

# MultiSync® Flat Professional Series Monitors



Reduced distortion for superior precision

Minimized glare for outstanding image quality

Perfectly suited for sophisticated, high-end applications

**Introducing MultiSync FP Series monitors from NEC Technologies: The new standard for precision.**

Our new MultiSync FP Series monitors are as uncompromising as the design professionals they were made for. The perfectly flat viewable image virtually eliminates distortion and glare. So the level of razor-sharp detail is simply unprecedented. Our patented digital signal processor lets the user fine-tune convergence in any one section without disturbing the rest of the screen. Plus, the USB communication channel offers image adjustments via an easy-to-use software interface, that can be individually saved and recalled. The result is the most precise, accurate image available. Which means the user will never again have to compromise their standards to suit their monitor's.



# MultiSync® FP Series monitors deliver a flat screen surface for superior precision and true-to-life images.

**Sophisticated graphics users benefit from the perfectly flat screen surface of MultiSync FP Series monitors.** The advanced new design of the flat aperture grille CRT combined with NEC Technologies patented digital signal processing (DSP) technology provides unparalleled image quality with greater accuracy, reduced glare and less geometric distortion.

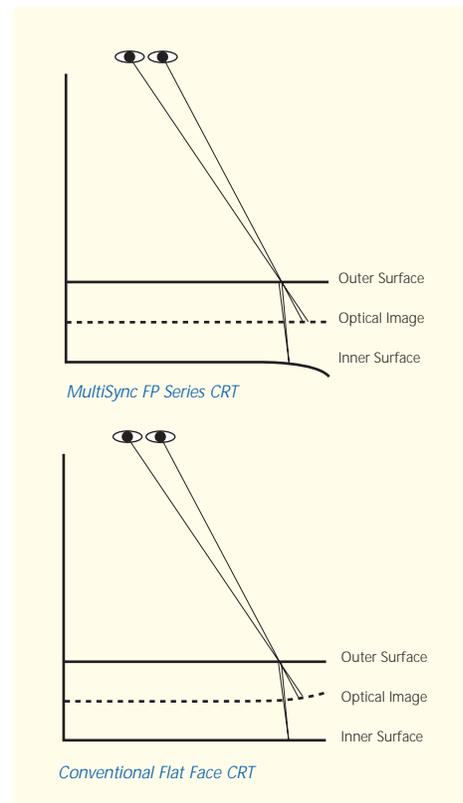
MultiSync FP Series monitors are ideal for users whose work demands high-end performance, including applications such as CAD/CAM, graphic design, desktop publishing, animation, document imaging, pre-press, medical imaging and web design.

Two large-screen models meet the needs of professional users:

- *The 19-inch MultiSync FP950™ monitor (18-inch viewable image size)*
- *The 22-inch MultiSync FP1350™ monitor (20-inch viewable image size)*

**Flat CRT reduces distortion and glare for superior image quality.** With their patented new design, MultiSync FP Series monitors offer many advantages over conventional flat square and traditional aperture grille CRTs, including:

*Reduced geometric distortion*—With many traditional CRT monitors, what you see is not necessarily what you get. The curvature of the screen can



*Incorporating a precisely calculated curvature, the inner surface of the MultiSync FP Series revolutionary CRT takes into account the working of the human eye and delivers a virtually flat optical image.*

cause what should be straight lines to appear slightly curved at the corners. The virtually flat design of MultiSync FP Series monitors minimizes this distortion, ensuring the image on the screen matches the user's precise expectations.

The monitors' crisp, clear graphics are further enhanced by the fine variable grille pitch of .25mm – .27mm for impeccable, true-to-life images with reduced moiré patterns.

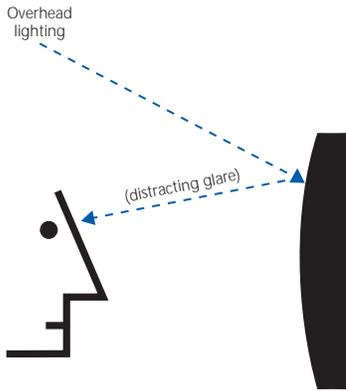
*Minimized glare*—Glare caused by ambient lighting can have a detrimental effect on image quality and can be extremely distracting for users who spend hours in front of their monitors. The flat screens of MultiSync FP Series monitors divert irritating reflections away from the user's vision. Add NEC Technologies OptiClear® screen surface and super-high resolutions and refresh rates for flicker-free images, and you have a monitor that allows the user to focus on what's really important: their design.

*Outstanding color purity, clarity and brightness*—NEC Technologies flat aperture grille CRT, coupled with the exclusive AccuColor® control system, offers outstanding color purity and clarity. AccuColor lets you individually adjust the monitor's red, green and blue color guns in precise digital steps—256 each for red, green and blue. It also allows the user to change the on-screen colors to closely match a variety of standards such as Pantone® and

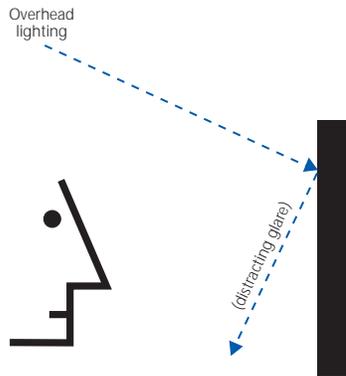


MultiSync FP950

MultiSync FP1350



Spherical face panel



Flat face panel of the MultiSync FP Series

MultiSync FP Series monitors' flat aperture grille CRT diverts irritating reflections caused by ambient light away from the user's vision.

TruMatch®, printer output, another monitor or a personal preference. The AccuColor system includes five industry standard settings and five customizable settings. Customized settings can be saved and recalled when needed. In addition, the monitors' accurate color and precisely calibrated displays save time for design and pre-press professionals, allowing the "soft-proofing" of files before going to print.

The flat aperture grille CRT of MultiSync FP Series monitors also produces excellent brightness and contrast as well as good color uniformity throughout the screen.

**Comprehensive on-screen controls put image management at your fingertips.** MultiSync FP Series monitors feature NEC Technologies fourth-generation OSM™ on-screen controls, the most precise monitor adjustments available. A touch of the up-front controls activates the OSM, giving the user access to a comprehensive set of adjustments and an expanded display mode plus monitor information such as vertical refresh rate, model number and serial number. Controls include:

**Patented digital signal processing (DSP) control system provides for excellent image quality, easy setup and precise control.** MultiSync FP Series monitors virtually eliminate image distortion and misconvergence thanks to NEC Technologies patented DSP technology, which allows for one of the lowest image distortion specifications in the industry. DSP enables extremely precise adjustments on the manufacturing line and expanded control by the end user. The DSP system enhances monitor image quality by allowing for fine-tune adjustments of the CRT's electron beam from the center to the perimeter, pro-

ducing a consistently sharp, focused image across the entire CRT surface. In addition, DSP enables manipulation of the CRT's three electron gun beams (red, green and blue) during manufacturing, resulting in the best possible edge-to-edge convergence.

The DSP system also eliminates the need to adjust horizontal and vertical size and position controls separately during setup. Simply select the AutoSize control in the OSM™ on-screen controls and the image size and position adjustments are automatically maximized for the signal supplied from your PC.

*Size and position*, including a new AutoSize feature making setup and adjustments faster and easier

*Screen geometry* enables the image uniformity and accuracy sophisticated users want and need. Screen geometry controls include: barreling, pin-cushion, trapezoidal and rotation adjustments

*Brightness and contrast*

*AccuColor*

*Basic convergence* enables you to align the red, green and blue guns vertically and horizontally to eliminate image misconvergence. Area convergence, thanks to DSP, allows for convergence adjustments at the top and bottom sections of the screen

*Linearity* adjusts the spacing of an area on the screen

*Advanced corner correction* allows for isolated top and bottom balance adjustments

*GlobalSync®* automatically creates a stable environment for the monitor by counteracting the effects of the earth's magnetic field on screen geometry and color purity

*Moiré Canceler* eliminates undesired moiré patterns

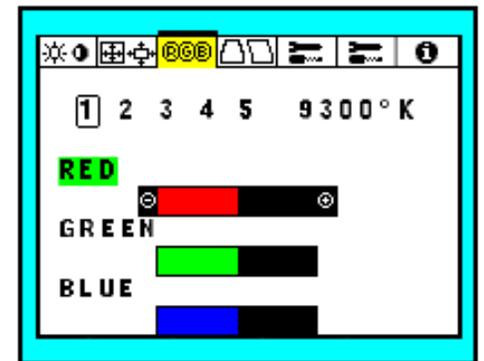
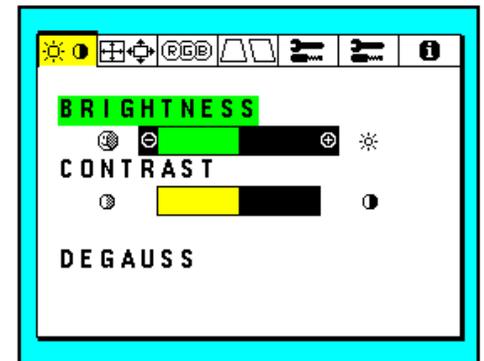
*Fitness tips* appear periodically to remind you to take a break and rest your eyes

All control menus are simple to scroll through and feature easy-to-understand, "plain-language" commands.

**USB communication channel allows a wide variety of display adjustments.** MultiSync FP Series monitors also feature a USB communication channel and input that allows Windows® 98 users to access a diverse array of adjustments, previously only accessible through the OSM, via an easy-to-use software interface. Interactive monitor controls

appear on the display and can be manipulated through the mouse or keyboard, just like other control applications. Settings can be saved to a file and recalled for future use, a helpful feature in multi-user environments.

**Shorter cabinet design frees up more desktop space.** MultiSync FP Series monitors take advantage of a shorter cabinet design, giving users more screen size as well as more desktop space. The 19" MultiSync FP950 monitor features a similar footprint to that of conventional 17-inch monitors



Adjustments to on-screen color, screen geometry, contrast and brightness are among the controls at your fingertips with NEC Technologies easy-to-use OSM on-screen controls.



*MultiSync FP Series monitors' shorter depth cabinet design allows users to have a larger viewable screen without sacrificing valuable desktop space.*

and the 22" MultiSync FP1350 monitor has a footprint smaller than most traditional 21" monitors.

**Microsoft® Plug and Play compatibility means easy setup and improved performance.** To minimize setup and installation time with Windows® 95/98, MultiSync FP Series monitors feature Plug and Play compatibility codeveloped by NEC Technologies and Microsoft® for monitors. Plug and Play compatibility enables the monitor to send its capabilities—such as screen size, refresh rates and resolutions supported—directly to your computer system. Display performance is automatically optimized by providing the best match between the capabilities of your monitor and your computer.

**Outstanding compatibility includes the latest resolution standards.** MultiSync FP Series monitors are compatible with PC and Macintosh computers. The monitors support higher resolutions, up to 1920 × 1440 non-interlaced, allowing you to view more detailed information comfortably. In addition, they support super-high refresh rates, up to 160Hz, for solid, flicker-free images—creating more comfortable viewing conditions for users who spend hours at their monitors each day.

MultiSync FP Series monitors also offer dual inputs, allowing you to connect your monitor to one system via a BNC cable and another system via a standard D-Sub cable. You can easily switch between computers with the simple touch of a button on the monitor's up-front control panel.

**ErgoDesign® enhancements increase comfort, productivity and ease of use.**

MultiSync FP Series monitors are designed according to NEC Technologies ErgoDesign philosophy. ErgoDesign enhancements adapt technology to the way the user works, resulting in increased comfort and ease of use. The ErgoDesign elements on MultiSync FP Series monitors include:

*Digital OSM on-screen controls* for quick and easy adjustments

*Removable tilt/swivel base* that easily adjusts to each user's preferred angle of vision

*Reduced Magnetic Field™* technology that meets strict Swedish MPRII guidelines for lower ELF and VLF emissions

*TCO 99 approved* to meet stringent environmental specifications

**NEC Technologies quality and reliability offer peace of mind.** Every MultiSync monitor is backed by the responsive service and support of NEC Technologies. All MultiSync FP Series monitors are covered by a comprehensive three-year limited warranty with guaranteed exchange service, as well as toll-free technical support. In addition, specialty service plans are available for qualified corporate accounts.

## The New MultiSync IntelliBase™ Series



Fast and easy USB device connections, dynamic audio output, true Plug and Play compatibility—whatever the need, NEC Technologies IntelliBase Series delivers intelligent solutions.

The new MultiSync IntelliBase Series, co-developed by Altec Lansing®, features three adjustable tilt/swivel bases that replace MultiSync FP Series monitor bases.\*

**IntelliBase USB Hub** boasts one upstream and four self-powered downstream USB ports for quick, simple and convenient device connections.

**IntelliBase Audio** delivers powerful sound with its full-range speaker system with subwoofer.

**IntelliBase USB Hub & Audio** includes all the features of IntelliBase USB Hub and



*IntelliBase Audio, plus True Digital Audio™, on-screen sound adjustment and digital microphone connection and support capabilities.*



*The MultiSync IntelliBase Series and MultiSync FP Series monitors are sold separately.*



For more detailed information or the dealer nearest you, call 1-800-NEC-INFO or visit [www.nectech.com](http://www.nectech.com).

\* The MultiSync IntelliBase Series is compatible with the following NEC Technologies MultiSync brand monitors only: MultiSync XV15, XV15+, XV17, XV17+, MultiSync 50 and 70, XE Series, XP Series, A Series, M Series, E Series, P and FP Series CRT monitors. USB versions require PC running Windows 98.

**Picture Tube:**

FP950:	19" (18.0" viewable image size) flat aperture grille CRT, 1210mm radius, 90 degree deflection, 0.25-0.27mm variable grille pitch, medium-short persistence phosphor, anti-static coating, dark-tint screen, OptiClear screen surface
FP1350:	22" (20.0" viewable image size) flat aperture grille CRT, 1850mm radius, 90 degree deflection, 0.25-0.27mm variable grille pitch, medium-short persistence phosphor, multi-layered, anti-static coating, dark-tint screen, OptiClear screen surface

**PC and Macintosh Compatibility:**\* (Some systems may not support all modes listed)

FP950:	640 x 480 @ 60 to 160Hz 800 x 600 @ 55 to 160Hz 832 x 624 @ 55 to 160Hz 1024 x 768 @ 55 to 136Hz 1152 x 870 @ 55 to 120Hz 1280 x 1024 @ 55 to 102Hz** 1600 x 1200 @ 55 to 88Hz 1792 x 1344 @ 55 to 78Hz 1800 x 1440 @ 55 to 73Hz 1856 x 1392 @ 55 to 75Hz 1920 x 1440 @ 55 to 73Hz
FP1350:	640 x 480 @ 60 to 160Hz 800 x 600 @ 55 to 160Hz 832 x 624 @ 55 to 160Hz 1024 x 768 @ 55 to 143Hz 1152 x 870 @ 55 to 125Hz 1280 x 1024 @ 55 to 107Hz 1600 x 1200 @ 55 to 92Hz** 1792 x 1344 @ 55 to 81Hz 1800 x 1440 @ 55 to 76Hz 1856 x 1392 @ 55 to 78Hz 1920 x 1440 @ 55 to 76Hz

**Synchronization Range:**

FP950:	Horizontal: 31kHz to 110kHz (automatically) Vertical: 55Hz to 160Hz (automatically)
FP1350:	Horizontal: 31kHz to 115kHz (automatically) Vertical: 55Hz to 160Hz (automatically)

**Maximum Video Input:**

FP950:	270MHz
FP1350:	280MHz

**Active Display Area:** (Factory Setting, dependent upon signal timing used)

FP950:	Horizontal: 14.0", 350mm, Vertical: 10.5", 267mm,
FP1350:	Horizontal: 15.6", 396mm, Vertical: 11.7", 297mm

**Active Display Area:** (Full Scan, dependent upon signal timing used)

FP950:	Horizontal: 14.4", 366mm, Vertical: 10.5", 267mm,
FP1350:	Horizontal: 16.0", 406mm, Vertical: 12.0", 305mm

**Input Signal:**

Both models:	Video: ANALOG 0.7 Vp-p/75 Ohms positive. Sync: Separate sync, TTL level. Horizontal sync: positive/negative. Vertical sync: positive/negative. Composite sync: TTL level positive/negative. Sync on Green video (positive) 0.7 Vp-p and Sync (negative) 0.3 Vp-p
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**Display Colors:**

Both models:	Analog Input: unlimited colors (dependent upon display card)
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**Power Management:**

Both models:	IPM™ (Intelligent Power Manager) system, EPA ENERGY STAR®, NUTEK based on VESA DPMS 4 states
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**User Controls:**

Both models:	Brightness, contrast, degauss, auto adjust, horizontal position, horizontal size, vertical position, vertical size, AccuColor, geometry (sides: in/out; left/right; tilt; align: rotate), moiré canceler, basic convergence (horizontal and vertical), area convergence (top horizontal, top vertical, bottom horizontal, bottom vertical), corner correction (top, top balance, bottom, bottom balance), linearity (vertical, vertical balance), Global-Sync (top left, top right, bottom left, bottom right), sharpness, factory preset, language, OSM turn off, OSM lock out, IPM system off mode, EdgeLock™, refresh notifier, display mode, fitness tips, monitor info, power, BNC/D-Sub select
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**Advanced Communications:**

Both models:	Plug and Play and USB
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**Signal Cable:**

Both models:	15-pin Mini D-Sub to 15-pin Mini D-Sub (VGA) 5 BNCs (Red, Green/CS, Blue, Horizontal, Vertical)
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**Power Supply:**

Both models:	AC100-120V/220-240V, 50/60Hz
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**Current Rating:**

FP950:	1.8 A @ 100-120V/0.8 @ 220-240V
FP1350:	2.3 A @ 100-120V AC/1.0 @ at 220-240V AC

**Dimensions (W x H x D):**

FP950:	17.4 x 18.0 x 17.6" 442 x 456 x 447mm
FP1350:	19 x 19.7 x 18.6" 483 x 501 x 472mm

**Weight:**

FP950:	59.5 lbs/27kg
FP1350:	74.9 lbs/34kg

**Environmental:**

Both models:	Operating temperature: +10°C to +35°C, +50°F to +90°F Humidity: 30% to 80%, 0-10,000 ft Storage temperature: -20°C to +60°C, -4°F to +140°F Humidity: 10% to 90%, 0-45,000 ft
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**Regulatory Approvals:**

FP950:	UL 1950, CSA C22.2 No. 950, FCC Rules Part 15 Class B, DHHS Rules 21 CFR Sub-Chapter J, MPR-II, TCO-99, EPA ENERGY STAR, NUTEK
FP1350:	UL 1950, CSA C22.2 No. 950, FCC Rules Part 15 Class B, DHHS Rules 21 CFR Sub-Chapter J, ISO-9241-3, MPR-II, TCO-99, EPA ENERGY STAR, NUTEK, TÜV-GS, TÜV Ergonomie

**Limited Warranty:**

Both models:	3 years CRT, parts and labor
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For the location of the MultiSync FP Series dealer nearest you or for more information, call **1-800-NEC-INFO**.

For more information via fax, call **NEC's FastFacts™** at **1-800-366-0476** and request **catalog #1**.

To speak to a MultiSync FP Series customer service representative, call **1-800-632-4662**.

Visit our World Wide Web home page, at <http://www.nectech.com>.

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\* Maximum resolution based on horizontal and vertical frequencies only.

\*\* Recommended resolution

All specifications are the same for all models unless otherwise noted.

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