

RE4012

TEKTRONIX

11-inch graphic and alphanumeric terminal designed to withstand rugged environments.

Ruggedized Computer Display Terminal

The RE4012 Computer Display Terminal provides alphanumeric and graphics for less than the cost of many ruggedized terminals offering alphanumeric alone.

The RE4012's alphanumeric capability is highly sophisticated, permitting up to 2590 characters per display and 1024 x 1024 addressable points.

Its **high-resolution** 11-inch graphics display means that alphanumeric data can be instantly translated into easily understandable graphs, diagrams, plots, maps and renderings. Its refreshed moving symbols and zoom capability facilitate weather mapping, navigation, anti-sub tracking, monitoring of pressure lines or air flows and many other operations.

An optional feature, **Fast-Graph**, allows refreshed dynamic information to be displayed simultaneously with stored data on the display. Up to 300 vector elements (depending on length and interfacing method) or 40 characters can be displayed in this "write-through" mode with negligible "flicker."

Designed with the same quality that has made Tektronix a leading manufacturer of alphanumeric and



graphic terminals, the RE4012 is built rugged to withstand the rigors of your application environments.

The Ruggedized CRT in a non-stress mount ensures reliability and complete operator safety. Tests in conformance with **MIL-S-901C** demonstrate that the tube will not implode or explode.

General purpose asynchronous serial interfaces and parallel interfaces allow connection to a variety of data systems. It is fully compatible with the **TEKTRONIX 4631 Hard Copy Unit** and other commercially-available peripheral equipment.

The RE4012 has a complete 128-character ASCII keyboard, with character repeat enabled simply by holding a key down.

Integral thumb-wheel controls on the keyboard offer true convenience of graphic input, facilitate "menu-selection" and allow alteration of your data base.

Other front panel controls include fuse diagnostic light, variable brightness control for "**write-through**" mode, and control for hard copy scan brightness.

Portable at 80 pounds, the terminal is compact enough to slip through a 25-inch hatch opening.

Plug-in Maintenance

The RE4012 has its entire terminal logic contained on four cards for rapid serviceability and the entire CRT assembly unplugs and is replaceable as a single unit.

The back connector panel is a single large plate designed for ease of access.

PRODUCT DATA

OPERATIONAL CHARACTERISTICS:

Alphanumeric Mode:

Display Medium:
Direct View Storage CRT.

Display Size:
11-inch diagonal.
(approx. 7.9x6.0 inches).

Character Generator:
7x9 dot matrix (ROM).
Approx. 1,000 characters/sec.
Approx. 0.087x0.106 inch.
Full ASCII, 94 printing characters (upper and lower case).

Format:
74 characters per line.
35 lines per display.
2,590 characters per display.

Cursor:
Pulsating 7x9 dot matrix.

Alphanumeric Speed:
Approx. 10,000 WPM (Avg. 6 characters per word).

Graphic Display Mode:

Vector Drawing Time:
2.6 ms for standard terminal

With fast-graph option, variable depending on vector length.

Graphic Matrix:
1024X x 1024Y addressable points.
1024X x 780Y viewable points.

Graphics Input Mode:
Thumb-wheel controlled cross-hair cursor 4 through 1023X, 0 through 780Y.

Length error:
<1%.

Usable Storage Time:
Approx. 15 minutes in view status and 1 hour in hold status without permanent damage to the storage target.

Line Straightness:
0.5% deviation from mean.

Line Voltage Ranges:

110 V AC	220 V AC
Low	
110V ± 10%	220V ± 10%
Medium	
115V ± 10%	220V ± 10%
High	
120V ± 10%	230V ± 10%
	240V ± 10%

ENVIRONMENTAL CHARACTERISTICS:

Temperature:
Operating: -15° to +55°C
Non-operating: -55° to +75°C
As per Procedure 1, Method 501, 502, Mil-Std-810B

Humidity:
To 95%.
Procedure IV, Method 507, as per Mil-Std-810B.

Altitude:
Operating: To 15,000 feet.
Non-operating: To 50,000 feet.
As per Procedure IV, Method 506, Mil-Std-810B.

Vibration (non-operating):
5 to 25 Hz—.025 inch.
25 to 55 Hz—.020 inch.
18 minutes each axis.
10 minutes dwell at resonance.

Shock (non-operating):
to 30 g's ½ sine,
11 ms duration, 6 axis, 18 shocks minimum.
As per Procedure 1, Method 416.1, Mil-Std-810B.

Bench Handling:
4-inch drop—all edges.
As per Procedure V, Method 516.1, Mil-Std-810B.

Transportation:
Meets National Safe Transit Committee type of test when packaged as shipped by factory.

Personnel Safety:
Shock test, as per Mil-Std.-901C Grade B.

Fungus:
Certified non-nutrient materials.

Salt Atmosphere:
Materials and finishes.
As per Mil-Std-810B Procedure 1, Method 509.

Drip-Proof:
8-minute spray @ 4.33 gal/hr with nozzle.
3 ft. above surfaces.
Equipment rotated 15° from horizontal in 4 directions.

Dust Atmosphere:
Withstands normal dusty environments with proper filter maintenance.

EMI:
CE-01, CE-03, CS-01, CS-02, CS-06; RE-02 (limited to 1 GHz), (T) RE-04, RS-01, and RS-03 (limited to 1 GHz).

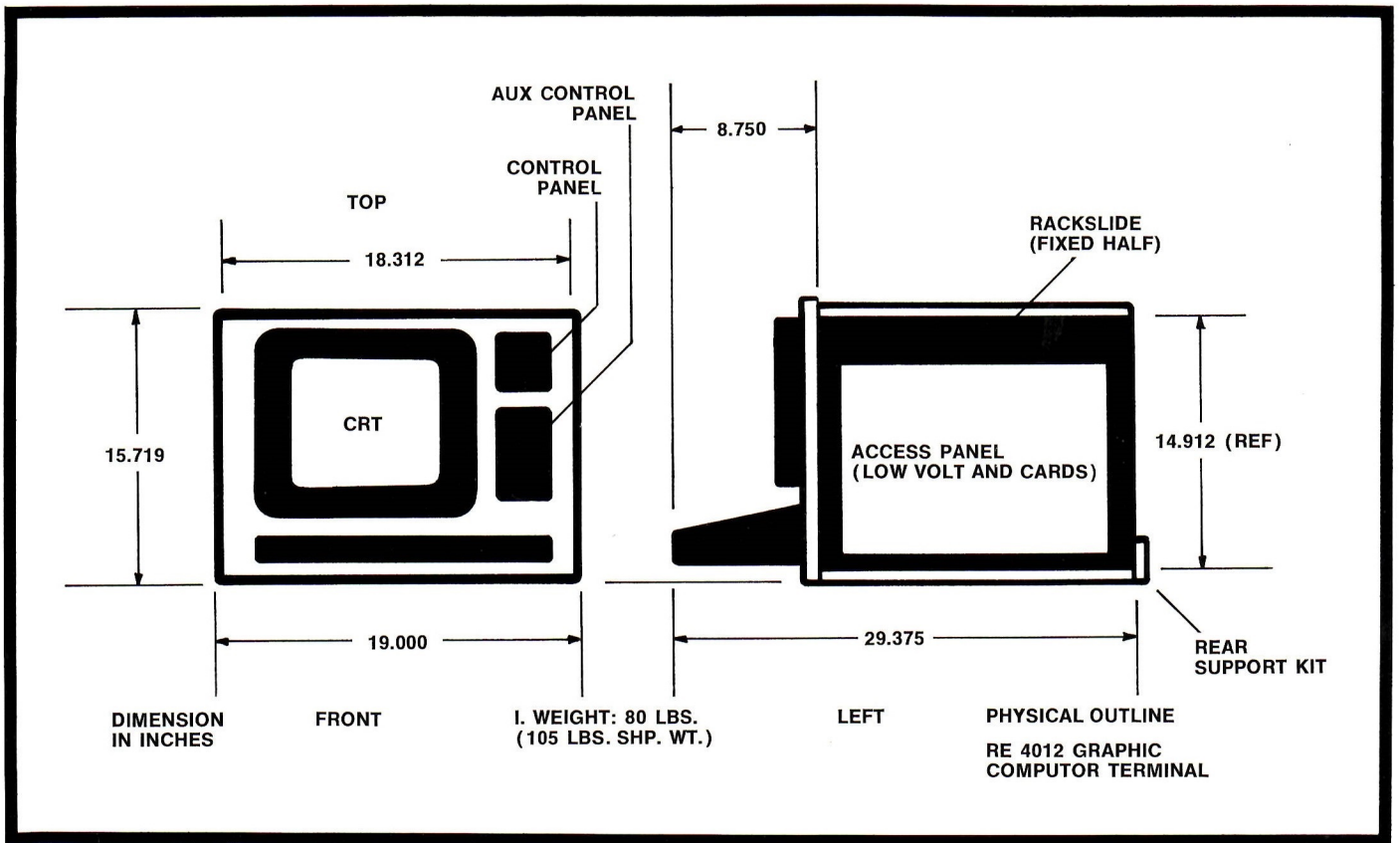
DC Magnetic Field:
20 Oersteds.

Reliability:
Level B, Mil-Std-781.

Weight:
Approx. 80 lbs. (36.4 kg) exclusive of rack tracks.

Shipping Weight:
Approx. 120 lbs. (54.5 kg).

Dimensions:
Height: (15.7 in) 40.00 cm.
Width: (19 in) 48.3 cm.
Length: (29.4) 74.6 cm.



Miscellaneous:

- Ceramic IC's.
- Metal Can Transistors.
- Coated Circuit Cards.
- Plug-in Circuit Cards with Discrete Connectors.
- Structurally Rugged.
- Special CRT Mounting.
- Board Retainers.
- Large Component Clamps.
- Cable Tie-Downs.
- Modular Functional Components.

Standard Accessories:

- General Purpose Asynchronous Serial Interface (installed).
- Rackmount Adapter Kit, rear support.
- Chassis Track (Pr).
- Manual.

Options:

- Parallel Interface (NTDS Fast).
- Fast Graph.
- Display Multiplexer.
- 400 Hz Operation.
- No keyboard (read only).
- Minibus Extender.

Optional Accessories:

Manuals:

- Parallel Interface (NTDS Fast).
- RE4012 Maint/Operator.
- Display Multiplexer.
- Fast Graph.
- General Purpose Asynchronous Serial Interface.

Maintenance Aids:

- 72-pin Card Extender.

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