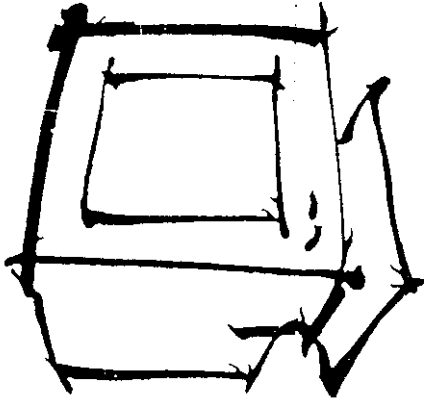


 HomeTek Technology Inc.

**Appendix B**  
**User's Manual**

# User's Manual



## Wichtige Sicherheitshinweise

- 1 Bitte Lesen Sie sich diese Hinweise sorgfältig durch
- 2 Heben Sie diese Anleitung für den sparsamen Gebrauch auf
- 3 Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie keine Flüssig- oder Aerosolreiniger. Am besten dient ein angefeuchtetes Tuch zur Reinigung.
- 4 Um eine Beschädigung des Gerätes zu vermeiden sollten Sie nur Zubehörteile verwenden, die vom Hersteller zugelassen sind.
- 5 Das Gerät ist vor Feuchtigkeit zu schützen.
- 6 Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Verletzungen hervorrufen. Verwenden Sie nur sichere Standorte und beachten Sie die Aufstellhinweise des Herstellers.
- 7 Die Belüftungsöffnungen dienen zur Luftzirkulation die das Gerätes vor Überhitzung schützt. Sorgen Sie dafür, daß diese Öffnungen nicht abgedeckt werden.
- 8 Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
- 9 Die Netzanschlußsteckdose muß aus Gründen der elektrischen Sicherheit einen Schutzleiterkontakt haben.
- 10 Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann. Es sollte auch nichts auf der Leitung abgestellt werden.
- 11 Alle Hinweise und Warnungen die sich am Gerät befinden sind zu beachten.
- 12 Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
- 13 Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrischen Schlag auslösen.
- 14 Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
- 15 Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten

Servicestelle zu überprüfen

- a - Netzable oder Netzstecker sind beschädigt
- b - Feuchtigkeit ist in das Gerät eingedrungen
- c - Das Gerät war Feuchtigkeit ausgesetzt
- d - Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen
- e - Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt
- f - Wenn das Gerät deutliche Anzeichen eines Defektes aufweist

- 16 Bei Reparaturen dürfen nur Originalersatzteile bzw. den Originalteilen entsprechende Teile verwendet werden. Der Einsatz von ungeeigneten Ersatzteilen kann eine weitere Beschädigung hervorrufen.
- 17 Wenden Sie sich mit allen Fragen die Service und Reparatur betreffen an Ihren Servicepartner. Somit stellen Sie die Betriebssicherheit des Gerätes sicher.
- 18 Der Arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 beträgt 70dB (A) oder weniger.
- 19 Die Steckdose muß nahe dem Gerät angebracht und leicht zugänglich sein.
- 20 Es wird aus ergonomischen Gründen empfohlen, die Grundfarbe blau nicht auf dunklem Untergrund zu verwenden (schlechte Lesbarkeit und erhöhte Augenbelastung bei zu geringem Zeichenkontrast wie die Folge)
- 21 ZH1/618/10 80 for ergonomics
- 22 Zum Netzanschluß dieses Gerätes ist eine geprüfte Leitung zu verwenden. Für einen Nennstrom bis 6A und einem Gerätegewicht größer 3Kg ist eine Leitung nicht leichter als H05W-F 3G 0,75mm<sup>2</sup> einzusetzen.

#### Wichtige Sicherheitshinweise

unkentst n nach DBP Vlg. 2.3.1991

er arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 Teil 1000 betr. 70dB (A) oder weniger:

ie in diesem Gerät entstehende Röntgenstrahlung ist ausreichend abgeschirmt.  
 beschleunigungsspannung maximal 27 kV

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## WARNING!

This equipment has been tested and found to comply with the limits for a Class B digital pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential environment is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Note

Use the attached specified shielded cable with this monitor below so as to keep interference within the limit of a Class B computing device.

-AC Cord

-Signal Cable (mini D-shell 15pin)

## Canadian DOC Notice

"This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications".

"Le Present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la classe B prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

## PRECAUTIONS

### Precautions

Handle with care when transporting.

Avoid any malfunction or damages caused by other power line connections than a direct connection to the specified power source.

The monitor shall be of user's responsibility.

Set-up in a clear and dry place.

Keep the monitor away from high capacity power transformers, electric motors, and other electric devices, which may create strong magnetic fields.

For ergonomic reasons the preset size and position is recommended with the standard signals.

If the power switch turn "ON", The power indicator does not illuminate waited for 30 sec.

Do not place any heavy object on the power cord, damage of the cable may cause shock or fire.

## 2.0 Installation

- Be careful never to drop the unit when handling, boxed or unboxed.
- Be sure the unit is firmly positioned on a rigid supporting surface.

## 2.1 Connection

- For complete electrical separation, unplug AC Cord from the Inlet on the monitor or from the wall socket.
- Keep the unit unplugged from the power outlet if it is not to be used for more than a few days.
- Be sure to operate the unit only on the specified power supply. Use of an incorrect voltage will cause severe damage.
- Keep the AC Cord away from a pedestrian area.
- To disconnect the AC Cord or signal cable, always pull it by the plug. Never pull the cord itself.
- If, when the power switch is turned on, the power indicator does not illuminate, turn off the switch, wait for approx. 1 minute, then turn it on again.
- Should the indicator still not light, disconnect the AC Cord and contact your dealer.
- Do not overload power outlets or extension cords as this can result in fire or electric shock.

## 2.2 Operation

- To allow adequate air circulation, do not leave any objects either on the top or against the back of the cabinet that may block the ventilation holes.
- To eliminate eye fatigue, do not operate the unit against a bright background or where the sun or other light can shine on the CRT directly.
- For optimum viewing and operation comfort, the monitor should be just below eye level.
- Do not remove the Tilt-Swivel Stand for operation. All ventilation holes on the cabinet bottom should be kept cleared and they will be blocked up if it is removed.

## 2.3 Cleaning

- To keep the unit looking brand new, periodical cleaning with a soft cloth is recommended. Even stubborn stains may be removed with a cloth lightly dampened with a mild detergent solvent. Do not use spray cleaner, wax or compressed air directly on the cabinet.
- A clean soft cloth such as gauze or cotton or lens cleaner paper is recommended for stains on CRT's. Stubborn stains can be removed with those lightly dampened with an alcohol (Methyl, Ethyl or Isopropyl). Other material or liquid may damage the surface of CRT. Be sure not to put alcohol on the cabinet. \*Never use strong solvents such as thinner, benzine or other abrasive cleaners since these will damage the cabinet and CRT.
- Do not place any liquids or solvents on the top of the model. To ensure safety, unplug the unit before cleaning it.

## INTRODUCTION

### Introduction

When choosing a FUNJET color monitor, we are confident that you will be pleased with the performance of your PM411F. Please take a few minutes to read this manual as it will help you to get the most out of your PM411F monitor. The 17" high resolution color monitor is designed to be used with a computer capable of displaying a maximum resolution of 1600 dots x 1200 lines with a high quality picture. This manual explains the features and operating procedures.

### Features

#### Stability

Horizontal operation frequency from 30KHz to 70K, 82K, 86K, 92K, 96KHz (Automatic)  
Vertical scan frequency from 50Hz to 120Hz, 140Hz, 160Hz, 180Hz, 200Hz (Automatic)  
RGB video signal input

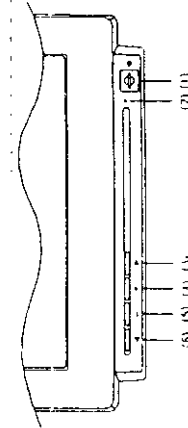
The monitor can memorize horizontal and vertical picture adjustment information through a microprocessor. When the system is powered on again, you get the screen for whatever you have set before. For example, IBM PS/2, 8514-A, 1024 x 768 non-interface board.

#### High Color CRT

Resolution of a 17" (16V), 90° deflection, 0.26mm dot pitch CRT gives clear and crisp pictures and text. The Dark-Fint and Flat-Screen minimize light reflection and reduce eye

fatigue. The monitor can be free from mutual interference when two or more are used close together because of a S/S DY (Saddle/Saddle Deflection Yoke). The guideline for distance between two monitors is approximately 15cm to avoid interference for practical use.

#### Panel Controls



The buttons explain as following:

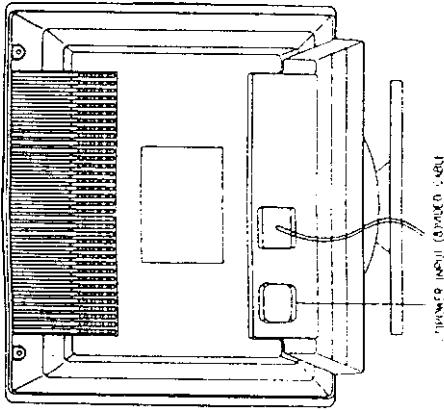
Power switch: Push/push to turn ON/OFF.

LED indicator: The LED indicate power management status.

Right selection: With OSD windows to select Icon's function to right side.

Right window enter & adjustment: Icon select window display on the picture and to adjustment

Left selection: With OSD windows to select Icon's function to left side.



1. Rear panel

2. Power input: To connect with the power cord.

3. Video signal cable: To connect with personal computer's R.G.B signal output

4. The monitor complies with the Scandinavian Standard requirement (MPR-1990) against Low Frequency Electric Field, Magnetic Field and Static Electricity.

## THE MONITOR

### Standard Package-

- \* MONITOR
- \* Detachable AC Cord
- \* User Manual

When unpacking the monitor, be sure that your monitor package includes all the above items. original carton and other packing materials in case you have to transport the unit or place in the future. They make an ideal and safe shipping package.

The monitor comes with the standard Tilt-Swivel Base fitted to the monitor. AC Cord is ready for power supply connection as supplied. User Manual should be kept for frequent reference.

### OSD (On Screen Display) control

When you press button "3 or 4 or 5 or 6" to display OSD (on window) OSD window displayed over 10 sec but no any active then the window will be disappeared automatically. When you press button "3 or 4" the OSD icon select window will display on CRT, and select your item and then press button "4" or "5" to decide your adjust value. When you want quit it please choice icon "exit" and press button "4 or 5". When window position may be little shifted from the screen central, depend-upon input signals.

### Windows's Icon function explanation

- ) Contrast : To adjust the image brightness in relation to the background.
- ) Brightness : To adjust the overall image and background screen brightness.
- ) Horizontal position : To move the horizontal phase to left or right.
- ) Horizontal width : To adjust horizontal width increases or decreases.
- ) Vertical position : Move the vertical image position up or down.
- ) Vertical size : To adjust vertical size increases or decreases.
- ) Pincushion : To modify the curvature of the sides either inward or outward.
- ) Trapezoid : Increases or decreases the bottom of the screen to be same as the top side.
- ) R-GAIN : To adjust Red Gain color level by user.
- ) B-GAIN : To adjust Blue Gain color level by user.
- ) Rotation : Rotate the image.
- ) Degauss : Choice the degauss function on Icon window and push button "4 or 5". It will be stray magnetic field and correct scan of the electron beam, will affect the purity, focus, convergence ; but use again must interval 30 minutes.

- M) Recall : Reset the adjustment value return to the factory seted.
- N) Frequency : To display monitor operation frequency status.
- O) Language : To display 5 country language for function explains.
- P) Auto Demo : Auto Demo for all Icon's function, press any button 3 secs to exit.
- Q) Exit : (1) Turn off OSD Menu, (2) Save all the setting changed.

## 4.4 Power management DPMS

DPMS (display power manager signaling) system is follow VESA (video electronics standard association) power down method. The power down process a system should use to communicate to the monitor to save energy. The power down process by using monitor's horizontal and vertical SYNC signals. The following is description of the LED indicator for the DPMS modes.

Mode	LED indicator	Power
ON	Green	Normal
Stand by suspend	Orange	< 15W
OFF	Orange (Flash)	< 8W

## 4.5 Trouble Shooting

Problems	check following items
No video picture	The video card should be completely seated in its slot, power switch should be "ON" position. Measure signal cable completely connected to the video card.
Image is scrolling or unstable.	Signal cable should be completely attached to the computer, check video card's signal timing and pin assignment, and that the card is properly seated in the computer.
LED indicator light	Power switch should be "ON" position, power cord should be connected.
Picture is fuzzy or colors look blotchy.	Adjust contrast and brightness control, active the degauss control ; CAUTION: A minimum interval 30 minutes should exist before the degauss use a second time.

### Getting ready for operation

Identify Your Computer & Video Board
Signal Input Connection (D-SUB)
Power Cable Connection
Turn on the Power Switch
Adjust Controls
Operation
Make sure both the computer and the monitor are turned off.

If any problem appear on the monitor during its connections and installation, refer to the Quick Trouble Shooting" and if problems persist, contact your dealer.

### How to use Plug & Play

This monitor features the VESA DDC (Display Data Channel) standard that, when used with a DDC compatible video card, will simplify the monitor's setup. DDC is a protocol that allows the monitor to communicate with the video card. The monitor sends signals to the card informing the card of the monitor's factory preset modes. A table is created that matches the maximum refresh rates of the monitor with those of the video card. So, for example, when you choose a resolution in Windows, the monitor will automatically run at a high refresh rate.

To implement DDC is simple :

Turn on the monitor. Turn on the computer.

That's all Some DDC compatible video cards will allow you to save the compatibility information in your AUTOEXEC.BAT file. If not, just be sure to turn on the monitor before the computer to activate DDC.

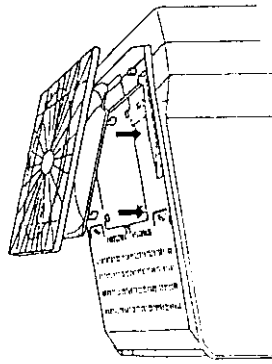
### 4.8 Loading & Unloading Tile / Swivel base

#### Loading

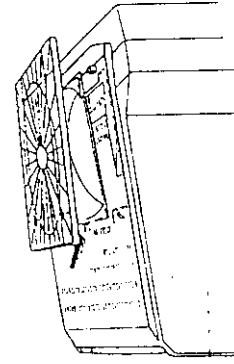
1. Align the feet von the optional T/S base with the arrow-marked openings on the bottom of the monitor cabinet.
2. Slide the T/S base is now secured in position.

#### Unloading

Gently press at the clip with one hand, while pulling the T/S base towards the rear of the cabinet with the other hand. The T/S base should now come off of the monitor.



Loading T/S Base



Unloading T/S Base

### 4.9 Burn in picture

If the user turns on the monitor but forgets to input signal cable, the screen show as illustration. Please turn off the monitor and input the signal cable. Then turn on again.

TIMING CHARTS

Timing No.	11	12
MODE	1280x1024(85)	1600x1200(75)
PIXEL RATE	157.500MHz	202.500MHz
H TOTAL	1728=10.971uS	2160=10.667uS
H DISPLAY	1280=8.127uS	1600=7.901uS
H B-PORCH	240 =1.524uS	304 =1.501uS
HS WIDTH	160 =1.016uS	192 =0.948uS
H BORDER	48 =0.305uS	64 =0.316uS
V TOTAL	1072=11.761mS	1250=13.333mS
V DISPLAY	1024=11.235mS	1200=12.800mS
V B-PORCH	44 =0.483mS	46 =0.491mS
VS WIDTH	3 =0.033mS	3 =0.032mS
V BORDER	1 =0.011mS	1 =0.011mS
HS OUTPUT	ON(+)	ON(+)
VS OUTPUT	ON(+)	ON(+)
fh	=91.146KHz	=93.750KHz
fv	85.024Hz	=75.000Hz
Timing No.		
MODE		
PIXEL RATE		
H TOTAL		
H DISPLAY		
H B-PORCH		
HS WIDTH		
H BORDER		
V TOTAL		
V DISPLAY		
V B-PORCH		
VS WIDTH		
V BORDER		
HS OUTPUT		
VS OUTPUT		
fh		
fv		

TIMING CHARTS

Timing No.	1	2	3	4	5
MODE	640x480(60)	640x400(85)	640x480(85)	800x600(75)	800x600(85)
PIXEL RATE	25.175MHz	31.500MHz	36.000MHz	49.500MHz	56.250MHz
H TOTAL	800=31.778uS	832=26.413uS	832=23.111 uS	1056=21.333uS	1048=18.631uS
H DISPLAY	610=25.422uS	640=20.317uS	640=17.778uS	800=16.162uS	800=14.222uS
H B-PORCH	48 =1.907uS	128 =4.063uS	112 =3.111uS	160 =3.232uS	152 =2.702uS
HS WIDTH	96 =3.813uS	32 =1.016uS	48 =1.333uS	80 =1.616uS	64 =1.138uS
H BORDER	8 =0.318uS	0 =0.000uS	0 =0.000uS	0 =0.000uS	0 =0.000uS
V TOTAL	525=16.683mS	445=11.754mS	509=11.764mS	625=13.333mS	631=11.756mS
V DISPLAY	480=15.253mS	400=10.565mS	480=11.093mS	600=12.800mS	600=11.179mS
V B-PORCH	33 =1.049mS	41 =1.083mS	25 =0.578mS	21 =0.448mS	27 =0.303mS
VS WIDTH	2 =0.064mS	3 =0.079mS	3 =0.069mS	3 =0.064mS	1 =0.019mS
V BORDER	8 =0.254mS	0 =0.000mS	0 =0.000mS	0 =0.000mS	0 =0.000mS
HS OUTPUT	ON(-)	ON(-)	ON(-)	ON(+)	ON(+)
VS OUTPUT	ON(-)	ON(+)	ON(-)	ON(+)	ON(+)
fh	=31.469KHz	=37.861KHz	=43.269KHz	46.875KHz	=53.674KHz
fv	=59.941Hz	=83.080Hz	=85.008Hz	=75.000Hz	=85.061Hz
Timing No.	6	7	8	9	10
MODE	1024x768(75)	1024x768(85)	1152x864(75)	1280x1024(75)	1280x960(85)
PIXEL RATE	78.750MHz	94.500MHz	121.500MHz	135.000MHz	148.500MHz
H TOTAL	1312=16.660uS	1376=14.561uS	1576=12.971uS	1688=12.504uS	1728=11.636uS
H DISPLAY	1024=13.003uS	1024=10.836uS	1152=9.481uS	1280=9.481uS	1280=8.620uS
H B-PORCH	176 =2.235uS	208 =2.201uS	232 =1.909uS	248 =1.837uS	240 =1.616uS
HS WIDTH	96 =1.219uS	96 =1.016uS	128 =1.053uS	144 =1.067uS	160 =1.077uS
H BORDER	0 =0.000uS	0 =0.000uS	64 =0.527uS	16 =0.119uS	48 =0.323uS
V TOTAL	800=13.328mS	808=11.765mS	907=11.765mS	1066=13.7329mS	1011=11.764mS
V DISPLAY	768=12.795mS	768=11.183mS	964=11.207mS	1024=12.804mS	960=11.171mS
V B-PORCH	28 =0.466mS	36 =0.524mS	39 =0.506mS	38 =0.475mS	47 =0.547mS
VS WIDTH	3 =0.050mS	3 =0.044mS	3 =0.039mS	3 =0.038mS	3 =0.035mS
V BORDER	0 =0.000mS	0 =0.000mS	0 =0.000mS	1 =0.013mS	1 =0.012mS
HS OUTPUT	ON(+)	ON(+)	ON(+)	ON(+)	ON(+)
VS OUTPUT	ON(+)	ON(+)	ON(+)	ON(+)	ON(+)
fh	=60.023KHz	=68.677KHz	=77.094KHz	=79.976KHz	=85.938KHz
fv	=75.029Hz	=84.997Hz	=84.999Hz	=75.027Hz	=85.002Hz



**DESCRIPTION**

<b>Product Name</b>	770W	782W	786W	792W	796W
<b>Model No.</b>	PM41F	PM41F	PM41F	PM41F	PM41F
<b>Size &amp; Deflection Angle</b>	17" 90° Def.				
<b>Face Plate</b>	Silica-Coating				
<b>Dot Pitch</b>	0.26mm				
<b>Input Form</b>	Separate, TTL, Positive/Negative				
<b>H. Scanning Frequency</b>	30~70KHz	30~82KHz	30~86KHz	30~92KHz	30~96KHz
<b>V. Scanning Frequency</b>	50~120Hz	50~140Hz	50~160Hz	50~180Hz	50~200Hz
<b>Input Form</b>	Separate, RGB Analog				
<b>Input Form</b>	0.7V p-p/75 ohm, Positive				
<b>Input Form</b>	Separate Analog				
<b>Linearity</b>	Horizontal: ± 7.0% Vertical: ± 7.0%				
<b>Video Band Width</b>	110MHz	130MHz	135MHz	150MHz	160MHz
<b>Input Connector</b>	15-pin, D-SUB connector				
<b>Display Colors</b>	Analog Input: Unlimited Colors				
<b>Display Area</b>	300mm(H) × 225mm(V) * Display size can be preset by user through microprocessor control panel.				
<b>Voltage Input</b>	90-264 Vac, 50/60Hz				
<b>Power Consumption</b>	135watts	135watts	135watts	135watts	135watts
<b>Power Management</b>	"On"	Green	Normal		
	"Standard By"	Orange	30 Watts		
	"Suspend"	Orange	15 Watts		
	"Off"	Orange (Flash)	8 Watts		
<b>Net Weight</b>	17.5kg				
<b>Gross Weight</b>	21.5kg				
<b>Net Dimensions</b>	410mm(W) × 430mm(D) × 413mm(H)				
<b>Gross Dimensions</b>	531mm(W) × 561mm(D) × 518mm(H)				
<b>Environmental Considerations</b>	Operating Temperature 5°C ~40°C Humidity 0%~90% Storage Temperature -20°C ~60°C Humidity 20%~90%				
<b>Regulations</b>	UL/CUL/FCC B/DHHS/TUV-GS/MPRII/CE Mark/EPA				

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