Discover Digital Capabilities

With the push of a button, the 2200 series of digital storage oscilloscopes bring the power of digital to your measurement needs. Now you can capture and view events that are difficult or impossible to see on an analog oscilloscope, such as fast transients, single-shot events, elusive glitches, and low-speed phenomena. With pre-trigger capability, you can see what is occurring before a trigger event. And since waveforms can be stored, you can recall them later for analysis or comparison to newly acquired data. For easy documentation, waveforms can be sent to a printer or plotter, or transferred to a PC for subsequent analysis and data storage.

Capture and Display Narrow Glitches

The 2230/2221/2220 DSO's feature 20 MS/s sampling rates, with repetitive sampling to the full analog bandwidth of the oscilloscope. In addition, each offers Tek's proprietary peak-detect mode, for catching signal extremes or glitches that would otherwise be missed between sample points. Elusive glitches as narrow as 100 ns are always captured, even at the slowest sweep speeds.

Time-Saving Features

The 2230 and 2221 both offer additional features that save you time and ensure accuracy. Cursors and CRT readout provide for simultaneous voltage and timing measurements for fast, accurate waveform analysis. Weighted signal averaging can be used to remove unwanted noise from a signal. Accumulate Peak Detect mode allows you to capture extremes in signal variations or drift over time.

Flexibility and High Performance

The 2230 adds benefits that are normally found only on much more expensive products. Features like dual time-base operation, point-selectable trigger positioning, a choice of 1K and 4K record length, and adjustable sweep limits and average weighting. Waveforms can be saved in one of three reference-memory locations, then subsequently repositioned, expanded vertically, and horizontally magnified by a factor of ten. With either the GPIB or RS-232 option, you get an additional 26K of battery-backed memory for storing and retaining up to 26 additional waveform sets for up to three years.

These capabilities, and more, coupled with Tek's proven reliability and support, mean you are assured of outstanding value and long life from your oscilloscope investment.

2230/2221/2220

TYPICAL APPLICATIONS (2230/2221/2220)

- Teleservicing
- Medical Equipment Servicing
- Digital Design and Troubleshooting
- Power Supply Design and Troubleshooting

BENEFITS

- UL Listed, CSA and VDE Certified
- 3-Year Warranty, 5-Year Optional

FEATURES

- 100-MHz Analog/Digital Bandwidth (2230); 60 MHz (2221, 2220)
- 100 ns Glitch Capture at Any Speed
- 4K Record Length (1K/4K Selectable 2230)
- Pre/post Triggering (Point Selectable 2230)
- Cursors and Readout (2230, 2221)
- Signal Averaging (2230, 2221)
- Three Save Reference Memory Locations (2230), One location (2220, 2221)
- Expand, Compress, Reposition Stored Waveforms (2230)
- Dual Time Base (2230)
- GPIB or RS-232 Comm Options
- 26K Extended Waveform Storage (with 2230 Comm Options)

Analog and Digital Versatility

Now get the best of both worlds—analog and digital—with the 2200 series of digital storage oscilloscopes. In analog mode, the 2230, 2221, and 2220 operate as conventional oscilloscopes, with the ability to capture complex waveforms with the ease of use and familiarity you expect from Tektronix. Switch to digital operation, and powerful new capabilities are at your command.

CHARACTERISTICS

The following characteristics are common to the 2230, 2221, and 2220 except where indicated.

DIGITIZER AND MEMORY

Speed—Digitizing rates from 20 MS/s at 5 μs/div and faster to 20 samples/s at 5 s/div. CHOP/ALT modes effectively halve the digitizing rate/waveform. The effective sampling rate in Repetitive Storage mode is 2 GS/s.

Useful Storage Bandwidth—Single Shot: Useful storage bandwidth is the maximum sampling rate (20 MS/s) divided by the desired points/signal period. Repetitive Storage Mode: DC to 100 MHz (2230); DC to 60 MHz (2220, 2221).

Resolution—Vertical: 8 bits, 25 levels/div. Horizontal: 10 bits, 100 points/div.

Acquisition/Process Modes—Sample, Peak Detect, Average (2230, 2221) Accumulated Peak Detect.

Peak Detect (Enhanced Envelope) Mode—100-ns minimum pulse width for 100% probability of 50% signal amplitude capture. 10 MS/s sampling rate.

Average Mode—(2230) Normalized Average weight is selectable from $\frac{1}{1}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, $\frac{1}{32}$, $\frac{1}{64}$, $\frac{1}{128}$, $\frac{1}{256}$. Number of sweeps averaged adjustable from 1 to 998,000 or to an unlimited number. (2220, 2221). Normalized weight of average is $\frac{1}{4}$ for 2220, $\frac{1}{16}$ for 2221. (2220 Average mode used for 2 μs/div and faster sweep settings.)

Pre/Posttrigger—(2230) $\frac{7}{8}$ (Pretrig) or $\frac{1}{8}$ (Posttrig) of waveform acquisition is prior to the trigger event. Trigger position menu selectable over the entire record. (2220, 2221) $\frac{7}{8}$ (pretrig), $\frac{1}{2}$ (midtrig) or $\frac{1}{8}$ (posttrig) of waveform acquistion window prior to trigger event.

Record Length—(2230) 4K or 1K record length, selectable. (2220, 2221) 4K record length. Dual Channel: 2K per channel.

Save-Reference Memory—(2230) One 4K or three 1K acquisitions may be saved in reference memory. Options 10 and 12 offer 26K of battery backed reference memory, allowing 26 waveform sets to be saved. (2220, 2221) One 4K acquisition may be saved in reference memory.

Total Cursor Accuracy—Voltage: ±3% of delta voltage reading. Time difference: 5s to 5 μs/div. ±1 sample display interval (+1 if in Peak or ACC Peak); 2 μs to 0.05 μs/div ±2 sample display intervals (+2 if in ACC Peak).

X-Y Plotter Output—Standard on 2230, 2221, and 2220. The oscilloscopes plot all displayed waveform(s) and readout information in either Auto or Manual Plot mode. The plotting of the graticule is selectable on the 2230. Plotter pen lift is adjustable with a relative speed range of 1 to 10 div/s.

External Clock—Provides an input for Ext Clock signals, dc to 1 kHz, to the storage acquisition system.

VERTICAL SYSTEM
(2 Identical Channels)

Bandwidth (−3 dB) **and Rise Time (Nonstore)**—(2230) 100 MHz and 3.5 ns, derated to 80 MHz and 4.4 ns at 2 mV/div and outside 0 to +35°C. (2220, 2221) 60 MHz and 5.8 ns, derated to 50 MHz and 7.0 ns at 2 mV/div and outside 0 to +35°C.

Bandwidth Limit—(2230) 20 MHz ±10%. (2220, 2221) 10 MHz ±15%.

Deflection Factor and Accuracy (Store/Nonstore)—2 mV to 5 V/div in 1-2-5 sequence. Accuracy: 15-35°C: 2%; 0-50°C: 3% Uncalibrated: Continuously variable between steps by at least 2.5:1.

Vertical System Operating Modes—CH 1, CH 2, CH 2 Invert, ADD, ALT, CHOP (500 kHz nonstore).

Common-Mode Rejection Ratio—For signals of 6 div or less, at least 10:1 (at 50 MHz).

Input R and C—1 MΩ, 20 pF.

Maximum Input Voltage (AC and DC Coupled)—400 V (dc + peak ac) or 800 V (p-p to 10 kHz).

Channel 1/Channel 2 Isolation—≥100:1 at 50 MHz.

AC-Coupled Lower Cutoff Frequency—10 Hz or less at −3 dB.

Automatic Scale Factor—(2230, 2221) Probe tip deflection factors for coded probes are automatically indicated in the CRT readout.

HORIZONTAL SYSTEM

A Time Base—0.05 μs to 0.5 s/div in 1-2-5 sequence. 10X magnifier extends the maximum sweep speed to 5 ns/div. In Store mode, lower sweep speed is extended to 5 s/div.

B Time Base—(2230) 0.05 μs to 50 ms/div in 1-2-5 sequence. 10X magnifier extends the maximum sweep speed to 5 ns/div.

Variable Sec/Div Control—In Nonstorage mode, uncalibrated variable extends sweeps by at least 2.5:1. In storage mode, a 4K acquisition is compressed to 1K for on-screen viewing.

Sweep Linearity—±5% over any two of the center eight divisions.

Time-Base Accuracy—Storage mode: 0.1% over full 10 cm (or div).

Nonstorage Mode	15 to 35°C	0 to +50°C
Unmagnified	±2%	±3%
Magnified	±3%*1	±4%*2

*1 4% at 0.05 μs/div.
*2 6% at 0.05 μs/div.

Horizontal Operating Modes—(2230) Nonstorage: A, Alternate with A intensified by B, and B; Storage: A, A intensified by B, and B.

DELAYED SWEEP (2230)

Delayed Sweep Delay Times—Continuously variable with 10-turn control from less than 0.5 div plus 300 ns to greater than 10 div.

Differential Delay Time Accuracy—±1% (+15 to +35°C); ±2% (0 to +50°C).

Delay Jitter—5,000:1 (0.02%), nonstore mode only.

TRIGGERING
'A' Trigger Sensitivity

2230	Internal	External
10 MHz	0.35 div	40 mV
100 MHz	1.5 div	200 mV
2220/2221	**Internal**	**External**
10 MHz	0.35 div	40 mV
60 MHz	1.0 div	120 mV

B Trigger (2230 Internal Only)—Sensitivity: 0.35 div at 10 MHz; 1.5 div at 100 MHz.

Trigger System Operating Modes—Normal, P-P Automatic, TV Line, TV Field, and Single Sweep. HF Rej triggering attenuates signals above 40 kHz. Lowest usable frequency for P-P Automatic is 20 Hz.

Trigger Coupling—Automatic coupling with internal signal sources: AC with P-P Automatic and TV Field; DC with Normal and Single Sweep.

Trigger Sources—A trigger: Internal, external, and line. B trigger (2230): Internal only.

External Trigger Input—Input Coupling: AC, dc, or dc divide by 10. Bandwidth: 100 MHz (2230), 60 MHz (2220, 2221); ac-coupled lower cutoff frequency is 10 Hz or less at −3 dB. Maximum safe input voltage same as scope's vertical channels.

Variable Hold-Off—(Non-Store) ≤1:10.

X-Y MEASUREMENTS

Deflection Factors—Same as scope's vertical system with the Volts/Div switch in calibrated detent.

Accuracy—Storage Mode is same as digital storage vertical-deflection system.

Nonstorage	Y-Axis	X-Axis
+15 to +35°C	±2%	±3%
0 to +50°C	±3%	±4%

Storage-Mode Bandwidth—(2230) dc to 100 MHz. (2220, 2221) dc to 60 MHz. Bandwidth changes proportionate to sweep speed.

Nonstorage Bandwidth—Y-axis same as scope's vertical system, X-axis: 2.5 MHz.

Nonstorage Phase Difference—Between X and Y amplifiers: ±3° from dc to 150 kHz.

Storage-Mode Phase Difference—Time difference between Y-axis and X axis is no more than 100 ns. The X-axis is sampled before the Y-axis. Between X and Y amplifiers: Less than ±2° referenced to a 10-division signal period.

Nonstorage Bandwidth—Y-axis same as scope's vertical system, X-axis: 2.5 MHz.

Nonstorage Phase Difference—Between X and Y amplifiers: ±3° from dc to 150 kHz.

Storage-Mode Phase Difference—Time difference between Y-axis and X-axis is no more than 100 ms. The X-axis is sampled before the Y-axis. Between X and Y amplifiers: Less than ±2° referenced to a 10-division signal period.

CRT AND DISPLAY FEATURES

CRT—8×10 cm display; internal graticule, nonilluminated, accelerating potential is 14 kV, GH (P31) phosphor standard.
Controls—Beam finder, focus, trace rotation. (2230). Storage/Readout intensity (2221). Separate A and B sweep intensity (2230).
Z-Axis—Sensitivity: 5 V causes noticeable modulation, positive voltage decreases intensity. Usable frequency range is dc to 20 MHz. Maximum safe input voltage is 30 V (dc + peak ac) or 10 V ac p-p at 1 kHz or less. Input resistance is approximately 10 kΩ.

OTHER CHARACTERISTICS

Probe Adjustment Signal—0.5 V ±5% square wave at 1 kHz ±20%.

POWER REQUIREMENTS

Line-Voltage Range—90 to 250 V ac.
Line Frequency—48 to 440 Hz.
Maximum Power Consumption—85 W, 2.0 A, at 250 V (slow blow line fuse).

ENVIRONMENTAL

Temperature—Operating: 0 to +50°C; Non-operating: −55 to +75°C.
Altitude—Operating: to 4,500 meters (15,000 ft), maximum operating temperature decreased 1°C per 1,000 ft above 5,000 ft. Non-operating: to 15 000 m (50,000 ft).
Humidity—Operating and Nonoperating: 5 cycles (120 hours) referenced to MIL-T-28800C, for Type III, Class 5 instruments.
**Radiated and Conducted Emissions**—Requirements per VDE-0871. Meets Class B.
Vibration—Operating: 15 minutes along each of three axes at a total displacement of 0.015-inch p-p (2.4 g's at 55 Hz) with frequency varied from 10 to 55 to 10 Hz in one-minute sweeps; hold for 10 minutes at 55 Hz in each axis; all major resonances must be above 55 Hz.
Shock—Operating and Nonoperating: 30 g's, half-sine, 11-ms duration, 3 shocks per axis for a total of 18 shocks.

PHYSICAL CHARACTERISTICS

Dimensions	mm	In.
Width		
w/handle	360	14.2
w/o handle	328	12.9
Height, w/feet &		
handle	137	5.4
Depth		
w/front cover	445	17.5
w/o front cover	440	17.3
w/handle extended	511	20.1

| Weight ≈	kg	lb
Net, w/cover access	9.4	20.7
Net, w/o cover, access/pouch	8.2	18.0
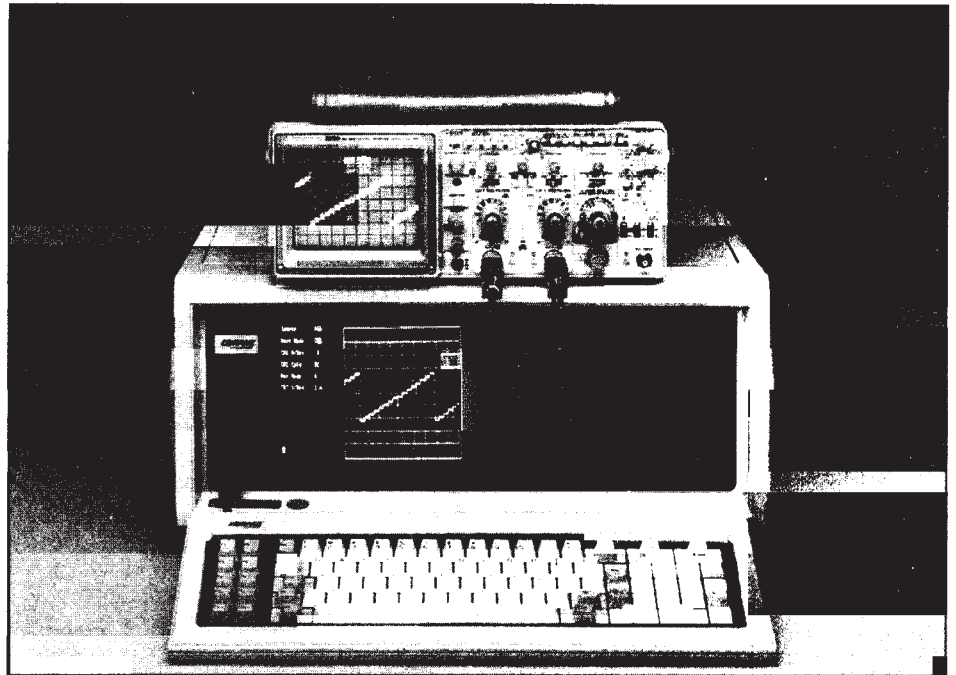
Option 10 GPIB Interface
Option 12 RS-232C Interface

GPIB IEEE-488 With Option 10, the 2230/2221/2220 comply with IEEE Standard 488.1-1987 and use Tektronix *Standard Codes and Formats*. With Option 12, the 2230/2221/2220 feature Standard RS-232C and use an extension of Tektronix *Standard Codes and Formats*.

GPIB (Option 10) and RS-232C (Option 12) interfaces are available for the 2230, 2221, and 2220. Either interface can transmit and receive waveform data. Most front-panel settings can be queried and many functions can be controlled via the interface; e.g., single-sweep reset.

2230 and 2221 Option 10 or 12 interfaces also allow messages or computed results to be displayed on screen. Both options for the 2230 include a battery-backed reference memory (minimum lifetime 3 years) for storage of up to 26 additional waveform sets.
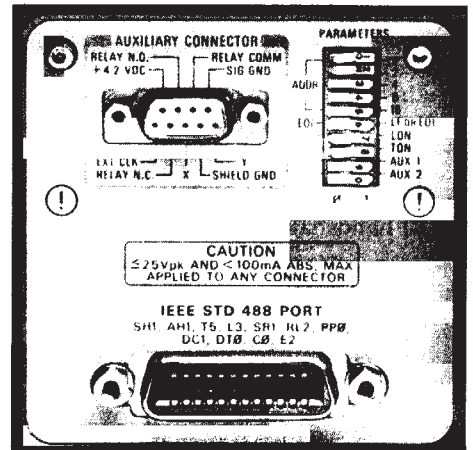
Option 10 GPIB Interface

The **Option 10 GPIB** interface conforms to IEEE Standard 488.1-1987. It is fully compatible with Tektronix *Standard Codes and Formats*. Primary address (0-30), message terminator (EOI or LF/EOI), and talk/listen mode are selected by a switch on the oscilloscope side panel. Maskable interrupts for RQS and OPC can be programmed.

IEEE Standard 488.1-1987 Interface Function Subsets Implemented—SHI, AHI, T6, L3, SRI, RL2, PPO, DCI, DTO, C0.
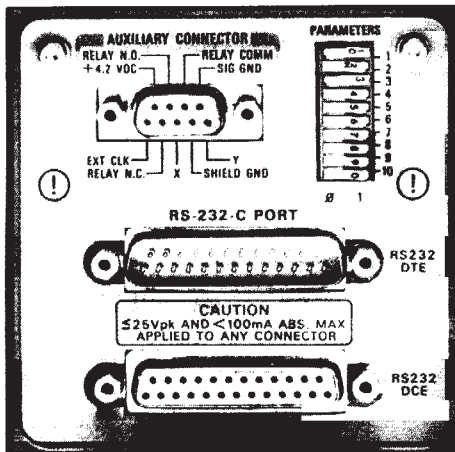
Option 12 RS-232C Interface

The **Option 12 RS-232C** interface has both DCE and DTE connectors. It is compatible with an extension of Tektronix *Standard Codes and Formats*. Baud rate (50–4800), parity (Odd, Even, Mark, Space, or none), line termination (CR or CR-LF), and SRQ generation on parity error (ON or OFF) are selected by a switch on the oscilloscope side panel. Number of bits per character (7 or 8), number of stop bits (1 or 2), and CTRL-S/CTRL-Q handshaking (enable/disable) may be changed by remote commands. The interface automatically senses the presence of Clear to Send (CTS)/Request to Send (RTS) or Data Set Ready (DSR)/Data Terminal Ready (DTR) handshaking lines.

Direct Connection to Printers and Plotters via GPIB or RS-232C.
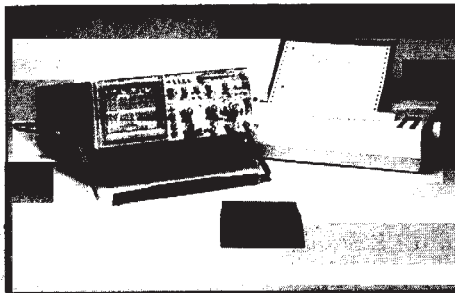
A 2230, 2221, or 2220 equipped with either Option 10 or Option 12 interface is fully compatible with any Digital X-Y plotter that uses Hewlett-Packard Graphics Language (HPGL), any Epson FX-Series format printer, or the HP Thinkjet 2225D printer. The GPIB interface is also compatible with the Tektronix HC100 Plotter. Plotter output is directed to the interface if its control switches are set for the appropriate plotter or printer. Otherwise, plotting is directed to the X-Y outputs. Plotting is in single color only.

SOFTWARE

- **RS-232-C Software Utilities**
- **GPIB Software Utilities**
- **Advanced Data Analysis and Controller**

Tektronix offers a variety of software packages to help you transform your 2200 DSO into a highly capable system component. By equipping your scope with either GPIB or RS-232 interface options, you can send and receive digitized waveform data to and from external devices such as controllers and computers. With RS-232, data can even be sent over phone lines, offerfing excellent potential for remote-site monitoring via modem and phone linkages.

IBM PC Utility Software (S49Z200 Series)—The S49Z201/202/203 Utility Software packages consist of a set of subroutines intended to speed application development for users of Tek's 2230, 2221, 2220 digital scopes with RS-232 or GPIB interface options.

This software is capable of being used directly for essential data handling functions, including transmitting and receiving waveforms, displaying waveforms using PC graphics, and storing and retrieving waveforms from disk storage. With these capabilities, you can create a library of reference waveforms, or maintain a record of previous acquisitions for later review or analysis.

The 2200 DSO's also support limited command sets for changing select front panel and menu settings, such as acquisition mode and single sweep trigger reset, thereby enabling remote *babysitting* applications.

In addition, you can utilize the subroutines for integrating essential data handling and instrument communication protocols into your own developed application programs. Applications such as automated data analysis, waveform comparison, or data logging can be created more easily with less development time.

S49Z121/122 Tek 4041 Software—These programs include subroutines written in 4041 BASIC to perform many necessary instrument control functions and data handling procedures with the Tek 4041 controller. S49Z122 further enables you to perform complex mathematical and statistical analysis on retrieved waveforms.

GURU II, SPD, and ASYST—There are several other advanced software packages offered by Tektronix that are easily integrated with the 2230. They include: GURU II (GPIB User's Resource Utility) Software, which provides subroutines written in BASIC to support application environment work; SPD (Signal Processing and Display) Software for performing complex waveform analysis on acquired waveforms; and ASYST Drivers, consisting of instrument control subroutines.

For more information on utility and application software, see the Test and Measurement Software Section or consult your local sales or applications engineer.

TECHNICAL ASSISTANCE SERVICES
When you need technical assistance to supplement your own resources, Tektronix can arrange the services of an application engineer skilled in meeting your needs. For more information, see Total Solution/New Product section, page 35 or consult your local sales engineer.

230

To order, call your local Tektronix Sales Office, or call Tek's National Marketing Center.
Toll free: 1-800-426-2200, Ext. 99.

ORDERING INFORMATION

2220—60 MHz Single Time-Base
Digital Storage Oscilloscope. **$2,995**
Includes: Two P6109 10X Voltage Probes, front-panel cover (200-2520-00), Accessory Pouch (016-0677-02), Operator Manual (070-5301-01), Users Reference Card (070-5681-00).

2221—60 MHz Single Time-Base
Digital Storage Oscilloscope **$3,995**
Includes: Two P6109 10X Voltage Probes, front-panel cover (200-2520-00), Accessory Pouch (016-0677-02), Operators Manual (070-6530-00), Users Reference Card (070-6532-00).

2230—100 MHz Dual Time-Base
Digital Storage Oscilloscope **$4,995**
Includes: Two P6109 10X Voltage Probes, front-panel cover (200-2520-00), Accessory Pouch (016-0677-02), Operators Manual (070-4998-02), Users Reference Card (070-5370-00).

OPTIONS

Option 10—(2230) GPIB IEEE-488 Interface includes 26K battery backed memory	**+ $750**
Option 10—(2220/2221) GPIB IEEE-488 Interface	**+ $500**
Option 12—(2230) RS232C Interface includes 26K battery-backed memory	**+ $750**
Option 12—(2220/2221) RS232C Interface	**+ $500**
Option 1C—C-5C Option 04 Camera	**+ $495**
Option 1K—K212 Portable Instrument Cart	**+ $350**
Option 1T—Transit Case	**+ $215**
Option 1R—Rackmount*[1]	

FIELD RETROFIT KITS

2230F10—Field Retrofit kit for Option 10	**$750**
2230F12—Field Retrofit kit for Option 12	**$750**
2221F10—Field Retrofit kit for Option 10	**$500**
2221F12—Field Retrofit Kit for Option 12	**$500**
2220F10—Field Retrofit Kit for Option 10	**$500**
2220F12—Field Retrofit Kit for Option 12	**$500**

*[1] *Contact your local sales office.*

SOFTWARE

S49Z201—RS-232 Utility Software. **$50**
Includes: Software diskettes (5.25 inch); User's Manual. Required equipment and software: 2230, 2221, or 2220 Digital Oscilloscope with Option 12 (RS-232 Interface); IBM PC or fully compatible (384K bytes of RAM, 2 diskette drives, color monitor, color graphics card, DOS V2.1 or later); BASICA Interpreter (V3.0 or later) or Microsoft QuickBASIC Compiler (V2.0 or V3.0); and RS-232 Cable (straight-through).

S49Z202—GPIB/Turbo Pascal
Utility Software. **$50**
Includes: Software diskettes (5.25 inch); User's Manual. Required equipment and software: 2230, 2221, or 2220 Digital Oscilloscope with Option 10 (GPIB Interface); IBM PC or fully compatible (512K bytes of RAM, 2 diskette drives, color monitor, color graphics card, DOS V2.1 or later); Borland's Turbo Pascal (V3.0 or above); National Instruments PC2/PC2A GPIB Card, or Tektronix GURU card (or equivalent); GPIB Cable.

S49Z203—GPIB/BASICA Utility
Software. **$50**
Includes: Software diskettes (5.25 inch); User's Manual. Required equipment and software: 2230, 2221, or 2220 Digital Oscilloscope with Option 10 (GPIB Interface); IBM PC or fully compatible (256K bytes of RAM, 2 diskette drives, color monitor, color graphics card, DOS V2.1 or later); BASICA Interpreter or QuickBASIC Compiler; National Instruments PC2/PC2A GPIB Card, or Tektronix GURU card (or equivalent); GPIB Cable.

INTERNATIONAL POWER PLUG OPTIONS

Option A1—Universal Euro 220 V, 50 Hz
Option A2—UK 240 V, 50 Hz
Option A3—Australian 240 V, 50 Hz
Option A4—North American 240 V, 60 Hz
Option A5—Switzerland 220 V, 50 Hz

WARRANTY-PLUS SERVICE PLANS

M1—(2230) 2 Calibrations	**+ $229**
M1—(2221) 2 Calibrations	**+ $229**
M1—(2220) 2 Calibrations	**+ $229**
M2—(2230) +2 Years Service	**+ $338**
M2—(2221) +2 Years Service	**+ $328**
M2—(2220) +2 Years Service	**+ $319**
M3—(2230) 4 Calibrations & 2 Years Service	**+ $796**
M3—(2221) 4 Calibrations & 2 Years Service	**+ $785**
M3—(2220) 4 Calibrations & 2 Years Service	**+ $776**
M4—(2230) 5 Calibrations	**+ $547**
M4—(2221) 5 Calibrations	**+ $547**
M4—(2220) 5 Calibrations	**+ $547**
M5—(2230) 9 Calibrations & 2 Years Service	**+ $1,318**
M5—(2221) 9 Calibrations & 2 Years Service	**+ $1,307**
M5—(2220) 9 Calibrations & 2 Years Service	**+ $1,298**

OPTIONAL ACCESSORIES
2200 SERIES DSOs

HC100—Color Pen Plotter.	**$825**
Option 01—GPIB Cable	**+ $140**
Service Manuals—	
(2230) Order 070-4999-00	**$25**
(2221) Order 070-6531-00	**$30**
(2220) Order 070-4999-00	**$25**
(2210) Order 070-7648-00*[1]	
(2201) Order 070-7819-00*[1]	
Rackmount Conversion Kit—	
(2220/21/30) Order 016-1003-00	**$140**
(2210/2201) Order 016-0819-00	**$190**
Padded Suitcase—Order 016-0792-01	**$225**
Carrying Strap—Order 346-0199-00	**$17.50**
Rain Cover—Order 016-0848-00	**$16.25**

Viewing Hoods—

(Collapsible) 016-0592-00	**$15**
(Polarized) 016-0180-00	**$60**
(Binocular) 016-0566-00	**$21**
CRT Light Filter, Clear— Order 337-2775-01	**$1.95**
Portable Power Supply— 1105. See page 315.	**$2,090**
Battery Pack—1106. See page 315.	**$1,580**
DC Inverter—1107. See page 316.	**$1,175**
DC Inverter Mounting Kit— Order 016-0785-00.	**$60**
Isolators—	
(Ground Isolation Monitor) A6901.	**$760**
(Isolation Amplifier) A6902B.	**$1,980**

RECOMMENDED PROBES

Passive Voltage Probes

P6008—10X Probe	**$260**
P6062B—Switchable 1X/10X	**$175**
P6101A—Non Attenuating 1X	**$53**
P6121—Modular 10X	**$100**
P6122—Modular 10X	**$58**

High Voltage Probes

P6009—1.5 kV 100X Probe	**$205**
P6015—20 kV 1000X Probe	**$725**

Active Voltage Probes

P6201—1X FET Probe	**$1,280**
P6202A—10X FET Probe	**$735**
P6230—10X Bias/Offset Probe	**$420**
P6046—Differential Probe	**$1,895**

Current Probes

P6021—AC Current Probe	**$450**
P6022—AC Current Probe	**$495**
A6302—DC/AC 20 A Current Probe (Requires TM500 Mainframe and AM503 Current Amplifier	**$625**
A6303—DC/AC 100 A Current Probe (Requires TM500 Mainframe and AM503 Current Amplifier	**$1,180**
CT-4—AC 1000 A Current Transformer	**$1,320**

RECOMMENDED CARTS

K212—Portable Instrument Cart	**$350**

RECOMMENDED CAMERAS

See Instrumentation Documentation Devices section.

C-5C—Option 04.	**$495**
C-7—Option 02.	**$610**

*[1] *Contact your local sales office.*

TRAINING

Tektronix Instrument Group Customer Training offers operation and application training to help you get full value out of your instrumentation investment. See Customer Training Section for information. For further information, or to enroll, call us at 1-800-835-9433 ext. 430.