

TTX – T9154PSNNFxxxx



User Guide

Version 7.6

The specification is subject to change without notice. Manufacturer assumes no responsibility for Error Contained here in



IMPORTANT SAFETY INSTRUCTIONS

1. Please read these instructions carefully before using the product and save for later reference.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Clean the product with a damp soft cloth. Do not use liquid or aerosol cleaners as it may cause permanent damage to the screen.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not disregard the purpose of the grounding-type plug.
9. Do not allow anything to rest on the power cord. Do not place this product where persons might step on the cord.
10. If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord ampere rating. Also make sure that the total of all products plugged into the wall outlet does not exceed 15 amps.
11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
12. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks and will void the warranty. Refer all servicing to qualified service personnel.
13. Unplug this product 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 frayed.
- b. If liquid has been spilled into the product.
- c. If the product has been exposed to rain or water.
- d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
- e. If the product has been dropped or the cabinet has been damaged.
- f. If the product exhibits a distinct change in performance, indicating a need for service.

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1. Introduction

1-1 About the Product

This product is a microprocessor-controlled, 15" XGA TFT color POS LCD monitor. It is designed to meet the demanding performance requirements of today's business and industrial applications.

1-2 Notice

1. Do not touch the LCD panel surface with sharp or hard objects.
2. Do use abrasive cleaners, waxes or solvents for cleaning, use only a dry or damp, soft cloth.
3. Use only with a high quality, safety-approved, AC/DC power adapter.

1-3 Check List

Before using this POS LCD monitor, please make sure that all the items listed below are present in your package:

- POS LCD monitor
- Accessory Box containing:

1. Power cord	x1
2. User manual	x1
3. DVI cable (optional)	x1
4. Touch screen driver CD (optional)	x1
5. RS232 cable (optional)	x1
6. Audio cable (optional)	x1

If any items are missing or damaged, please contact your dealer immediately.

2. Installing the POS LCD Monitor

The procedures for setting up your POS LCD monitor are as follows:

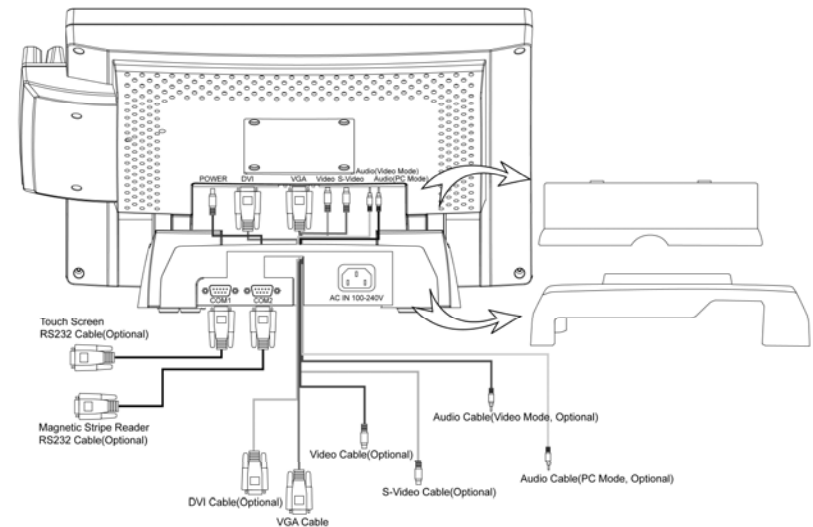
2-1 Power & Signal Connections

2-1-1. Power cable connection:

Connect the power cord to the AC outlet and the POS LCD monitor.

2-1-2. Signal cable connection:

Plug one end of the VGA cable or DVI cable to PC and the other end to the POS LCD monitor. Secure the connectors with the screws on the cable connector.



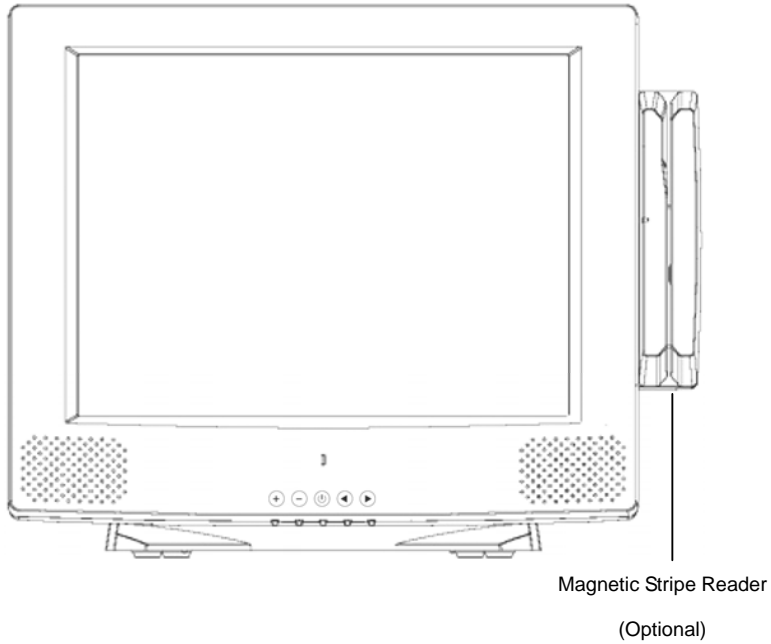
2-2 Optional Connections:

The POS LCD monitor is designed to work with a variety of compatible video sources. Due to possible deviations between these video sources, you may have to make some adjustment to the monitor settings when switching between these sources. These adjustments are made from the OSD menu.

3. Using POS LCD monitor

3-1 Control Functions

The POS LCD monitor controls are located on the lower bottom side of the panel. They are shown in the figure below and described in the following paragraphs.




3-2 Key Definition

1. MENU ◀/▶

Use this key to select the function you would like to adjust.

2. ADJUST +/−

Use this key to adjust the selected function for optimal viewing.





3. POWER SWITCH 

Use the power switch to turn the power ON or OFF. We recommend turning your PC system power on first, then the POS LCD monitor.

4. Power on LED

Indicates when the power is in the ON position.

The Control Key Description

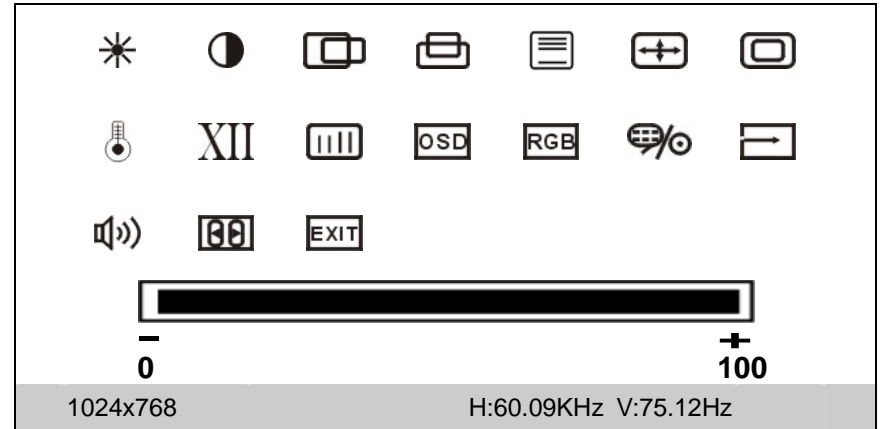
1. MENU : Press  to have manual screen.
2.  : Move to the previous item.
3.  : Move to the next item.
4. + : Adjust UP.
5. − : Adjust DOWN.
6.  : Power Switch







The Hot key Description (Before the OSD screen coming)



1. ◀/+ : Press the two buttons simultaneously to change input channel.
2. ◀ : Auto adjust function
3. ▶ : OSD manual recall

3-3 Main OSD Screen



-  **BRIGHTNESS**
Adjust the screen brightness. Press "+" to increase or "-" to decrease.
-  **CONTRAST**
Adjust the contrast of the screen. Press "+" to increase or "-" to decrease.
-  **H-POSITION**
Push to move the image to the left or right on the screen.
-  **V-POSITION**
Push to move the image up or down on the screen.
-  **CLOCK**
Push to increase or decrease the Horizontal screen size (not available).
-  **AUTO**
Press "+" or "-" to have the monitor logic choose the best settings for the current input signal.

 **WHITE BALANCE**

Press to adjust "+" or "-" to set RGB signal voltage level.

 **COLOR TEMPERATURE**

Adjust "+" or "-" to set the color temperature

- **USER:** Use this function to set a color temperature to suit your own preference.
- **9300K:** Push to set monitor for the CIE coordinate 9300 color temperature
- **6500K:** Push to set monitor for the CIE coordinate 6500 color temperature
- **5500K:** Push to set monitor for the CIE coordinate 5500 color temperature

XII GAMMA

Press "+" or "-" to turn the GAMMA Function On/Off

 **PHASE**

Press "+" or "-" button to adjust the PHASE control. Phase adjustment may be required to optimize the display quality.

 **TRANSPARENT**

Press "+" or "-" to adjust the OSD background color to be brighter or weaker in color.

 **ADC ADJUST**

Press "+" or "-" to enter the ADC control manual for Green Color Gain, Blue Color Gain, Red Color Gain, and Color Contrast adjustment.

 **CHANNEL**

Press "+" or "-" to change the input to the S-Video, Video or DVI mode.

 **RECALL**

Press "+" or "-" to RECALL the factory default settings.

 **SPEAKER ON/OFF (Optional)**

Speaker ON/OFF selection.

















 **VOLUME (Optional)**

Press "+" or "-" to adjust volume of speaker.

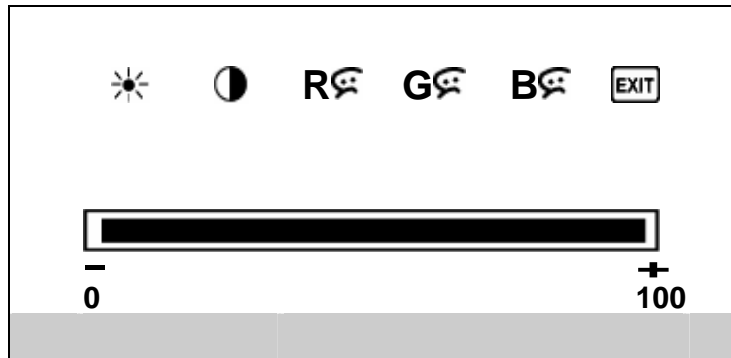
 **EXIT**

Press "+" or "-" to EXIT the OSD MENU.

Summary

	BRIGHTNESS: Press "+" or "-" to adjust.
	CONTRAST: Press "+" or "-" to adjust.
	H-POSITION: Move the screen to the left or right side.
	V-POSITION: Move the screen up or down.
	CLOCK: To adjust the Horizontal screen size.
	AUTO ADJUST: To find the optimal screen settings.
	WHITE BALANCE: White Balance value adjust.
	COLOR TEMPERATURE: Color Temperature settings.
XII	GAMMA: Gamma value adjust.
	PHASE: Adjust horizontal phase for optimal display quality.
	TRANSPARENT: OSD Transparent adjustment.
	ADC CONTROL: Color degree adjustment.
	CHANNEL: Change to the S-video, AV-video and DVI mode.
	RECALL: Press "+" or "-" to reset the factory default settings.
	SPEAKER ON/OFF: Speaker volume on/off selection.
	VOLUME: Adjust speaker volume.
	EXIT: To exit from the OSD function.

3-4 ADC ADJUST

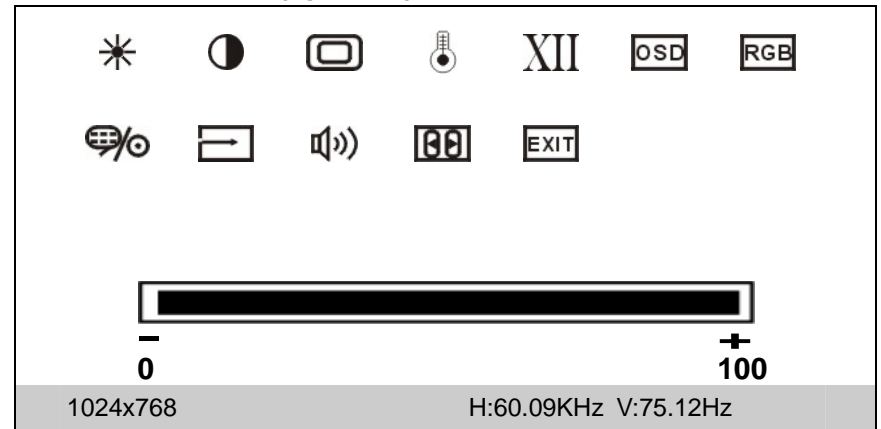


- BRIGHTNESS**
Adjust the screen brightness with the inverter voltage level. Press "+" to increase or "-" to decrease.
- ADC CONTRAST**
Adjust the contrast by pressing "+" or "-".
- RED GAIN**
Push to adjust the RED gain level by "+" or "-".
- GREEN GAIN**
Push to adjust the GREEN gain level by "+" or "-".
- BLUE GAIN**
Push to adjust the BLUE gain level by "+" or "-".

Summary

	BRIGHTNESS: Adjust the screen brightness.
	ADC CONTRAST: Press "+" or "-" to adjust.
	RED GAIN: Adjust the Red color gain.
	GREEN GAIN: Adjust the Green color gain.
	BLUE GAIN: Adjust the Blue color gain.

3-5 DVI Channel (optional)



- BRIGHTNESS**
Press "+" to increase or "-" to decrease the brightness.
- CONTRAST**
Press "+" to increase or "-" to decrease the contrast.
- WHITE BALANCE**
Press "+" or "-" to enable auto adjust white balance function.
- COLOR TEMPERATURE**
Press "+" or "-" to set the color temperature
USER: Use this function to set a proper color temperature.
9300K: Push to set monitor for the CIE coordinate 9300 color temperature
6500K: Push to set monitor for the CIE coordinate 6500 color temperature
5500K: Push to set monitor for the CIE coordinate 5500 color temperature
- XII GAMMA**
Press "+" or "-" to adjust GAMMA Function.
- TRANSPARENT**
Press "+" or "-" to adjust the OSD background color.
- ADC ADJUST**
Press "+" or "-" to enter the ADC control manual for Brightness, Contrast, Red Color Gain, Green Color Gain and Blue Color Gain adjustment.

 **CHANNEL**

Press "+" or "-" to change the input to the Analog, S-Video or Video channel.

 **RECALL**

Press "+" or "-" to RECALL the factory default settings.

 **SPEAKER ON/OFF (Optional)**

Speaker ON/OFF selection.












 **VOLUME (Optional)**

Press "+" or "-" to adjust volume.

 **EXIT**

Press "+" or "-" to EXIT the OSD MENU.

Summary

	BRIGHTNESS: Press "+" or "-" to adjust.
	CONTRAST: Press "+" or "-" to adjust.
	WHITE BALANCE: White Balance value adjust.
	COLOR TEMPERATURE: Color Temperature settings.
XII	GAMMA: Gamma value adjust.
	TRANSPARENT: OSD Transparent adjustment.
	ADC ADJUST: Color degree adjustment.
	CHANNEL: Change to the S-Video, AV-Video or Analog mode.
	RECALL: Press "+" or "-" to recall the factory default settings.
	SPEAKER ON/OFF: Speaker volume on/off selection.
	VOLUME: Adjust speaker volume.
	EXIT: To exit the OSD menu.

3-6 AV/S Video Mode (optional)



 **BRIGHTNESS**

Adjust the brightness level by pressing "+" or "-".

 **CONTRAST**

Adjust the contrast by pressing "+" or "-".

 **SHARPNESS**

Increase/Decrease sharpness. This function allows the user to optimize the sharpness of the image.

 **SATURATION**

Increase/Decrease color degree level.

 **HUE**

The hue is defined as a phase shift of the sub-carrier with respect to the burst. Use this function to obtain the desired color settings.

XII GAMMA

Press "+" or "-" to adjust the gamma value.

 **CHANNEL**

Press "+" or "-" to select the input mode for VGA channel, S-Video channel or DVI channel.









 **SPEAKER ON/OFF (Optional)**

Press on/off for selecting speaker volume on or off.

 **EXIT**

Press "+" or "-" to exit the OSD function.

Summary:

	BRIGHTNESS: Press "+" or "-" to adjust.
	CONTRAST: Adjust RGB contrast values.
	SHARPNESS: Increase/Decrease sharpness.
	SATURATION: Increase/Decrease Chroma Blue Gain.
	HUE: To obtain the desired Color settings.
XII	GAMMA: Gamma value setting.
	CHANNEL: Change to S-Video, VGA and DVI mode.
	SPEAKER ON/OFF: Speaker volume on/off.
	EXIT

4. Specifications

Item	Specification	
Display Area	304.1(H)x228.1(V)x(15.0-inch diagonal)	
Resolution	1024(H) x 768(V)	
Pixel Pitch (mm)	0.297(H) x 0.297(V)	
Number of Colors	262,144 colors (6bit) at least	
Contrast Ratio	400:1	
Backlight Unit	2 replaceable CCFL's edge-light (top/bottom)	
Brightness (cd/m ²)	250(cd/m ²) (Typical.)	
Viewing Angle	-60° ~ 60° (H) , -40° ~ 60° (V) (Typical)	
Magnetic Stripe Reader (optional)	Type	Triple track
	Function	Read
	Interface	RS232
	Speed	100-1000mm/sec
	Recording Method	F2F(FM)
	Lift Cycle	300,000 passes
	Voltage	+5V
	Standard	ISO 7810-7813
Environmental	Operating: temperature:0°C ~+ 50°C (32°F ~ 122°F) humidity 10-85 % maximum Storage: temperature: -20°C ~ +60°C (-4°F ~ 140°F) humidity10-90 % maximum	
Power source	AC100-240V Universal, ±10%	
I/O Connectors	DC power in, VGA 15-pin D-sub, (optional) AV-connector, S-video connector, DVI connector	
Safety/Regulations	C-UL,UL,FCC,CE	
Weight	5.8 kg	

Dimension(mm)	With magnetic card reader 4290(W)x3385(H)x1056(D)
	Without magnetic card reader 4290(W)x3385(H)x1056(D)

Specifications are subject to change with out notice

The LCD Products listed on this document are not suitable for use in aerospace, submarine, nuclear reactor control systems or life support systems. If customers intend to use these LCD products for this type of mission critical applications they should contact our sales department for further input.

Suitable applications include, but are not limited to, the following: Computer and Office equipment, Communications equipment, Test and Measurement equipment, Machine tools, Industrial robots, Audio and Visual equipment.

5. Cleaning the POS LCD Monitor

1. Make sure the monitor is turned off.
2. Never spray or pour any liquid directly onto the screen or case.
3. Wipe the screen with a clean, soft, lint-free cloth. This removes dust and other particles.
4. The display area is highly prone to scratching. Do not use ketone type material (e.g. Acetone), Ethyl alcohol, toluene, ethyl acid or Methyl chloride to clear the panel. It may permanently damage the panel and void the warranty.
5. If it is still not clean enough, apply a small amount of non-ammonia, non-alcohol based glass cleaner onto a clean, soft, lint-free cloth, and wipe the screen.
6. Don't use water or oil directly on the monitor. If droplets are allowed to dry on the monitor permanent staining or discoloration may occur.

6. Disclaimer

We do not recommend using any ammonia or alcohol-based cleaners on the monitor screen or case. Some chemical cleaners have been reported to damage the screen and/or case of the monitor. The manufacturer will not be liable for damage resulting from the use of any ammonia or alcohol-based cleaner.

7. Trouble shooting

If your POS LCD monitor fails to operate correctly, consult the following chart for possible solution before calling for repairs:

Condition	Check Point
1. The picture does not appear	<ul style="list-style-type: none"> ● Check if the signal cable is firmly seated in the socket. ● Check if the Power is ON at the computer ● Check if the brightness control is at the appropriate position, not at the minimum.
2. The screen is not synchronized	<ul style="list-style-type: none"> ● Check if the signal cable is firmly seated in the socket. ● Check if the output level matches the input level of your computer. ● Make sure the signal timings of the computer system are within the specification of the monitor. ● If your computer was working with a CRT monitor, you should check the current signal timing and turn off your computer before you connect the VGA Cable to this monitor.
3. The position of the screen is not in the center	<ul style="list-style-type: none"> ● Adjust the H-position, and V-position, or Perform the Auto adjustment.
4. The screen is too bright (too dark).	<ul style="list-style-type: none"> ● Check if the brightness or contrast control is at the appropriate position, not at the Maximum (Minimum).

5. The screen is shaking or waving	<ul style="list-style-type: none"> ● Press " ◀ " (the Auto - adjustment control) to adjust. Moving all of objects which emit a magnetic field such as a motor or transformer, away from the monitor. Check if the specific voltage is applied. ● Check if the signal timing of the computer system is within the specification of the monitor.
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If you are unable to correct the fault by using this chart, stop using your monitor and contact your distributor or dealer for further assistance.

8. Appendix A:

Compatible modes:

The display has been designed to be compatible with a variety of computers. The table below describes the display timing of the compatible modes.

8-1 Video Input Format

Input mode	Resolution	Zoom to 640X480	Zoom to 800X600	Zoom to 1024X768
XGA	1024x768	Scale down	Scale down	1:1
SVGA	800x600	Scale down	1:1	Scale up
VGA	640x480	1:1	Scale up	Scale up
DOS(TEXT)	640x400	Scale up	Scale up	Scale up
DOS(EGA)	640x350	Scale up	Scale up	Scale up
TEXT	720x400	640X400 mode	Scale up	Scale up
NTSC	720x(240x2)	De-interlaced	De-interlaced	De-interlaced
PAL	720x(288x2)	De-interlaced	De-interlaced	De-interlaced

8-2 Composite Video Input; Y/C Video (S-Video) input (optional)

Video Format	Resolution	Frequency	Country Support
NTSC-M	525X60	3.58MHZ	U.S., Japan, may others
PAL	625X50	4.43MHZ	China, Europe, may others

9. Appendix B:

9-1 Separate RGB Video Signal (VGA) Input Timing

Input Timing Range: H : 30-80KHz; V : 50-75Hz

Mode	Resolution	H-Freq.(KHz)	V-Freq.(Hz)
Model 1	640x350	31.47	70
Model 2	640x400	31.47	70
Model 3	640x480	31.47	60
Model 4	640x480	37.86	72
Model 5	640x480	37.5	75
Model 6	720x400	31.47	70
Model 7	800x600	35.15	56
Model 8	800x600	37.87	60
Model 9	800x600	48.07	72
Model 10	800x600	46.87	75
Model 11	1024x768	48.36	60
Model 12	1024x768	56.47	70
Model 13	1024x768	60.02	75

9-2 DVI Input Timing

Input Timing Range: H : 31.47-48.36KHz; V : 60Hz

Mode	Resolution	H-Freq.(KHz)	V-Freq.(Hz)
Model 1	640x480	31.47	60
Model 2	800x600	37.87	60
Model 3	1024x768	48.36	60