Ramtek

The 6211 Colorgraphic Terminal. More for less.

A Price/Performance Breakthrough
More Colors. More Resolution. More Capabilities. All for Less Money.

A sophisticated color graphics terminal at an unsophisticated price. As the pioneer in raster scan color graphics, Ramtek is known for its state of the art display systems. Now we've packaged that experience into a low cost, value packed terminal—a true price/performance breakthrough.

The 6211 colorgraphic terminal gives you more. *More colors* to improve user data discrimination. *More resolution* (640 x 480/512 displayable pixels) and a high quality long persistence phosphor monitor that is easier on the eyes. More powerful graphing capabilities that help you do more work in less time. *More accessories* that add to terminal convenience and utility. *More service* and support to assure continuing user satisfaction. *And all for less money.*

The right terminal for creation and display of complex color graphics. Business graphics. Scientific data analysis. Control systems. Whatever your application, the 6211 Colorgraphic Terminal is the best buy in a low cost high quality color terminal.

See More.

More color. Display up to 16 colors *simultaneously.* That's twice the displayable colors available from most systems. This extra color discrimination gives you more color display power for highlighting, coding and other differentiating techniques. Use it to reveal more complex relationships, compact more data into a single graphic, convey more levels of significance.

Choose any 16 colors from a palette of 64, or use eight colors plus an alpha-
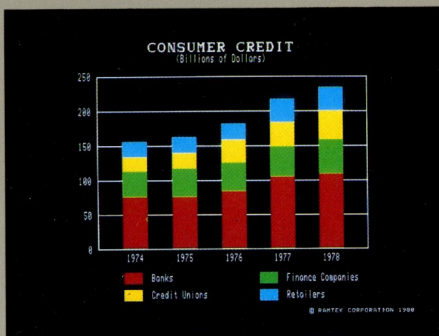

numeric overlay, or eight colors plus a blink function. And do it easily, because the 6211 carries four refresh memory planes that index a user programmable color table. You aren't restricted by fixed hardware.

A better picture. The 6211 high resolution (0.31 mm pitch) monitor provides a better picture. Its flicker-free CRT features long persistence phosphors and a precision in-line gun that eliminates the need for the adjustment of dynamic convergence. This is one terminal that users can view all day without eye fatigue.

Do More.

A complete system. The 6211 Colorgraphic Terminal includes a high resolution monitor and display electronics. Some competitors do not advertise complete system prices.
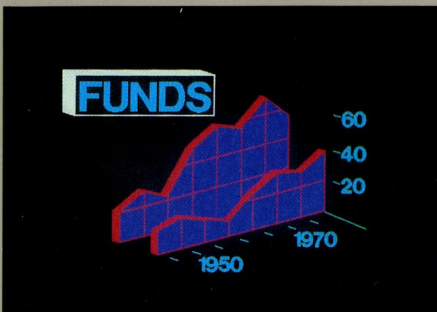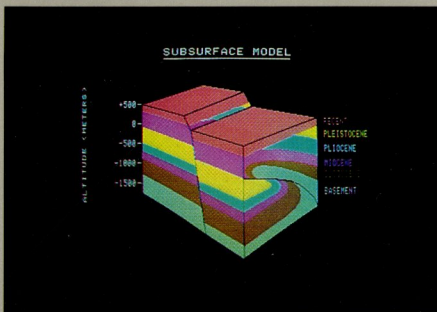
Host communications are provided via an EIA Standard RS-232C (teletype) interface. Full duplex and simplex modes are supported at rates from 110 to 9600 baud.

User friendly. The Ramtek 6211 contains an easy to learn Colorgraphic Programming Language (CGL) which has been designed specifically for color graphics programming. It gives you a powerful set of simple English language commands to create your own graphics (bar charts, text charts, block diagrams, line charts, point plots, circles, etc.).
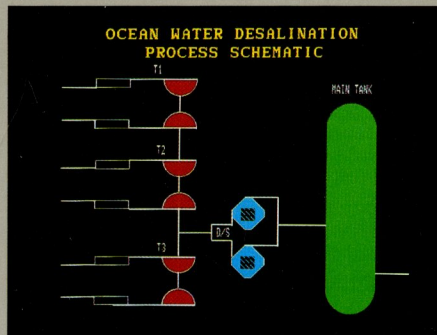
Flood complex objects such as polygons with color. It requires only a single command. Display pixel addressable alphanumerics with a 96 character ASCII set or create your programmable fonts.

Tektronix™ compatibility. For many existing graphic applications, color conversion is greatly simplified by the Tektronix 4010 compatibility option. Compatibility with this widely used terminal allows most existing application software to be retained without modification.

SUBSURFACE MODEL

FUNDS

Interactive aids. In addition to a keyboard with programmable function keys, you can add an optional digitizing tablet or light pen for easy graphics data entry or editing.

More memory. Optional RAM memory can be added to support user developed subroutines and fonts that can be created locally at the keyboard or downloaded from the host computer.

OCEAN WATER DESALINATION PROCESS SCHEMATIC

Share More.

More ways to display output. The 6211 broadens access to displayed information. In addition to viewing graphics on the terminal monitor, you can share this information by adding slave monitors or large screen projectors.

Your Colorgraphic Terminal is also a cost-effective workstation for production of hardcopy graphics. The 6211 supports a wide assortment of color hard copy devices. Printers for 8-color plain paper copy and camera systems for the production of 4 x 5 or 8 x 10 prints, color overhead transparencies or 35mm slides.

Gain more effective communication and distribution of information. Make more effective presentations. Maintain archival records.

What Departments in Your Organization could use a 6211 Colorgraphic Terminal?

General Manager
• Budgets • Departmental Performance • Portfolio Analysis • Operations Control Charts • P/L Forecasts

Finance Manager
• Financial Trends • Investment Planning ROI/ROA • Multi Regression Models • Econometric Modeling

Marketing Manager
• Market Share • Market Segmentation • Revenue/Profit Tracking • Product Life Cycle • Demographic Charts

Sales Manager
• Sales Trends • Forecasting • Demographic Performance • Competitive Analysis • Customer Presentation Slides

Engineering Manager
• Data Analysis • Simulation • Critical Path • Pert Charts • Design

Manufacturing Manager
• Inventory Control • Production Scheduling • New Facility Planning • Schematics/Block Diagrams • Distribution Maps • Process Control

The 6211 Colorgraphic Terminal. More for Less.

More Software. Each 6211 Colorgraphic Terminal is ready to use with a wide range of commercially available graphics software packages.

More support. As the world's largest independent manufacturer of raster scan graphics and imaging systems, Ramtek offers the worldwide service, spares and customer support network necessary to assure continuing customer satisfaction. The 6211 Colorgraphic Terminal is more than a good buy, it's a great investment.

More graphics products. In addition to the 6211 Colorgraphic Terminal, Ramtek offers a complete line of graphic and imaging display systems, stand-alone computer graphic systems, intelligent alphanumeric terminals, monitors (resolution to 1280 x 1024 and CRT image sizes to 25 inches, diagonal), color hardcopy devices, and accessories.

Ramtek Corporation
2211 Lawson Lane
Santa Clara, California 95050
Telephone: (408) 988-2211
TWX: 910-339-9379

Ramtek

Ramtek 6211

The Ramtek Model 6211 is a 640 x 480 or 512 resolution, low cost, interactive colorgraphic terminal. The desktop configuration is an efficient and compact solution for your graphics applications. Its special long persistence phosphor monitor provides a high resolution, flicker-free, full color display.

The user programs in Ramtek's Colorgraphic Programming Language (CGL) or uses Tektronix™ 4014 commands. CGL is a powerful set of user-oriented commands which lend simplicity to graphics programming.

Application oriented software packages are available from ISSCO® (DISSPLA®, TELL-A-GRAF®), PDA, Inc. (PATRAN™), SAS (SAS/GRAPH), Precision Visuals (DI-3000™ Charts and Graphs), and others.

The attractive desktop 6211 terminal contains the following standard features: four refresh memory planes under control of a user programmable color video look-up table, ROM based firmware to support graphics picture creation either in local mode via the keyboard or remote mode from a host computer, an RS-232C serial host port, and a long persistence color monitor.

User Memory

12K bytes of RAM memory are available for user subroutines. Subroutines may be created locally, at the keyboard, or downloaded from a host computer.

OPTIONS
Interactive Devices

A detachable keyboard plus a data tablet and light pen are supported. The digitizing tablet supports an 11'' x 11'' active work surface. The light pen is available for menu selection and cursor control.

Color Hardcopy

Color hardcopy support is available on the Ramtek 4100 Colorgraphic Printer. Color camera systems such as the Ramtek Series GM-300 are also supported by the basic terminal.

SPECIFICATIONS
Display Screen

CRT Size:	33 cm (13'') Diagonal
Visible Raster Size:	25.5 cm (10'') horizontal by 19 cm (7.5'') vertical.
CRT Type:	High resolution RGB color monitor.
Refresh Type:	25 Hz or 30 Hz Refresh (interlace) standard. 50 Hz or 60 Hz Refresh (non-interlace) optional.
Phosphors:	Red—special, long persistence composition. Green—P39 Blue—P22

Graphics

Origin:	(0,0) at lower left corner (first cartesian quadrant).
Addressability:	640 pixels horizontally by 480 or 512 vertically. (512 line operation requires repeat field operation).
Cursor Type:	Crosshair.
Vector Types:	Solid, Patterned (dash, dot, dash/dot), Radial.
Colors:	Up to 16 static or blinking colors from a palette of 64.
Text Fonts:	A standard 96 viewable ASCII character set, in an 8x10 character cell, is provided. In addition, the font definition for 128 characters can be down-loaded to characters which reside in 8x12 character cells. Height, width, and spacing between consecutive characters is selectable. Proportionally spaced text is also included as standard.

Alphanumerics Overlay

Origin:	(0,0) at upper left corner.
Addressability:	80 columns horizontally by 24 lines vertically.
Text Font:	96 displayable ASCII characters, 8x20 character cell.

Host Communications

Type:	Serial asynchronous, RS-232C/V24, simplex or full duplex.
Data Rates:	110, 134.5, 150, 300, 600, 1200, 2400, 4800, or 9600 baud.
Parity:	even, odd, or none.
Code:	7 or 8 data bits; 1, 1.5, or 2 stop bits.

PHYSICAL SPECIFICATIONS

	DISPLAY UNIT	KEYBOARDS	GRAPHIC TABLET	TABLET POWER SUPPLY	4100 PRINTER
HEIGHT	42 cm (17.2'')	10 cm (4.12'')	4 cm (1.5'')	6.5 cm (2.5'')	102 cm (40'')
WIDTH	53cm (20.88'')	53cm (20.88'')	40 cm (15.5'')	16 cm (6.1'')	90 cm (35'')
DEPTH	48 cm (20.00'')	28 cm (10.75'')	40 cm (15.5'')	13 cm (15.5'')	67 cm (26'')*
WEIGHT	23 kg (50.5 lb)	3 kg (7.5 lb)	3.3 kg (7.4 lb)	5.9 kg (15 lb)	75 kg (165 lb)
POWER CONSUMPTION	1100 watts	N/A	N/A	15 watts	880 watts

*99 cm (38.5'') with paper basket

Simplified Keyboard (option)

Keys:	58 Standard alphanumeric keys, 16 User definable function keys, 24 Terminal/ graphics control pad keys.
Interface:	Serial, 8 data bits. Comes with 3m (10') cable.
Data Rate:	1200 baud.

General Purpose Keyboard (option)

Keys:	61 Standard alphanumeric keys, 16 user definable function keys, 24 Terminal/ graphics control pad keys.
Status Indicators (LED's):	16.
Interface:	Serial, 8 data bits. Comes with 3m (10') cable.
Data Rate:	1200 baud.

Light Pen (option)

Entry Device:	Pen-type stylus (push tip actuation).
Interface:	Hardwired logic connection to internal timing circuitry. Front panel connector and light pen holder.
Power:	Supplied through display unit.

Graphics Tablet (option)

Active Work Surface:	28 cm x 28 cm (11''x11'').
Entry Device:	Pen-type stylus (push tip actuation) or optional 3X magnifying puck (button actuation).
Interface:	Serial asynchronous, RS-232C.
Data Rate:	1200 baud.
Power:	Supplied through separate power supply unit.

4100 Colorgraphic Printer (option)

Ribbons:	Cyan, magenta, yellow and black drop in cartridges.
Dot Size:	.33 mm (.0147'') square.
Resolution:	27 dots/cm (70 dots/inch).
Paper Width:	10.3 cm (4'') to 38.4 cm (15'') using the adjustable tractors.
Picture Size (640 x 512 resolution):	23.6 cm x 18.7 cm (9.2'' x 7.2'').
Picture Size (640 x 480 resolution):	23.6 cm x 17.7 cm (9.2'' x 6.9'').
Interface:	480 8-bit parallel Centronics™-type to 6211.
Speed:	Less than 3 minutes for full graphics copy (40 lines/minute in alphanumeric mode) using 8-bit interface.

Display Unit

Internal Processor:	Z80A based microprocessor operating at approximately 4 MHz.
Memory Planes:	4.
Video Output:	3 BNC connectors for color camera systems, daisychaining large screen projection devices, or additional monitors. Composite video (RGB) voltage compatible with industry RS-170 or RS-343A levels.

All System Components

Free Space Ambient Temperature:	Non-operating: -20 to 50 C (-4 to 122 F) Operating: 0 to 40 C (32 to 104 F)
Relative Humidity:	20%-80% (non-condensing)
Voltages:	115/230 ± 10% vac.
Frequency:	47-66 Hz

Product Support

Warranty:	90 days, parts and factory labor.
Installation:	Installation can be performed by the owner/user. The reference manual supplied with the unit provides detailed instructions. Installation assistance is available from Ramtek upon request at prevailing maintenance rates.
Maintenance:	On-site maintenance agreements are available.

*Specifications subject to change without notice.

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Our Experience Shows
2211 Lawson Lane
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