

Manufactured in China for:
DELTA-OPTI Monika Matysiak,
60-713 Poznan, 10 Graniczna St., Poland
www.shopdelta.eu

User Manual

**VM-215, VM-2701,
VM-802M, VM-101M,
VM-236M VM-24**



Table Of Contents

EMC COMPLIANCE	T
IMPORTANT PRECAUTIONS	2
1. Introduction	
1.1. General	4
1.2. Features	4
1.3. Packing List	4
2. Installation	
2.1. Connection of signal cable	5
2.2. Connection of power cord	5
2.3. Connection of Audio cable	5
2.4. Power on	6
2.5. Self-inspection	6
2.6. Image Adjustment	6
3. Operation	
3.1. OSD button	7
3.2. OSD menu and operation menu introduction	8
3.3. Safeguard	12
3.4. Setting of display mode	12
4. Technical specification	
4.1 ALLTFT-LCD monitor specification	13
4.2 Pin assignment of signal cable	14
4.3 Visual Inspection	M
5. Trouble Shooting	15
6. Operation Warranty	16

EMC COMPLIANCE

This device has been tested and found to comply with the standards for a class B digital device, pursuant to Part 15 of FCC Rules. Those standards are designed to provide reasonable protection against harmful interference in a residential installation. This device generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the device and receiver
- —Plug the device into a wall outlet different from that connected to the receiver.
- ...Consult the dealer or an experienced radio/TV technician for help.

CAUTION: any change or modification not expressly illustrated in this manual may void the warranty.

A NOTE: any unshielded cable is not allowed to be used in the device!

IMPORTANT PRECAUTIONS

A WARNINGS:

1. Before using this device, please read all the instructions in this manual carefully.
2. Please keep the manual carefully for future reference.

3. Unplug this device from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp or wet cloth to clean. Please use LCD screen detergent for cleaning if it is still dirty.
4. Do not use the parts not recommended by the manufacturer, otherwise it may cause a hazard.
5. When unplugging the power cord of the monitor or adapter, please hold the plug with your hand, do not pull the cord directly.
6. Do not place any object on the power cord. Do not trample it either.
7. Do not use the device near water sources, e.g. bathtub, basin, kitchen sink, or washing machine. Do not place the device on a wet floor, or near a swimming pool etc. Do not touch the screen with your fingers or other hard objects.
8. Slots and openings on the housing and its back or bottom are provided for ventilation, to ensure reliable operation of the components and to protect them from overheating, these openings must not be blocked or covered placing the device on a bed, sofa, rug, or other similar surface. The device should never be placed near or over a radiator or heater and should not be placed in a built-in installation unless proper ventilation is provided.
9. Make sure that the device is at least 5cm distance from the wall or other objects around when it is in use.
10. The power supply must respond to that stated on the rating plate. If you have any query about the power supply, please refer to the dealer or local power supply provider.
11. As a safeguard measure, the monitor or adapter is equipped with a power cord with three-terminal plug, the third terminal is grounded. If the plug cannot be inserted into the outlet, please contact an electrical technician for replacing the original outlet while keeping the safeguard measure in effect.
12. Ensure that the power socket and cord in use are able to take the sum of the rated currency of all the products.
13. Do not put the device at the place where user is subject to mal-operation.
14. Observe all the warnings and instructions described in the manual.
15. Do not overload the power outlet or use any extension cord, otherwise it may cause fire or electric shock.
16. Do not attempt to repair this device yourself since opening or removing covers may expose you to dangerous voltage or other hazards. Refer servicing to qualified

service personnel.

17. Unplug this monitor or AC adaptor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a. When the power cord or plug is damaged or worn.
- b. If the device has been dropped or its housing has been damaged.
- c. When the performance of the device deteriorates distinctly.

18. The power cord is the main facility to turn on/off the device; unplug it if the device is not used for a long period of time.

19. Store the device at a place of good ventilation; avoid strong sunlight, high temperature or humidity.

20. Store the device at a place at 20°C~55°C room temperature. Otherwise, it may cause permanent damage.

1. Introduction

1.1 General

Thank you for purchasing the latest model of LCD monitor, with advantages of high display performance and light weight etc, meanwhile with the power saving and no-radiation features, the latest LCD will bring you comfortable, safe and environmental-protection brand-new visual experience.

Your purchase and use of this product is highly appreciated!

1.2 Features

A

- " High performance intelligent multi-frequency scanning, use active matrix Thin film transistor liquid crystal display (TFT).
- Micro Computer digital technology control, no radiation, no glare ■Built-in multimedia speaker system (option).
- Built-in AV signal connection terminal and 8 terminal (option).
- ...Comply with VESA DPMS International Power Saving Regulation.
- • • Support DDC 1/2B and Windows PNP Plug & Play.
- Microprocessor based with OSD (On Screen Display) control, be able to adjust the image to optimum.
- Built-in hoisting hole complying with International Standard(VESA), which is able to hang the display on the wall.

1.3 Packing list

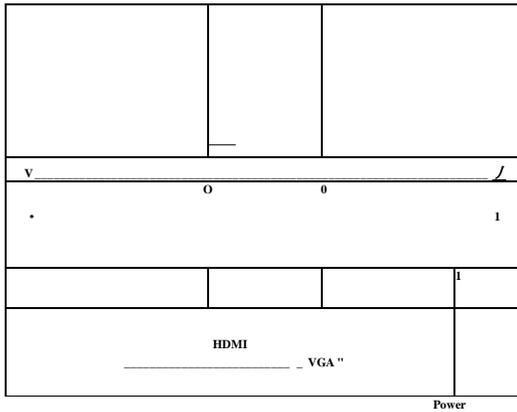
Please make sure the following items are included with your LCD display before installation:

- A LCD monitor (with pedestal)
- A VGA signal cable, DVI-D signal cable (option)
- An audio cable
- A power cord cable
- User's manual

If any of these items are missing, please contact with your dealer for technical support and customer service.

NOTE: be sure to save original box and all packing material for transport in future if the display need.

2. Installation I



PC with signal cable, please turn off your monitor and computer. And then insert one end of the signal cable into the VGA or HDMI jack on your computer, and lock it with two fixed screw for ensured grounding. Finally, please insert another end of signal cable to the VGA or HDMI signal input jack of monitor and lock it with fixed screw.

2.2 Connection of power cord

First, insert one end of power cord cable into the power input jack of monitor, and another end into power outlet.

2.3 Connection of Audio cable

Please insert one end of audio cable into the sound card audio output terminal on your computer, another end into the audio input terminal of monitor.

3. Operation I

3.1 OSD one

(1) Power Switch(O)

Digital control light-touch switch, used for turning on or off monitor power.

(2) Power Indicator

When the monitor is under normal working condition, the indicator will light green (or blue); if the monitor is under saving mode, the indicator will light red or off. And the

2.4 Power on

Turn on the monitor and computer, and then indicator will light green (or blue) when the screen is under normal condition. Please check to see if there is any wrong with the connection of video signal cable if the indicator lights red.

2.5 Self-inspection

If the monitor inspects there is no horizontal and vertical signal, it will prompt to check the video input, please refer to the illustration below, and the monitor will enter into power saving mode after several seconds, the indicator will light red. The screen will restore to normal display once receiving video signal.

2.6 Image Adjustment

Please adjust the image according to your need; please refer to the "Operation" in Section Three.



HDMI signal input: connect to computer HDMI signal output jack VGA signal input: connect to computer VGA signal output jack Audio input: connect to computer sound card audio output jack Power jack: connect to input jack

2.1 Connection of signal cable

Before connecting your monitor and

indicator will turn off under the power off mode. (When the power indicator turns off, it means that the monitor is under off mode, please disconnect the power cable when the monitor is not used for the purpose of safety.)

(3) AUTO Button

Auto adjust / exit

(4) - Button

Select and adjust the OSD items (Decrease the value)

(5) Menu Button

Activate OSD, enter sub menu, select items, confirm selection.

(6) + Button

Select and adjust the OSD items (Increase the value)

MENU Adjustment Setting :

1. Press Menu into Main Function choice Menu
2. Press + or - to switch the image of Main Function changing settings.
3. Press Menu to switch to submenu changing setting and To Press + or - into this menu.

1. Press + or - to adjust the setting.
2. Press AUTO to return back Main Menu.

3.11 OSD menu and operation menu introduction

Press the MENU to call out the OSD menu (main menu), please see the illustration as below:



With + or - to select the desired items, and then press the MENU button for adjustment, with + or - button to adjust the display items to optimum, press again for confirmation and exit adjustment.

Color adjust menu

Brightness: use + or - to adjust the brightness to optimum.

Contrast: use + or - to adjust the contrast to optimum.. **Exit:** back to previous menu.



Picture adjustment menu

H-position adjustment: use + or - to adjust the horizontal position to optimum. **V-**

position adjustment: use + or - to adjust the vertical position to optimum. **Phase**

adjustment: use + or - to adjust the focus and definition to optimum. **Clock**

adjustment: use + or - to adjust the clock image display to track stability.

Sharpness: 1 2 3 4 5 6

Exit: back to previous menu.

	1440*90	60Hz
Colour	0	
Function		
OSD Menu		
Misc	Sharpness	
Exit	Exit	

Function:
Auto Adjust
Auto Colour
Exit



OSD Tool Adjustment Menu :

OSD H-position adjustment: use + or - to adjust the Horizontal position.

OSD V-position adjustment: use + or -to adjust the Vertical position.

OSD Timer:

ON OFF

Exit: back to previous menu.



MISC.:

Mode select 4:3 16:9

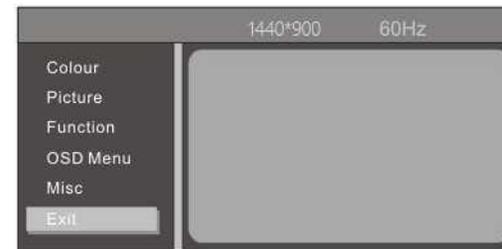
Reset YES NO

Volum

Exit



Exit



Exit: exit OSD menu

3.2 OSD two (option)

3.1 Power on-off switch

This key is digital control, working by slightly touch, used for turn on or turn off the display power supply.

3.2 Indicator light

When monitor is working normally , the indicator light looks green (or blue), when the monitor is under electricity saving, the indicator light looks red or extinct, when power off, the indicator light will extinct, but the adapter still under the power-on condition, in view of safety, should cut off the adapter power supply.

3.3 Function keys

3.3.1 AUTO/SELECT key

When with only VGA mode: without OSD menu, this key is used to auto-adjust, to adjust the geometrical setting to best condition. Under OSD menu, this key is use as confirmation. Under VGA+DVI mode, this key is used to switch the signal between VGA and DVL

3.3.2 +/- or >/< key

Under OSD menu, these two keys are used for scan and select menu from left or right, meanwhile adjust the volume. When under without menu condition, if the monitor either without audio signal, -/< Can used as shortcut key of brightness; if the monitor with audio signal function, +/- or >/< only used for adjusting volume.

3.3.3 MENU key

Menu key , used for enter into menu and exit from menu.

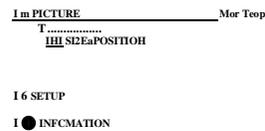
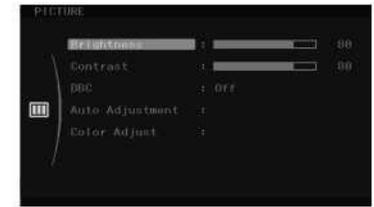
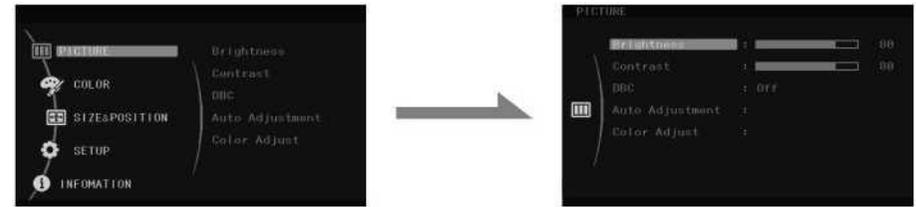
3.4 OSD menu

3.4.1 main menu

Item: 1. Color adjusting; 2. Picture adjusting; 3. Auto-adjusting; 4. Item adjusting;
5. Others; 6. Exit

3.4.2.submenu

Item: 1 .brightness 2.contract ratio 3.auto image adjustment 4.auto color adjustment 5.color temp
6.red 7.green 8.blue 9.Aspect ratio 10.H-position 11.V- position 12.clock 13.phase
14.language 15.Menu H- position 16.Menu V-position 17.OSD timer 18.reset



TECHNICAL SPECIFICATION



display information of the monitor



- Text
- Game
- Internet
- Sport
- DCR

switch the display model



Color Adjust



Auto Adjustment



The monitor will be shown out of range if the monitor exceed the max resolution

TECHNICAL SPECIFICATION

main menu	submenu	function
picture	brightness	adjust the brightness of the monitor
	contract ratio	adjust the contract ratio of the monitor
	auto image adjustment	Auto adjust the position of the picture
	auto color adjustment	Auto adjust the color of the picture
color	color temp	Choose the color temp., users can set the color temperature by themselves
	red	User can adjust this when set the color temp
	green	
	blue	
size and position	Aspect ratio	switch aspect ratio of the picture
	H-position	adjust the horizontal position of the picture
	V- position	adjust the vertical position of the picture
	clock	adjust the picture's time and pulse
	phase	adjust the phase of the pictures
Setup	language	adjust OSD language
	Menu H- position	adjust up and down of the OSD menu
	Menu V-position	adjust size of the OSD menu
	OSD timer	The time disappeared after completion
	reset	reset all functions of the monitor
information		display information of the monitor

3.3 Safeguard

When the video signal of your computer exceeds the frequency range of monitor (refer to product specification), the micro-computer of monitor will turn off the sync

signal of horizontal and vertical for the purpose of monitor protection, please refer to the illustration below. The monitor will enter saving mode after few seconds, and the power indicator will light red. Please set the output frequency of your computer within the acceptable range of monitor so that the monitor can work normally.



3.4 Setting of display mode

With standard VESA and DDC function, the monitor will scan frequency, output power, performance etc and transfer to PC after turning on when you use the video card with VESA DDC1/2B function. And it will identify the connection mode of display and select the proper resolution.

The preset mode before leaving factory is as below:

Mode	Resolution	Horizontal(KHz)	Vertical(Hz)
1	640x400	31.469	70.087
2	640x480	31.469	59.940
3	640x480	37.861	72.809
4	640x480	37.500	75.000
5	720x400	31.469	70.087
6	800x600	35.156	56.250
7	800x600	37.879	60.317
8	800x600	48.077	72.188
9	800x600	46.875	75.000
10	1024x768	48.363	60.004
11	1024x768	56.476	70.069
12	1024x768	58.038	71.918
13	1024x768	60.023	75.029
14	1024x768	48.019	60.000
15	1024x768	47.700	60.000
16	1152x864	67.500	75.000
17	1280x800	49.702	74.900
18	1280x800	62.795	60.000
19	1360x768	47.700	60.000
20	1280X1024	47.700	60.000
21	1440X900	55.000	60.000
22	1600X900	60.000	60.000
23	1680X1050	62.000	60.000
24	1920X1080	65.000	60.000

product specification

products size	15.6:6:09	17.0 ^H :04:03	19.0 ^w :04:03	19.0 " 16:10	22 ^{ff} :16:10
display style	Active matrix TFT				
display size	469.9mm	431.8mm	482.6mm	482.6mm	558.8mm
pixel pitch	0.255*0.255mm	0,2640264mm	0.29r0.294mm	0.285*0.285mm	0.282*0.282mm
Horizontal Viewing angle	160	160	160	160	160
Vertical Viewing angle	150	150	150	150	150
max brightness	250cd/m ²	400cd/m ²	300cd/rrf	300cd/m ²	450cd/m ²
dynamic contrast ratio	5000:1	5000:1	8000:1	8000:1	10000:1
response time	8ms	5ms	5ms	5ms	5ms
standard resolution	1366*768	1280M024	1280*1024	1440*900	1680*1050
video input	RGB Analog 15 pin D-sub or DVI-D(option)				
signal input	H/V TTL, analog 0.7Vpp+singal /75 Q				
Horizontal frequency	64.000KHZ	64.000KHZ	64.000KHZ	55.935KHZ	65.100KHZ
Vertical frequency	60.0Hz	60.0Hz	60.0Hz	59.8Hz	60.0Hz
H-size of picture	344.2mm	341.9mm	380.2mm	410.4mm	473.8mm
V- size of picture	193.5mm	274.4mm	305.0mm	260.5mm	300.1mm
power supply	AC100-240V, 50/60HZ, 1.5A				
working environmental temperature	5°-40°0				
storage environmental temperature	-20°C-60/4				
Operation relative humidity	10%-85%				
power consumption	25W	28.5W	29.5W	32.5W	34.8W
standby power consumption	1W	0.63W	0.67W	0.68W	0.70W
weight(N.W.)	2.8Kg	3.5Kg	3.8Kg	4.0Kg	5.0Kg
weight(G.W.)	3.5Kg	4.6Kg	5.0Kg	5.2Kg	6.5Kg
Packing dimension (L*H*W)	420*110*397	436*138*431	460*145*478	488*370*125	570*433*128
safety standard	GB4943-2001				
Energy Efficiency Grade	grade 2		grade 2	grade 2	grade 3

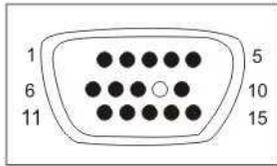
product specification

products size	18.5" 16:9	20" (T 16:9)	21.5" 16:9	23" (T 16:9)	23.6" 16:9
display style	Active matrix TFT				
display size	469.9mm	508.0mm	546.1mm	584.2mm	599.4mm
pixel pitch	0.300, 0.300mm	0.277*0.277mm	0.248*0.248mm	0.265*0.265mm	0.271 *0271mm
Horizontal Viewing angle	160	160	160	160	160
Vertical Viewing angle	150	150	150	150	150
max brightness	300cd/m,	300cd/nf	450cd/m ²	450cd/m ²	450cd/m ²
dynamic contrast ratio	8000:1	8000:1	10000:1	10000:1	10000:1
response time	5ms	5ms	2ms	2ms	2ms
standard resolution	1366*768	1600*900	1920*1080	1920*1080	1920, 1080
video input	RGB Analog 15 pin D-sub or DVI-D(option)				
signal input	H/V TTL, analog 0.7Vpp+singal /75 Q				
Horizontal frequency	47.700 KHz	55.900 KHz	67.200 KHz	67.200KHZ	67.200KHZ
Vertical frequency	60.0 Hz	60.0 Hz	60.0 Hz	60.0 Hz	60.0 Hz
H-size of picture	409.8mm	442.8mm	477.5mm	509.8mm	521.3mm
V- size of picture	230.4mm	249.1mm	268.5mm	286.7mm	293.2mm
power supply	AC100-240V, 50/60HZ, 1.5A				
working environmental temperature	5° C-40P				
storage environmental temperature	-20°-60°				
Operation relative humidity	10%-85%				
power consumption	28.5W	36.8W	37.8W	42.0W	43.0W
standby power consumption	0.56W	0.65W	0.68W	0.72W	0.72W
weight(N.W.)	3.5Kg	4.0Kg	4.5Kg	5.3Kg	5.3Kg
weight(G.W.)	4.5Kg	5.2Kg	6.1Kg	6.7Kg	6.7Kg
Packing dimension (L*H*W)	488*370*125	530*123*381	570*433*128	618*413*130	618*413*130
safety standard	GB4943-2001				
Energy Efficiency Grade	grade 2	grade 2	grade 3	grade 3	grade 3

product specification

products size	15.6" LED 16:9	17.3" LED 16:9	18.5" LED 16:9	19" LED 16:10	22" LED 16:10
display style	Active matrix TFT plus LED backlight				
display size	396.2mm	439.4mm	469.9mm	482.6mm	558.8mm
pixel pitch	0.252mm	0.239mm	0.3mm	0.283mm	0.282mm
Horizontal Viewing angle	90	90	170	170	170
Vertical Viewing angle	50	50	160	160	160
max brightness	250cd/m ²	250cd/m ²	300cd/m ²	300cd/m ²	300cd/m ²
dynamic contrast ratio	5000:1	5000:1	8000:1	8000:1	8000:1
response time	8ms	8ms	5ms	5ms	5ms
standard resolution	1366*768	1600*900	1366*768	1440*900	1680*1050
video input	RGB Analog 15 pin D-sub or DVI-D(option)				
signal input	H/V TTL, analog 0.7Vpp+singal /75 Q				
Horizontal frequency	47.700KHZ	55.900KHZ	47.700KHZ	55.935KHZ	65.100KHZ
Vertical frequency	60.0Hz	60.0Hz	60.0Hz	60.0Hz	60Hz
H- size of picture	344.2mm	382.1mm	409.8mm	408.2mm	473.7mm
V- size of picture	193.5mm	214.9mm	230.4mm	255.1mm	296.1mm
power supply	AC100-240V, 50/60Hz, 1.5A				
working environmental temperature	5°C-40°C				
storage environmental temperature	-20°C-60°C				
Operation relative humidity	10%-85%				
power consumption	8.2W	11W	12W	12W	18W
standby power consumption	0.5W	0.5W	0.5W	0.5W	0.5W
weight(N.W.)	1.39Kg	1.7Kg	3.5Kg	4.0Kg	5.0Kg
weight(G.W.)	2.2KG	2.7Kg	4.5Kg	5.2Kg	6.5Kg
Packing dimension (L*H*W)	440*370*130	488*370*125	488*370*125	488*370*125	570,433,128
safety standard	GB4943-2001				

4.2 Pin assignment of signal cable



Pin	Signal(D-sub)	Pin	Signal(D-sub)
1	Red	9	DDC Power
2	Green	10	Ground
3	Blue	11	Ground
4	Ground	12	SDA(FOR DDC)
5	Test Cont	13	H.sync
6	Red Ground	14	V. Sync
7	Green Ground	15	SCL(FOR DDC)
8	Blue Ground		

4.3 Visual Inspection

Even the normal pixels on the LCD screen reach 99.99% or higher, there may be 0.01% or less pixels showing dark or light while displaying.

5. Troubleshooting I

If your monitor cannot work normally, please refer to the follow methods for common problems quickly, if you need assistance; please call the dealer where you purchased the Monitor.

A. There is no Screen Image/LED no light

Please check to see whether the power cord is securely connect to the monitor and wall outlet, and whether the display is in power saving mode.

B. There is no Screen Image/LED light red

Please to see whether the display card of PC is loosed, and check the connection between signal cables and display.

C. The display is not clear or the image is too large or too small

Enter the OSD image adjustment menu, and then select "Auto Adjust" to make the display to adjust automatically to optimum.

D. The image is too light or too dark

Enter the OSD brightness adjustment menu, and then select the "Up/Down " To adjust the brightness and contrast to optimum.

E. The screen is overheated

Please keep at least 5cm around the display for ventilation, and do not place anything onto the monitor.

F. Dark display after power on/ facula

This is normal. Due to the temperature difference, the backlight will not give out light equably at the beginning of powering on, but the backlight lamp will come to normal work after 20 minutes, the darkness and facula will disappear at this time.

G. The image is distorted to flash and shake

Check the set of computer and choose the proper resolution, then readjust and renovate the resolution.

H. The color is abnormal

Check the connection of signal cable, if there is any curved or broken pin, please replace it; Enter the OSD color adjustment menu to set the display color to the optimum.

6. Operation Warranty

We appreciate you very much for your choice of our monitors. In order to guarantee the good quality, all the monitors have been checked strictly before they leave factory.

On behalf of our company, we promise you a good quality and completion of monitor components. If there appears any operation problem, please contact us in time to arrange the reparation

In case of the following conditions,the operation warranty will not work:

- 1 .The monitor is damaged by wrong operation,accident of natural disaster;
2. The monitor has been fixed or re-equipped by other company Technicians;
3. The Series NO.has been changed or eliminated;
4. The monitor has not been equipped in accord with the directions provided .

CERTIFICATE

Commodity :

Production Date : ----- _

Tester Stamp : -----

Through the test of Quality Control Department in our company, the product has been proved that the function parameter has reached the technique criteria. They are permitted to leave factory.