



Artisan Technology Group is your source for quality new and certified-used/pre-owned equipment

- FAST SHIPPING AND DELIVERY
- TENS OF THOUSANDS OF IN-STOCK ITEMS
- EQUIPMENT DEMOS
- HUNDREDS OF MANUFACTURERS SUPPORTED
- LEASING/MONTHLY RENTALS
- ITAR CERTIFIED SECURE ASSET SOLUTIONS

SERVICE CENTER REPAIRS

Experienced engineers and technicians on staff at our full-service, in-house repair center

*InstraView*SM REMOTE INSPECTION

Remotely inspect equipment before purchasing with our interactive website at www.instraview.com ↗

WE BUY USED EQUIPMENT

Sell your excess, underutilized, and idle used equipment. We also offer credit for buy-backs and trade-ins. www.artisanng.com/WeBuyEquipment ↗

LOOKING FOR MORE INFORMATION?

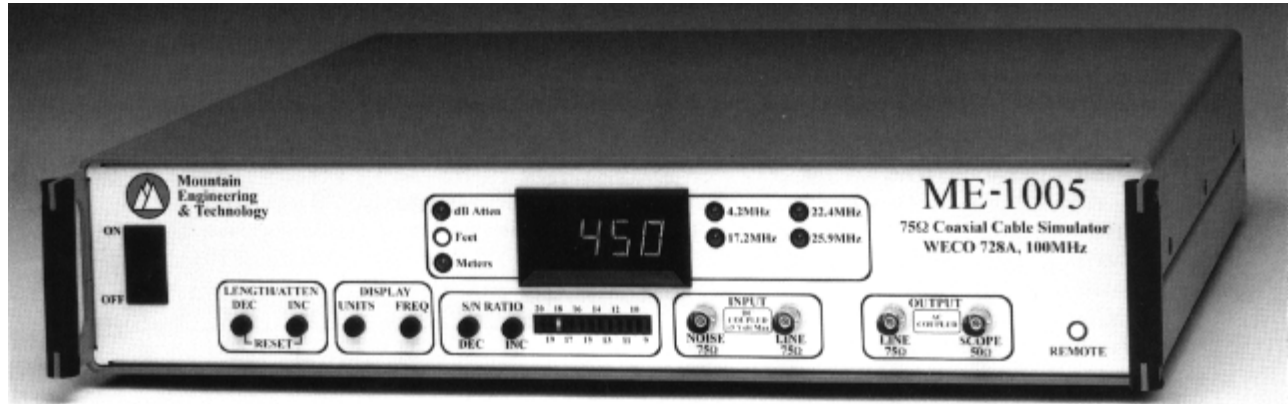
Visit us on the web at www.artisanng.com ↗ for more information on price quotations, drivers, technical specifications, manuals, and documentation

Contact us: (888) 88-SOURCE | sales@artisanng.com | www.artisanng.com



**Mountain
Engineering
& Technology**

ME-1005
75Ω Coaxial Cable Simulator
WECO 728A, 100MHz



Features

- Simulates 75W coaxial cable, WECO 728A (Belden 9231)
- Selectable cable lengths from 0ft to 1485ft (453m) in 45ft (13.7m) steps
- Noise mixer input provides variable S/N ratio simplifying interference margin testing to CCITT G.703 specifications
- Buffered 50W oscilloscope output (1/4 level) provides end-of-line view of data signal for easy pulse mask verification
- Accurate over a 3 decade frequency range, from 100kHz to 100MHz
- Convenient front panel controls and display, calibrated in Feet, Meters, and dB of Attenuation at 4 standard frequencies
- Remote control of all functions via standard RS-232 port

Compatibility

- US and European AMI-PCM codes:

Applications

- Design and evaluation of serial data receivers and repeaters
- Replaces almost 1500ft (453m) of 75W coaxial cable and multi-tap patch panels in laboratory experiments
- Allows automated testing of telecommunications, PBX, CATV, HDTV and LAN equipment

General Description

The ME-1005 is a highly accurate, programmable filter designed to simulate the attenuation versus frequency characteristics of the 75W coaxial cable, type WECO 728A (Belden 9231) specified by ANSI and CCITT for use in high speed communications networks in the US and around the world. This same cable is also found in office buildings and industrial complexes where it forms the backbone of PBX and LAN communication systems. By simulating almost 1500ft (453km) of coaxial cable in 45ft (13.7m) increments, the ME-1005 offers a convenient and practical method of developing and testing

- DS2 - 6.312 Mb/s
- DS3 - 44.736 Mb/s
- CCITT - 32.064 Mb/s
- CEPT - 8.448 Mb/s
- CEPT - 34.368 Mb/s

- SONET STS-1 - 51.840Mb/s
- Ethernet and other LAN protocols
- CATV and HDTV signals

communications equipment intended for use in these high speed networks.

Easy to use front panel controls set the ME-1005's simulated cable length displayed in Feet, Meters, or dB of Attenuation at 4 standard frequencies (in MHz): 4.2, 17.2, 22.4, and 25.9. A 75W noise mixer signal input allows interference margin testing with S/N ratios from 9dB to 20dB in accordance with CCITT G.703 while a buffered 50W oscilloscope output simplifies viewing of individual data pulses for easy mask verification. All ME-1005 functions can be computer controlled via a standard RS-232 serial port for automated test applications. Options include a rack-mount chassis and battery backup.

Operating Specifications

(Valid at all attenuation settings, test signal (f_o) = 22.4 MHz and $0^\circ\text{C} < T_{\text{ambient}} < 40^\circ\text{C}$ unless otherwise stated)

Input

Terminating Impedance
75W, $\pm 5\%$

Recommended Frequency Range 100kHz to
100MHz

Maximum Input Voltage, Absolute
Zero to Peak
..... $\pm 5\text{V}$

Maximum Input Voltage (<0.25dB Compression)
Zero to Peak
..... ± 3.75

Output

Sourcing Impedance (At 1MHz) 75W/50W,
 $\pm 5\%$

Maximum Rise/Fall Time At 0dB,
 $V_{\text{IN}} = 1V_{\text{PEAK-to-PEAK}}$ <
2nsec

Maximum Overshoot At 0dB,
 $V_{\text{IN}} = 1V_{\text{PEAK-to-PEAK}}$ <
5%

Short Circuit Tolerance
Continuous

Attenuation Characteristics

Attenuation range at f_o with display setting:

- $f_o = 4.2\text{MHz}$ 0dB to -7.9dB
- $f_o = 17.2\text{MHz}$ 0dB to -16.7dB
- $f_o = 22.4\text{MHz}$ 0dB to -19.4dB
- $f_o = 25.9\text{MHz}$ 0dB to -21.1dB

Frequency dependent attenuation simulates that of

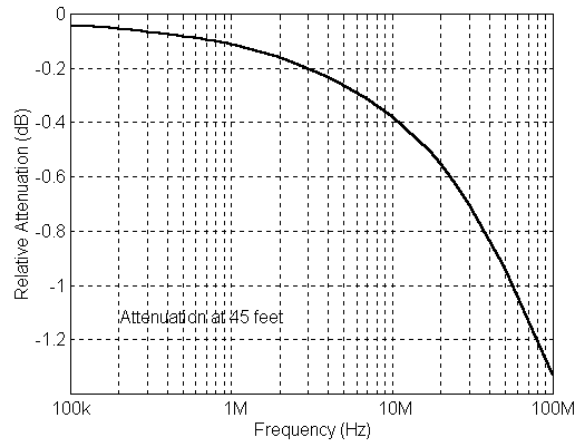
.

The attenuation at any frequency, $A(f)$, can be calculated as a function of the simulated cable length as follows:

$$A(f) = A_{45}(f) \times (\text{length}/45\text{ft})$$

75W coax cable (WECO 728A) at 20°C. The following table lists the cable attenuation (A_{45}) versus frequency at a length of 45ft.

Freq. (MHz)	.10	.20	.30	.50	.70	1.0	2.0
A_{45} (dB)	.040	.054	.065	.081	.095	.112	.162
Freq. (MHz)	3.0	4.5	5.0	7.0	10	17.2	20
A_{45} (dB)	.202	.240	.264	.314	.376	.505	.550
Freq. (MHz)	22.4	25.9	30	50	70	100	
A_{45} (dB)	.588	.640	.700	.936	1.13	1.33	

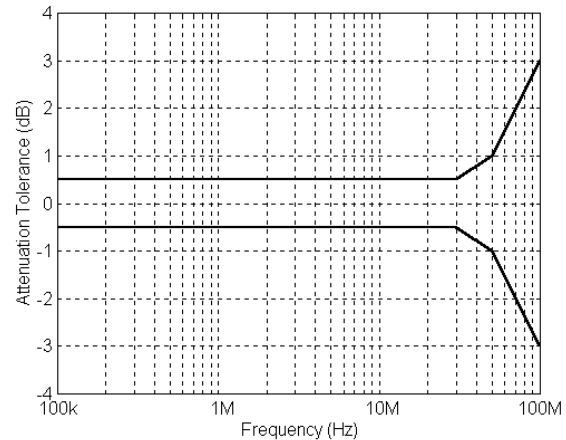


Attenuation Characteristics

Attenuation tolerance for both the LINE and NOISE inputs and LINE and SCOPE outputs at f_o display setting:

$f_o = 4.2\text{MHz}$	$\pm 0.25\text{dB}$
$f_o = 17.2\text{MHz}$	$\pm 0.25\text{dB}$
$f_o = 22.4\text{MHz}$	$\pm 0.25\text{dB}$
$f_o = 25.9\text{MHz}$	$\pm 0.25\text{dB}$

LINE input attenuation accuracy at any frequency is specified to a maximum of -20dB. NOISE input attenuation accuracy at any frequency is specified to a maximum of -40dB.



Attenuation tolerance at all other frequencies relative to f_o is given by the following graph:

General Specifications

Power input voltage:

Option A	103V to 132V
Option B	210V to 250V
Option J	90V to 110V

Power input frequency45Hz to 66Hz

Power consumption
14W

Dimensions (w x h x d in inches) 17 x 3.5 x 14

Weight

..... 14 lbs

Storage temperature -40°C to 85°C

Ordering Information

Transmission Line Simulator: ME-1005-A-1C

Options: A - 120V supply	_____
B - 240V supply	_____
J - 100V supply	_____
1 - Bench-top chassis	_____
2 - Rack-mount chassis	_____
C - Battery back-up	_____



Artisan Technology Group is your source for quality new and certified-used/pre-owned equipment

- FAST SHIPPING AND DELIVERY
- TENS OF THOUSANDS OF IN-STOCK ITEMS
- EQUIPMENT DEMOS
- HUNDREDS OF MANUFACTURERS SUPPORTED
- LEASING/MONTHLY RENTALS
- ITAR CERTIFIED SECURE ASSET SOLUTIONS

SERVICE CENTER REPAIRS

Experienced engineers and technicians on staff at our full-service, in-house repair center

*InstraView*SM REMOTE INSPECTION

Remotely inspect equipment before purchasing with our interactive website at www.instraview.com ↗

WE BUY USED EQUIPMENT

Sell your excess, underutilized, and idle used equipment. We also offer credit for buy-backs and trade-ins. www.artisanng.com/WeBuyEquipment ↗

LOOKING FOR MORE INFORMATION?

Visit us on the web at www.artisanng.com ↗ for more information on price quotations, drivers, technical specifications, manuals, and documentation

Contact us: (888) 88-SOURCE | sales@artisanng.com | www.artisanng.com