

2794  
2792

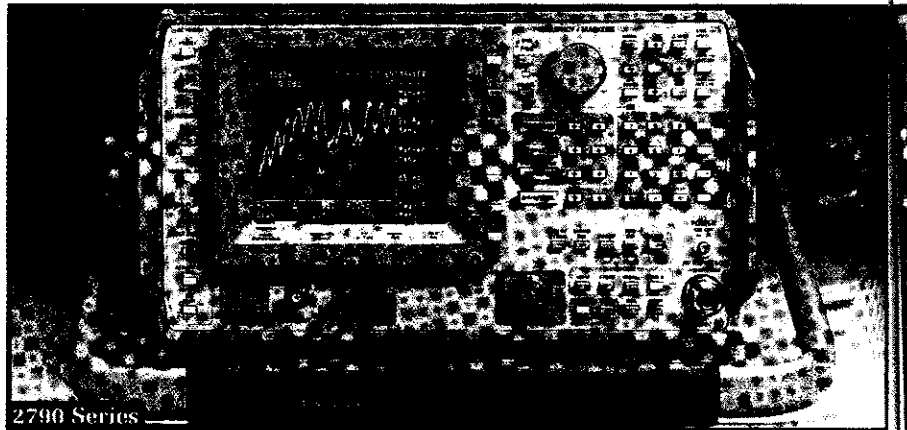
2797  
2795

# Spectrum Analyzers

*Field proven,  
rugged portables  
with application-  
oriented  
frequency  
ranges.*

## 2794/2792 2797/2795

- 100 Hz to 325 GHz Frequency Coverage
- Continuous-Resolution Frequency Tuning
- Up to 90 dB Viewable Dynamic Range
- Built-in Frequency Counters Provide Frequency Determination to Within 0.0000001% ( $1 \times 10^{-9}$ /day ref.)
- Sensitivities to -134 dBm
- Built-in Intelligence for Signal Processing/Marker Functions
- Push Button Noise-Normalization Functions
- Macro Capability with Non-volatile Memory
- Optional Switch-Selectable 50/75  $\Omega$  Impedances
- Non-volatile Memory for up to Nine Waveforms and Ten Front-panel Settings
- GPIB Programmability with Tektronix Codes and Formats



## 2790

The Tektronix 2790 Series Spectrum Analyzers are proud successors to the venerable Tektronix 490 Series which has proven itself in years of reliable, rugged service around the world. All units provide full IEEE-488 (GPIB) programmability, which means you can change front-panel settings, read data from the CRT display, and send waveforms from internal digital source memory to other GPIB devices. Frequency ranges of the instruments are as follows:

2794: 10 kHz to 325 GHz  
2792: 10 kHz to 325 GHz  
2797: 100 Hz to 7.1 GHz  
2795: 100 Hz to 1.8 GHz

Built to rugged MIL-T-28800C environmental specifications, these units can withstand transportation shock and vibration to a remote site. Or they can simply be moved from the engineering lab to the production floor with complete confidence in measurement accuracy.

A wide array of price/performance alternatives are available. If you need 10 Hz resolution for an exacting close-in spectral purity measurement, consider the 2794. For more routine uses, such as microwave transmitter maintenance, the 2792 may be the most cost-effective solution.

## A WIDE ARRAY OF INTELLIGENT FEATURES

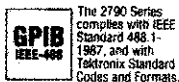
Downloadable programming (macro) capability lets you execute your frequently-used measurement routines from the Spectrum Analyzer's non-volatile memory. In addition, these Spectrum Analyzers can store up to ten complete front-panel measurement parameter setups in nonvolatile memory to save measurement time. You can also save up to nine waveform displays, a real benefit when data analysis must be delayed.

Tedious, time-consuming, and often incorrect carrier-to-noise ratio calculations are eliminated; the instrument handles it all with a single keystroke, with automatic noise normalization to 1 Hz and automatic conversion for reference units such as dBm, dBmV, dBV, dB $\mu$ V, and dB/Hz.

An internal high-stability reference provides marker or center frequency accuracy approaching  $10^{-9}$ /day in the 2794. For added confidence in measurements, a built-in microwave signal counter in the 2794 with 134 dB compression-to-noise dynamic range means you can determine the exact frequency of marked signals only 30 Hz apart — or count the exact delta-frequency between two marked signals — even with greatly differing amplitudes. You also have the flexibility of tying in with a system clock, using the external reference lock capacity.

A permanent record of CRT displays can be obtained at the push of a button, without a controller, using the direct plot capability and a GPIB plotter such as the Tektronix HC100.

Product(s) available through your local Tektronix representative (listed in the back of this catalog) or call 1-800-426-2200.



The 2790 Series complies with IEEE Standard 488.1-1987, and with Tektronix Standard Codes and Formats.



Tektronix Measurement products are manufactured in ISO registered facilities.

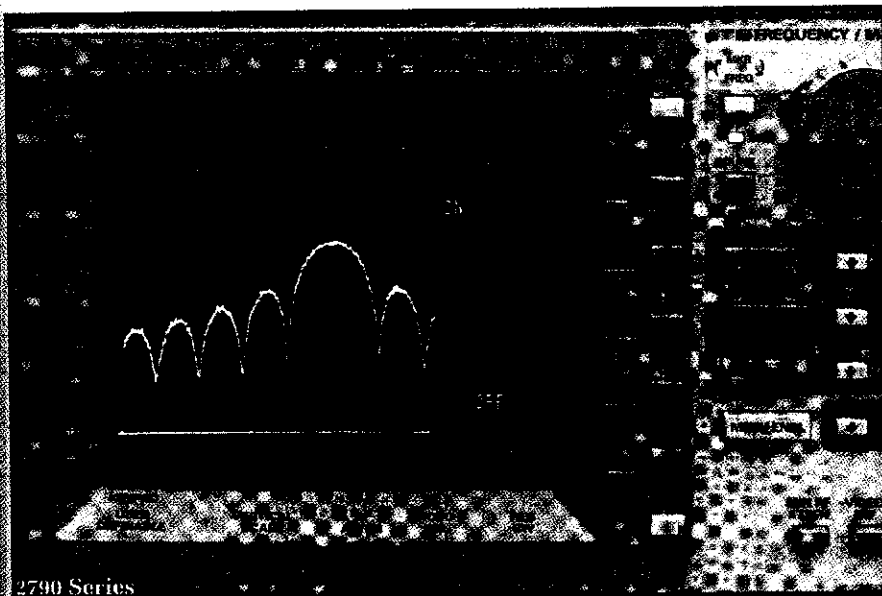
## APPLICATIONS

- Manufacturing ATE
- Avionics
- Broadcasting
- CATV
- Cellular Radio
- Design and Engineering
- Nuclear Physics
- Radio Astronomy
- Satellite Communications
- Terrestrial Microwave
- Two-way Radio

# Spectrum Analyzers

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2790 Series

Menu-selected dynamic markers automatically update frequency and amplitude data with every sweep. Unprecedented signal processing power results when you use these markers in conjunction with the built-in intelligence. With PULSE Mode, you can mark the peak of a main lobe and peaks of side lobes at the push of a button. The CW Mode locates signals that exhibit CW characteristics and ignores all other signals. The SPUR Mode marks all signals that meet user-defined or automatic threshold criteria. User-definable threshold criteria are available for all signal processing modes.

## MENU POWER

The 2790 Series is primarily menu-driven. Pressing one of the four front-panel menu keys brings up a selection menu on the right portion of the display. Each menu selection is assigned to a bezel-mounted selection key; simply press the associated key to make a menu selection. When numeric data is required, it can be entered using the keypad. When menu selection is complete, the menu area is used by the waveform to provide a full-screen display.

Some of the common functions are performed by dedicated function keys or knobs. For example, the FREQUENCY/MARKERS knob provides frequency or marker tuning; the function is shifted between marker or frequency by alternately pressing MKR  $\leftrightarrow$  FREQ.

A unique and powerful feature is the USER DEFINABLE knob which can be assigned to many of the front-panel functions; Span, Reference Level, Resolution Bandwidth, Sweep Speed, Minimum RF Attenuation, plus other functions. This allows you to customize the front panel for measurement convenience.

## OPERATOR CONVENIENCE

These instruments also offer operator convenience for measuring the bandwidth of filters, amplifiers, and other networks. Just enter the desired bandwidth point and select BANDWIDTH Mode, and the markers automatically update to display the new value.

Dedicated direct keypad data entry of major measurement parameters enables fast, accurate instrument setup. The unique marker keypad allows Right and Left Next, Next Higher and Lower, Marker to Ref. Level, and Peak Find and Center operations to be executed directly from the front panel. This makes signal searches much easier.

Optional switch-selectable 50  $\Omega$  and 75  $\Omega$  impedances add versatility. For applications such as baseband and CATV, 75  $\Omega$ /dBmV greatly simplifies spectrum analysis.

## PRICE/PERFORMANCE SELECTION

The performance leader is the 2794, which offers frequency coverage from 10 kHz to 21 GHz with its internal mixer, and to 325 GHz with external mixers such as the Tektronix WM780 Series (each WM780 Series mixer is individually calibrated). Signal sensitivity is an impressive  $-134$  dBm. The 2794 is optimized for use in baseband through millimeter-wave measurements, where the ability to identify and process signal frequencies and amplitudes over wide dynamic ranges with high accuracy is critical. The 2794 offers full high-resolution and frequency coverage for RF/Microwave component design and test.

The 2792 covers the same coaxial frequency range as the 2794, and provides nearly the same set of outstanding features and state-of-the-art specifications. It is designed as a cost-effective and productive solution to engineering needs. The 2792's frequency range of 10 kHz to 21 GHz is ideal for cost-sensitive applications that still require most of the powerful features of the product family, but can get by with slightly-reduced performance specifications. The 2792 is also ideal for personal communications network testing to 26.5 GHz.

The 2795 features the same functionality and high level of performance as the 2794, but over a frequency range of 100 Hz to 1.8 GHz. It is optimized for stand-alone or automated operation in baseband through UHF measurements, where the ability to identify and process weak signals is critical. The 2795 used with the TR503 Tracking Generator forms a swept frequency system for passive and active component design and test.

The 2797 provides the same cost-effective performance as the 2794, but over a frequency range of 100 Hz to 7.1 GHz. The 2797 is well suited for land, sea, and air mobile communications system design and testing.

## REMOTE OPERATION AND COMPLETE SPECTRUM ANALYSIS PACKAGES

Full GPIB-programmability lets you automate your spectrum analysis system needs. Programming is simplified and measurement repeatability ensured. Under program control, you can operate the instrument, change front-panel settings, read data from the CRT display, and send waveforms from internal memory to other GPIB devices. Tektronix Standard Codes and Formats keep commands clear, consistent, and universally understood.

Tektronix spectrum analyzer software lets you use the 2790 Series Spectrum Analyzers as system components, controlling them with popular instrument controllers such as the PC compatibles. Coupling the computer to the Spectrum Analyzer via the IEEE 488 bus lets you take advantage of the PC's capability, as well as the power and versatility of the Spectrum Analyzer.

Tektronix' General RF Applications Software Package (GRASP) offers many different applications and utility routines, which are selected through easy menu-driven operation. Also, EMI software is available for FCC, VDE, CISPR, and MIL-STD testing.

SPECTRUM ANALYZERS

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## Spectrum Analyzers

## CHARACTERISTICS

Frequency-related	2794	2792	2797	2795
Frequency Range with Internal Mixers	10 kHz to 21 GHz	10 kHz to 21 GHz	100 Hz to 7.1 GHz	100 Hz to 1.8 GHz
Frequency Range with External Mixers	10 kHz to 325 GHz	325 GHz (Opt. 04)	NA	NA
Frequency Readout Accuracy (center or marker), ±[2% span + (CF x Ref.) + (2N + 25) Hz]	±20 kHz @ 1 GHz with 1 MHz span	±30 kHz @ 1 GHz with 1 MHz span	±21 kHz @ 1 GHz with 1 MHz span	±20 kHz @ 1 GHz with 1 MHz span
Frequency Counter Accuracy, ±[(CF x Ref.) + (5 + N) Hz + 1 LSD]	±7 Hz @ 1 GHz	±10.013 kHz @ 1 GHz, ±9 Hz @ 1 GHz (Opt. 03)	±1 kHz @ 1 GHz, ±7 Hz @ 1 GHz (Opt. 02)	±7 Hz @ 1 GHz
Delta Count Accuracy, ±[(D-F x Ref.) + (10 + 2N) + 1 LSD]	±13 Hz for 1 MHz ΔF	±65 Hz for 1 MHz ΔF	±14 Hz for 1 MHz ΔF	±13 Hz for 1 MHz ΔF
Frequency Reference Accuracy	≤1x10 <sup>-9</sup> /day (aging)	≤2x10 <sup>-9</sup> /day (aging) Opt. 03	≤1x10 <sup>-9</sup> /day (aging) Opt. 02	≤1x10 <sup>-9</sup> /day (aging)
Frequency Stability (residual FM)	≤3 Hz @ 1 GHz	≤12 Hz @ 1 GHz	≤3 Hz @ 1 GHz	≤3 Hz @ 1 GHz
Frequency Stability (drift)	<50 Hz/minute	<50 Hz/minute	<50 Hz/minute	<50 Hz/minute
Single Sideband Phase Noise (30 kHz offset and N=1)	-105 dBc/Hz @ 1 GHz	-103 dBc/Hz @ 1 GHz	-105 dBc/Hz @ 1 GHz	-105 dBc/Hz @ 1 GHz
Frequency Span Range (plus 0 Hz and MAX)	100 Hz to 150 GHz	2 kHz to 12 GHz	100 Hz to 4 GHz	100 Hz to 1.7 GHz
Frequency Span Accuracy	±5%	±5%	±5%	±5%
Delta Frequency Accuracy Marker Mode	1% of span	1% of span	1% of span	1% of span
Resolution Bandwidth (6 dB) Range	10 Hz to 3 MHz	1 kHz to 3 MHz	10 Hz to 3 MHz	10 Hz to 3 MHz
Resolution Bandwidth Selectivity (-60 dB/-6 dB)	≤7.5:1 except 15:1 @ 10 Hz	≤7.5:1	≤7.5:1 except 15:1 @ 10 Hz	≤7.5:1 except 15:1 @ 10 Hz
Video Bandwidth Range	0.3 Hz to 30 kHz	3 Hz to 30 kHz	0.3 Hz to 30 kHz	0.3 Hz to 30 kHz
<b>Amplitude-related</b>				
Reference Level Range	-117 to +30 dBm	-117 to +30 dBm	-117 to +30 dBm	-117 to +30 dBm
Maximum Safe Input Power, CW	1 W (+30 dBm)	1 W (+30 dBm)	1 W (+30 dBm)	1 W (+30 dBm)
Maximum Safe Input Power, Pulse	75 W Pk (1 μS pulse, 0.1% duty factor)	75 W Pk (1 μS pulse, 0.1% duty factor)	75 W Pk (1 μS pulse, 0.1% duty factor)	75 W Pk (1 μS pulse, 0.1% duty factor)
CRT Display Range, Log	1 to 15 dB/div	1 to 15 dB/div	1 to 15 dB/div	1 to 15 dB/div
CRT Display Range, Linear	39.6 nV/div to 2.8 V/div	39.6 nV/div to 2.8 V/div	39.6 nV/div to 2.8 V/div	39.6 nV/div to 2.8 V/div
Input Attenuator Range	0 to 60 dB in 10 dB steps	0 to 60 dB in 10 dB steps	0 to 60 dB in 10 dB steps	0 to 60 dB in 10 dB steps
Dynamic Range (maximums):				
Compression to noise	134 dB	110 dB	130 dB	130 dB
Signal to distortion harmonic	77 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz	65 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz	75 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz	75 dB
Signal to distortion intermodulation	93 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz	76 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz	90 dB to 1.7 GHz ≥100 dB 1.7 to 7.1 GHz	90 dB
Viewable on CRT screen	90 dB	80 dB	90 dB	90 dB
Residual Response (no signal and zero RF attenuation)	-100 dBm (input terminated)	-95 dBm (input terminated)	-100 dBm (input terminated)	-100 dBm (input terminated)
Second Harmonic Distortion, RF Frequency Range	-60 dBc (mixer level -40 dBm)	-60 dBc (mixer level -40 dBm)	-60 dBc (mixer level -40 dBm)	-60 dBc (mixer level -30 dBm)
Second Harmonic Distortion Microwave Frequency Range	-100 dBc (mixer level -20 dBm)	-100 dBc (mixer level -20 dBm)	-100 dBc (mixer level -20 dBm)	NA
Third Order Intermodulation Distortion	-70 dBc (mixer level -27 dBm)	-70 dBc (mixer level -27 dBm)	-70 dBc (mixer level -27 dBm)	-70 dBc (mixer level -27 dBm)
Calibrator Accuracy	±0.3 dB	±0.3 dB	±0.3 dB	±0.3 dB
Gain Compression (1 dB)	0 dBm	0 dBm	0 dBm	0 dBm
Frequency Response (10 dB RF attenuation referred to cal signal):				
Band 1 (10 kHz to 1.8 GHz)	±2.5 dB	±3.0 dB	±2.5 dB	±2.0 dB (100 Hz to 1.8 GHz)
Band 2 (1.7 GHz to 5.5 GHz)	±3.5 dB	±4.0 dB	±3.5 dB	NA
Band 3 (3.0 GHz to 7.1 GHz)	±3.5 dB	±4.0 dB	±3.5 dB	NA
Band 4 (5.4 GHz to 18 GHz)	±4.5 dB	±5.0 dB	NA	NA
Band 5 (15 GHz to 21 GHz)	±6.5 dB	±7.0 dB	NA	NA
In-band Flatness (with 10 dB RF attenuation):				
Band 1 (10 kHz to 1.8 MHz)	±1.5 dB	±2.0 dB	±1.5 dB (100 Hz to 1.8 GHz)	±1.0 dB (100 Hz to 1.8 GHz)
Band 2 (1.7 GHz to 5.5 GHz)	±2.5 dB	±3.0 dB	±2.5 dB	NA
Band 3 (3.0 GHz to 7.1 GHz)	±2.5 dB	±3.0 dB	±2.5 dB (5.4 GHz to 7.1 GHz)	NA
Band 4 (5.4 GHz to 18 GHz)	±3.5 dB	±4.0 dB	NA	NA
Band 5 (15 GHz to 21 GHz)	±5.0 dB	±5.5 dB	NA	NA

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SPECTRUM ANALYZERS

Amplitude-related (continued)	2794	2792	2797	2795
Displayed Average Noise Level (input terminated, narrowest resolution bandwidth, and video filter):				
Band 1 (100 Hz)	-80 dBm (typical)	NA	-75 dBm (typical)	-75 dBm (typical)
Band 1 (1 kHz to 10 kHz)	-90 dBm (typical)	-60 dBm (typical)	-95 dBm	-95 dBm
Band 1 (10 kHz to 100 kHz)	-95 dBm	-70 dBm	-115 dBm	-100 dBm
Band 1 (100 kHz to 1 MHz)	-115 dBm	-90 dBm	-120 dBm	-115 dBm
Band 1 (1 MHz to 1.8 GHz)	-134 dBm	-110 dBm	-130 dBm	-131 dBm
Band 2 (1.7 GHz to 5.5 GHz)	-125 dBm	-108 dBm	-127 dBm	NA
Band 3 (3.0 GHz to 7.1 GHz)	-125 dBm	-108 dBm	-126 dBm	NA
Band 4 (5.4 to 12 GHz/12 to 18 GHz)	-111/-107 dBm	-94/-89 dBm	NA	NA
Band 5 (15 GHz to 21 GHz)	-106 dBm	-88 dBm	NA	NA
IF Gain Uncertainty	±2 dB max over 107 dB range	±2 dB max over 107 dB range	±2 dB max over 107 dB range	±2 dB max over 107 dB range
Scale Fidelity, Log (80 dB range/90 dB range)	±2 dB max/ ±4 dB max	±2 dB max	±2 dB max/ ±4 dB max	±2 dB max/ ±4 dB max
Scale Fidelity, Linear	±5% of full scale	±5% of full scale	±5% of full scale	±5% of full scale
Input Attenuator Switching Accuracy (20 dB to 60 dB settings):				
0 to 1.8 GHz	±0.5 dB/10 dB; ±1.0 dB max	±0.5 dB/10 dB; ±1.0 dB max	±0.5 dB/10 dB; ±1.0 dB max	±0.5 dB/10 dB; ±1.0 dB max
1.8 to 18 GHz	±1.5 dB/10 dB; ±3.0 dB max	±1.5 dB/10 dB; ±3.0 dB max	±1.5 dB/10 dB; ±3.0 dB max (1.8 to 7.1 GHz)	NA
18 to 21 GHz	±3.0 dB/10 dB; ±6.0 dB max	±3.0 dB/10 dB; ±6.0 dB max	NA	NA
Resolution Bandwidth Switching Uncertainty (reference BW = 3 MHz)	±0.4 dB	±0.4 dB	±0.4 dB	±0.4 dB
<b>Time-related</b>				
Sweep Time Range	200 µsec/div to 100 sec/div	200 µsec/div to 100 sec/div	200 µsec/div to 100 sec/div	200 µsec/div to 100 sec/div
Sweep Time Accuracy	±5%	±5%	±5%	±5%
Marker Time Measurement Accuracy	±10%	±10%	±10%	±10%
Delta Marker Time Measurement Accuracy	±5%	±5%	±5%	±5%
Sweep Trigger	Free Run, Line, Video, Single, Ext.	Free Run, Line, Video, Single, Ext.	Free Run, Line, Video, Single, Ext.	Free Run, Line, Video, Single, Ext.
<b>External Input</b>				
RF input Impedance	50 Ω nominal	50 Ω nominal	50 Ω nominal	50 Ω nominal
VSWR (10 dB input attenuation):				
<2.5 GHz	1.3:1 max	1.3:1 max	1.3:1 max	1.3:1 max
2.5 GHz to 6.0 GHz	1.7:1 max	1.7:1 max	1.7:1 max	NA
6.0 GHz to 18 GHz	2.3:1 max	2.3:1 max	NA	NA
18 GHz to 21 GHz	3.5:1 max	3.5:1 max	NA	NA
Local Oscillator Emission Level (0 dB input attenuation)	≤-70 dBm	≤-70 dBm	≤-70 dBm	≤-70 dBm
External Mixer Input	Approx. 2 GHz IF	NA	NA	NA
External Reference Input	1, 2, 5, or 10 MHz	NA	1, 2, 5, or 10 MHz	1, 2, 5, or 10 MHz
Horizontal Input/Trigger Input	0 to +10 V/1 to 50 V	0 to +10 V/1 to 50 V	0 to +10 V/1 to 50 V	0 to +10 V/1 to 50 V
Video Input/Marker Input	0 to +4 V/0 to -10 V	0 to +4 V/0 to -10 V	0 to +4 V/0 to -10 V	0 to +4 V/0 to -10 V
<b>External Output</b>				
Calibrator	100 MHz ±10 Hz, -20 dBm ±0.3 dB	100 MHz ±1 kHz, -20 dBm ±0.3 dB	100 MHz ±100 Hz, -20 dBm ±0.3 dB	100 MHz ±10 Hz, -20 dBm ±0.3 dB
1st Local Oscillator	2 to 6 GHz, +7.5 to +20 dBm	2 to 6 GHz, +7.5 to +20 dBm	2 to 6 GHz, +6 to +20 dBm	2 to 4 GHz, +6 to +20 dBm
2nd Local Oscillator	-12 dBm to +5 dBm	-12 dBm to +5 dBm	-12 dBm to +5 dBm	-10 dBm to +15 dBm
Video Output (CRT center reference)	0.5 V of signal per div of video	0.5 V of signal per div of video	0.5 V of signal per div of video	0.5 V of signal per div of video
Sweep Output (CRT center reference)	0.5 V/div; ±2.5 V max	0.5 V/div; ±2.5 V max	0.5 V/div; ±2.5 V max	0.5 V/div; ±2.5 V max
Pen Lift	+5 V nominal; TTL-compatible	+5 V nominal; TTL-compatible	+5 V nominal; TTL-compatible	+5 V nominal; TTL-compatible

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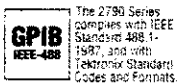
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External Output (continued)	2794	2792	2797	2795
2nd IF Output (Opt. 42)	110 MHz, 0 dBm; 3 dB BW is 4.5 MHz	110 MHz, 0 dBm; 3 dB BW is 4.5 MHz	110 MHz, 0 dBm; 3 dB BW is 4.5 MHz	110 MHz, 0 dBm; 3 dB BW is 4.5 MHz
3rd IF Output	10 MHz, -5 dBm	10 MHz, -5 dBm	10 MHz, -5 dBm	10 MHz, -5 dBm
Probe Power	+5 V, -15 V, +15 V; 100 mA max each	+5 V, -15 V, +15 V; 100 mA max each	+5 V, -15 V, +15 V; 100 mA max each	+5 V, -15 V, +15 V; 100 mA max each
<b>General Specifications</b>				
Power Requirements:				
Voltage	90-132/180-250 VAC	90-132/180-250 VAC	90-132/180-250 VAC	90-132/180-250 VAC
Frequency	47-63 Hz	47-63 Hz	47-63 Hz	47-63 Hz
Power	210 W max @ 115 VAC, 60 Hz	210 W max @ 115 VAC, 60 Hz	210 W max @ 115 VAC, 60 Hz	210 W max @ 115 VAC, 60 Hz
Weight (carrying), Nominal	22.2 kg (48 lb.)	21.3 kg (46 lb.)	20.83 kg (45 lb.)	19.44 kg (42 lb.)
Dimensions (without handle, feet, or cover), mm/inches	175 x 327 x 499/ 6.9 x 12.87 x 19.65	175 x 327 x 499/ 6.9 x 12.87 x 19.65	175 x 327 x 499/ 6.9 x 12.87 x 19.65	175 x 327 x 499/ 6.9 x 12.87 x 19.65
Digital Storage	1000 pts horizontal, 250 pts vertical	1000 pts horizontal, 250 pts vertical	1000 pts horizontal, 250 pts vertical	1000 pts horizontal, 250 pts vertical
Digitizing Rate	9 $\mu$ S	9 $\mu$ S	9 $\mu$ S	9 $\mu$ S
Macro Programming	8 K	8 K	8 K	8 K
Non-volatile Memory	9 waveforms, 10 control settings	9 waveforms, 10 control settings	9 waveforms, 10 control settings	9 waveforms, 10 control settings
<b>Environmental (Per MIL-T-28800C, Type III, Class 3, Style C)</b>				
Electromagnetic Compatibility (consult data sheet for compliance details)	MIL-STD-461B	MIL-STD-461B	MIL-STD-461B	MIL-STD-461B
Calibration Interval	1 Year	1 Year	1 Year	1 Year
<b>IEEE 488 (GPIB)</b>				
Interface Functions	SH1, AH1, T5, L3, SR1, RL1, PP1, DC1, DT1, and CO	SH1, AH1, T5, L3, SR1, RL1, PP1, DC1, DT1, and CO	SH1, AH1, T5, L3, SR1, RL1, PP1, DC1, DT1, and CO	SH1, AH1, T5, L3, SR1, RL1, PP1, DC1, DT1, and CO
Direct Plotter Output	Supports Tektronix HC100, HP7470A	Supports Tektronix HC100, HP7470A	Supports Tektronix HC100, HP7470A	Supports Tektronix HC100, HP7470A
Waveform Transfer Speed	165 msec/1000 pts	165 msec/1000 pts	165 msec/1000 pts	165 msec/1000 pts
Safety	Listed FM 3810 Certified CSA	Listed FM 3810 Certified CSA	Listed FM 3810 Certified CSA	Listed FM 3810 Certified CSA

## ORDERING INFORMATION

<b>2794</b> Programmable Spectrum Analyzer ..... <b>\$34,000</b> <b>Includes:</b> Operator's Manual; Programmer's Manual; 6 ft., 50 $\Omega$ Coaxial Cable, N-N (012-0114-00); 18 in., 50 $\Omega$ Coaxial Cable, BNC-BNC (012-0076-00); N Male-to-BNC Female Adapter (103-0045-00); Rear Connector Shield (337-3274-00); Power Cord and Spare Fuses.	<b>Opt. 10</b> - (2794) Freq. range extension to 26.5 GHz..... <b>+\$2,000</b>
<b>2792</b> Programmable Spectrum Analyzer..... <b>\$24,200</b> <b>Includes:</b> Same as 2794.	<b>Opt. 11</b> - (2794) Freq. range extension to 40 GHz..... <b>+\$3,500</b>
<b>2797</b> Programmable Spectrum Analyzer..... <b>\$28,900</b> <b>Includes:</b> Same as 2794	<b>Opt. 12</b> - (2794) Freq. range extension to 60 GHz..... <b>+\$5,500</b>
<b>2795</b> Programmable Spectrum Analyzer..... <b>\$25,000</b> <b>Includes:</b> Same as 2794.	<b>Opt. 13</b> - (2794) Freq. range extension to 140 GHz..... <b>+\$10,500</b>
<b>Opt. 02</b> - (2797) Precision Freq. Reference, 1 x 10 <sup>-7</sup> /yr aging ..... <b>+\$2,200</b>	<b>Opt. 14</b> - (2794) Freq. range extension to 325 GHz..... <b>+\$14,500</b>
<b>Opt. 03</b> - (2792) Precision Freq. Reference, 5 x 10 <sup>-7</sup> /yr aging ..... <b>+\$1,500</b>	<b>Opt. 23</b> - GRASP Software (S26RF00), PC2A Interface, GPIB Cable..... <b>+\$1,530</b> <b>NOTE:</b> The PC2A is a National Instruments GPIB Interface Card.
<b>Opt. 04</b> - (2792) Freq. range extension to 325 GHz..... <b>+\$750</b>	<b>Opt. 30</b> - Rackmount with handles for 19 in. rack ..... <b>+\$525</b>
<b>Opt. 07</b> - 75 $\Omega$ dBmV input and calibration in addition to the normal 50 $\Omega$ dBm input and calibration. (Not combinable with Opt. 04 and Opts. 10 through 14.) Includes: 42 in., 75 $\Omega$ BNC-BNC Coax Cable (012-0074-00) and BNC Male to "F" Female Adapter (013-0126-00)..... <b>+\$750</b>	<b>Opt. 39</b> - Non-lithium (silver) Batteries for Battery-backed Memory ..... <b>+\$50</b>
	<b>Opt. 41</b> - (2792 and 2794) Digital Microwave Radio Measurement Enhancement package ..... <b>+\$450</b>
	<b>Opt. 42</b> - Replaces MARKER/VIDEO input port on the rear panel with a 110 MHz IF output port that provides a 3050-Series DSP System compatible 3 dB signal bandwidth $\geq$ 4.5 MHz ..... <b>+\$750</b>
	<b>INTERNATIONAL POWER PLUG OPTIONS</b>
	<b>Opt. A1</b> - Universal Euro 220 V, 50 Hz ..... <b>NC</b>
	<b>Opt. A2</b> - United Kingdom 240 V, 50 Hz ..... <b>NC</b>
	<b>Opt. A3</b> - Australian 240 V, 50 Hz ..... <b>NC</b>
	<b>Opt. A4</b> - North American 240 V, 60 Hz ..... <b>NC</b>
	<b>Opt. A5</b> - Switzerland 220 V, 50 Hz ..... <b>NC</b>
	See Customer Information Section for additional description <i>Continued on next page.</i>

Product(s) available  
through your local  
Tektronix representative  
(listed in the back of  
this catalog) or call  
1-800-426-2200.



# Spectrum Analyzers

2797  
2795

2794  
2792

## 1405/TV Sideband Adapter

Works with the 279X and 271X Series Spectrum Analyzers to analyze the sideband and in-band response of a television transmitter.

See page 223 for details.

## TR503 Tracking Generator

Works with all 2790 Series spectrum analyzers to provide constant level, calibrated sources for swept frequency tests.

See page 225 for detail.

### ORDERING INFORMATION

Opt. B1 - Service Manual .....+\$250  
Opt. B2 - Additional Set of Manuals .....+\$300

#### SERVICE ASSURANCE OPTIONS

Opt. R2 - Adds two years of post-warranty Repair Protection.....+\$590  
Opt. C5 - Adds five years of Calibration Services .....+\$1,225

#### SOFTWARE

See page 233 for complete description.

**GRASP (General RF Applications) Software -**  
Order S26RF00 .....\$875  
**ISM (Host Site) Software -** Order S26RM00 .....\$300  
**ISM (Remote Site) Software -** Order S26RM01 .....\$750  
**EMI Prequalification Software -** Order S26EM00 .....\$1,475

#### RECOMMENDED ACCESSORIES

See page 446 for complete selection information.

#### PROBES

**FET Probe - DC to 900 MHz.** Order P6201 .....\$1,599  
**FET Probe - DC to 500 MHz.** Order P6202A .....\$1,115  
**50  $\Omega$  Divider Probe - DC to 3.5 GHz.** 6 ft. Order P6156 .....\$275  
**Current Probe - 935 Hz to 120 MHz.** Order P6022 .....\$610

#### PLOTTER

**Plotter - Four Color.** Order HC100 Opt. 01 .....\$1,380

#### CARTS

**K420 Instrument Cart** .....\$730

#### POWER SPLITTER (6 dB)

**50  $\Omega$ , SMA, 18 GHz.** Order 015-0565-00 .....\$445

#### CABLES, PADS AND ADAPTERS

**50  $\Omega$  Coaxial Cable -**  
**BNC to BNC 5.5 in.** Order 012-0214-00 .....\$80  
**BNC to BNC 18 in.** Order 012-0076-00 .....\$34  
**BNC to BNC 42 in.** Order 012-0057-01 .....\$31  
**75  $\Omega$  Coaxial Cable - BNC to BNC 42 in.**  
Order 012-0074-00 .....\$34

#### GPIO Cables -

**0.5 m** Order 012-1282-00 .....\$170  
**1 m** Order 012-0991-01 .....\$195  
**2 m** Order 012-0991-00 .....\$195  
**4 m** Order 012-0991-02 .....\$315

**75  $\Omega$  to 50  $\Omega$  Minimum Loss Attenuator - With DC block,**  
5.7 dB loss. Order 011-0112-00 .....\$110

**75  $\Omega$  to 50  $\Omega$  Matching Attenuator - With 11.25 dB**  
conversion factor from dBm to dBV with DC block.  
Order 011-0118-00 .....\$140

**"F" Female to BNC Male Adapter -** Order 013-0126-00 .....\$25

**BNC Female to "F" Male Adapter -** Order 103-0158-00 .....\$15.50  
**"N" Female to BNC Male Adapter -** Order 103-0058-00 .....\$19.75

**75  $\Omega$  to 50  $\Omega$  Matching Transformer - 0.5 dB loss.**  
**50 kHz to 300 MHz.** Order 120-1883-00 .....\$250  
**5 MHz to 1 GHz.** Order 120-1884-00 .....\$250

#### DC BLOCKS

**N to N - DC Block 015-0509-00** is rated over the coaxial frequency range of 10 kHz to 21 GHz. Its electrical characteristics, rugged construction, and type "N" connectors make it the preferred solution for EMI/RFI and other applications requiring the blocking of 2790 front ends. Characteristics - Operating Frequency: 10 kHz to 21 GHz. Insertion Loss: 1.0 dB maximum. VSWR: 1.4:1 maximum, 10 kHz to 18 GHz; 1.6:1 maximum 18 to 21 GHz. Voltage Rating: 50 VDC maximum. Impedance: 50  $\Omega$  Connectors: Type "N" male and female.  
Order 015-0509-00 .....\$490

**BNC to BNC - Maximum DC potential 50 V.**  
Order 015-0221-00 .....\$160

#### GPIO CARDS

**PC-GPIO Card - IBM PC, AT, and Compatibles.**  
Order S3FG210 .....\$395

**AT-GPIO Card - IBM AT Bus (High-speed Card).**  
Order S3FG220 .....\$495

**MC-GPIO Card - IBM PS/2 with Microchannel Bus.**  
Order S3FG230 .....\$450

#### ADDITIONAL ACCESSORIES

**EMI Ancillary Devices -** See page 235.

#### Service Manuals -

**2797, Volume I.** Order 070-8638-00 .....\$95  
**2797, Volume II.** Order 070-8642-00 .....\$180  
**2795, Volume I.** Order 070-8637-00 .....\$95  
**2795, Volume II.** Order 070-8641-00 .....\$180  
**2794, Volume I.** Order 070-8636-00 .....\$95  
**2794, Volume II.** Order 070-8640-00 .....\$180  
**2792, Volume I.** Order 070-8635-00 .....\$95  
**2792, Volume II.** Order 070-8639-00 .....\$160

**Service Kit -** Order 006-3286-01 .....\$1,995

**Diplexer Assembly - For 2790 Series and WM780**  
Waveguide Mixers. Order 015-0385-00 .....\$385

**Diplexer Interconnecting Cable - Required for use**  
with Diplexer Assembly. 50  $\Omega$ , SMA-to-SMA.  
Order 012-0649-00 .....\$50

**Rack Adapter - 19 in.** Order 016-0844-01 .....\*

**Rear Panel Connector Cover -** Order 337-3274-00 .....\$6.50

**Soft Side Case -** Order 016-0659-00 .....\$190

**Transit Case -** Order 016-0658-00 .....\$1,180

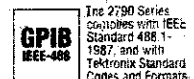
**TV Sideband Analyzer Adapter - 525/60 Markers.**  
Order 1405 .....\$7,175

**Tracking Generator - 100 Hz to 1800 MHz.**  
Order TR503 .....\$8,500

**Microwave Comb Generator - TM500 Series Compatible.**  
Order 067-0885-00 .....\$3,455

\*1 Contact your Tektronix representative for price information.

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Tektronix Measurement products are manufactured in ISO registered facilities.