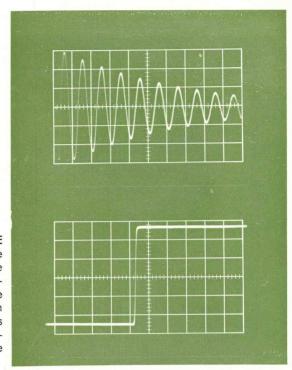


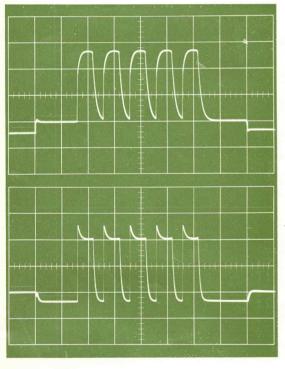
GENERAL PURPOSE—f/1.9, 1:0.9 object-to-image ratio . . . image brightness sufficient for most applications . . . records up to 8×10 -cm graticule on $3\frac{1}{4} \times 4\frac{1}{4}$ film with maximum resolution . . . WRF* of 4.



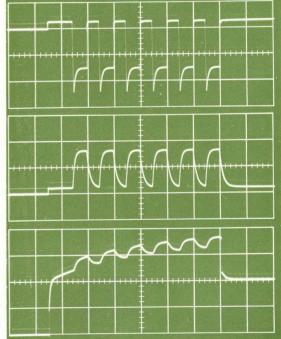
HIGH WRITING RATE—f/1.9, 1:0.5 object-to-image ratio . . . for high writing rate applications such as single-shot photography of fast transients . . . recommended for use with Tektronix Type 519 and 580-Series Oscilloscopes . . . WRF* of 6.

ULTRA-HIGH WRITING RATE—f/1.3, 1:0.5 object-to-image ratio . . . for applications where writing rate is the prime consideration . . . advances the state of the art and in combination with the C-19 Main Frame makes possible the recording of higher-speed phenomena than before . . . WRF* of 12.

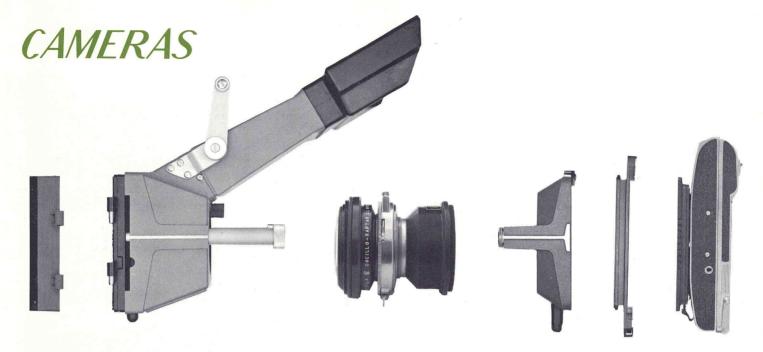




ECONOMY—f/4.5, 1:0.7 object-to-image ratio . . . for economy of price and efficient use of film where high writing rate is not required . . . 3 records of 4×10 -cm graticule, or 2 records of 6×10 -cm graticule on $3\frac{1}{4} \times 4\frac{1}{4}$ film . . . WRF* of 1.

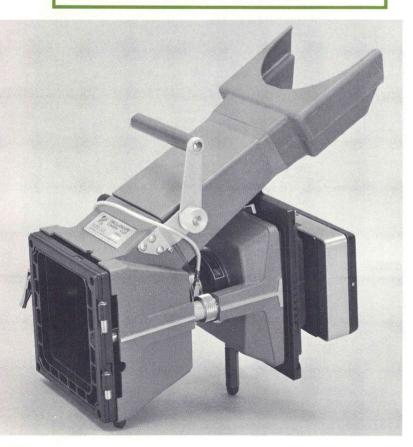


ECONOMY & SPEED—f/1.9, 1:0.7 object-to-image ratio . . . efficient use of film . . . WRF*



Tektronix Trace-Recording Cameras are designed for maximum flexibility and easy interchange of components. A complete camera consists of an appropriate mounting bezel, main frame assembly, lens, rear frame, rotating slide adapter, and film back. For 35-mm photography, only a bezel, main frame assembly, and Type 350 Camera Attachment are required. Four Standard Camera Assemblies are described on the following pages. Variations of the standard cameras (using inter-changeable lenses and backs and incorporating a shutter actuator with built-in power supply) are also available as custom cameras. Each component part can be ordered separately for further versatility or for addition to a present Tektronix Trace-Recording Camera. Your nearest Tektronix Field Office or Representative is ready to assist you in your trace-recording needs.

STANDARD C-27 CAMERA



The C-27 Camera combines general-purpose utility and performance in a design compact enough for multiple stacking on 7" Rack-Mount Oscilloscopes.

Direct binocular viewing is featured. For stacking, the viewing tunnel is removed and the carrying handle folded out of the way. The camera frame can be rotated 90° or 180° to view from the top, bottom, or either side. The f/1.9-1:0.85 lens supplied with the Standard C-27 offers an ideal compromise of writing rate and image size (8 x 10-cm on $3\frac{1}{4}$ x $4\frac{1}{4}$ film or 10 x 10-cm coverage on 4 x 5 film) in a moderately-priced camera.

The Polaroid* Land Pack-Film Back offers convenient loading and picture development outside the camera. Dimensions overall are 13 7/32" high (only 8" with viewing tunnel removed) by 7½" wide by 13 11/32" long (only 12" with viewing tunnel removed). Net weight is 10 pounds. Shipping weight is approximately 14 pounds.

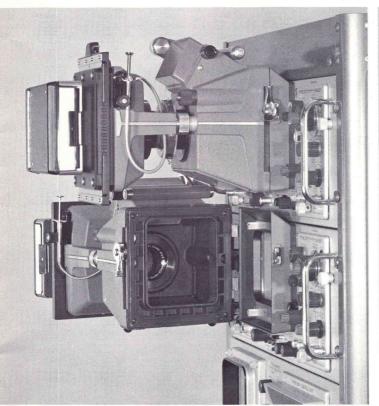
C-27 CAMERA, (less mounting bezel — see page 16) \$420
Each camera includes: 1—cable release (122-586), 1—focus plate (387-893), 2—instruction manuals (070-383).

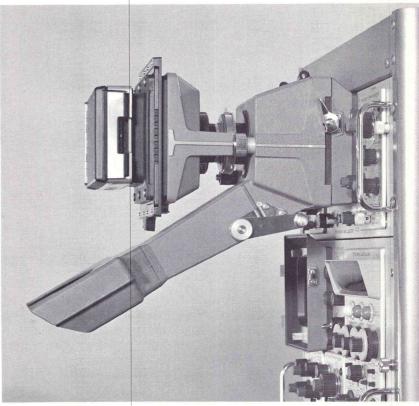
ROLL-FILM CAMERA identical to the Standard C-27, except a Polaroid Roll-Film Back is substituted for the Pack-Film Back. C-27-R CAMERA, (less mounting bezel—see page 16) \$420 ELECTRICALLY-TRIGGERED CAMERA identical to the Standard C-27, but with a shutter actuator and built-in power supply. (See page 15)

C-27-S CAMERA, (less mounting bezel—see page 16) \$575 ELECTRICALLY-TRIGGERED CAMERA with Roll-Film Back combines features of the C-27-R and C-27-S, above.

C-27-RS CAMERA, (less mounting bezel—see page 16) \$575

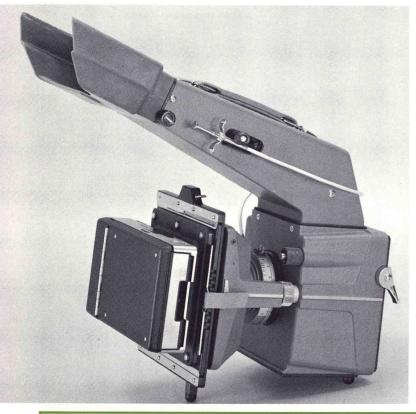
^{*} Registered Trade-Mark Polaroid Corporation.





	CUSTOM C-27 CAMERAS				
LENS (Writing rate factor compared to Standard f/1.9, 1:0.85 lens)	SHUTTER ACTUATOR and BUILT-IN POWER SUPPLY	150	POLAROID ILM BACK	ORDER NO.	PRICE (less mounting bezel — see page 16)
ECONOMY and SPEED—f/1.9, 1:0.7 Records two 6 x 10-cm or three 4 x 10-cm graticules on	No		Pack Film Roll Film	C-27-547 C-27-547 R	\$440 440
$3\frac{1}{4} \times 4\frac{1}{4}$ film, or one 10×10 cm with optional Graflok Back. Writing rate factor 1.25X Standard Lens.	Yes		Pack Film Roll Film	C-27-547 S C-27-547 RS	595 595
GENERAL-PURPOSE—f/1.9, 1:0.9	No		Pack Film Roll Film	C-27-548 C-27-548 R	420 420
Records an 8×10 -cm graticule on $3\frac{1}{4} \times 4\frac{1}{4}$ film. Writing rate factor same as Standard Lens.	Yes		Pack Film Roll Film	C-27-548 S C-27-548 RS	575 575
HIGH WRITING RATE—f/1.9, 1:0.5	No		Pack Film Roll Film	C-27-549 C-27-549 R	460 460
Records fast-writing displays such as single-shot transients. Writing rate factor 1.5X Standard Lens.	Yes		Pack Film Roll Film	C-27-549 S C-27-549 RS	615 615
ECONOMY—f/4.5, 1:0.7 Records two 6 x 10-cm or three 4 x 10-cm graticules on each film. Recommended when cost rather than writing rate is the prime consideration. Writing rate factor .25X Standard Lens.	No		Pack Film Roll Film	C-27-550 C-27-550 R	365 365
PRECISE FULL-SIZE IMAGE—f/1.4, 1:1 Records full-size image of 10 x 10-cm graticule (on	No		Pack Film Roll Film	C-27-608 C-27-608 R	535 535
4 x 5 film with Graflok Back). Writing rate factor 1.75X Standard Lens.	Yes		Pack Film Roll Film	C-27-608 S C-27-608 RS	690 690
ULTRA-HIGH WRITING RATE—f/1.3, 1:0.5	No		Pack Film Roll Film	C-27-662 C-27-662 R	585 585
Records two 6 x 10-cm graticules on each film. Writing rate factor 3X Standard Lens.	Yes		Pack Film Roll Film	C-27-662 S C-27-662 RS	740 740

Any Tektronix Standard or Custom Trace-Recording Camera can be ordered less back. Use suffix 'G' after the Order Number and deduct \$80 from the price. 4×5 and $2^{1}/_{4} \times 3^{1}/_{4}$ Graflok Backs and accessories are shown on page 17.



STANDARD C-12 CAMERA

The C-12 Camera is ideally suited for general-purpose trace recording. A beam-splitting mirror provides the operator with an on-axis binocular view of the crt display, and also allows use of the Projected Graticule accessory (see facing page). The f/1.9—1:0.9 lens supplied with the standard C-12 offers the ideal compromise of writing rate and image size (up to 8 x 10 cm coverage) in a moderately-priced camera. The Polaroid* Land Pack-Film Back offers convenient loading and picture development outside the camera. Dimensions overall 15 3/8" high by 7½" wide by 17¼" long. Net weight is 12¾ pounds. Shipping weight is approximately 15 pounds.

C-12 CAMERA, (less mounting bezel—see page 16) . . \$450 Each camera includes: 1—cable release (122-586), 1—focus plate (387-893), 2—instruction manuals (070-383).

ROLL-FILM CAMERA identical to the Standard C-12, except a Polaroid Roll-Film Back is substituted for the Pack-Film Back. C-12-R CAMERA, (less mounting bezel—see page 16) \$450 ELECTRICALLY-TRIGGERED CAMERA identical to the Standard C-12, but with a shutter actuator and built-in power supply. (See page 15.)

C-12-S CAMERA, (less mounting bezel—see page 16) \$605 ELECTRICALLY-TRIGGERED CAMERA with Roll-Film Back combines features of the C-12-R and C-12-S, above.

C-12-RS CAMERA, (less mounting bezel—see page 16) \$605

	CUSTOM C-12 CAMERAS	\$	元化的现在分词 医电影效果	THE COUNTY
LENS (Writing rate factor compared to Standard f/1.9, 1:0.9 lens)	SHUTTER ACTUATOR and BUILT-IN POWER SUPPLY	POLAROID FILM BACK	ORDER NO.	PRICE (less mounting bezel — see page 16)
ECONOMY and SPEED—f/1.9, 1:0.7 Records two 6 x 10-cm or three 4 x 10-cm graticules	No	Pack Film Roll Film	C-12-547 C-12-547 R	\$470 470
on each film. Writing rate factor 1.25X Standard Lens.	Yes	Pack Film Roll Film	C-12-547 S C-12-547 RS	625 625
HIGH WRITING RATE—f/1.9, 1:0.5 Records fast-writing displays such as single-shot	No	Pack Film Roll Film	C-12-549 C-12-549 R	490 490
transients. Writing rate factor 1.5X Standard Lens.	Yes	Pack Film Roll Film	C-12-549 S C-12-549 RS	645 645
ECONOMY—f/4.5, 1:0.7 Records two 6 x 10-cm or three 4 x 10-cm graticules on each film. Recommended when cost rather than writing rate is the prime consideration. Writing rate factor .25X Standard Lens.	No	Pack Film Roll Film	C-12-550 C-12-550 R	395 395
PRECISE FULL-SIZE IMAGE—f/1.4, 1:1 Records full-size image of 8 x 10-cm graticule (on	No	Pack Film Roll Film	C-12-608 C-12-608 R	565 565
4 x 5 film with Graflok Back). Writing rate factor 1.75X Standard Lens.	Yes	Pack Film Roll Film	C-12-608 S C-12-608 RS	720 720
ULTRA-HIGH WRITING RATE—f/1.3, 1:0.5 Compensates for losses in beam-splitting mirror where writing rate is prime consideration. Records	No	Pack Film Roll Film	C-12-662 C-12-662 R	615 615
two 6 x 10-cm graticules on each film. Writing rate factor 3X Standard Lens.	Yes	Pack Film Roll Film	C-12-662 S C-12-662 RS	770 770
GENERAL-PURPOSE—f/1.9, 1:0.85 Complete 8 x 10-cm graticule is always positioned	No	Pack Film Roll Film	C-12-692 C-12-692 R	450 450
within exposable area of $3\frac{1}{4} \times 4\frac{1}{4}$ film. Writing rate factor same as Standard C-12.	Yes	Pack Film Roll Film	C-12-692 S C-12-692 RS	605 605

Any Tektronix Standard or Custom Trace-Recording Camera can be ordered less back. Use suffix 'G' after the Order Number and deduct \$80 from the price. 4×5 and $2\frac{1}{4} \times 3\frac{1}{4}$ Graflok Backs and accessories are shown on page 17.

PROJECTED GRATICULE for the C-12 Camera

The Projected Graticule eliminates parallax, one of the most common problems in making accurate readings of oscillographs taken of external graticule crt's.

Parallax is the apparent displacement of the trace in relation to the graticule. Error is introduced since the graticule and crt phosphor are on different planes.

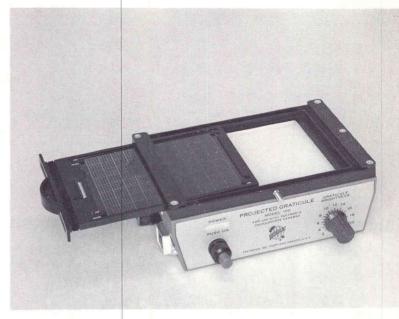
To eliminate parallax, a virtual image of the graticule is presented at the crt phosphor plane as viewed by the operator and as projected to the camera film plane.

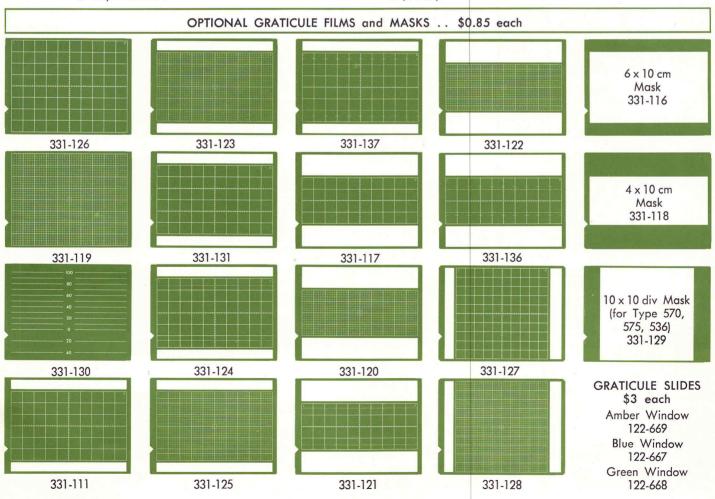
Special graticules, reference waveforms, or any image that can be recorded on a film transparency, can be superimposed on the crt display. The transparency is held in a slide holder and is easily slipped in and out of the Projected Graticule case, making possible rapid change of graticule slides.

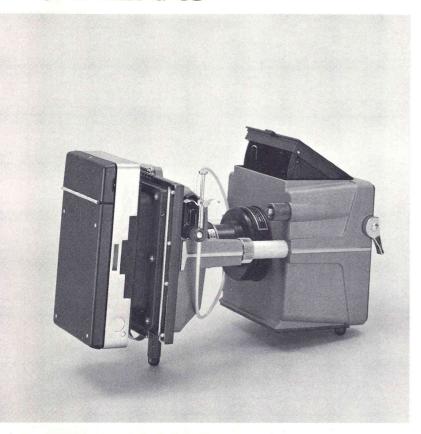
The projected graticule provides up to an 8×10 -cm projection, a portion of which can be used for write-in data. Colored filters can be inserted to match or contrast the projection with the crt phosphor.

The light source is indexed in $\frac{1}{2}$ f stop increments for use as a film exposure guide. This source can also be used for precise prefogging of film for increased sensitivity in fast writing-rate applications.

Power requirements are 90 to 130 v, or 180 to 260 v, 60 cps. Although the Projected Graticule case is small (it adds only 21/4" to camera height), clearance problems exist with the Type 81 Adapter and a few plug-in unit/probe combinations. If in doubt about compatibility, please consult your Tektronix Field Office or Representative.







STANDARD C-13 CAMERA

The C-13 Camera combines quality and economy where high writing rate is not required. Displays are viewed directly through a hinged aperture in the top of the camera frame. The f/4.5—1:0.7 lens supplied with the Standard C-13 offers economy of price and efficient use of film with up to 8 x 10 cm coverage. The Polaroid* Land Pack-Film Back offers convenient loading and picture development outside the camera. Dimensions overall are 8 3/4" high by 7 1/2" wide by 14" long. Net weight is 9 3/4 pounds. Shipping weight is approximately 14 pounds.

C-13 CAMERA, (less mounting bezel—see page 16) .. \$360

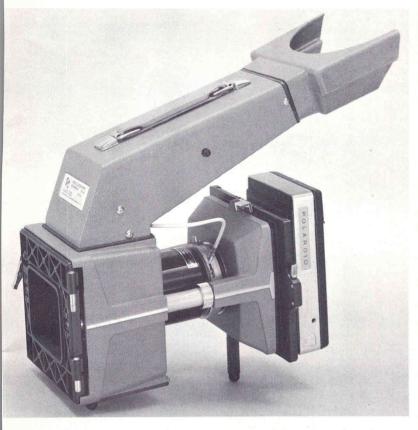
Each camera includes: 1—cable release (122-586), 1—focus plate (387-893), 2—instruction manuals (070-383).

ROLL-FILM CAMERA identical to the Standard C-13, except a Polaroid Land Roll-Film Back is substituted for the Pack-Film Back.

C-13-R CAMERA, (less mounting bezel—see page 16) \$360

	CUSTOM C-13 (CAMERAS		
LENS (Writing rate factor compared to Standard f/4.5, 1:0.7 lens)	SHUTTER ACTUATOR and BUILT-IN POWER SUPPLY	POLAROID LAND FILM BACK	ORDER NO.	PRICE (less mounting bezel — see page 16)
GENERAL-PURPOSE— $f/1.9$, 1:0.9 Records an 8×10 -cm graticule on $3\frac{1}{4} \times 4\frac{1}{4}$ film. Writing rate factor 4X Standard Lens.	No	Pack Film Roll Film	C-13-548 C-13-548 R	\$415 415
	Yes	Pack Film Roll Film	C-13-548 S C-13-548 RS	570 570
PRECISE FULL-SIZE IMAGE—f/1.4, 1:1 Records full-size image of 8 x 10-cm graticule (on 4 x 5 film with Graflok Back). Writing rate factor 7X Standard Lens.	No	Pack Film Roll Film	C-13-608 C-13-608 R	530 530
	Yes	Pack Film Roll Film	C-13-608 S C-13-608 RS	685 685
GENERAL-PURPOSE—f/1.9, 1:0.85 Insures complete coverage of 8 x 10-cm	No	Pack Film Roll Film	C-13-692 C-13-692 R	415 415
graticule on $3\frac{1}{4} \times 4\frac{1}{4}$ film. Writing rate factor 4X Standard Lens.	Yes	Pack Film Roll Film	C-13-692 S C-13-692 RS	570 570

Any Tektronix Standard or Custom Trace-Recording Camera can be ordered less back. Use suffix 'G' after the Order Number and deduct \$80 from the price. 4×5 and $2\frac{1}{4} \times 3\frac{1}{4}$ Graflok Backs and accessories are shown on page 17.



STANDARD C-19 CAMERA

The C-19 Camera makes permanent records of single-shot phenomena where high writing rate is required. Mirror placement provides low-angle binocular viewing and maximum light transmission from crt to film. The f/1.9—1:0.5 lens supplied with the Standard C-19 records two 6 x 10-cm displays or an 8 x 10-cm display on 3½ x 4½ film. The Polaroid* Land Pack-Film Back offers convenient loading and picture development outside the camera. Dimensions overall are 15 3/8" high by 7½" wide by 17¼" long. Net weight is 13¾ pounds. Shipping weight is approximately 18 pounds.

C-19 CAMERA, (less mounting bezel—see page 16) . . \$500 Each camera includes: 1—cable release (122-586), 1—focus plate (387-893), 2—instruction manuals (070-383).

ROLL-FILM CAMERA identical to the Standard C-19, except a Polaroid Roll-Film Back is substituted for the Pack-Film Back. C-19-R CAMERA, (less mounting bezel—see page 16) \$500 ELECTRICALLY-TRIGGERED CAMERA identical to the Standard C-19, but with a shutter actuator and built-in power supply.

(See page 15).
C-19-S CAMERA, (less mounting bezel—see page 16) \$655
ELECTRICALLY-TRIGGERED CAMERA with Roll-Film Back combines features of the C-19-R and C-19-S, above.

C-19-RS CAMERA, (less mounting bezel—see page 16) \$655

CUSTOM C-19 CAMERAS						
LENS (Writing rate factor compared to Standard f/1.9, 1:0.5 lens)	SHUTTER ACTUATOR and BUILT-IN POWER SUPPLY	POLAROID LAND FILM BACK	ORDER NO.	PRICE (less mounting bezel — see page 16)		
GENERAL-PURPOSE—f/1.9, 1:0.9 Records on 8 x 10-cm graticule on 31/4 x	No	Pack Film Roll Film	C-19-548 C-19-548 R	\$460 460		
41/4 film. Writing rate factor .67X Standard Lens.	Yes	Pack Film Roll Film	C-19-548 S C-19-548 RS	615 615		
PRECISE FULL-SIZE IMAGE—f/1.4, 1:1 Records full-size image of 8 × 10-cm	No	Pack Film Roll Film	C-19-608 C-19-608 R	575 575		
graticule (on 4 x 5 film with Graflok Back). Writing rate factor 1.12X Standard Lens.	Yes	Pack Film Roll Film	C-19-608 S C-19-608 RS	730 730		
GENERAL-PURPOSE—f/1.9, 1:0.85 Insures complete coverage of 8 x 10-cm	No	Pack Film Roll Film	C-19-692 C-19-692 R	460 460		
graticule on $3\frac{1}{4} \times 4\frac{1}{4}$ film. Writing rate factor .67X Standard Lens.	Yes	Pack Film Roll Film	C-19-692 S C-19-692 RS	615 615		

Any Tektronix Standard or Custom Trace-Recording Camera can be ordered less back. Use suffix 'G' after the Order Number and deduct \$80 from the price. 4×5 and $2^{1}/_{4} \times 3^{1}/_{4}$ Graflok Backs and accessories are shown on page 17.

35-MM ATTACHMENT FOR ALL TEKTRONIX CAMERAS

The Type 350 Camera Attachment consists of a 35-mm film-back and shutter, integral f/1.9 lens with 1:0.2 object-to-image ratio, and mounting hardware to fit a C-12, C-13, C-19 or C-27 Main Frame Assembly. Shown with a C-13 Camera frame.

The "automatic" advance feature of the Type 350 Camera Attachment allows a rapid sequence of exposures with no interruption to manually advance the film to each new frame. The spring motor automatically advances the film one frame each time the shutter trigger is depressed and released. Up to 4 exposures per second can be made using the Model 2 Shutter Actuator.

Shutter speeds are 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, and Bulb. Time exposures are obtained using the Model 2 Shutter Actuator in its 'holding' mode, or locking the cable release with shutter set at B.

Calibrated lens apertures are f/1.9, f/2.8, f/4, f/5.6, f/8, f/11, and f/16. The object-to-image ratio for this lens is 1:0.2, thus its writing rate factor is approximately 1.8X the f/1.9, 1:0.9 lens. With appropriate film processes, the Type 350 Camera Attachment is well suited for photographing fast single-sweep displays.

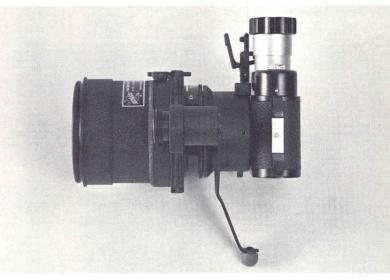
Standard 35-mm cassettes with either 20 or 36-exposures can be used. The Type 350 takes approximately 30 exposures on a 20-exposure roll, or 55 exposures on a 36-exposure roll. Each exposure is 23.2×23.6 mm. Viewing area when mounted in slides is 22×22 mm. 10×10 -cm graticules can be photographed in conjunction with the C-27 Main Frame Assembly $(8 \times 10 \text{ cm})$ with all others).

Net weight is $3\frac{1}{4}$ pounds. Shipping weight is approximately 7 pounds.

COMPLETE 35-MM CAMERAS

These cameras include the Type 350 Attachment and appropriate Main Frame Assembly. Mounting bezels must be ordered separately from page 16.

TYPE 350/C-13, illustrated	520
TYPE 350/C-19	565
	525





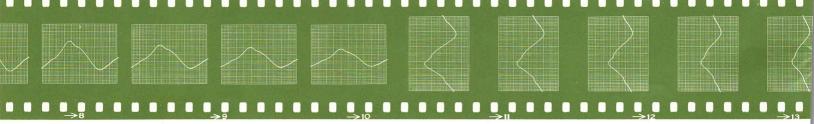
OPTIONAL 35-MM ACCESSORIES

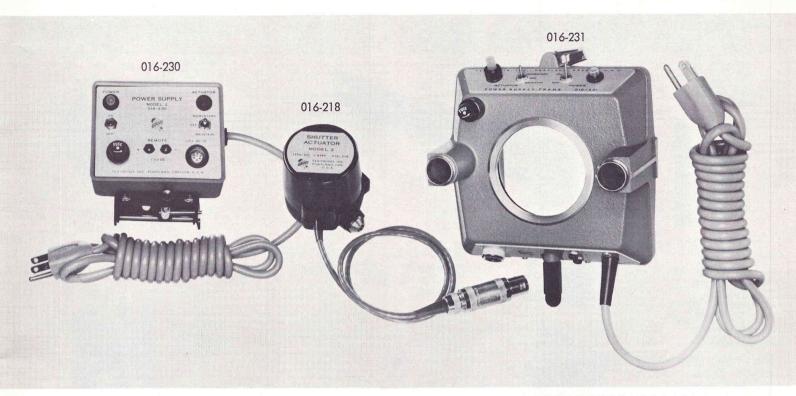
The NR cassette is a light-tight cassette which can be used in place of the standard take-up spool. With the NR cassette it is not necessary to rewind the film after the last exposure. This cassette is especially useful when it is desired to take a small number of pictures and remove them from the camera for immediate processing.

PART NUMBER 016-222 \$5.95

The TR cassette is used for bulk loading, when a great deal of 35-mm film is used, or for films that are only available in bulk.

PART NUMBER 016-221 \$5.95





NEW SHUTTER ACTUATOR for Electrically-triggered exposures

The Shutter Actuator System (Model 2) is a rotary solenoidoperated release that closely simulates the action of a handoperated cable release. It permits electrical triggering of most Tektronix Trace-Recording Cameras.

Two power supply packages are available. They are electrically identical, and differ only in mechanical configuration. One takes the place of the standard Rear Frame in the C-12, C-13, C-19, and C-27 Camera. The other is a separate small housing which can be mounted to the Type 350 35-mm Attachment, either of the Polaroid Backs, or used remotely.

A holding circuit in the separate power supply allows the actuator to be energized indefinitely without overheating. This feature is especially useful in obtaining Time exposures with the Type 350 35-mm Attachment. Several actuators can be operated simultaneously by paralleling the remote switches from the individual power supplies.

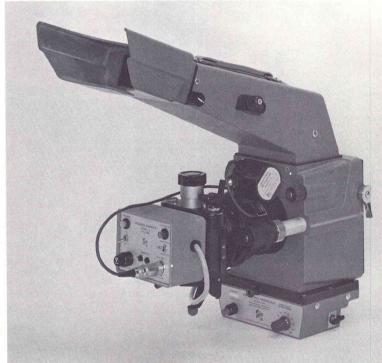
CHARACTERISTICS

The actuator mounts to the cable release bushing of the Alphax #3 and Ilex #3 shutters, and to the body of the Type 350 35-mm Attachment.

Operating time from switch contact to full open blades at 115 vac is 20 to 25 msec.

Power requirement is 115 vac, 50 to 400 cps, or 115 v dc.

Actuator for either supply (016-218)	\$	75
Separate Power Supply (016-230)		85
Built-in Power Supply (016-231)	1	25



Model 2 Shutter Actuator shown with Type 350/C-12 Camera and optional Projected Graticule.

MOUNTING BEZELS

Each Bezel can be used to mount the rectangular polarized viewer (016-039).

> FOR C-12, C-13 AND C-19 CAMERAS

For Tektronix Oscilloscopes with round 5" crt. (not needed with Type 519) Part No. 016-226 \$ 15 For Tektronix 560-Series Oscilloscopes with rectangular crt. and Type 506. Part No. 016-217 \$15 For some Hewlett-Packard Oscilloscopes. Contact your local Tektronix Field Office or Representative.

Part No. 016-229 \$16

FOR C-27 CAMERA



For all Tektronix Oscilloscopes with 5" round crt. Part No. 016-225 \$15

For all Tektronix 560-Series Oscilloscopes with rectangular crt, the Type RM527 and Type 506.

Part No. 016-224 \$15

For Tektronix Type 647 and RM647 Oscilloscopes.

Part No. 016-223 \$15

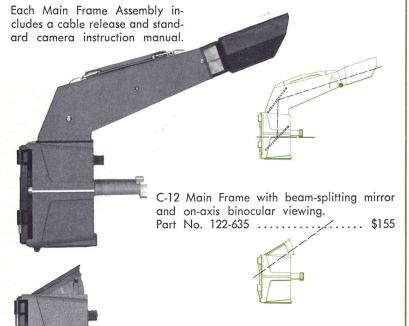
For most models of Hewlett-Packard Oscilloscopes. Contact your local Tektronix Field Office or Representative.

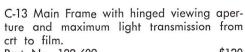
Part No. 016-228 \$15

For some models of DuMont Oscilloscopes. Contact your local Tektronix Field Office or Representative.

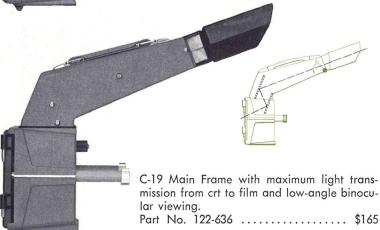
Part No. 016-227 \$15

MAIN FRAME **ASSEMBLIES**





Part No. 122-609 \$120





C-27 Main Frame with direct binocular viewing, removable viewing tunnel and maximum light transmission from crt to film. Part No. 122-676 \$125 INTERCHANGEABLE LENSES



f/1.9—1:0.7 Economy plus Speed Alphax & llex No. 3X Shutter Part No. 122-547 ... \$180



f/1.9—1:0.9 General Purpose Alphax & Ilex No. 3X Shutter Part No. 122-548 ... \$160



f/1.9—1:0.5 High Writing Rate Alphax & Ilex No. 3X Shutter Part No. 122-549 ... \$200



f/4.5-1:0.7 Economy of Film & Price Alphax No. 1 Shutter Part No. 122-550 ... \$105

			CAMERAS
INTERCHANGEABLE LENSES	REAR FRAMES	INTERCHANGEABLE FILM BACKS	ACCESSORIES FOR GRAFLOK BACKS
f/1.4—1:1 Precise full-size Image Alphax No. 3 Shutter			Readily available from local camera shops. Cut-Film Holder 2 exposures
Part No. 122-608 \$275	Standard Frame (not needed with Type 350) Part No. 122-591 \$45	Polaroid Land 3½ x 4½ Roll-Film Back, 8 exp. Part No. 122-603 . \$ 75 Focus Plate for above. Part No. 387-460 . \$ 5 Polaroid Land 3½ x 4½ Pack-Film Back, 8 exp. Part No. 122-671 . \$ 75 Focus Plate for above. Part No. 387-893 . \$5.35	Film-Pack Adapter 12 exposures
Ultra-High Writing Rate Ilex No. 3X Shutter Part No. 122-662 \$325	Power Supply Frame for Model 2 Shutter Actuator (not used with Type 350) Part No. 016-231 . \$125	(Focus Plates not needed if Graflok Back is available.)	Film Magazine 6 exposures
f/1.9—1:0.85 General Purpose Alphax & Ilex No. 3X Shutter Part No. 122-692 \$160	Adapts Polaroid or Graflok Back to rear frame. Part No. 122-602 \$25	4 x 5 Graflok Back with Focusing Screen accepts standard cut-film holders, film-pack adapters, roll-film (120) adapters, Polaroid 4 x 5 Film Holder. Part No. 122-604 \$45 21/4 x 31/4 Graflok Back with Focusing Screen accepts standard cut-film holders, film-pack adapters, roll-film (120) adapters. Part No. 016-233 . \$ 45	Roll-Film Adapter "22" 12 exposures, 2½ x 2½, 120 film Roll-Film Adapter "23" 8 exposures, 2½ x 3½, 120 film Polaroid Land 4 x 5 Film Holder.

SCOPE-MOBILE® CARTS

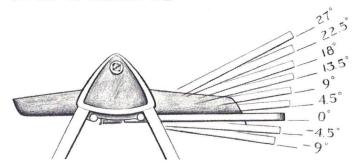
TYPE 200 SERIES



Five models comprise the Type 200-Series Scope-Mobile[®] Carts featuring tilt locking in one of nine tray positions. These tilt-lock models include the Types 201-1, 201-2, 202-1, 202-2, and 205-1. The three models ending with -1 have a storage drawer for holding accessory items. The two models ending with -2 have a storage drawer and a plug-in carrier for housing a pair of plug-in units. All tilt-lock models come equipped with front-wheel brakes.

CHARACTERISTICS

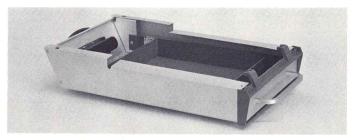
ADJUSTABLE TRAY tilt-locks in either of six 4.5° steps in the upward direction or two 4.5° steps in the downward direction from the horizontal axis.



MECHANICAL FEATURES include aluminum construction, 5-inch rubber wheels with front wheel brakes, and linoleum-topped steel shelf at the bottom.

OVERALL DIMENSIONS are approximately 36" high by $17\frac{1}{2}$ " wide by 28" deep for the 201-1, -2 and the 202-1, -2; 36" high by 22" wide by 28" deep for the 205-1.

Either the storage drawer or the storage drawer and plug-in carrier combination can be ordered separately to modernize older 200-Series Scope-Mobile® Carts.



014-012 drawer for 201-1	\$40
014-013 drawer/plug-in carrier combination for 201-2	45
014-014 drawer for 202-1	40
014-015 drawer/plug-in carrier combination for 202-2	45

MODEL	DRAWER	PLUG-IN CARRIER	TRAY WIDTH	TRAY DESIGNED FOR TEK- TRONIX OSCILLOSCOPE TYPE	NET WEIGHT	PRICE
201-1		NO	101/2"	503, 504, 506, 515A,		\$120.00
201-2		2, 3 and 9 Series	101/2"	516, 561, 561A, 564		130.00
202-1 MOD 52	YES	NO	143/4"	519	38 lbs.	155.00
202-1		NO	14"	502A*, 507, 517, 517A, 530, 540,		120.00
202-2		1 and Letter Series	14"	550, 580 Series; 570, 575, 661.		130.00
205-1		NO	173/4"	565, 567, AND ALL RACK- MOUNT INSTRUMENTS	43 lbs.	135.00
* Requires special adapter, part no. 436-033\$ 2.40						

TYPE 500 SERIES

The Type 500A (without plug-in carrier but with blank front panel) and the Type 500/53A (with plug-in carrier factory installed) Scope-Mobile® Carts comprise the Type 500 Series. These carts come equipped with front wheel brakes. Four wheel brakes can be ordered at additional cost.

Convenient feature of the Type 500A is the compartment for housing auxiliary equipment mounted behind the blank front panel. This compartment is 8 ½" high by 13 ¾" wide for the first 5 ½" of depth tapering from this point, at a 20° angle, to a minimum height of 2½" at a depth of 19½".

An available fan kit provides ventilation for the equipment compartment.



CHARACTERISTICS

STATIONARY TRAY slants upward at a 20° angle.

TRAY WIDTH is 133/4 inches.

STORAGE DRAWER is felt-lined and slides on nylon guides, provides handy storage for accessory items, such as probes, cables, and manuals.

NET WEIGHT is approximately 35 pounds.

Туре		Price
500A	without plug-in carrier	\$ 99.50
500A Export*	without plug-in carrier	99.50
500/53A	with plug-in carrier	110.00
500/53A Export*	with plug-in carrier	110.00
*Modified for expe		110.00

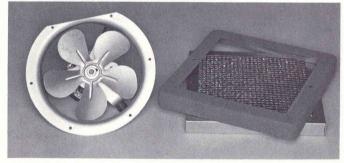
FOUR WHEEL BRAKES

TYPE 500A MOD 741B	 \$114.50
TYPE 500/53A MOD 741B	 125.00

PLUG-IN CARRIER

(can be ordered separately)

FAN KIT



SPECIAL TRAYS

Special trays furnish a secure positioning mount for Tektronix Oscilloscopes smaller in size than those for which the Scope-Mobile® Cart was intended.

Oscilloscopes	Part Number	Price	
502A	436-019	\$8.75	
503, 504, 515A, 516, 561A, 564	436-058	9.75	

	CT-1, P6040	CT-2, P6041	CT-3,	P6016	P6038	P6034 P6035	P6026	P6027 P6028	P6023	P6013 P6015	P6008 P6009	P6006 P6007	P6032	P6025	P500CF**	P500CF	P170CF*	P170C
	10040			人。一层面层					LOSCO			Plane Control of						
310A		x		X				х		х		х			0		0.	
317		х		х				x	Harry I	x		X			0		0	
RM17		x		х				X		X		X	HELES		0		0	
321		Х	F. Farry	Х				X		Х		X			0		0	
321A		х		х				х		X		X			0		0	
360		Х		Х				Х		X		Х			0		0	N. Hayer
502A		0		Х				X	X	X	Value of the	X			0		0	
503		0		X		persis.		X	X	X		X	With the second		0		0	
RM503 504		0		X				X	^	X		X			0		0	
RM504		0		×				X		x		x			0		0	
515A		X		X				x		x		x			0		0	100
RM15		X		X				X		Х		Х			0		0	
516		x		x				x		x		X			0		0	
517A	0	0	0															X
519	0	0	0			0	0		11 4 5									
524AD							Print.	X				X				X		
525							Bress	X				X						
526								X			1 - 1							
527 RM527								X										
RM327							102 31		-IN UI	VITS								
		x		x				x		x		X			0		0	
B CA		X		X				x	0	X		×			0		0	
D		x		×				x	x	x		x			0		0	
G		X		X			A CONTRACT	X	X	х		х			0		0	-
Н		x		x				×		x		x			0		0	
K		x		X				X		Х		Х			0		0	
L		Х		X				X		X		X			0		0	
М		X		X				X		X		X			0		0	
N	X	0	X			0	X			X		X		X	0		0	
O Z		X		X				Х	x	0		0			0		0	
1A1	0	x	0	×		0		X		x	x	0			0		0	
1A2	0	X	0	X		0		X	1000	X	X	0		1007	0		0	
2A60		x		x			175	x		x		x			0		0	l An
2A63		x		x				×	×	x		x			0		0	
3A1		х		х				X	0	X		X			0		0	
3A2		Х		х				X		Х		X			0		0	
3A3		Х		X			P (P)		X	X	10-10-	0		1000	0		0	
3A6		X		X				V	0	X		X	The state of		0		0	
3A72		X		X				X	0	X		X			0		0	
3A74 3A75		X		X				X		X		X			0		0	
10A2	0	X	0	0		0		X		X	x	X			0		0	
82	0	X	0	0		0				X	x	0			0		0	1
86	0	Х	0	0		0			Х	Х	X	0			0		0	
3576	×	0	x	×		x	0						x					
353	х	0	X	in Thick are	X											1	11,291	
451	х	0	X			X	0						X					
452	X	0	X	To de	X	Х							X					
4S3	Х	0 X	X	X				X	0	X		X			0		0	
9A2		X		X	7.8			x	0	x		x			0		0	
								AM	APLIFIE	RS			V					
123								X							0		0	
1121								х				x			0			X

PROBES

Tektronix manufactures both active and passive probes that broaden application areas for Tektronix oscilloscopes.

Most Tektronix probes are selectable for their attenuation ratios. They not only attenuate the signal to the oscilloscope but also reduce the loading effect of the oscilloscope on the circuit under test.

To assist in selection, the probes have been grouped as to general-purpose, special-purpose, and sampling. When making your selection, consider these guiding principles:

- 1. Be sure the desired probe will accommodate the input resistance and capacitance of the oscilloscope used, and is equipped with the proper type of connector.
- 2. For RF (CW) or high-voltage applications, select a probe with an adequate RF or HV rating. Most probes require derating for RF work.
- 3. Select for appropriate risetime and bandwidth for the oscilloscope and application.
- 4. When considering high input impedance, select the shortest cable length, highest attenuation probe compatible with the application. The probe with the lowest compatible input capacitance will generally provide the most accurate measurements.

When ordering any probe, please designate not only the type but also the six-digit part number.

If you desire help in selecting the right probe for your applications, please consult your Tektronix Field Engineer.

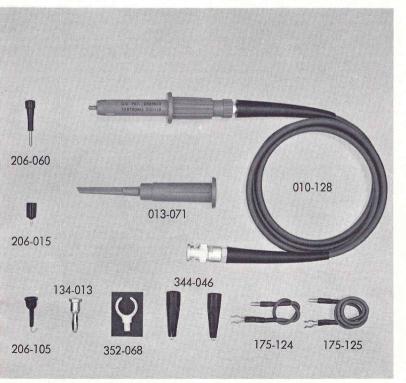
GENERAL PURPOSE PROBES

P6006 10X PASSIVE PROBE

The Type P6006 low input-capacitance probe has improved design and electrical characteristics over its predecessors, the Types P6000, P6003, P6017, and P6022 Probes.

By rotating the probe body with respect to its base, the probe time-constant can be adjusted for the input time-constant of the oscilloscope or plug-in unit.

The probe is available with 6', 9', or 12' cable lengths in addition to the standard 3.5' cable length and either BNC or UHF connectors. BNC to UHF or UHF to BNC adapters are available from your local supplier or Tektronix, Inc.



ATTENUATION RATIO is 10X.

INPUT RESISTANCE is 10 megohms.

INPUT CAPACITANCE for standard length probe is approximately 7 pf when used with an instrument having a 20 pf input capacitance and approximately 9.5 pf when used with an instrument having a 47 pf input capacitance.

PROBE RISETIME is approximately 5 nsec.

TYPICAL RISETIME of probe, Type K Plug-In Unit, and Type 540-Series Oscilloscope is 13 nsec.

VOLTAGE RATING is 600 v dc or ac pk-to-pk.*

STANDARD CABLE is 3.5' long, terminated with BNC or UHF connector.

P6006 PROBE PACKAGE (010-127 BNC or 010-125 UHF) \$22 Includes: 1-P6006 probe, 010-128 BNC or 010-126 UHF

-straight tip, 206-015 1-hook tip, 206-105

2-minigator clips, 344-046 1-pincher tip, 013-071

-spring tip, 206-060 1-banana plug, 134-013

-probe holder, 352-068 1—5" ground lead, 175-124 1—12" ground lead, 175-125 1-instruction manual, 070-381

*Peak-to-peak voltage derating is necessary for CW frequencies higher than 5.7 Mc when working into a 20 pf input, or higher than 3.6 Mc when working into a 47 pf input.

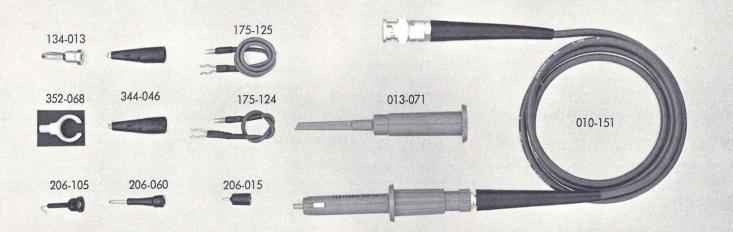
ADDITIONAL CABLE LENGTH P6006 PROBE PACKAGE WITH CORRESPONDING INPUT C CHANGE.

		Part Number			
Cable Input C		ut C	BNC	UHF	
Length	20 pf	47 pf	Connector	Connector	Price
6'	8.5 pf	11.0 pf	010-160	010-158	\$22
9'	11.0 pf	13.5 pf	010-146	010-142	22
12'	13.0 pf	15.5 pf	010-148	010-144	22

REPLACEMENT PROBES (without tips and ground leads)

	Part Nu		
Cable Length	BNC Connector	UHF Connector	Price
3.5'	010-128	010-126	\$19.50
6'	010-161	010-159	19.50
9'	010-147	010-143	19.50
12'	010-149	010-145	19.50

P6007 100X PASSIVE PROBE



The Type P6007 low input-capacitance probe has improved overall design and electrical characteristics over its predecessors, the Types P6002 and P6005 Probes.

By rotating the probe body with respect to its base, the probe time constant can be adjusted for the input time constant of the oscilloscope or plug-in unit.

At no additional cost, the probe is available with 6', 9', and 12' cable lengths in addition to the standard 3.5' cable length with either BNC or UHF connectors. UHF to BNC adapters are available from your local supplier or Tektronix Inc.

ATTENUATION RATIO is 100X.

INPUT RESISTANCE is 10 megohms.

INPUT CAPACITANCE for a standard length probe is approximately 2.0 pf when used with an instrument having a 20 pf input capacitance and approximately 2.3 pf when used with an instrument having a 47 pf input capacitance.

PROBE RISETIME is approximately 7 nsec.

TYPICAL RISETIME of probe, Type K Plug-In Unit, and Type 540-Series Oscilloscope is 13 nsec.

VOLTAGE RATING is 1.5 kv dc or ac rms, 4.2 kv ac pkto-pk.*

STANDARD CABLE is 3.5' long, terminated with BNC or UHF connector.

P6007 PROBE PACKAGE (010-150 BNC or 010-134 UHF) \$22

Includes: 1—P6007 probe, 010-151 BNC or 010-135 UHF 2-minigator clips, 344-046 -straight tip, 206-015 1-hook tip, 206-105 1-probe holder, 352-068 1—5" ground lead, 175-124 1—12" ground lead, 175-125 1-pincher tip, 013-071 1-spring tip, 206-060 1-instruction manual, 070-381

1-banana plug, 134-013

*Peak-to-peak voltage derating is necessary for CW frequencies higher than 200 kc. At 10 Mc, the maximum allowable pk-to-pk voltage is 2 kv. Above 10 Mc, additional derating is required depending on the input capacitance of the plug-in or instrument used.

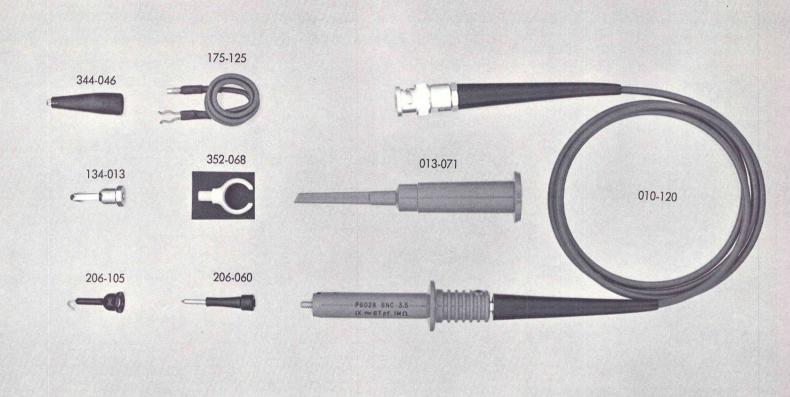
ADDITIONAL CABLE LENGTH P6007 PROBE PACKAGE WITH CORRESPONDING INPUT C CHANGE.

			Part N	lumber	
Cable Length	Inpu 20 pf		BNC Connector	UHF Connector	Price
6'	2.2	2.5	010-165	010-162	\$22.00
9'	2.4	2.7	010-152	010-136	22.00
12'	2.6	2.8	010-154	010-138	22.00

REPLACEMENT PROBES (without Tips and Ground Leads).

Cable Length	BNC Connector	UHF Connector	Price
3.5'	010-151	010-135	\$19.50
6'	010-166	010-163	19.50
9'	010-153	010-137	19.50
12'	010-155	010-139	19.50

P6027 and P6028 1X PROBES



The P6027 and P6028 passive probes are identical in all respects with the exception of the connectors. The P6027 uses a UHF connector. The P6028 uses a BNC connector.

In addition to the standard 3.5' cable length, these probes are available in cable lengths of 6', 9', and 12'. Insertion loss increases with probe cable length. For a 12' cable length probe, insertion loss is an additional 3-db at 16 Mc.

ATTENUATION RATIO is 1X.

INPUT RESISTANCE is 1 meg.

INPUT CAPACITANCE for a standard length probe is 60 pf when used with an instrument having a 20 pf input capacitance and 87 pf when used with an instrument having a 47 pf input capacitance.

PROBE RISETIME is approximately 10 nsec.

TYPICAL RISETIME of probe, Type K Plug-In Unit, and Type 540-Series Oscilloscope is 16 nsec.

VOLTAGE RATING is 600 v dc or ac pk-to-pk.*

STANDARD CABLE is 3.5' long, terminated with BNC or UHF connector.

P6027 PROBE PACKAGE with UHF connector (010-070) \$12.50 P6028 PROBE PACKAGE with BNC connector (010-074) 12.50

Each probe package includes: 1-probe (UHF, 010-116) or (BNC, 010-120)

1-hook tip, 206-105

1-minigator clip, 344-046

1-pincher tip, 013-071 1-spring tip, 206-060

1-probe holder, 352-068 1-12" ground lead, 175-125

1-banana plug, 134-013

1-parts list

*peak-to-peak voltage derating is necessary for CW frequencies higher than 1 Mc. At 10 Mc, the maximum allowable pk-to-pk voltage is 60 v.

REPLACEMENT PROBES (without tips and ground leads)

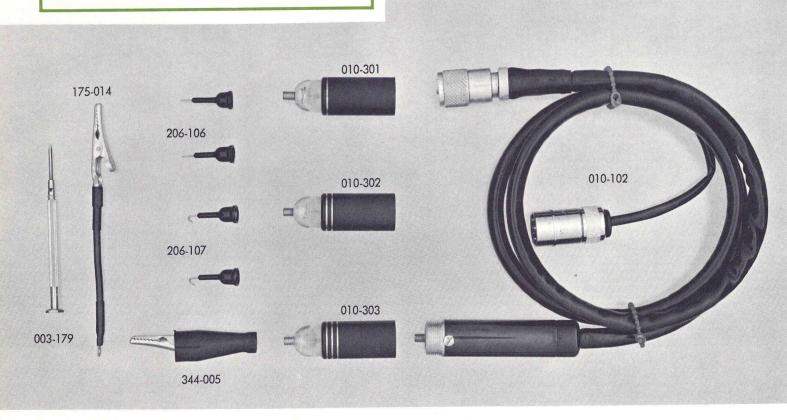
Cable	Part N	Number	
Length	P6027	P6028	Price
3.5'	010-116	010-120	\$9.45
6'	010-117	010-121	9.45
9'	010-118	010-122	9.45
12'	010-119	010-123	9.45

P6027 and P6028 PROBES with over 3.5' cable lengths

Probe	length nector No		In Capac	Price		
	Lengin	necion	140.	Min-pf	Max-pf	rrice
P6027 P6028	6 ft.	UHF BNC	010-071 010-075	83.0	110.0	\$12.50
P6027 P6028	9 ft.	UHF	010-072 010-076	110.0	137.0	\$12.50
P6027 P6028	12 ft.	UHF	010-073 010-077	138.0	165.0	\$12.50

SPECIAL PURPOSE PROBES

P170CF CATHODE-FOLLOWER PROBE



The P170CF has been developed for use with the Tektronix Type 517A Oscilloscope. When used with oscilloscopes other than the Type 517A, the P170CF requires use of a power supply such as the Tektronix Type 128 Probe Power Supply.

The preamplifier grid line in the Type 517A acts as the 170-ohm termination for the P170CF probe. When the probe is used with oscilloscopes other than the Type 517A, the Tektronix 170-ohm terminating resistor is recommended for proper termination of the P170CF.

The probe uses three variable attenuator heads for attenuations up to 4000X.

PROBE ALONE:

ATTENUATION is 2X.

RISETIME is less than 2 nsec.

INPUT SHUNT CAPACITANCE is 5 to 5.5 pf.

LOW FREQUENCY INPUT RESISTANCE is 12 megahoms, isolated by 0.001 μf coupling capacitor.

FREQUENCY RESPONSE is down less than 0.5 db at 65 Mc for high frequency and down 3 db at 15 cps for low frequency.

MAXIMUM VOLTAGE INPUT is ±0.5 v peak.

POWER SUPPLY REQUIREMENTS are regulated + 120 v at 10 ma, regulated or unregulated 6.3 v at 150 ma.

CABLE is 3.5' long, terminated with a UHF connector.

P170CF PROBE PACKAGE (010-101) \$99.50

Includes: 1—P170CF probe, 010-102 1—PAX-1 attenuator head,010-301 1—PAX-11 attenuator head, 010-302 1—PAX-111 attenuator head, 010-303 2—hook tips, 206-107

2—straight tips, 206-106 1—ground lead, 175-014 1—clip, 344-005 1—screwdriver, 003-179 1—instruction manual, 070-201

P170CF ONLY (010-102) \$53.00

		P170CF A	TTENUATOR	HEADS		
Туре	Attenuation (includes P170CF)	Input Capacity	Low-Freq. 3-db Point	Max. Voltage Input	Part No.	Price
PAX-I	4X min. 40X max.	5 pf 1.2 pf	800 cps 1700 cps	±1 v pk.	010-301	\$14.00
PAX-II	40X min. 400X max.	5 μ i 1.2 pf	150 cps 150 cps	±10 v pk.	010-302	\$14.00
PAX-III	400X min. 4000X max.	3 pf 1.1 pf	60 cps 60 cps	±100 v pk.	010-303	\$14.00

P500CF CATHODE-FOLLOWER PROBE

The P500CF Probe has been developed for use with the Tektronix Type 524AD Oscilloscope. When used with oscilloscopes other than the Type 524AD, the P500CF requires use of a power supply such as the Tektronix Type 128 Probe Power Supply.

PROBE GAIN is from 0.8 to 0.85.

ATTENUATION is 10X with attenuator head.

INPUT IMPEDANCE is 40 megohms paralleled by 4 pf when using the probe alone and 10 megohms paralleled by 2 pf when using 10X attenuator head.

HIGH FREQUENCY RESPONSE is 0.5-db down at 10 Mc.

LOW FREQUENCY RESPONSE is 3-db down at 5 cps.

AMPLITUDE DISTORTION is less than 3% for peak amplitudes up to 5 v when using the probe alone, or up to 50 v when using the 10X attenuator head.

MAXIMUM INPUT VOLTAGE is approximately 5 v at 10 Mc or 2 v at 30 Mc for the probe alone and approximately 50 v at 10 Mc or 20 v at 30 Mc when using the 10X attenuator head.

HUM LEVEL is less than 1.5 mv at maximum sensitivity.

POWER SUPPLY REQUIREMENTS are regulated +120 v at 25 ma, regulated or unregulated +6.3 v at 150 ma, dc

CABLE is 3.5' long, terminated with a UHF connector.

P500CF PROBE PACKAGE (010-109) \$85

Includes: 1-P500CF probe

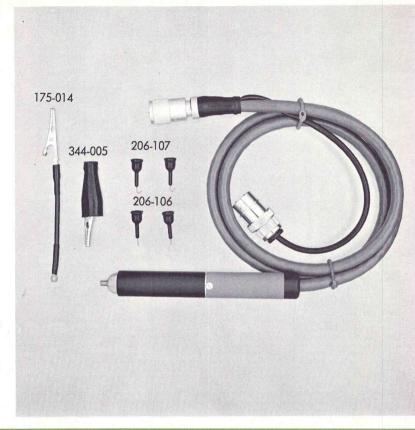
2—straight tips, 206-106 1-ground lead, 175-014

1-10X probe head, 010-304

-clip, 344-005

2-hook tips, 206-107

1-instruction manual, 070-212



P6023 10X PROBE

Initially designed for the Tektronix Type Z Plug-In Unit, the Type P6023 applies its specifications as well to other Tektronix differential preamplifiers.

The probe can be compensated for input capacities between 20 pf and 50 pf. The attenuation can be compensated for normal plug-in attenuator differences between two plug-in units or two channels of the same plug-in unit.

ATTENUATION RATIO is 10X, adjustable $\pm 2.5\%$.

INPUT RESISTANCE is 8 meg.

INPUT CAPACITANCE is approximately 12 pf when used with an instrument having a 20 pf or 47 pf input capacitance.

PROBE RISETIME is less than 7 nsec.

TYPICAL RISETIME of probe, Type Z Plug-In Unit, and Type 540-Series Oscilloscope is 16 nsec.

VOLTAGE RATING is 1000 v dc or ac pk-to-pk*.

CABLE is 3.5' long, terminated with a locking BNC or UHF connector.

P6023 PROBE PACKAGE (010-167 LOCKING BNC or 010-065 UHF)

Includes: 1-P6023 probe, 010-168 BNC or 010-097 UHF

2-minigator clips, 344-046

1-long tip, 206-105

1-probe holder, 352-068

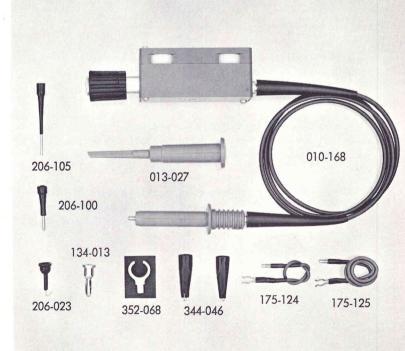
1-hook tip, 206-023 1-pincher tip, 013-027

1—calibration tip, 206-100 1-banana plug, 134-013

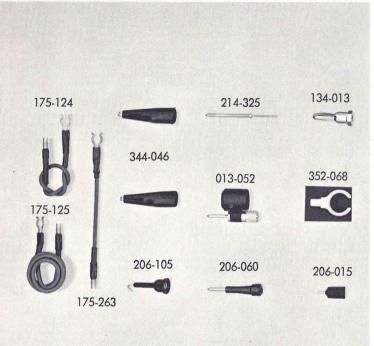
1—5" ground lead, 175-124 1—12" ground lead, 175-125 1-instruction manual, 070-294

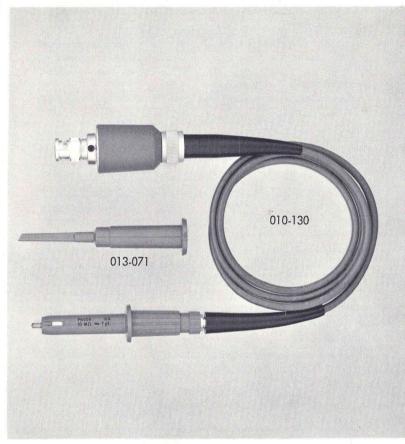
P6023 PROBE ONLY (010-168 LOCKING BNC or 010-097 UHF) \$33

*Peak-to-peak voltage derating is necessary for CW frequencies higher than 5 Mc. At 20 Mc, the maximum allowable pk-to-pk voltage is 300 v.



P6008 10X PASSIVE PROBE





The P6008 low-capacitance probe was designed for use with the Tektronix Type 82 and Type 86 Plug-In Units. It can also be used with Type 1A1, 1A2 and 10A2 Plug-In Units.

The probe can be adjusted by rotating the probe body with respect to the probe base so that the probe input time constant equals the input time constant of the plug-in unit.

When observing high-frequency signals with the Type P6008, it is necessary to use the shortest ground lead possible in order to avoid excessive inductance between test point and probe.

ATTENUATION RATIO is 10X.

INPUT RESISTANCE is 10 meg.

INPUT CAPACITANCE is approximately 7.5 pf.

PROBE RISETIME is less than 3 nsec.

TYPICAL RISETIME of probe, Type 82 Plug-In Unit, and Type 580-Series Oscilloscope is 5 nsec.

VOLTAGE RATING is 600 v dc pk-to-pk.*

CABLE is 3.5' long, terminated with a BNC connector.

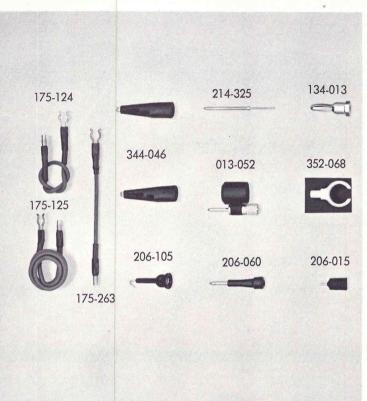
P6008 PROBE PACKAGE (010-	129)	\$35
Includes: 1—P6008 probe, 010-130		
1—bayonet adapter, 013- 052	2—minigator clips, 344-046 1—probe holder, 352-068	
	1—3" ground lead, 175-263	

1—pincher tip, 013-071 1—5" gra 1—spring tip, 206-060 1—12" gra 1—straight tip, 206-015 1—instruct 1—banana plug, 134-013

1—probe holder, 352-068 1—3" ground lead, 175-263 1—5" ground lead, 175-124 1—12" ground lead, 175-125 1—instruction manual, 070-362

*peak-to-peak voltage derating is necessary for CW frequencies higher than 20 Mc. At 40 Mc, the maximum allowable pk-to-pk voltage is 300 v.

P6009 100X PASSIVE PROBE





Initially designed for use with the Type 82 and Type 86 Plug-In Units, the P6009 low-capacitance probe can also be used with the 1A1, 1A2 Plug-In Unit. A separate version of the P6009 is available for use with the Type 10A2 Plug-In Unit.

The probe can be adjusted by rotating the probe body with respect to the probe base so that the probe input time constant equals the input time constant of the plug-in unit.

When observing high-frequency signals with the Type P6009, it is necessary to use the shortest ground lead possible in order to avoid excessive inductance between test point and probe.

ATTENUATION RATIO is 100X.

INPUT RESISTANCE is 10 meg.

INPUT CAPACITANCE is 2.5 pf.

*peak-to-peak voltage derating is necessary for CW frequencies higher than 300 kc. At 40 Mc, the maximum allowable pk-to-pk voltage is 575 v.

P6009 PROBE ONLY, for Type 10A2 (010-171) 50

P6013 HIGH-VOLTAGE PROBE

The Type P6013 provides 1000X attenuation as a means for oscilloscope measurements of high-amplitude waveforms or dc potentials up to 12 kv. Pulse frequency can be up to 100 kc at 12 kv.

The probe can be compensated for oscilloscope input capacities up to 60 pf.

ATTENUATION RATIO is 1000X.

INPUT RESISTANCE is 100 meg.

INPUT CAPACITANCE is 3 pf.

PROBE RISETIME is less than 7 nsec.

TYPICAL RISETIME of probe, Type K Plug-In Unit, and Type 540-Series Oscilloscope is 14 nsec.

VOLTAGE RATING is 12 kv dc, pk pulse, or pk ac.*

CABLE is 10' long, terminated with a UHF connector.

P6013 PROBE PACKAGE (010-106) \$75

Includes: 1—P6013 probe 1—7" ground lead, 175-192 1—banana plug, 134-016 1—instruction manual, 071-321

1-alligator clip, 344-033

*peak-to-peak voltage derating is necessary for CW frequencies higher than 100 kc. At 1 Mc, the maximum allowable pk-to-pk voltage is 5.5 kv.



The Type P6015 provides 1000X attenuation for oscilloscope measurements of waveforms reaching up to 40-kv peak. Voltage or duty cycle derating is necessary for RF voltages at frequencies over 100 kc, or in environmental temperatures above 25° C.

The probe time constant can be adjusted to equal that of the oscilloscope input time constant for those instruments having between 12 pf and 50 pf input capacitance.

ATTENUATION RATIO is 1000X, adjustable ±9%.

INPUT RESISTANCE is 100 meg.

INPUT CAPACITANCE is approximately 2.7 pf.

PROBE RISETIME is approximately 4 nsec.

TYPICAL RISETIME of probe, Type K Plug-In Unit, and Type 540-Series Oescilloscope is 13 nsec.

TEMPERATURE RANGE is 10°C to 55°C environmental temperature. Calibration adjustments are necessary when environmental temperature changes.

VOLTAGE RATING is 40 kv pk ac or pulse, 20 kv dc or rms continuous at 25°C environmental temperature.*

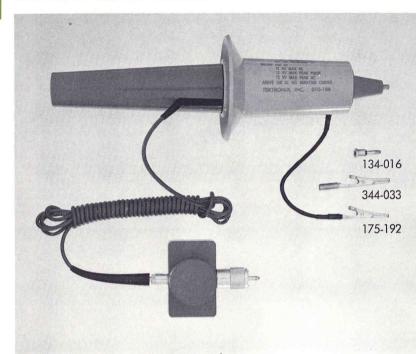
CABLE is 10' long, terminated with a BNC or UHF connector.

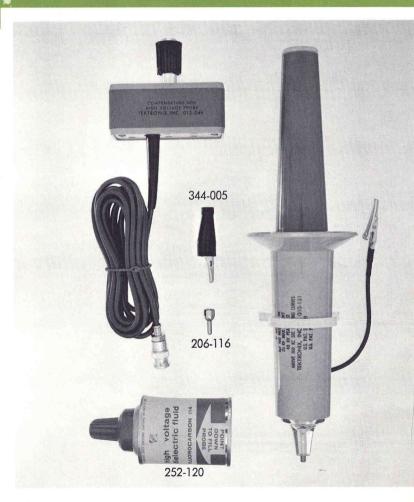
Includes: 1—P6015 probe
†1—storage case, 202-103
†1—storage case insert,

1—alligator clip tip, 344-005 1—tip, 206-116 1—can, dielectric, 252-120

436-035 1—instruction manual, 070-373 †1—probe holder, 352-056 †(not shown)

*peak-to-peak voltage derating is necessary for CW frequencies higher than 100 kc. At 10 Mc, the maximum allowable pk-to-pk voltage is 13 kv.





P6016 AC CURRENT PROBE

The P6016 Probe offers two current detecting systems for use with Tektronix wide-band oscilloscopes, the P6016 Probe and Type 131 Amplifier combination, or the P6016 Probe and Passive Termination combination.

The Probe and Amplifier combination measures currents over a wide range with risetimes to 20 nsec. The Probe and Passive combination is not quite as flexible, but has improved passband characteristics.

PROBE AND TYPE 131 AMPLIFIER

SENSITIVITY with a 50 mv/div oscilloscope input is 1 ma/div basic sensitivity with 10 calibrated steps from 1 ma/div to 1 amp/div in a 1-2-5 sequence, accuracy within 3%. Variable control on the oscilloscope provides continuous uncalibrated ranging between steps.

NOISE is equivalent to a 100- μ amp, pk-to-pk, input signal. RISETIME is 20 nsec with a Tektronix Type K Plug-In Unit and Type 540A-Series Oscilloscope.

PASSBAND is approximately 17 Mc at 3-db down.

DELAY TIME is 40 nsec or less measured at the 50% pulse amplitude points.

LOW-FREQUENCY RESPONSE at 3-db down is 50 cps. AC CURRENT SATURATION RATING is 15 amps pk-to-pk, decreasing to 8 amps at 400 cps, 400 ma at 50 cps.

POWER REQUIREMENT is 105-125 v ac, approximately 0.5 watt at 117 v, or approximately 1 watt at 234 v ac, or 0.2 watt at 22.5* battery charge.

P6016 PROBE, TYPE 131 AMPLIFIER, 117 V POWER SUPP (015-054 LOCKING BNC or 015-030 UHF)	
P6016 PROBE, TYPE 131 AMPLIFIER, 234 V POWER SUPP (015-055 LOCKING BNC or 015-045 UHF)	LY 235.00
TYPE 131 AMPLIFIER AND 117 V POWER SUPPLY (015-051 LOCKING BNC or 015-011 UHF)	160.00
TYPE 131 AMPLIFIER AND 234 V POWER SUPPLY (015-052 LOCKING BNC or 015-024 UHF)	160.00
TYPE 131 AMPLIFIER AND 22.5 V BATTERY ADAPTER (015-053 LOCKING BNC or 015-026 UHF)	120.00
TYPE 131 AMPLIFIER, less power supply (015-050 LOCKING BNC or 015-029 UHF)	115.00
117 V POWER SUPPLY ONLY (015-027)	60.00
234 V POWER SUPPLY ONLY (015-028)	60.00
*22.5 V BATTERY ADAPTER ONLY (013-050)	8.00
CALIBRATOR ADAPTER (017-031)	3.50

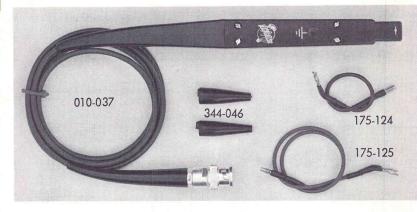
COMMON TO BOTH SYSTEMS

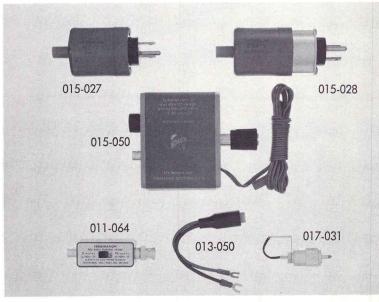
DC SATURATION THRESHOLD is 0.5 amp.

MAXIMUM BREAKDOWN VOLTAGE is 600 v.

INSERTION IMPEDANCE after a step function has been applied to the conductor under test is (1) $0.06~\Omega$ after 50 nsec, (2) $0.04~\Omega$ after 100 nsec, (3) $0.015~\Omega$ after 1 μ sec, and (4) $0.006~\Omega$ after 10 μ sec. Dependent upon size of the wire, the capacitance between conductor and probe case is typically 1 pf.

*Use Eveready #763 or equivalent.





PROBE AND PASSIVE TERMINATION

SENSITIVITY is either 2 ma/mv or 10 ma/mv of oscilloscope sensitivity, accuracy within 3%.

RISETIME is 17 nsec, $\pm4\%$ maximum rolloff, overshoot, and ringing, with a Tektronix Type K Plug-In Unit and Type 540A-Series Oscilloscope.

PASSBAND is approximately 20 Mc at 3-db down.

DELAY TIME is 20 nsec or less measured at the 50% pulse amplitude points.

LOW-FREQUENCY RESPONSE at 3-db down is approximately 850 cps at 2 ma/mv (5% tilt of 10 μ sec square-wave pulse) and approximately 230 cps at 10 ma/mv (5% tilt of 35 μ sec square-wave pulse).

 MAXIMUM CURRENT RATING is 15 amps pk-to-pk.

 P6016 PROBE (010-037)
 \$75.00

 PROBE AND PASSIVE TERMINATION BNC (011-074)
 90.00

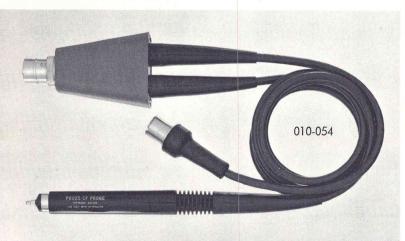
 PROBE AND PASSIVE TERMINATION UHF (011-044)
 90.00

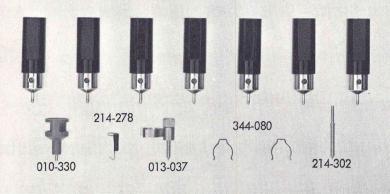
 PASSIVE TERMINATION (011-028 UHF or 011-064 BNC)
 20.00

Each probe includes:
1—5" ground lead, 175-124 2—minigator leads, 344-046
1—12" ground lead, 175-125 1—instruction manual, 070-237

SAMPLING PROBES

P6025 CATHODE-FOLLOWER PROBE





The P6025 Cathode-Follower Probe, a high-frequency probe designed for use with the Tektronix Type N Sampling Plug-In Unit, offers flexibility through 7 attenuator heads. All attenuator heads can be compensated for proper ac attenuation ratios.

Normally dc coupled, the probe can also be ac-coupled with a capacitor-coupler head that is supplied with the probe.

OUTPUT is $\pm 100 \, \text{mv}$ into a 50-ohm load.

OUTPUT DC LEVEL is approximately +350 mv.

INPUT RESISTANCE is 10 megohms with an attenuator head.

POWER REQUIREMENTS are 6.3 v ac at 200 ma for the

heater and + 100 v dc at approximately 12 ma for the plate.

CABLE is 54 inches long with GR connector.

RISETIME of the probe, attenuator head, Type N Unit, is 0.85 nsec for attenuations of 200X and less, and 1 nsec for attenuations above 200X, when using a 25-ohm source impedance. A higher source impedance imposes an RC charge time as a restriction on the probe risetime.

	ATTENUATOR	HEADS (DO	C COUPLED)
Part Number	Attenuator	Input C ±10%	Max. Linear Voltage Input in ± Volts
010-323	10X	5.0 pf	
010-324	20X	3.5 pf	2
010-325	50X	2.5 pf	5
010-326	100X	1.8 pf	10
010-327	200X	1.5 pf	20
010-328	500X	1.3 pf	50
010-329	1Q00X	1.2 pf	100

All Heads \$16.00

P6025 PROBE PACKAGE (010-053)\$260

Includes: 1—P6025 probe, 010-054
7—attenuator heads
1—capacitor-coupler head
1—hook tip, 214-278

2—ground clips, 344-080 1—bayonet ground clip, 013-037 1—extended bayonet pin, 214-302 1—instruction manual, 070-326

P6025 PROBE Only (010-054) \$165

P6026 PASSIVE PROBE

The Type P6026 Probe, usable with any of the Tektronix 50-ohm input sampling systems, has extremely low input capacitance with passband characteristics to 600 Mc.

The seven attenuator heads are easily interchangeable and do not require compensation.

The probe includes two 50-ohm terminations, one for ac coupling and one for dc coupling.

Part Number	Attenu- ator-DC Accuracy within 2%	Input C	Input R at 600 Mc	Input R at DC	Low freq. coupled approx. AC 3 db point
010-333	5X	0.5 pf	125 Ω	125 Ω	1.4 Mc
010-334	10X	0.5 pf	250 Ω	250 Ω	720 kc
010-335	20X	0.6 pf	500 Ω	500 Ω	360 kc
010-336	50X	0.8 pf	1 kΩ	1.25 kΩ	140 kc
010-337	100X	0.8 pf	2 kΩ	$2.5 k\Omega$	65 kc
010-338	200X	0.8 pf	3.25 kΩ	5 kΩ	32 kc
010-339	500X	0.8 pf	$4 k\Omega$	12.5 kΩ	13 kc.
010-331	50 Ω DC	termination	, 010-340	50 Ω AC	termination

All Heads \$14.00 ea

STANDARD CABLE is a 10-nsec RG58A/U cable, approximately 6½ feet long; 5-nsec and 10-nsec RG8/U cables are available for extending the cable length. A frequency response loss becomes apparent when the cable is extended beyond 20 feet.

 10 nsec, approx. 6.5' long (017-501)
 \$13.50

 5 nsec, approx. 3.5' long (017-502)
 13.50

 P6026 PROBE PACKAGE (010-055)
 \$140

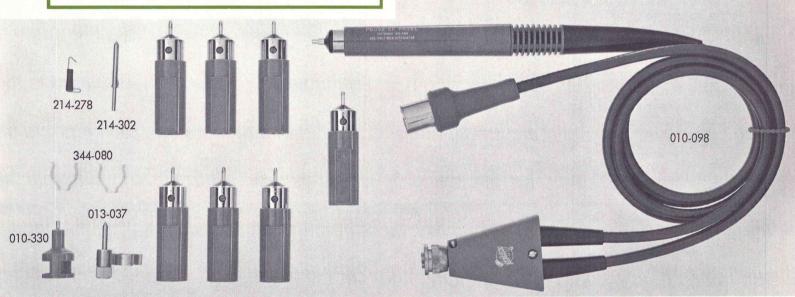
Includes: 1—hook tip, 214-278

1—50 Ω ac termination, 010-340 1—50 Ω dc termination, 010-331

1—ground clip, 013-037 1—adapter, 017-036 7—attenuator heads
1—10 nsec cable, 017-501
1—carrying case, 202-081
1—instruction manual 070-291



P6032 CATHODE-FOLLOWER PROBE



The P6032 is a high-frequency cathode-follower probe designed for use with Tektronix vertical sampling plug-in units, such as the Type 3S76, Type 4S1, and Type 4S2.

The attenuator heads can be compensated for ac attenuation ratios.

RISETIME is typically 0.4 nsec for probe and attenuator head.

MAXIMUM OUTPUT is ± 150 my into a $50-\Omega$ load.

SIGNAL DELAY is approximately 10 nsec.

POWER REQUIREMENTS are 12.6 v at 180 ma for the filament and $+100 \,\mathrm{v}$ at 12 ma for the plate.

CABLE is 54" long with GR connector.

CAPACITOR-COUPLER HEAD is rated at 0.001 µfd,	500 v
dc. Low frequency 3-db point is 16 cps.	
Order Part Number 010-330	\$4
P6032 PROBE PACKAGE (010-108)	\$220
Includes: 1—P6032 probe, 010-098 7—attenuator heads	
1—capacitor-coupler head 1—center pin, 214-302	

1—ground clip, 013-037 2—solderable ground clips, 344-080 1-spring contact, 214-278 1-instruction manual, 070-327

P6032 PROBE ONLY (010-098) \$115

Part Number	Attenuator Head	Max. Input Voltage*	Input Capacitance (± 10%)
010-350	10X	± 1.5 v	3.6 pf
010-351	20X	± 3.0 v	2.6 pf
010-352	50X	± 7.5 v	1.8 pf
010-353	100X	± 15 v	1.5 pf
010-354	200X	± 30 v	1.4 pf
010-355	500X	± 75 v**	1.3 pf
010-356	1000X	± 150 v**	1.3 pf
411 1 1 1		C 11	AT THE REPORT OF THE PARTY OF T

*Limited by linearity of cathode follower. This value may be exceeded by 50% for pulses without damage to probe components. **Must be derated for continuous wave use. Peak-to-peak voltage derating is necessary at CW frequencies higher than 500 Mc for the 1000X attenuator head and 1000 Mc for the 500X attenuator head.

Max. Input Voltage (peak-to-peak) Attenuator (at 100% duty factor)				
Head	500 Mc	750 Mc	1000 Mc	1250 Mc
500X	150 v	150 v	150 v	125 v
1000X	300 v	200 v	150 v	125 v

INPUT RESISTANCE at DC of all attenuator heads is 10 megohms \pm 2%.

P6034 10X PROBE

The P6034 low-capacitance, miniature passive probe assists Tektronix Type 4S1, 4S2 and Type 3S76 Pulse-Sampling Plug-In Units in realizing accurate measurements of high-speed repetitive pulse. Risetime of the probe conforms to the risetime of the plug-in units.

The probe is marked for attenuation ratio, wattage rating, and resistance of the probe.

ATTENUATION RATIO is 10X.

INPUT RESISTANCE is 500 ohms $\pm 1.5\%$, approximately 300 ohms at 1 Gc.

INPUT CAPACITANCE is 0.7 pf, dc to 100 Mc.

PROBE RISETIME is less than 100 psec.

PASSBAND is dc to 3.5 Gc (3-db down).

LOW FREQUENCY RESPONSE is approximately 70 kc at 3-db down, ac coupled.

MAXIMUM RINGING AND OVERSHOOT is 2% using a 25-ohm source and coaxial probe ground.

VOLTAGE RATING is 16 v dc or 45 v pk-to-pk.*

CABLE is 18" long with GR connector.

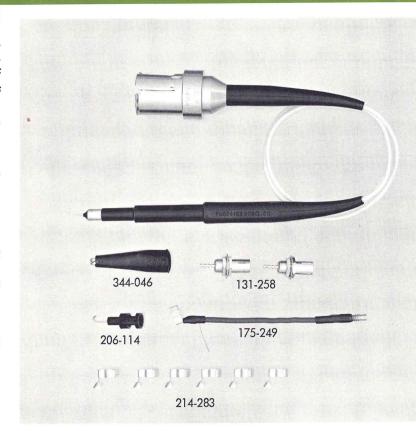
P6034 PROBE PACKAGE (010-110) \$35

Includes: 1-P6034 probe

2—test jacks, 131-258 1—21/2" ground lead, 175-249 1-hook tip, 206-114

6-ground clips, 214-283 1-instruction manual, 070-368 1-minigator clip, 344-046

*peak-to-peak voltage derating is necessary for CW frequencies higher than 800 Mc. At 1 Gc, the maximum allowable pk-to-pk voltage is 25 v.



P6035 100X PROBE

The P6035 low-capacitance miniature passive probe physically resembles the P6034 probe and adheres closely to the risetime of the Type 4S1, 4S2 and Type 3S76 Sampling Plug-In Units when making high-speed repetitive-pulse measurements.

The probe is marked for attenuation ratio, wattage rating, and resistance of the probe.

ATTENUATION RATIO is 100X.

INPUT RESISTANCE is $5 \text{ k} \pm 1.5\%$, approximately 1.5 kat 1 Gc.

INPUT CAPACITANCE is 0.6 pf, dc to 100 Mc.

PROBE RISETIME is less than 200 psec.

PASSBAND is dc to 1.7 Gc (3-db down).

LOW FREQUENCY RESPONSE is approximately 6 kc at 3-db down, ac coupled.

MAXIMUM RINGING AND OVERSHOOT is 2% using a 25-ohm source and coaxial probe ground.

VOLTAGE RATING is 50 v dc or 140 v pk-to-pk.*

CABLE is 18" long with GR connector.

P6035 PROBE PACKAGE (010-111)\$35

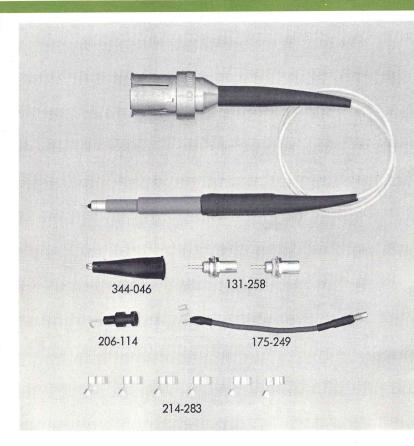
Includes: 1-P6035 probe 1-hook tip, 206-114

2—test jacks, 131-258 1—2½" ground lead, 175-249

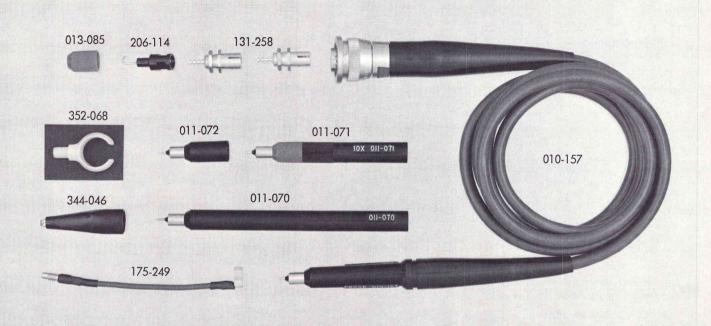
6-ground clips, 214-283 1-instruction manual, 070-369

1-minigator clip, 344-046

*peak-to-peak voltage derating is necessary for CW frequencies higher than 500 Mc. At 1 Gc, the maximum allowable pk-to-pk voltage is 60 v.



P6038 DIRECT SAMPLING PROBE



Specifically designed for use with the Type 3S3 and 4S3 Sampling Plug-Ins, the P6038 Probe features wide-band performance in the dc-to-1000 Mc range.

Very small in size for ease of handling, the P6038 Probe contains sampling circuitry in the probe head, permitting low-noise, full-sensitivity measurements even when used with source impedances above 50 ohms.

Standard accessories supplied with the P6038 Probe include a 10X Attenuator, a Coupling Capacitor for blocking the dc component of the signal, and a non-attenuating Response Normalizer to assure the probe input is insensitive to source impedance variations.

PROBE ALONE:

ATTENUATION is 1X.

INPUT RESISTANCE is 100 k ± 1%.

INPUT CAPACITANCE is 2 pf \pm 10%.

TYPICAL RISETIME with Type 3S3 or 4S3 Plug-In Unit and 50-ohm source is 0.35 nsec or less.

CABLE is approximately 4.5' with special 4-pin connector.

P6038	PROBE	PACKAGE	(010-156)	•
			1	

Includes: 1-P6038 probe, 010-157 1—coupling capacitor, 011-072 1-10X attenuator, 011-071

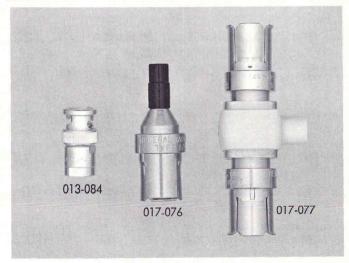
1-response normalizer, 011-070 2—test-point jacks, 131-258 1—bayonet ground adapter, 013-

1-hook tip, 206-114 1-ground clip, 175-249 -probe holder, 352-068

1-carrying case, 202-123 1-minigator clip, 344-046 1—instruction manual, 070-400

P6038 PROBE ONLY (010-157) \$155

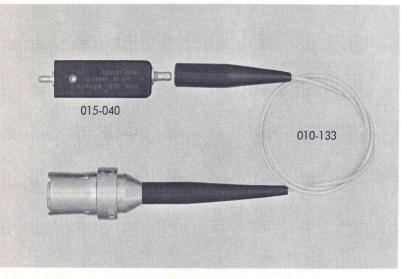
P6038 PROBE/ADA	APTER CHARACT	ERISTICS
PER MINISTER SE	INPUT R	INPUT C
PROBE AND COUPLING CAPACITOR		$3.5 \mathrm{pf} \pm 10\%$
PROBE AND 10X ATTENUATOR	1 meg ± 1%	$1.8\mathrm{pf}\pm10\%$
PROBE AND RESPONSE NORMALIZER	100.3 k ± 1%	$3.5 \mathrm{pf}\pm10\%$



OPTIONAL ACCESSORIES

P6038-TO-GR ADAPTER (017-076)	\$ 4.50
P6038-TO-BNC ADAPTER (013-084)	3.00
VP-2 VOLTAGE PICKOFF "T" (017-077)	30.00

TYPE CT-1 CURRENT TRANSFORMER & P6040 PROBE



When used with Tektronix sampling systems, the CT-1 and P6040 combination will measure milliamp currents at frequencies from 35 kc to beyond 1 Gc.

Because of its compact size (approx. 2" long, $\frac{9}{16}$ " wide and $\frac{3}{8}$ " thick) the CT-1 is easy to use in crowded circuits. Its insulated case eliminates the possibilty of shorting-out adjacent components or wiring.

SENSITIVITY is 5 mv/ma into a 50-ohm load. Accuracy is better than $\pm 3\%$.

DECAY TIME CONSTANT is $5 \,\mu \text{sec}$, approximated by 1% per 50 nsec; limit, $1 \,\mu \text{sec}$.

RISETIME is less than 0.35 nsec.

FREQUENCY RESPONSE is 35 kc to 1 Gc (30% down points).

INSERTION IMPEDANCE with a 50-ohm termination is 1 ohm shunted by approximately 5 μ h; 2 ohms shunted by approximately 5 μ h without a 50-ohm termination.

TYPE CT-2 CURRENT TRANSFORMER & P6041 PROBE

The CT-2 Current Transformer and P6041 Probe combination is designed for use with conventional oscilloscopes such as the Tektronix Type 530, 540, 550 and 580 Series. Since the frequency response of the CT-2/P6041 is only 7% down at 200 Mc, the response of the system will be that of the oscilloscope used.

The insulated case of the CT-2 Current Transformer is convenient to use in applications where limited circuit space exists. Several CT-2 Transformers may be placed throughout the circuit and monitored by one or more P6041 Probes.

CAPACITIVE LOADING to a bare wire passing through the CT-1 transformer is typically 1.5 pf for no. 14 gauge, 0.6 pf for no. 20 gauge.

MAXIMUM VOLTAGE OF CIRCUIT UNDER TEST is 1000 v dc.

DIRECT CURRENT reduces the L/R time constant by a factor of 2 at 0.6 amp.

PULSE CURRENT RATING is 100 amps peak, with an ampsec product of 1 amp- μ sec. When the amp-second product is exceeded, the core saturates reducing the CT-1 output to zero.

RMS CURRENT RATING is 500 ma maximum.

TEMPERATURE RATING is -25°C to +65°C.

PHYSICAL DIMENSIONS are $^3/_8$ " x $^9/_{16}$ " x $^{113}/_{16}$ " plus $^1/_4$ " x 6-32 mounting stud.

TYPE P6040 PROBE

The P6040 Probe is an inter-connecting cable for the CT-1, used between the transformer and oscilloscope input.

If several CT-1 Transformers are in a circuit, the P6040 Probe can be used to monitor any one of them.

The P6040 can be used with other test-point connectors, such as Amphenol series 27 Sub-Minax or Sealectro Sub-Miniature rf.

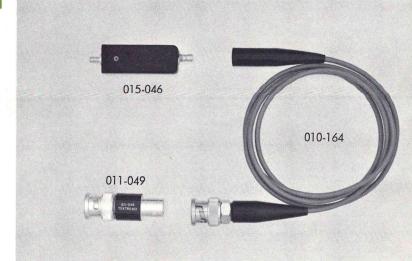
IMPEDANCE is 50Ω .

ATTENUATION is 1X.

OUTPUT CONNECTOR is a GR type.

CABLE LENGTH is 18 inches. Additional 50- Ω cable can be used in series with the probe. RG8/U or RG58A/U is recommended for best preservation of the CT-1 Transformer high-frequency response.

CT-1 AND P60	040 (015-041)	\$31
CT-1 CURRENT	TRANSFORMER (015-040)	17
P6040 PROBE	(010-133)	14



SENSITIVITY is 1 mv/ma into a 50-ohm load. Accuracy is better than $\pm 3\%$.

DECAY TIME CONSTANT is 125 μ sec, approximated by 1% per 1.25 μ sec; limit, 25 μ sec.

RISETIME is approximately 0.5 nsec.

FREQUENCY RESPONSE is 30% down at 1.2 kc, 7% down at 200 Mc.

INSERTION IMPEDANCE with a 50-ohm termination is 0.04 ohms shunted by approximately 5 μ h; 0.08 ohms shunted by approximately 5 μ h without a 50-ohm termination.

CAPACITIVE LOADING to a bare wire passing through the CT-2 Transformer is typically 2.1 pf for no. 16 gauge, 0.7 pf for no. 22 gauge.

MAXIMUM VOLTAGE OF CIRCUIT UNDER TEST is 1000 v dc.

<code>DIRECT CURRENT</code> reduces the L/R time constant by a factor of 2 at 0.5 amp.

PULSE CURRENT RATING is 100 amps peak, with an ampsec product of 50 amp- μ sec. When the amp-second product is exceeded, the core saturates reducing the CT-2 output to zero.

RMS CURRENT RATING is 2.5 amps maximum. TEMPERATURE RATING is -25° C to $+65^{\circ}$ C. PHYSICAL DIMENSIONS are $^{3}/_{8}$ " x $^{9}/_{16}$ " x $^{113}/_{16}$ " plus $^{1}/_{4}$ " x 6-32 mounting stud.

TYPE P6041 PROBE

The P6041 Probe serves as an interconnecting cable between the CT-2 Transformer and the oscilloscope input. A 50-ohm termination is used in conjunction with the P6041 for terminating the probe at the high impedance input of the oscilloscope used.

Although designed for use with the CT-2, the P6041 Probe can be used with other test-point connectors, such as Amphenol Series 27 Sub-Minax or Sealectro Sub-Miniature RF.

IMPEDANCE is 50 ohms.

ATTENUATION is 1X.

OUTPUT CONNECTOR is BNC type.

CABLE LENGTH is 42". Additional 50-ohm cable can be used in series with the probe. RG8/U or RG58A/U cable is recommended to preserve the high-frequency response.

CT-2 AND P6041/50-OHM TERMINATION (015-047)	\$37.75
CT-2 CURRENT TRANSFORMER (015-046)	17.00
P6041 PROBE (010-164)	12.00
50-OHM TERMINATION (011-049)	8.75

TYPE CT-3 50-OHM SIGNAL PICKOFF

Designed for use with high-frequency Oscilloscopes, the CT-3 Pickoff provides a convenient means of picking off a signal in a 50-ohm system. Used with any of the Tektronix Sampling Instruments, the CT-3 provides the link for use as a trigger source.

The CT-3 inductively meters the current in a circuit, developing a proportional output voltage. Used in a 50-ohm system, the output voltage of the CT-3 is 10% of the voltage at the center conductor.

SENSITIVITY is 10% of the voltage under test, into a 50-ohm load.

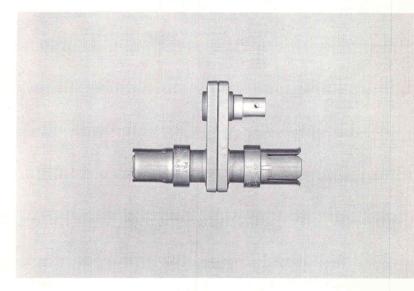
DECAY TIME CONSTANT is $4.5 \,\mu \text{sec}$ at 0 dc current. RISETIME is approximately $0.4 \,\text{nsec}$.

FREQUENCY RESPONSE is 50 kc to 875 Mc at 0 dc current. INSERTION IMPEDANCE with a 50-ohm termination is 1 ohm shunted by 4.5 μ h; 2 ohms shunted by 4.5 μ h without a 50-ohm termination.

VSWR is approximately 1.2 at 1.5 Gc.

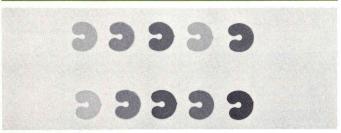
VOLTAGE RATING at 0 v dc is 25 v RMS, 1 kv pulse pk. The volts-sec product is 100 v $\mu \rm{sec.}$ If exceeded, the L/R decay will decay rapidly toward zero.

ORDER PART NUMBER 017-061 \$30.00



PROBE ACCESSORIES

IDENTIFICATION TAGS



Probe identification tags for multi-probe applications help locate correlating probe ends quickly. One package contains 2 each of 10 colors.

Order Part Number 334-798 \$1.00

PROBE GROUNDING ADAPTER

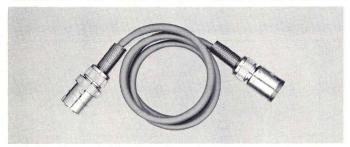


PROBE GROUNDING ADAPTER for Tektronix 10X probes provides a convenient method of establishing the vertical position of the oscilloscope trace in relation to the zero volts input at the probe tip. The adapter eliminates the need moving the probe tip from the signal source to ground.

Push-button operation of the Adapter disconnects the oscilloscope input from the probe and, at the same time, connects the input to ground through a parallel combination of a 9.1 megohm resistor and a 0.03 μf capacitor.

The Probe Grounding Adapter adds 7.5 pf to the input capacitance of the plug-in or oscilloscope. Readjustment of the probe is necessary for proper square-wave response.

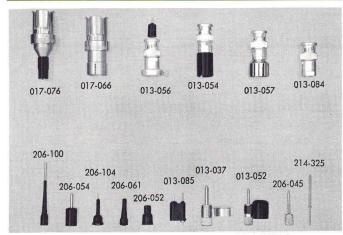
POWER CABLE EXTENSION



Probe Power-Cable Extension—A 30." 3-conductor power-cable extension for Tektronix P170CF and P500CF cathode-follower probes, permits wider separation of the probe power source from the instrument signal input.

Order Part Number 012-030 \$7.50

PROBE TIPS AND GROUND LEADS



SPECIAL-PURPOSE TIPS AND ADAPTERS

The following tips have a 6-32 thread size.

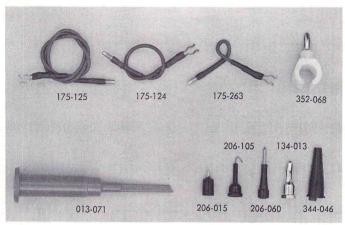
Description	Part Number	Price
Probe tip to BNC adapter (for P6025, P6026, P6032) Probe tip to BNC adapter	013-057	\$4.50
(for P6006, P6007, P6008 and P6009		3.00
Adapts probe to male BNC connected	or 013-056	3.00
Probe tip to BNC adapter (for P6034, P6035, P6038)	013-084	3.00
Probe tip to GR adapter (for P6025, P6026, P6032)	017-066	6.25
Probe tip to GR adapter (for P6034, P6035, P6038)	017-076	4.50
Bayonet ground assembly (for P6008, P6009)	013-052	2.50
Bayonet ground assembly (for P6034, P6035, P6038)	013-085	2.50
Center pin (for 013-052) Ground Clip Assembly	214-325	1.95
(for P6025 and P6026)	013-037	2.50
Insulated Straight Shank	206-054	.25
Long Straight Shank	206-104	.25
Spring Tip, without shank	206-061	.40
Recessed, fits 0.065" recessed pin		
plug	206-052	.25
Straight Shank, fits 0.082" pin jacks	206-045	.25
Calibration tip (for P6023)	206-100	2.70



SPECIAL-PURPOSE TIPS FOR P170CF, P500CF AND P410 PROBES

The following tips have a 10-32 thread size.

Description	Part Number	Price
Straight Shank	206-106	\$.25
Hook Shank	206-107	.25
Bent Shank, fits 0.082" pin jacks	206-011	.25
Alligator-Clip Assembly	344-005	.40



The following tips have a 6-32 thread size.

Description	Part Number	Price
12-inch Ground Lead	175-125	\$.55
5-inch Ground Lead	175-124	.50
3-inch Ground Lead	175-263	.55
Holder	352-068	.20
Pincher	013-071	2.00
Short Straight Shank	206-015	.25
Hook Shank	206-105	.25
Spring Tip	206-060	.50
Banana Tip	134-013	.10
Minigator Clip	344-046	.15

PROBE POWER SUPPLY



The Type 128 Probe Power Supply furnishes the necessary plate and filament voltages for cathode-follower probes such as the Tektronix P170CF and P500CF.

The two probe connections use separate $+6.3 \,\mathrm{v}$ dc voltage supplies.

PLATE SUPPLY is +120 v dc, regulated, at 25 ma.

HEATER SUPPLIES consist of two unregulated $+6.3\,\mathrm{v}$ dc at 150 ma.

PLATE SUPPLY RIPPLE is 5 mv pk-to-pk, maximum.

HEATER SUPPLY RIPPLE is 75 mv pk-to-pk, maximum.

POWER REQUIREMENTS are 105 to 125 v or 210 to 250 v, 50 to 800 cps, 25 watts (with P500CF probes).

MECHANICAL FEATURES include an aluminum-alloy chassis, three piece blue vinyl-finish cabinet, anodized front panel.

TYPE 128 PROBE POWER SUPPLY \$110

Includes: 1—3-conductor power cord, 161-010 1—3 to 2-wire adapter, 103-013

2—instruction manuals, 070-389

INPUT TIME-CONSTANT STANDARDIZERS



Five input time-constant standardizers are available for standardizing input capacitances of 12 pf, 15 pf, 20 pf, 24 pf, and 47 pf. Each standardizer has an approximate 1 megohm impedance and 2X voltage attenuation.

12 pf	(011-051	UHF)	(011-065	BNC)		 •	 			\$10.00	
15 pf	(011-073	BNC)			 		 			10.00	
20 pf	(011-022	UHF)	(011-066	BNC)			 			10.00	
24 pf	(011-029	UHF)	(011-067	BNC)			 			10.00	
47 pf	(011-030	UHF)	(011-068	BNC)			 			10.00	

INPUT ADAPTERS—ATTENUATORS—TERMINATIONS

Each accessory is marked as to type, ratio, maximum power, and correct orientation. Attenuators with UHF, GR, and TEKTRONIX 125-ohm connectors have color-coded bands that designate the attenuation ratio. Gold-plated connectors designate all 125-ohm ends.



ACCESSORIES WITH UHF-TYPE CONNECTORS

Description	Part Number	Price
50-Ω termination	011-045	\$15.00
50-Ω 5:1 attenuator	011-032	16.00
50-Ω 10:1 attenuator	011-031	16.00
$50-\Omega$ to $75-\Omega$ min. loss attenuator	011-041	16.00
$50-\Omega$ to $93-\Omega$ min. loss attenuator	011-042	16.00
$50-\Omega$ to $170-\Omega$ min. loss attenuator	011-043	16.00
75-Ω termination	011-046	15.00
75-Ω 5:1 attenuator	011-034	16.00
75- Ω 10:1 attenuator	011-033	16.00
93-Ω termination	011-047	15.00
93- Ω 5:1 attenuator	011-036	16.00
93- Ω 10:1 attenuator	011-035	16.00
170- $Ω$ * termination	011-048	15.00
*vswr less than 1.25 up to 30 mc.		



ACCESSORIES WITH GR-TYPE CONNECTORS

	ACCESSORIES	** * * * * * * * * * * * * * * * * * * *	OK-III L	COMMECTORS	
50-Ω	termination			017-047	\$20.00
50-Ω	2:1 attenuator			017-046	20.00
$50-\Omega$	5:1 attenuator			017-045	20.00
50-Ω	10:1 attenuator			017-044	20.00



ACCESSORIES WITH TEKTRONIX 125-Ω TYPE CONNECTORS

125-Ω termination	017-051	\$20.00
125- Ω 2:1 attenuator	017-071	25.00
125-Ω 5:1 attenuator	017-049	30.00
125- Ω 10:1 attenuator	017-050	30.00
125- Ω to 200- Ω Hewlett-Packard	017-038	20.00



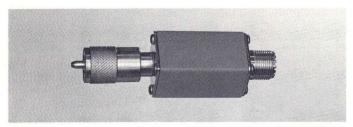
ACCESSORIES WITH GR-TEKTRONIX 125- Ω TYPE CONNECTORS

$50-\Omega$ to $125-\Omega$ min. loss atten.	017-052	\$30.00
125-Ω adapter N50/N125	017-053	17.50
125-Ω adapter N50/T125	017-054	17.50
125-Ω adapter T50/N125	017-055	23.00



ACCESSORIES WITH BNC-TYPE CONNECTORS

50- $Ω$ termination	011-049	\$ 8.75
50-Ω 5:1 attenuator	011-060	10.00
50-Ω 10:1 attenuator	011-059	10.00
$50-\Omega$ to $75-\Omega$ min. loss attenuator	011-057	10.00
$50-\Omega$ to $93-\Omega$ min. loss attenuator	011-058	10.00
75-Ω termination	011-055	8.75
75-№ 10:1 attenuator	011-061	10.00
93-Ω termination	011-056	8.75
93- Ω 10:1 attenuator	011-062	10.00
170-Ω termination (UHF to BNC)	011-063	10.00



TERMINATION BLOCKS W/O ELECTRICAL COMPONENTS

Component housings are useful for applications requiring special circuitry.

111/16" block with UHF connector	
Order Part Number 011-019	\$5.00
27/16" block with UHF connector	ψ5.00
Order Part Number 011-020	\$5.00

CONNECTOR CHARACTERISTICS

Accuracy of Indicated Attenuation R	Accuracy	of	Indicated	Attenuation	Ratio:
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recordey o.					
UHF	±2%	at dc	±3%	at	100 megacycles.
GR					1 gigacycle.
TEKTRONI	\times 125 Ω \pm 2%				
BNC	±2%	at dc	±3%	at	100 megacycles.

Voltage Standing Wave Ratio:

UHF		less	than	1.2	up	to	100 megacycles.
GR		less	than	1.1	up	to	1 gigacycle.
TEKTRONIX	125Ω	less	than	1.1	υp	to	1 gigacycle.
BNC		less	than	1.1	up	to	100 megacycles.

Power Rating:

UHF		1.5	o watts
GR		1	watt.
TEKTRONIX	125Ω	1	watt.
BNC		1	watt.

Output to Input Voltage Ratios for Minimum-Loss Atten-

When properly terminated the $E_{\text{out}}/E_{\text{in}}$ ratios for the various minimum-loss attenuators are as follows:

Connec	ction	E _{out} /E _{in}	Connection	E _{out} /E _{in}
$50 \Omega \rightarrow$	75Ω	0.63	$50 \Omega \rightarrow 125 \Omega$	0.56
$75 \Omega \rightarrow$	50Ω	0.42	$125 \Omega \rightarrow 50 \Omega$	0.23
$50 \Omega \rightarrow$	93Ω	0.59	$50 \Omega \rightarrow 170 \Omega$	0.54
93 Ω \rightarrow	50Ω	0.32	$170 \Omega \rightarrow 50 \Omega$	0.16
93 $\Omega \rightarrow$	50Ω	0.32	$170 \Omega \rightarrow 50 \Omega$	0.16

All attenuators, with the exception of minimum-loss types, are T-type attenuators.

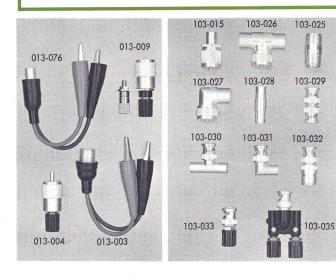
B170-A ATTENUATOR



 $170\text{-}\Omega$ pi-attenuator, uses 2% precision resistors, 1 to 64 db in 1 db steps, 0.25 watt.

Order Part Number 011-017 \$60.00

MISCELLANEOUS ADAPTERS

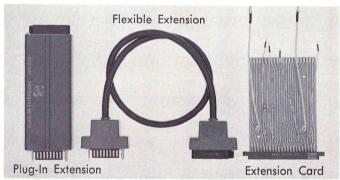


Description	Part Number	Price
Adapter, clip lead BNC	013-076	\$3.00
Adapter, clip lead UHF	013-003	3.00
Adapter, binding post UHF	013-004	3.00
Binding Post Adapter, with ground		
terminal, 3/4" spacing	013-009	3.25
UHF Male to BNC Female	103-015	2.75
UHF Female to Female	103-025	1.45
UHF T Male to 2 Female	103-026	3.40
UHF Elbow	103-027	2.15
BNC Female to Female	103-028	2.40
BNC Male to Male	103-029	5.45
BNC T Male to 2 Female	103-030	4.60
BNC Elbow	103-031	3.70
Male BNC to Female UHF	103-032	3.55
BNC to Binding Post	103-033	1.60
BNC Dual Binding Post	103-035	5.35

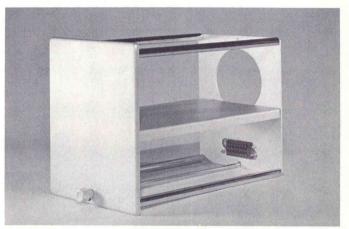
GAIN ADJUST ADAPTER-Permits an external calibrating signal to bypass the plug-in preamplifier, for calibrating the sensitivity of the main amplifier of Types 530, 540 and 550-Series Oscilloscopes.

Order Part Number 013-005 \$15

PLUG-IN UNIT ACCESSORIES



PLUG-IN EXTENSIONS—allow unit to be operated partially out of the oscilloscope:
For units in Type 560-Series Oscilloscopes Order Part Number 013-034 \$14.00
For units in Type 530-, 540-, 550-, 580-Series Oscilloscopes Order Part Number 013-055
For units in Type 647 Oscilloscope Order Part Number 013-077
For Type R Unit only Order Part Number 013-015
For Type 21A and 22A Time-Base Units Order Part Number 013-013 \$20.75
EXTENSION CARDS —extend removable circuit cards for ease of calibration and maintenance.
For Type 1A1 Plug-In Unit Order Part Number 012-079 \$25.00
For Type 262 Programmer Order Part Number 012-078 \$20.00
FLEXIBLE EXTENSIONS —permit plug-in unit operation away from the oscilloscope. Useful for trouble shooting—not used for calibration.
For 1-Series and Letter-Series Plug-In Units Order Part Number 012-038
For 10 and 11-Series Plug-In Units Order Part Number 012-080



BLANK 1-SERIES AND LETTER-SERIES PLUG-IN CHASSIS -Useful for constructing your own special circuits. Order Part Number 040-065 \$25.00

BLANK TYPE 560-SERIES PLUG-IN CHASSIS-For special circuit construction of sweep or vertical amplifier. Order Part Number 040-245 \$25.00

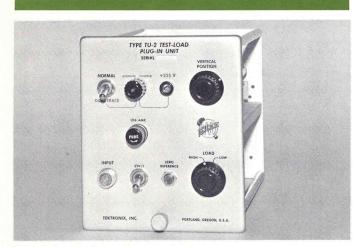


PLUG-IN PREAMPLIFIER STORAGE CABINET mounts in standard rack, available in two types:

FOR 1-SERIES AND LETTER-SERIES PLUG-IN UNITS-holds 3 plug-in units. Measures 19" wide, 83/4" high, 93/8" deep.
Order Part Number 437-031\$25

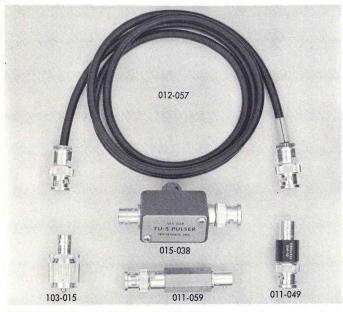
FOR 2 AND 3-SERIES PLUG-IN UNITS-holds 4 plug-in units. Measures 19" wide, 7" high, 135/16" deep. Order Part Number 437-071 \$30

TEST UNITS



TYPE TU-2 TEST-LOAD PLUG-IN UNIT—The unit is used to check Tektronix Type 530, 540, 550-Series Oscilloscope power-supply regulation under high load and low load demands of A to Z plug-in units. It can also be used to check vertical amplifier balance, vertical amplifier gain, and dual-trace function of the oscilloscope.

TYPE TU-2 TEST UNIT\$7.



TYPE TU-5 PULSER—The TU-5 tunnel diode pulser generates a fast-rise, flat-top square wave designed to aid in adjustment of transient response of the Tektronix 80-Series Plug-In Units. It can also be used with letter series and sampling plug-in units. When used with letter-series and 80-Series plug-in units the pulser is sufficiently fast to show the risetime of the oscilloscope and plug-in unit.

The oscilloscope calibrator output provides the proper input to the pulser.

A bias adjustment on the pulser provides for changes in tunnel-diode characteristics due to temperature variations, tolerance, or other variables.

RISETIME—less than or equal to 0.3 nsec into 50 ohms.

AMPLITUDE—at least 200 mv with 50-ohm termination, 20 mv with 10X attenuator and 50-ohm termination.

PULSE WIDTH—about 0.5 msec, dependent on oscilloscope calibrator output, (oscilloscope calibrator is 1 kc).

OUTPUT IMPEDANCE—50 ohms (25 ohms when used with 50 ohm termination).

SOURCE VOLTAGE—100 volt square wave (10 ma) from the oscilloscope calibrator output.

REPETITION RATE—same as source voltage (1 kc from oscilloscope calibrator output).

BNC CONNECTORS—for input and output.

011-049

Includes: 1—TU-5 Pulser, 015-038 1—UHF to BNC adapter, 103-015 1—10X attenuator, 011-059 1—50-ohm cable, 012-057 1—50-ohm termination,

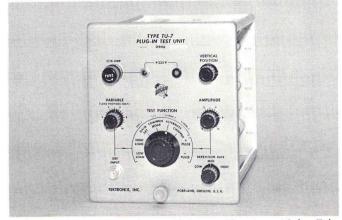
TU-5 PULSER ONLY (015-038) \$25.00



TU-5/105 ADAPTER—allows the TU-5 Pulser to be used with the Type 105 Square-Wave Generator.

The Adapter inverts the negative 100 v output of the Type 105 to a positive voltage source for driving the TU-5. A brighter trace display is possible because of the faster repetition rate of the Type 105 output.

TU-5/105 ADAPTER (013-075) \$20.00



TYPE TU-7 PLUG-IN TEST UNIT is a calibration aid for Tektronix Type 530, 540 or 550-Series Oscilloscopes using 1-Series or Letter-Series Plug-in Units. The only plug-in required for calibration, the Type TU-7 features a built-in pulse generator for checking risetime and adjusting transient response of the oscilloscope vertical amplifier.

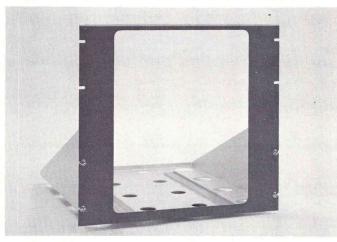
Other features include provisions for checking power supply regulation, chopped blanking operation, and alternate sync pulse circuitry. The TU-7 also checks dual-trace operation for instruments capable of displaying two time-base signals alternately.

TYPE TU-7 PLUG-IN TEST UNIT \$200

Dark No

Drice

MOUNTING ACCESSORIES



CRADLE-MOUNT—For rack mounting cabinet-type oscilloscopes. Each cradle-mount consists of a cradle (or "shelf") to support the instrument in any standard 19" relay rack, and a mask to fit over the regular instrument panel. Blue vinyl finish.

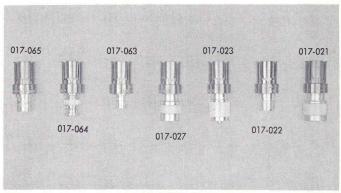
For Type 507 and Type 551 instruments (2 masks, 2 cradles). Rack height requirements; Indicator mask $17\frac{1}{2}$ ", Power Supply mask $12\frac{1}{4}$ ".

Order Part Number 040-279\$78.50

For Type 502A instruments (1 mask, 1 cradle). Rack height requirements 171/2". Order Part Number 040-278\$45

For Type 555 (2 masks, 2 cradles). Rack height requirements:

SAMPLING ACCESSORIES



ADAPTERS

rari No.	Price
017-027	\$6.25
017-021	6.25
017-022	6.25
017-023	6.25
017-063	6.25
017-064	6.25
017-065	6.25
	017-021 017-022 017-023 017-063 017-064



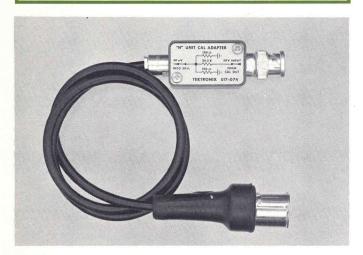
50-OHM CONNECTING CABLES (GR-TYPE CONNECTORS)

Delay	Cable Type	Part No.	Price
1 nsec	RG58/AU	017-503	\$ 8.25
2 nsec	RG58/AU	017-505	13.50
5 nsec	RG8/AU	017-502	13.50
10 nsec	RG58/AU	017-501	13.50
20 nsec	RG8/AU	017-504	16.50

ACCESSORIES WITH GR-TYPE CONNECTORS

	Part No.	VSWR Rating	Price
50 Ω 10:1 Attenuator	017-044	<1.1 to 1 GC	\$20.00
50 Ω 5:1 Attenuator	017-045	<1.1 to 1 GC	20.00
50 Ω 2:1 Attenuator	017-046	<1.1 to 1 GC	20.00
50 Ω Termination	017-047	<1.1 to 1 GC	20.00
50 Ω Type 874-K Coupling			
Сар	017-028	<1.06 to 1 GC	\$10.00
50 Ω Type 874-X Insertion			
Unit	017-030		\$13.00
50 Ω Type 874-EL 90°			
Elbow	017-070	<1.06 to 2 GC	\$10.00
		<1.5 to 4 GC	
50 Ω Type 874-T Tee	017-069		\$13.00
50Ω to 125Ω Min Loss	017-052	<1.2 to 1 GC	\$30.00
Attenuator			

CALIBRATOR ADAPTER



The Adapter is basically intended for use with the Type N Plug-In Unit, but can be used with any Tektronix sampling system except those incorporating the Type RM561 and Type 567 Oscilloscopes. The Adapter converts a 50-volt output from the oscilloscope calibrator to 40 mv at an impedance of 50 ohms for use in calibrating the gain of the sampling system.

50-OHM VOLTAGE PICKOFF "T"



The 50-ohm "T" type pickoff allows signal pickoff from a closed 50-ohm system with minimum disturbance of the system's characteristics. The coaxial "T" incorporates GR Type connectors at each end, with a plastic center collar for probe tip insertions.

TYPE VP-1 is designed for use with the P6034 or P6035 Miniature Passive Probes. The reflection coefficient of the VP-1 alone is approximately 3%. With the P6034 or P6035 inserted, it is typically 2%. The resistive reflection of the VP-1 is 1/2% when used with the P6035, 5% when used with the P6034.

Order Part Number 017-073 \$25

TYPE VP-2 is used in conjunction with the P6038 Direct Sampling Probe. The reflection coefficient without the P6038 Probe is approximately 4%. With the probe inserted it is typically 6%.

All accessory heads supplied with the P6038 Probe can be used with the VP-2.

Order Part Number 017-077 \$30

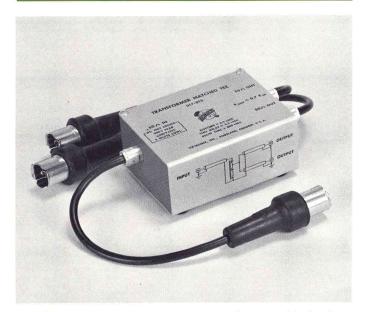
TIMING STANDARD



The Timing standard is a 3% device for calibrating equivalent sweep speeds of the Tektronix sampling systems. It is designed to ring at periods of 1, 2, 5, and 10 nsec when excited by a fast-rising pulse.

Order Part Number 013-028 \$60

TRANSFORMER MATCHED "T"



This unit provides two 50-ohm outputs from one 50-ohm input and divides the regenerated trigger for simultaneous triggering of two sampling sweep systems.

Order Part Number 017-012 \$45

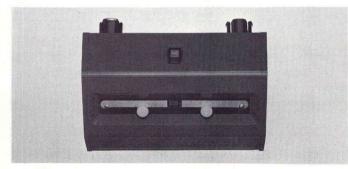
DIODE TEST JIGS



DIODE TEST JIG for the TYPE 291 DIODE SWITCHING-TIME TESTER or the TYPE 292 SEMICONDUCTOR TESTER-POWER SUPPLY provides a quick and convenient facility for checking round or ribbon lead diodes. V-shaped contacts plus magnetic attraction assures good electrical continuity for the diode under test. The contacts are replaceable yet have a life of 10-million diode insertions. The risetime of the Type 291 or 292 when used with the Test Jig is less than 0.35 nsec. Conductor capacitance of the jig is less than 0.004 pf side to side.

An adapter is required to provide electrical contact and mechanical support for the Test Jig when used with the Type 291 or 292.

DIODE TEST JIG (013-080)	******	\$40
ADAPTER FOR TYPE 292 (016-059)		\$21
ADAPTER FOR TYPE 291 (017-075)		\$55

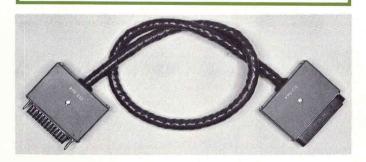


TYPE TF-1 DIODE TEST FIXTURE used with the TYPE 291 DIODE SWITCHING-TIME TESTER features pushbutton diode ejection for rapid testing of diodes with round or ribbon type leads. A solenoid may be added to the fixture for automatic rejection. Diodes under test are held in place magnetically insuring good electrical contact.

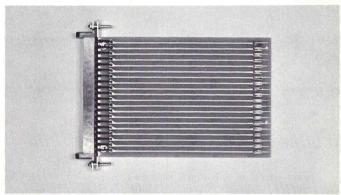
The risetime of the Type 291 with the Type TF-1 fixture is less than 0.35 nsec.

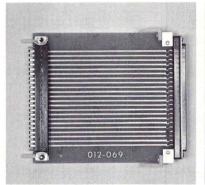
Order Part Number 017-072 \$65

PLUG-IN UNIT ACCESSORIES



Order Part Number 012-066 \$23







TYPE 3S3 SUB-CHASSIS EXTENSION — Allows maintenance of Type 3S3 sub-chassis when 3S3 is extended out of Oscilloscope.

Order Part Number 012-077 \$25

TYPE 4S1 SUB-CHASSIS EXTENSION — Allows maintenance of Type 4S1 sub-chassis when 4S1 is extended out of oscilloscope.

Order Part Number 012-069 \$25

50-OHM GREMAR CABLE — For retaining internal trigger and snap-off driver connection between plug-in units of the Type 661 when one or both plug-in units are extended out of oscilloscope.

Order Part Number 012-070 \$10.50

TYPE "O" PLUG-IN UNIT ACCESSORIES

LOGARITHMIC AMPLIFIER ADAPTER



The Logarithmic Amplifier Adapter converts linear amplification characteristics of the A or B operational amplifiers in the Type O Operational Amplifier Plug-In Unit to approximate logarithmic characteristics.

ALLOWABLE INPUT SIGNAL— $\pm 100 \, \mathrm{v}$ maximum, ac or dc coupled.

INPUT IMPEDANCE—Approximately 10 kilohms.

AMPLIFICATION CHARACTERISTICS—With the Logarithmic Amplifier Adapter, the operational amplifier approximates a logarithmic amplification response for input signals from \pm 0.1 v to \pm 100 v.

Signa!-In	Deflection
\pm 0.1 v	$1~{\rm cm}~\pm~0.5~{\rm mm}$
\pm 1.0 v	$2 \mathrm{cm} \pm 0.5 \mathrm{mm}$
\pm 10.0 v	$3 \mathrm{cm} \pm 1.0 \mathrm{mm}$
+ 100 v	$4 \mathrm{cm} \pm 1.0 \mathrm{mm}$

Below an input level of \pm 0.05 v, the amplifier is no longer logarithmic.

RISETIME—Typically 0.2 μ sec—for a 10-v signal to rise from 0.1 v to 10 v.

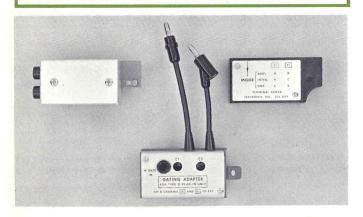
FALLTIME—Typically 0.3 μsec—for a 10-v signal to fall from 10 v to 0.1 v.

LOW FREQUENCY RESPONSE—65 cps. (In the AC-coupled mode, the —3-db point for signals of over 500 mv peak amplitude, and where the effective input resistance is 10 k).

PASSBAND—The —3-db apparent passband varies with both signal amplitude and signal dc level. It varies typically from 400 kc to 1 Mc, depending on the input signal.

LOGARITHMIC AMPLIFIER ADAPTER (Part No. 013-067) \$75

TERMINAL ADAPTERS AND SHIELDS



TERMINAL ADA				
parts for creating of	custom adapter	for the	"O"	Unit.
Order Part Numbe	013-048			\$10

GATING ADAPTER permits on and off gating of the Type O Unit from the +20 v gate output of the oscilloscope used.

With the Adapter plugged into the "B" Operational Amplifier of the Type O Unit, the "A" Operational Amplifier is gated on or off. The signal applied is then amplified, integrated or differentiated only during the "on" time.

COMPENSATING ADAPTER

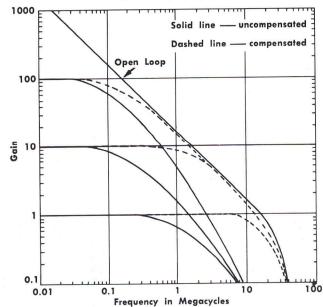


The Compensating Adapter extends the frequency performance of the Type O Unit operational amplifiers.

The adapter compensates for stray capacitance associated with the internal $Z_{\rm i}$ and $Z_{\rm f}$ resistors, providing an adjustment for optimum HF response.

CHARACTERISTICS (Type O Unit and Adapter)

TYPICAL FREQUENCY RESPONSE of the Type O unit with and without the Compensating Adapter:



INPUT RESISTANCE is 0.01 to 1 meg, determined by $Z_{\rm i}$ Selector position.

INPUT CAPACITANCE is approximately 40 to 450 pf, depending on the $Z_{\rm f}$ Selector position. (Maximum at X100 gain)

MAXIMUM INPUT VOLTAGE is 400 v dc or 150 v rms.*

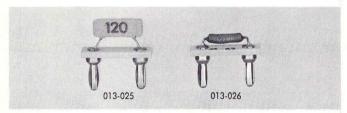
MAXIMUM OUTPUT VOLTAGE is ±50 v peak.

MAXIMUM TEMPERATURE is +55° C.

COMPENSATING ADAPTER (013-081) \$35

*Voltage derating is necessary for frequencies above 1 Mc.

TYPE Q PLUG-IN UNIT RESISTOR BOARDS



120-OHM PLUG-IN RESISTOR BOARD	
Order Part Number 013-025	\$2.25
150 K-OHM PLUG-IN RESISTOR BOARD	
Order Part Number 013-026	\$2.25

TYPE R PLUG-IN UNIT PLATE WIRED ASSEMBLIES

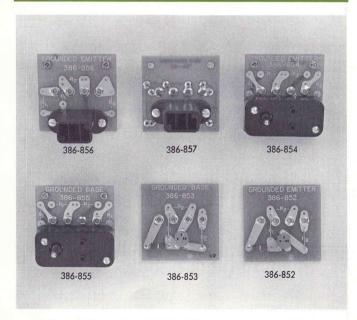
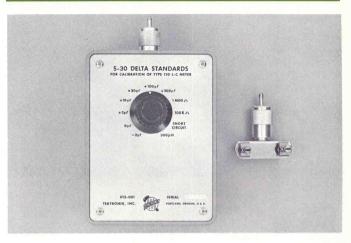


PLATE WIRED "R" ASSEMBLIES for various transistor checks

Description	Part No.	Price
Grounded emitter socket	386-852	\$5.00
Grounded base socket	386-853	5.00
Grounded emitter power socket	386-854	6.00
Grounded base power socket	386-855	6.00
Grounded emitter adapter	386-856	6.00
Grounded base adapter	386-857	6.00

TYPE 130 L-C METER ACCESSORIES



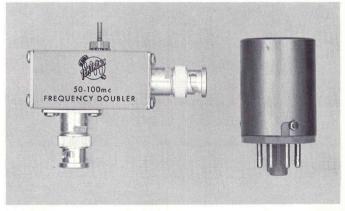
DELTA STANDARDS—For calibration of the Type 130 L-C Meter. The unit provides accurate steps of capacitance and inductance, selectable by a rotary selector switch. Values of the capacitance steps correspond to the full-scale adjustments required on the five scales of the Type 130. Two resistors of similar capacitance, values of 1 megohm and 0.1 megohm, are provided for the resistance compensation adjustment. A 300 μ h standard permits proper adjustments of the inductance ranges.

Order Part Number 015-001 \$40

PRODUCTION TEST FIXTURE—For use with the Type 130 L-C Meter. Speeds sorting and testing of capacitors and inductors.

Order Part Number 013-001\$5

TYPE 180-181 ACCESSORIES



FREQUENCY DOUBLER for the Type 180 or 180A Time Mark Generator doubles the 50 Mc output to 100 Mc. Particularly useful for calibrating Type 580-Series Oscilloscopes.

Order Part Number (015-056 BNC) \$29.50 (015-013 UHF) 29.50

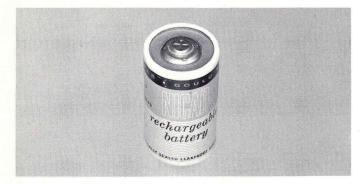
TYPE 310/310A FAN BASE



TYPE 310/310A FAN BASE provides filtered forced-air ventilation to reduce operating temperature when the instrument is used continuously for prolonged periods of time or in a hot or limited-ventilation area. The Fan Base tilts the oscilloscope to a convenient viewing angle.

For use on 105-125 v, 50 to 60 cps only:	4
Order Part Number 016-012	\$50
For use on 210-250 v, 50 to 60 cps only:	
Order Part Number 016-013	\$50

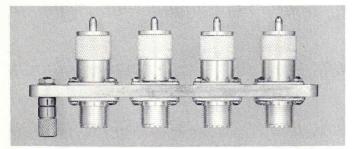
TYPE 321-321A BATTERIES



NiCd CELLS—3½ A.H. 'D' size, rechargeable, for Type 321 Portable Oscilloscope.

Order 10—(Part Number 146-005), \$7.00 each ... Total \$70.00

TYPE 507 GROUND CONNECTOR



TYPE 519 ACCESSORIES



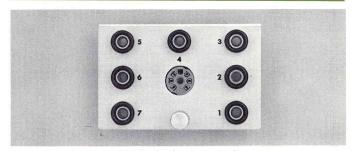
Description	Part No.	Price
1000 Mc Timing Standard	017-019	\$35.00
Double Button Contact Assembly	017-032	2.25
Connector Panel Assembly	017-033	7.00
Delay Line Equalizer	017-057	10.00

125 Ω ACCESSORIES

Other than those listed under Oscilloscope Input Adapters, Attenuators and Terminations.

Description	Part No.	Price
Attenuator 1.4:1 for 125 Ω Connector	017-009	\$25.00
Component Insertion Unit	017-013	10.00
Coupling Capacitor	01 <i>7</i> -018	10.75
Cable Connector Spare Kit	017-035	7.00
90° Elbow Assembly	017-043	15.00
1 nsec delay cable, RG63/U	017-507	16.50
2 nsec delay cable, RG63/U	017-508	16.00
5 nsec delay cable, RG63/U	017-509	16.50
10 nsec delay cable, RG63/U	017-510	17.50
20 nsec delay cable, RG63/U	017-511	24.00

TYPE 570 ADAPTER PLATES



With Jacks Installed

Description	Part No.	Price
7-pin adapter plate	016-004	\$10.00
8-pin adapter plate	016-005	10.00
9-pin adapter plate	016-006	10.00
Blank adapter plate	016-007	5.00
13-pin Nixie* Base	016-040	12.50
5-pin Nuvistor Twelvar Base	016-041	10.00
7-pin Nuvistor Twelvar Base	016-042	10.00
12-pin Compactron duodecar Base	016-043	12.50
9-pin Novar Base	016-044	10.00

*Burroughs registered trademark.

TYPE 575 TRANSISTOR AND DIODE ADAPTERS



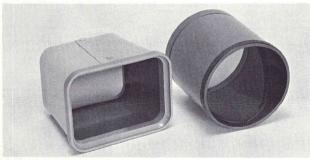
Description	Part No.	Price
3-terminal (for wire lead transistors)	013-069	\$5.00
3-terminal (for 2-pin base power transistors	013-070	5.00
Diode Test Jig (Tektronix)	013-072	5.00
Diode Test Jig (Daymarc)	013-079	25.00
Blank Adapter Box	013-073	4.00
Power Transistor Adapter	013-074	5.00
(for transistors with hook leads)		

VIEWING ACCESSORIES



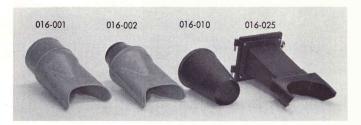
BEZEL—For mounting cameras, other than Tektronix types, on Tektronix 5" Oscilloscopes. Dimensions— $5\frac{7}{8}$ " square; ring $\frac{7}{8}$ " deep, diameter $5\frac{5}{8}$ " outside, $5\frac{1}{8}$ " inside. Die-cast construction.

Order Part Number 014-011 \$4.50



POLARIZED VIEWERS—For Tektronix 5" Oscilloscopes. The viewers reduce troublesome reflections and glare under high ambient-light conditions.

different figure contamons.	
RECTANGULAR VIEWER (016-039)	\$10
PLASTIC ROUND VIEWER (016-053)	10



CARRYING CASES





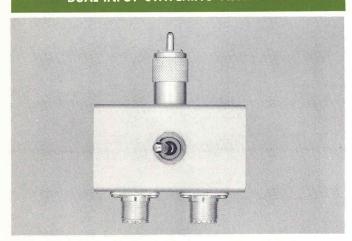




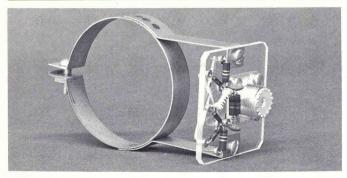
CARRYING CASE FOR 2, 3, 10 and 11 SERIES PLUG-IN UNITS—accommodates two plug-in units.

Order Part Number 437-070\$20

DUAL-INPUT SWITCHING ASSEMBLY



DEFLECTION PLATE CONNECTOR



The connector can be used with Types 530, 540, 530A, and 540A-Series Oscilloscopes. It provides a convenient means of making a connection directly to the cathode-ray tube vertical deflection plates. It is designed for use with high-frequency, fast-rise pulses or transient signals. The function of the vertical position control of the oscilloscope is retained. The connector is designed for use with 52-ohm cables. The connector is not recommended for use with frequencies below 8 kc or pulses with correspondingly slow risetimes.

For instruments with serial numbers 5000 and below, Order Part Number 013-006\$10

For instruments with serial numbers 5001 and above, Order Part Number 013-007\$10

MISCELLANEOUS CORDS AND LEADS



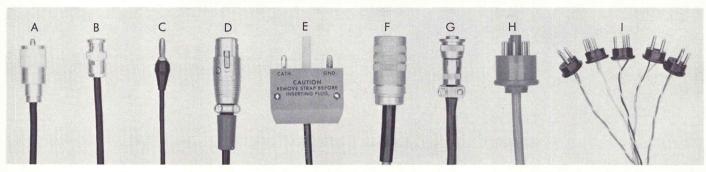
Length (Inches)	Connectors	Part No.	Price
36	Banana Plug to Alligator Clip	012-014	\$2.50
		012-015	2.50
	Banana Plug- Jack	012-023	1.15
	(Both Ends)	012-024	1.15
In the second		012-025	3.00
6		012-026	3.00
	(Both Ends)	012-027	3.00
		012-028	2.00
			2.00
18		012-031	1.20
		012-039	1.20
12	Tini-Plug	012-055	3.75
	36	Banana Plug to Alligator Clip Banana Plug- Jack (Both Ends) Banana Plug (Both Ends) Tini-Plug	36 Banana Plug to Alligator Clip 012-014 Banana Plug-Jack (Both Ends) 012-024 6 Banana Plug (Both Ends) 012-026 Banana Plug (Both Ends) 012-027 012-028 012-029 012-031 18 012-039

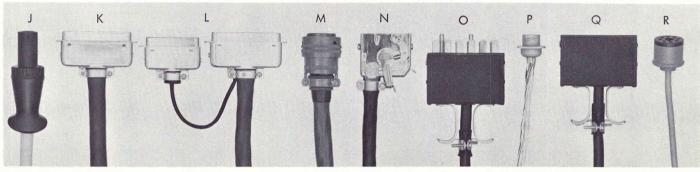
POWER CORDS



Connectors	Cond Number	had a feel and a feel	Length (Feet)	Part No.	Price
Male Plug to Female Plug	2 3 3 3	16 16 16 18	8 8 20 in. 8	161-004 161-010 161-014 161-019	\$2.10 2.40 1.40 5.00
Male Plug (one end only)	3 3 2	18 18 18	8 10 8	161-017 161-006 161-002	1.95 6.10 1.60
Male Plug to Right Angle Female Plug	2 3	18 18	8	161-007 161-022	3.70 3.60
Male Plug to Special Plug (ac cord for Type 321)	3	20	8	161-015	3.20
Male Plug to Special Plug (dc cord for Type 321)	3	20	8	161-016	2.70
Male Plug to Special A Connector	3	16	8	161-005	3.25

MISCELLANEOUS CABLES





INSTRUMENT		LENGTH	IMPEDANCE	CONNECTO	OR	PART	
TYPE	FUNCTION	(INCHES)	(OHMS)	TYPE	FIG.	NUMBER	PRICE
GENERAL	Output	42	50	UHF	A	012-001	\$ 6.50
GENERAL	Output	42	50	BNC	В	012-057	4.00
GENERAL	Output	42	75	UHF	A	012-002	7.50
GENERAL	Output	42	75	BNC	В	012-074	6.50
GENERAL	Output	42	93	UHF	A	012-003	6.50
GENERAL	Output	42	93	BNC	В	012-075	4.00
GENERAL	Output-Terminated with 93 Ω Resistor	42	93	UHF	Α	012-005	6.50
GENERAL	Output-Terminated with Variable Attenuator	42	93	UHF	A	012-004	13.50
GENERAL	Output	42	170	UHF	A	012-006	7.50
GENERAL	Horizontal Input	18		Banana	C	012-054	2.50
GENERAL	Adapter Cable	5		2-Banana to UHF	A-C	012-059	3.50
BOTTO	Input	30		Special 3-pin	D	012-022	6.00
N	CRT Cathode Unblanking	62		Special 2-Banana to BNC	B-E	012-052	11.00
N	Horizontal Input	30		Banana to UHF	A-C	012-053	7.50
Q	Input	15 ft.		Special 9-pin	F	012-040	12.00
2A61	Input	60		Special 4-pin	G	012-072	10.00
122	Battery Cable	7 ft.		Octal to (5) 3-pin	H-I	012-009	15.00
127	Input	60	170	UHF	A	012-034	7.50
160, 360	Inter-connecting	20		Octal	H-R	012-016	7.00
161, 162, 163	Inter-connecting	10		Octal	H	012-017	5.00
175	Test Cable	30		Banana	C	012-056	1.75
175	Test Cable-Black Plug	42		Special Plug	J	012-044	9.00
175	Test Cable-Red Plug	42	_	Special Plug	J	012-043	9.00
175	Socket Adapter			Special 9-pin	P	012-045	11.25
262	6R1 Inter-connecting	6 ft.		36-50 Pin Ribbon Special 41-pin	L-M	012-081	60.00
262	262 Inter-connecting	48		50-pin Ribbon	K	012-082	60.00
507, 517A**	Inter-connecting	30		16-pin Ribbon	N	012-032	27.00
551, 555	Inter-connecting	72	44	16-pin Ribbon	N	012-051	28.40
517/517A*	Inter-connecting	30		12-pin Ribbon	0-Q	012-012	20.00
* Serial Num	ber 101-1739	** Serial No	umber 1740 and	up.			

STANDARD GRATICULES

		RATICULE RUL		1	
INSTRUMENT TYPE*	DIVISION	VERTICAL	HORIZONTAL	PART NO.	PRICE
310, 310A, 360		8	10	331-027	\$1.75
316		8	10	331-042	1.75
317	1/4"	8	10	331-095 (adjustable) 331-042 (not adjustable)	1.75
321, 321A		6	10	331-055	1.75
502, 502A, 565	BENEFIT HERE	10	10	331-047	2.90
503, 504, 560, 561, 661		8	10	331-056	2.90
507, 515, 515A, 516, 531 531A, 533, 533A, 535, 535A	1 cm	6	10	331-037 (adjustable) 331-016 (not adjustable)	2.90
517 (SN 101-925)		4	8	331-008	8.00
517A (SN 926-957)		4	8	331-030	8.00
517A (SN 958-up)		4	8	331-033	2.90
519		2	6	331-065	8.00
524, 524AD		6	10	331-006	2.90
525		rked in Percenta dulation Measur		331-035	3.45
526		arked in Degree or TV Vector A		331-104	8.00
527	Caraial	7	10	331-069	3.45
RM527	Special	7	10	331-068	3.45
532	1 cm	8	10	331-026	2.90
536, 570, 575	5/16''	10	10	331-028	2.90
541, 541A, 543, 543A, 545 545A, 581, 581A, 585, 585A		4	10	331-034 (adjustable)	2.90
551, 555	1 cm	6	10	331-045	2.90
RM561, 567		8	. 10	331-076	2.90
564		8	10	331-097	2.30

SPECIAL PURPOSE GRATICULES

		GRATICULE RUL	ING		
INSTRUMENT TYPE*	DIVISION	VERTICAL	HORIZONTAL	PART NO.	PRICE
524, 524AD	1/8" x 1 cm	17	10	331-009	\$3.45
524, 524AD, 525	Co	olor TV Bar Dimer	nsions	331-040	4.05
527		Non-composite I	RE	331-079	3.45
527	Marked in Percentage for Video Modulation Measurements			331-080	3.45
RM527		Non-Composite IRE			3.45
RM527	Marked in Percentage for Video Modulation Measurements			331-078	3.45
531, 531A, 533 533A, 535, 535A MOD108A	.85 cm 6 10		10	331-051	2.90
536	For P	hase Angle Meas	urements	331-057	3.45
541, 541A, 543 543A, 545, 545A MOD 108A	.85 cm	4	10	331-052	2.90
551 MOD •108A	.85 cm	6	10	331-053	2.90
561A MOD 210C	1 cm	6	10	331-090	2.30

PLEXIGLASS LIGHT FILTERS

Filters for Tektronix oscilloscopes using 3" crt's					
Instrument	Color	Part No.	Price		
	Green	378-505	\$.50		
Type 315D	Amber	378-506	.50		
Type 313D	Blue	378-507	.50		
	Yellow	378-508	.50		
	Green	378-521	.50		
Type 321	Amber	378-524	1.10		
	Blue	378-523	1.15		
	Green	378-509	.50		
	Amber	378-511	.50		
General*	Blue	378-510	.50		
	Yellow	378-512	.50		

* For all 3" oscilloscopes not listed.

Filters for Tektronix oscilloscopes using 5" crt's

Instrument	Color	Part No.	Price
	Green	378-525	\$1.50
Types 527, RM527, 561	Amber	378-528	1.50
K/VI327, 361	Blue	378-527	1.50
	Green	378-514	.90
General*	Amber	378-516	.90
	Blue	378-515	.90

* For all 5" oscilloscopes not listed.

Filters for Tektronix oscilloscopes using rectangular crt's

Instrument	Color	Part No.	Price
Type 561A	Green	378-534	\$.90
	Amber	378-536	.90
	Blue	378-535	.90

UNSCRIBED GRATICULES

Instrument Type*	Part No.	Price	
310, 310A, 316, 317, 360	386-395	\$1.25	
502, 502A, 517 (SN 926- 957), 524, 524AD, 525, 526, 532, 536, 551, 555, 570, 575	331-093	1.45	
503, 504, 560, 561, 661	331-105	1.45	
507, 515, 515A, 516, 517A (SN 957-up), 581, 581A, 585, 585A	386-451	1.45	
527, RM561, 567	331-084	2.30	
531, 531A, 533, 533A, 535, 535A, 541, 541A, 543,	386-451 (adjustable)	1.45	
543A 545, 545A	331-093 (not adjustable)	1.45	
561A, RM561A, 564 (Implosion shield for ceramic type crt only.)	337-539	1.45	

* For both cabinet and rack-mount instruments unless rack-mount version is listed.

DIRECT REPLACEMENT CATHODE-RAY TUBES



All Tektronix direct replacement crt's are under a new numbering system that provides more flexibility for future designations of the crt's.

Example T5610-31-1

tube type - phosphor - internal graticule design variation

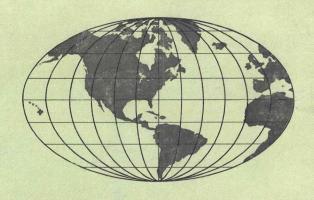
In the following list, phosphor designation is eliminated in order to avoid much repetition. Replacement crt's are normally available with phosphors P1, 2, 7, 11, or 31. It will be necessary to specify the phosphor desired when ordering. Other phosphors are available on special order. Consult your Tektronix Field Engineer for particulars.

INSTRUMENT*	CRT TYPE	PRICE**
310, 310A, 360	T3100	\$ 45.00
316	T3160	80.00
317	T3170	90.00
321	T3210	85.00
321 A	T3211	85.00
502	T5020	125.00
502A	T5021	125.00
503, 504, 560, 561, 661	T5030	60.00
506	T5033	80.00
507	T5070	125.00
515, 515A, 516	T0550	60.00
517, 517A	T0541	110.00
519	T5191	1000.00
524, 524AD	5ABP1	32.65
525	T0520	60.00
526	T5260	99.50
527	T5270	80.00
531, 535	T0510	75.00
531A, 533, 533A, 535A	T5330	75.00
532, 570, 575	T0520	60.00
536	T5360	75.00
541, 545	T0540	75.00
541 A, 543, 543 A, 545 A	T5430	75.00
543B, 544, 545B, 546, 547	T5470	120.00
551	T5511	180.00
555	T5550	225.00
RM561	T5032	60.00
561 A, 567	T5610	60.00
564	T5640	450.00
565	T5650	175.00
581, 581 A, 585, 585 A	T5810	175.00
647	T6470	250.00

^{*} Both conventional and rackmount instruments unless noted.

U.S. Sales Prices f.o.b. Beaverton, Oregon Please refer to Terms and Shipment, General Information page.

^{**} Prices slightly higher for internal graticule option where available.



UNITED STATES AND CANADA FIELD ENGINEERING OFFICES

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	Tucson Area: Enterprise 383
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	Pasadena 1194 East Walnut Street, PasadenaTWX: 213-449-1151Telex 06-74397
	Telephone (213)449-2164 From Los Angeles telephones call: 681-0201
	• Van Nuys 16930 Sherman Way, Van Nuys Telex 06-74396
	From Los Angeles telephones: 873-6868
	Island of Oahu, Hawaii Area: ENterprise 5-700
San Francisco Bay Area	Walnut Creek 1709 Mt. Diablo Blvd., Walnut Creek Telex 033-644 Telephone: (415) 935-6101 From Oakland, Berkeley, Richmond, Albany and San Leandro: 254-5353
	• Palo Alto 3944 Fabian Way, Palo AltoTelex 033-911
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FLORIDA	• Orlando 205 East Colonial Drive, OrlandoTelex 056-515
GEORGIA	 Atlanta 467 Armour Circle, N.E., Atlanta 24 Telex 05-42233
ILLINOIS	• Chicago 400 Higgins Road, Park RidgeTelex 02-53374
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	• Endicott 3214 Watson Blvd., EndwellTelex 093-796
	• Poughkeepsie 12 Raymond Ave., PoughkeepsieTelex 096-4724 Telephone: (914) GRover 1-3620
	Syracuse East Molloy Road & Pickard Drive, P.O. Box 155, Syracuse 11
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	Northern N. J 400 Chestnut Street, Union, New Jersey Telex 01-26344 Telephone: (201)688-2222
	Hudson River Valley, Westchester County, Connecticut 144 Morgan Street, Stamford, Connecticut
	Telex 096-5917 Telephone: (203) DAvis 5-3817
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