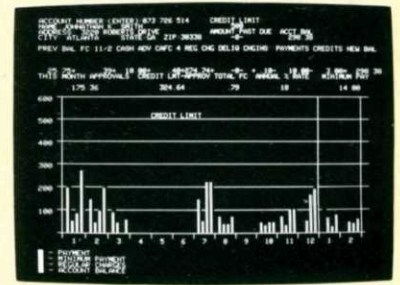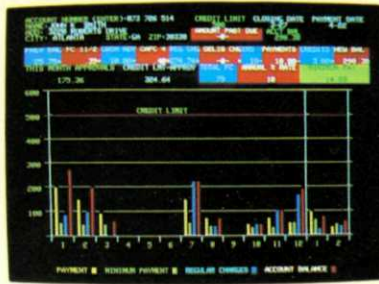# 3600

INTECOLOR®
3600 Series Terminal
and Desktop Computer
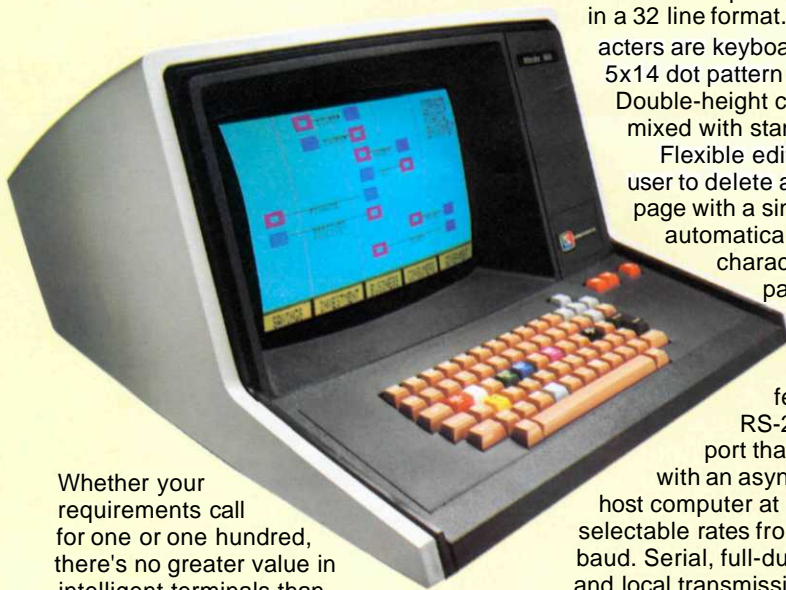
Intelligent Systems

The Color Advantage

Color conveys information faster and more effectively than monochrome displays.

The Most Cost-Effective Color Graphics Terminal on the Market

The Intecolor 3601

Whether your requirements call for one or one hundred, there's no greater value in intelligent terminals than Intecolor's 3601. Why? Because the 3601 is priced to be competitive with black-and-white display terminals, yet it offers the enhanced display capabilities of ISC color graphics.
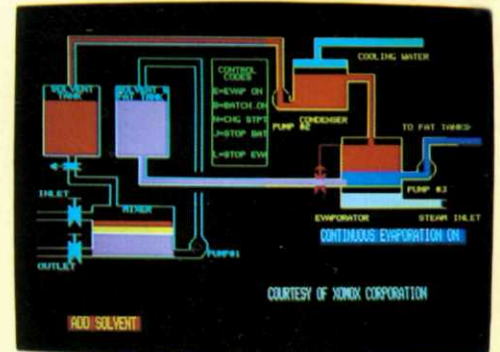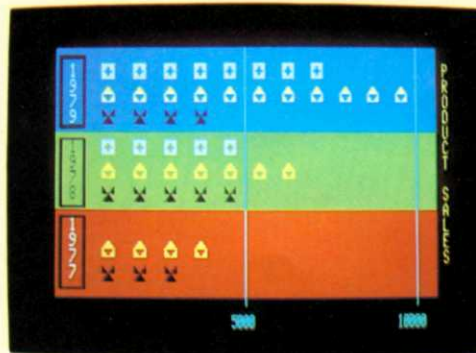
The 13" diagonal display screen plots graphics on a 128 x 128 grid. Firmware is provided for vectors, bar graphs and point plots. Memory consists of 4K ROM and 4K RAM for refresh.

Sixty-four standard ASCII alphanumeric characters are formed using a 5x7 dot pattern on a 6x8 matrix. Up to 64 characters-per-line can be displayed in a 32 line format. Double-height characters are keyboard selectable using a 5x14 dot pattern on a 6x16 matrix. Double-height characters can be intermixed with standard characters.

Flexible editing controls allow the user to delete a single line or an entire page with a single keystroke. Tabs are automatically set every eight character spaces. And a page roll mode is provided for user convenience.

The Intecolor 3601 features a standard RS-232C compatible I/O port that allows interfacing with an asynchronous modem or host computer at seven key board selectable rates from 110 to 9600 baud. Serial, full-duplex, half-duplex and local transmission are all selectable via the keyboard or RS-232C port.

The 3601 incorporates a standard ASCII 4-level coded keyboard with 192 codes and cursor. The keyboard is built-in and features 2-key rollover for fast data input.

ISC Characters

Since its inception, Intelligent Systems Corp. has been a leader in low-cost color graphics. The 3600 series continues that tradition with prices that make black-and-white obsolete. And the 3601 series offers the power and flexibility only ISC color graphics can provide.

Color improves the flow of information and reduces response time because color can be used to code similar data and emphasize the unique. Eight foreground and background colors can

be used in any combination, so even complex diagrams can be displayed with ease. And for added emphasis, important data can be programmed to blink.

Color graphics can present information symbolically, making the display screen easier and faster to understand. Numerous and often confusing figures can be converted into a wide variety of color charts, curves and bar graphs, for a fast, visual analysis of data.

The 3600 series comes in com-

pletely self-contained, contemporary styled enclosures. Compact and attractive, they're ideally suited for any office setting, from the receptionist's area to the executive offices.

The 3600 series was designed by ISC, the largest supplier of color graphics terminals in the world. If you're still thinking in black-and-white, the Intecolor 3600 series is the most economical way to discover what thousands of DP users already know:

Color Communicates Better

Now, An Affordable Self-Contained Desktop Computer with Color Graphics

The Intecolor 3621

An optional, separate disk drive can be added for applications requiring more '"on line" storage.

The 3621 includes 32K of RAM for user workspace, 16K ROM and 4K RAM for refresh. A BASIC interpreter and a FORTRAN compiler allow the user to choose between two powerful languages.

Extended Disk BASIC presents the user with an easy-to-use approach in solving complex problems. It provides 27 statement types, 5 command types, 18 mathematical functio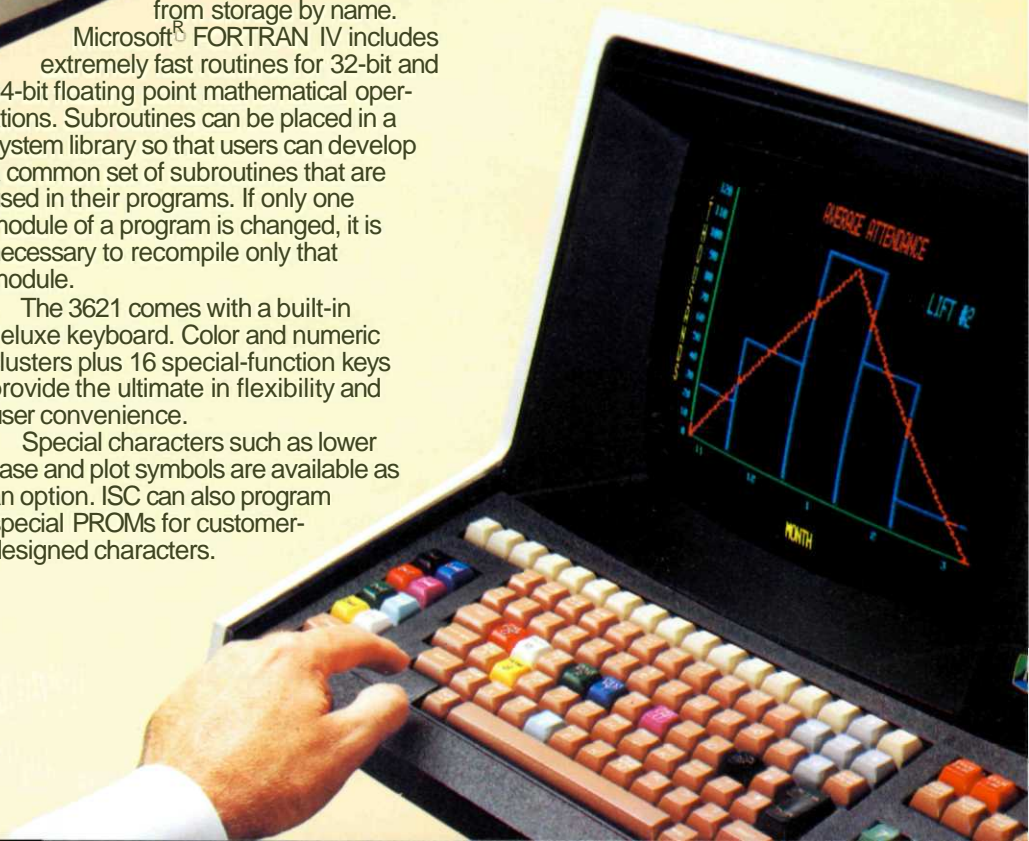ns, 9 string functions and 13 File Control System (FCS) disk commands. The file handling capability lets the user create, delete and retrieve program segments from storage by name.

Microsoft[R] FORTRAN IV includes extremely fast routines for 32-bit and 64-bit floating point mathematical operations. Subroutines can be placed in a system library so that users can develop a common set of subroutines that are used in their programs. If only one module of a program is changed, it is necessary to recompile only that module.

The 3621 comes with a built-in deluxe keyboard. Color and numeric clusters plus 16 special-function keys provide the ultimate in flexibility and user convenience.

Special characters such as lower case and plot symbols are available as an option. ISC can also program special PROMs for customer-designed characters.

ISC brings you the advantage of color graphics in a sleek, self-contained computer. Everything, including the mini-disk drive, is built-in. The mini-disk drive can provide up-to-date data on inventories, scheduling, personnel and other management information. The Intecolor 3621 is ideal for distributed processing—key employees and departments can use the 3621 as a stand-alone computer and avoid expensive and often unwarranted time-sharing costs.

The 3621 incorporates the same display, character format and editing features as the 3601 terminal. It also utilizes the same interface, allowing the 3621 to be used as a stand-alone computer or an intelligent terminal in conjunction with another system.

The built-in Siemens micro-disk drive provides an access time of 200 ms, based on an average of 20 tracks. Specially formatted 5$^1/_4$". Sof-Disks store 51.2K bytes per side, with both sides usable.

3600 Series Specifications

3601 Terminal and 3621 Desktop Computer

Screen Size: 13" diagonal/90 sq. in screen area/4x3 aspect ratio

Display Area: 60.75 sq. in./6³/₄"Hx9"W

Cursor: White blinking overscore/underscore, non-destructive

Colors: Eight foreground and eight background colors: Black, Red, Green, Blue, Yellow, Magenta, Cyan and White.

Editing: Tab; Erase Page; Erase Line; Blink; Color Selection; Cursor Up, Down, Left, Right and Home; Cursor XY Positioning; Transmit; Page Roll Mode.

Communication Modes: RS-232C Serial, full duplex/half-duplex/local, keyboard selectable.

Data Transfer: 7 rates from 110 to 9600 baud, 1 or 2 stop bits, all keyboard selectable. No parity.

CPU: 8080A CPU, 2 microsecond cycle.

Memory: 4K RAM for refresh

Graphics: Plotting on a 128Hx128V grid area. Software for vector, bar graphs and point plot.

Power: 105-125 Volts, 60Hz, 250 Watts.

Temperature: +10°C to 40°C operating.
-30°C to 70°C storage.

Humidity: 0-95% non-condensing.

Package Size:
(Less Peripherals) 13³/₄"Hx19³/₄"Wx26⁵/₈"D

Refresh Rate: 60 times/second, synchronized to line frequency.

Weight: 50.5 lbs. Max.

Additional Specifications

3601 Terminal

Memory: 4K ROM
4K RAM for refresh

Keyboard: Standard ASCII 4-level coded with 192 codes and cursor

3621 Desktop Computer

Memory: 16K ROM
4K RAM for refresh
32 K RAM for user workspace

Keyboard: Standard ASCII 4-level coded with 192 codes and cursor, color and numeric clusters, 16 special-function keys

Languages: Extended Disk BASIC Interpreter in 8K ROM memory includes: 27 statement types, 5 command types, 18 mathematical functions, 9 string functions, 13 File Control System (FCS) Disk commands. FORTRAN Compiler includes: ANSI standard FORTRAN IV with double precision less complex variables, relocating linking loader and FORTRAN IV run time library. Microsoft"
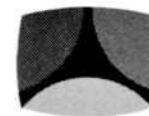
Micro-Disk Drive:
Tracks: 40
Track Density: 48 tpi
Rotational Speed: 300 rpm
Power on Delay: 1 second
Access Time: 200 ms (av. 20 tracks)
Average Latency: 100 ms
Transfer Rate: 76.8 kilobits/sec.
Performance Specs

(Capacity Formatted): 51.2K bytes/side. Both sides usable by flipping Sof-Disk™ over

ADVANCED MODELS 3650 (13" CRT) AND 9650 (19" CRT)

Intelligent Systems is pleased to announce the advanced 3650/9650 series of desktop computers which deliver an even higher quality picture, increased standards of reliability and easier maintenance. In addition, the 3650/9650 series provide single built-in mini-disk drive with 92K bytes of storage, instead of the former 51.2K byte micro disk drive.

		3601 TERMINAL	3651 COMPUTER	3652 COMPUTER	3653 COMPUTER	3654 COMPUTER
Display	All units in the 3600 series have a standard 13" CRT.	•	•	•	•	•
Format	64 characters/line x 32 lines.	•	•	•	•	•
Character	64 standard ASCII characters 5 X 7 dot pattern in 6 X 8 matrix plus special graphic characters and general purpose characters which allow larger characters to be made using line segments.	•	•	•	•	•
Cursor	White blinking underscore (non-destructive).	•	•	•	•	•
Colors	8 foreground and 8 background: black, red, green, blue, yellow, magenta, cyan, white.	•	•	•	•	•
Editing	Tab. Erase page. Erase line. Blink. Color selection. Cursor up, down, left, right and home. Cursor XY positioning. Transmit. Page roll mode.	•	•	•	•	•
Graphics	Plotting on a 128H X 128V grid area. Software for vector, bar graphics and point plot.	•	•	•	•	•
Keyboard	Standard ASCII 4 level coded with 192 codes and cursor.	•	•	•	•	•
Communication Mode	RS-232C Serial, full-duplex/half-duplex/local. (All are keyboard selectable.)	•	•	•	•	•
Data Transfer	8 bit plus start and stop bits. No parity; 7 rates from 110 to 9600 Baud, 1 or 2 Stop bits. (All are keyboard selectable.)	•	•	•	•	•
CPU	8080A central processing unit, 2 microsecond cycle	•	•	•	•	•
Memory	4K ROM, 128 bytes RAM scratchpad, 4K refresh	•				
	16K ROM, 4K refresh		•	•	•	•
	16K bytes RAM for user workspace, 4K Disk Buffer.		•	•	•	•
Language	Extended DISK BASIC 8001 Interpreter in 8K ROM memory includes: 27 statement types, 5 command types, 18 mathematical functions, 9 string functions and 13 file control system (FCS) DISK commands.		•	•	•	•
Storage	Single built-in Mini-Disk drive, with 92K bytes of storage.		•			
	Dual external Mini-Disk drives, with 184K bytes of storage.			•		
	Dual external 8" Floppy Disk drives, with 591K bytes of storage.				•	
	Dual external 8" *Double Headed* Floppy Disk drives with 1182K bytes of storage.					•
3651T Trend-Spotter™ Computer	Same as 3651 except includes Trend-Spotter software, 117-key keyboard including Trend-Spotter command and numeric clusters, 32K user RAM.					

(continued)

Additional Specifications

Disk Drive	5" Mini	8" Floppy
Size	Single $3^3/_4$"H X 6"W X $12^1/_2$"D Dual $3^3/_4$"H X $11^3/_4$"W X $12^1/_2$"D	Dual $5^1/_2$"H X 21"W X $23^1/_2$"D
Weight	Single 8 lbs. Dual 16 lbs.	Dual 48 lbs.
Tracks	40 Single/40 Double	77
Track Density	48 tpi	48 tpi
Rotational Speed	300 rpm	360 rpm
Power On Delay	1 second	N/A

Access Time	Single-340ms
	  (Average 40 tracks)
	Double-298ms
	  (Average 40 tracks)
		208ms
		  (Average 77 tracks)

Average Latency	100ms	83ms
Transfer Rate	125 kilobits/sec	250 kilobits/sec
AC Power Requirements	120VAC 5A maximum	100/115VAC; 60Hz

Performance Specs (Capacity Formatted)	Per Disk (Single Head):
	  92.16K bytes/Drive
	Per Disk (Double Head):
	  184.3K bytes/Drive
	Per Track (Single Head):
	  2.034K bytes
	Per Track (Double Head):
	  4.608K bytes
		Per Disk (800 Single Head):
		  295K bytes/Drive
		Per Disk (850 Double Head):
		  591K bytes/Drive
		Per Track (800 Single Head):
		  3.84K bytes
		Per Track (850 Double Head):
		  7.68K bytes

NOTE: The 3650/9650 Series will support up to three Mini-drives and four 8" drives simultaneously.

9650 Series

The Intecolor 9650 Series is available, with a 19" screen, in the same configurations as the 3650 Series. The 9650 systems are as follows:

9651:	Single external mini-disk drive, with 92K bytes of storage and 19" screen.
9652:	Dual mini-disk drives, with 184K bytes of storage and 19" screen.
9653:	Dual 8" floppy disk drives, with 591K bytes of storage and 19" screen.
9654:	Dual 8" double-headed floppy disk drives with 1182K bytes of storage and 19" screen.
9651T:	Same as 9651 except includes Trend-Spotter software, 117-key keyboard including Trend-Spotter command and numeric clusters, 32K user RAM.