

fd trinitron

beware of imitations

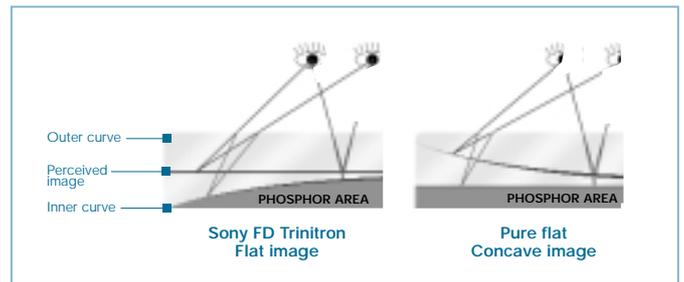
For over thirty years, Sony has led the world in picture quality through its **Trinitron**® technology.

Trinitron has been continuously developed and refined to keep Sony at the leading edge for both computer and TV monitors: developments and refinements which have led to what is now the pre-eminent CRT technology on the market, **FD Trinitron**®. FD Trinitron has three principal aspects, which combine to produce flawless images: **flatness**, **resolution** and **high contrast**.

flatness within FD Trinitron Technology

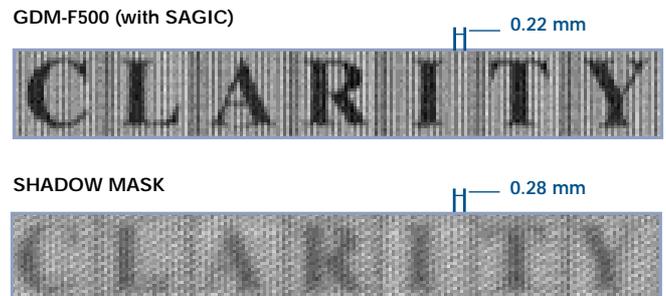
Flatness is more than just making a flat piece of glass – it is delivering an image that looks truly flat.

Simply making a physically flat screen actually results in a concave effect when viewing. The diagram shows how the slight inner curvature of the phosphor area on the Sony FD Trinitron cancels out this concave effect, giving a visually flat image to the very edge of the tube. This also significantly cuts down the glare and reflections found in most working environments.



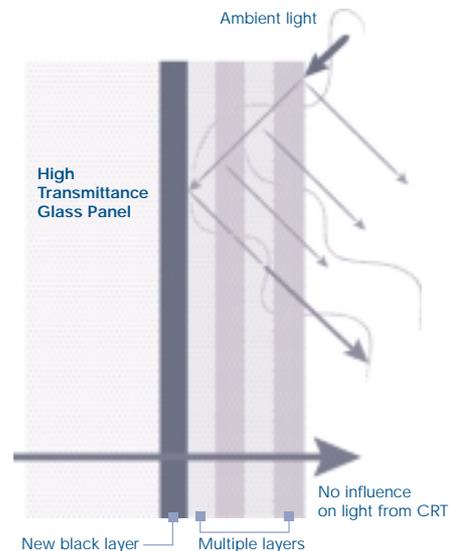
high resolution that cannot be matched

At the heart of Sony's FD Trinitron revolution is the new electron beam gun with tungsten impregnated cathode, **SAGIC™** (Small Aperture G1 Impregnated Cathode), which increases the density of the electron beam for better focus performance. This is further enhanced by **DQL**, **MALS** and **MALS & EFEAL** focusing systems, which, combined with a remarkable 0.22 mm Aperture Grille pitch, the finest available to date, give brilliant colour saturation for sharp, detailed images.



high contrast making "true blue" truly blue

FD Trinitron features advanced anti-reflection/antistatic screen coatings of 4 to 6 layers to achieve vivid reds, blues and greens, and cut annoying screen reflection. The new Hi-Con™ black layer achieves a vastly superior grayscale reproduction, resulting in better definition for graphics, clarity and brilliant colour saturation.



Ease of Use

DisplayMouse™ and OSD (On-Screen Display)

enable the user to set image parameters quickly and intuitively. The screen position of the OSD window is variable.



ASC Function (Auto Sizing and Centring) allows image size and position to be adjusted automatically and simultaneously at the push of a button.

Zoom/Zoom Pro Function, a useful feature for CAD/CAM and DTP professionals, allows users to adjust horizontal and vertical picture size simultaneously, whilst maintaining the correct aspect ratio.

Digital Multiscan technology's special circuitry determines the incoming video frequency and performs all of the necessary adjustments to correct geometric distortion, for perfect pictures at any resolution.

Environmental Ergonomics

Sony monitors conform to tough environmental and safety guidelines:

TCO '95/'99

Strict ergonomic and monitor safety guidelines regulating power consumption, radiation and recycling capabilities.

E2000 (Energy 2000)

Swiss standard demanding less than 5 Watts power consumption in stand-by mode.



Sony LCD panels

TFT LCD (Thin Film Transistor, Liquid Crystal Display) panels can be divided principally into two groups – active and passive matrix. The simplest, and therefore cheapest form of LCD “addressing” is passive matrix addressing. One of the drawbacks of passive matrix LCDs is that the LC material used has a slow response time, meaning that fast moving objects (i.e. the cursor) can be difficult to see and can “smear”, making single scanned passive matrix

displays unsuitable for fast changing graphics or motion video. Sony's Active Matrix LCDs use “fast” LC material, eliminating smearing and maintaining a constant brightness level. Sony's LCD displays also offer wide viewing angles, automatic adjustment for variable input signals – much more critical with LCD technology than CRTs – and Digital Smoothing for optimal use at varying resolutions.

SONY

Warranty

All Sony monitors are backed by a three-year parts and labour warranty.



dtp

program

finance

24"

professional

video

editing

maging

cad/cam



MULTISCAN W900

Broaden your horizons

- 24" CRT Sony Trinitron wide-screen professional monitor with 16:10 aspect ratio (displays two full size A4 pages side by side)
- BLC automatically corrects adverse influences of the Earth's magnetic fields to provide excellent colour purity
- Enhanced colour temperature control allows precise matching of print and screen colours with adjustable RGB Bias/Gain
- Dual signal inputs and input selection switch for easy switching between desktop and notebook PCs
- Maximum ergonomic resolution of 1920 x 1080 at 85 Hz
- TCO'95 compliance

MODEL CODE	GDM-W900																												
CRT TYPE	Super Fine Pitch, Trinitron tube, 24" (57.2 cm); DQL (Dynamic Quadrupole Lens) dynamic focus system, MALS (Multi-Astigmatism Lens System) with EFEAL (Extended Field Elliptical Aperture Lens) dynamic focus system and Impregnated Cathode Electron Gun; BLC (Beam Landing Correction); AR coating (anti-reflection/antistatic)																												
VISUAL AREA (H x V)	484 x 306 mm (diagonal: 573 mm)																												
APERTURE GRILLE PITCH	0.25 - 0.28 mm																												
HORIZONTAL SCAN RANGE	30 to 96 kHz																												
VERTICAL SCAN RANGE	50 to 160 Hz																												
MAXIMUM REFRESH RATES	800 x 600/150 Hz 1024 x 768/120 Hz	1280 x 1024/90 Hz 1600 x 1200/77 Hz	1920 x 1080/85 Hz 1920 x 1200/76 Hz																										
PRESET SIGNAL TIMING	VGA Graphics VGA Text VESA	640 x 480/60 Hz 720 x 400/70 Hz 1280 x 1024/75 Hz	VESA Sony 16:9 Sony 16:9	1600 x 1200/75 Hz 1920 x 1080/60 Hz 1920 x 1080/72 Hz	Sony 16:9 1920 x 1035/60 Hz Sony 16:10 1600 x 1025/76 Hz Sony 16:10 1920 x 1200/76 Hz																								
USR PRESET SIGNAL TIMING	16 additional settings																												
COLOUR CONTROLS (OSD)	Normal mode: 5000 K/6500 K/9300 K; variable 3000 K - 9300 K Expert Mode: 5000 K/6500 K/9300 K; variable RGB Gain and Bias control																												
COMPUTER INTERFACE	DDC 1/2 B/2 AB																												
POWER CONSUMPTION	Normal Operation: 200 Watts (max); Sleep Mode: 140 Watts (max); Deep Sleep Mode: 15 Watts (max); Active Off Mode: 8 Watts (max); Power Off Mode: 0 Watts																												
POWER MANAGEMENT	TCO'95, International Energy Star, VESA - Display Power Management Signalling (DPMS)																												
REGULATION COMPLIANCE	<table border="0"> <tr> <td>SAFETY</td> <td colspan="5">UL1950, CSA C22.2 No. 950, TÜV GS mark (EN60950), SEMKO, NEMKO, DEMKO, EI</td> </tr> <tr> <td>RADIATION/EMI</td> <td colspan="5">TCO'95, MPR II, FCC Class B, IC Class B, VCCI-2, CE mark (EN50081-1, EN50082-1)</td> </tr> <tr> <td>X-RAY</td> <td colspan="5">DHHS, DNHW, PTB</td> </tr> <tr> <td>ERGONOMICS</td> <td colspan="5">TCO'95, TÜV/Rheinland Ergonomie, ISO-9241-3, -8</td> </tr> </table>					SAFETY	UL1950, CSA C22.2 No. 950, TÜV GS mark (EN60950), SEMKO, NEMKO, DEMKO, EI					RADIATION/EMI	TCO'95, MPR II, FCC Class B, IC Class B, VCCI-2, CE mark (EN50081-1, EN50082-1)					X-RAY	DHHS, DNHW, PTB					ERGONOMICS	TCO'95, TÜV/Rheinland Ergonomie, ISO-9241-3, -8				
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USER CONTROLS (ON-SCREEN DISPLAY)	Brightness, contrast, horizontal size and centring, vertical size and centring, raster rotation, pincushion distortion, keystone distortion, horizontal convergence, vertical convergence, moiré cancellation, beam landing, manual degauss, colour temperature, OSD languages (6), OSD position and menu, control lock, video input selection, reset																												
VIDEO INPUT	D-sub 15/5 BNC																												
DIMENSIONS (W x H x D)	580 x 500 x 548 mm																												
WEIGHT	41 kg																												
SUPPLIED ACCESSORIES	AC power cord, HD15-HD15 video cable, Mac adaptor, monitor INF disk, manual																												



technical

glossary

glossary

technical

What

does all the technical jargon mean? It's not possible to describe every technical term in this brief overview, but here are some of the most commonly used terms, including those in the specification tables on the previous pages, and what they mean in plain English.

Digital Multiscan Technology: is a special Sony circuit which ensures that your monitor automatically adjusts its operation to provide the best possible picture with whichever computer you use.

Aperture Grille pitch: is the size of the monitor mask opening which allows light through to make up the picture you see. Smaller openings enable greater detail to be seen, so most Sony monitors have an AG pitch of just 0.25mm or less, producing sharp pictures, rich in detail. Other manufacturers using different mask technology use the term dot pitch, as their masks have dot openings as opposed to Trinitron's stripes.

Graphic Picture Enhancement: offers automatic control of brightness, colour temperature and sharpness settings to optimise your monitor for different applications.

Hi-Con and AR screen coatings: reduce reflections, glare and electro-magnetic emissions to make Sony monitors safe and easy to look at. All models have AR (anti-reflective and antistatic) coatings. FD Trinitron models feature the new Hi-Con (high contrast) black layer, which reduces light refraction off the surface of the tube and improves contrast considerably.

Flat screens: minimise picture distortion and unwanted reflections. All Sony Trinitron displays are vertically flat and have a minimal horizontal curvature, with FD Trinitron achieving complete visual flatness.

Dynamic Focus: The length and shape of light beams vary depending on whether they reach the mask at the centre or corner of the screen. Three lens systems adjust this to provide improved image quality: DQL (Dynamic Quadrupole Lens) delivers a small spot size in the corners of the screen; MALS (Multi-Astigmatism Lens System) provides a small spot size and better spot shape in the corners; MALS and EFEAL (Extended Field Elliptical Aperture Lens) ensure precisely focused pictures over the entire screen.

BLC (Beam Landing Correction): provides a uniform and sharp picture, using sensors and a landing correction coil to adjust the direction of the electron beams.

SAGIC/L-SAGIC: (Small Aperture G1 with Impregnated Cathode) is the remarkably fine electron gun with increased beam density for improved focus at the heart of FD Trinitron. L-SAGIC is a new low power consumption version of SAGIC technology.

ASC (Auto Sizing and Centring): automatically sizes and centres the screen image. If the video signal input is not of a standard VESA timing, the user can press the ASC button and the monitor will automatically size and centre the image. Set-up time is thus reduced to seconds, regardless of the signal timing utilised.

Digital Smoothing: Every LCD runs best at one specific resolution. Using other resolutions can result in rough edges or characters ("step" effect) on screen. To avoid this Sony LCD models come with the Digital Smoothing function, which gives you natural and smooth characters, no matter which resolution you are using.

BCF (Beam Current Feedback): Using a cathode over a long period of time could exhaust the electric beam and make it darker. To avoid this effect a sensor calculates the beam current and controls its voltage. This way the same level of colour and brightness is automatically maintained and a constant picture quality is guaranteed.

Environmental specifications: Safety, ergonomic and environmental considerations are covered by a number of international specifications. Sony monitors variously comply with MPRII, TÜV/Rheinland Ergonomie, ISO-9241-3,-8, TCO '92, TCO '95 or even TCO '99.

DisplayMouse: This unique Sony feature allows you to control your monitor settings easily and quickly at a single click.

For more advice on what to look for in a monitor and how to interpret the technical jargon, take a look at the CSF "Monitors Matter" Guide, which is available on the internet at www.csf.org.uk

frequently asked

What's the difference between Sony's FD Trinitron and regular Trinitron?

All Sony Trinitron monitors deliver excellent image reproduction and boast a vertically flat screen. This vertical flatness makes them less susceptible to distracting reflections from overhead lighting than Shadow Mask screens, which curve horizontally and vertically. "Flat Display" or FD Trinitron technology features Sony's first horizontally AND vertically flat computer monitor screen – this ensures that images are truly faithful to original documents, with the additional benefit of totally eliminating glare.

What else is different?

At the heart of Sony's FD Trinitron revolution is SAGIC, its newly-developed tungsten impregnated cathode, a key component of the electron beam gun. This increases the density of the beam, resulting in a better focus performance. Focus is enhanced still further by using the existing MALS and EFEAL lens technologies. What's more, the F400 and F500 models offer a remarkable AG pitch of 0.22 mm to ensure colour purity across the screen, and a high horizontal frequency (F400: 107 kHz; F500: 121 kHz) to optimise picture reproduction for even better images. Simply put, FD Trinitron heralds a new age of Sony monitors and sets standards in image quality.

What is Multiscan Technology?

Multiscan Technology enables a monitor to self-adjust to video signals from a variety of graphics boards. This makes it possible to switch between graphic modes without user involvement.

Why do Sony monitors have user-control buttons and an OSD (On-Screen Display) when almost all have Digital Multiscan?

Digital Multiscan takes care of all screen parameter adjustments. While the result is a perfect picture in almost all cases, some users may prefer their own settings. In order to allow for this customisation, Sony monitors have easy-to-use buttons and an On-Screen Display with controls for many picture parameters.

What is the difference between Trinitron technology and Shadow Mask technology?

The Trinitron technology uses an Aperture Grille. This grille, designed with long, unbroken slits, allows more light and colour to reach the screen, resulting in purer and more colourful images. The Shadow Mask uses a mesh-like, darker screen that creates a colour shift ("doming") distortion and prevents colour purity.