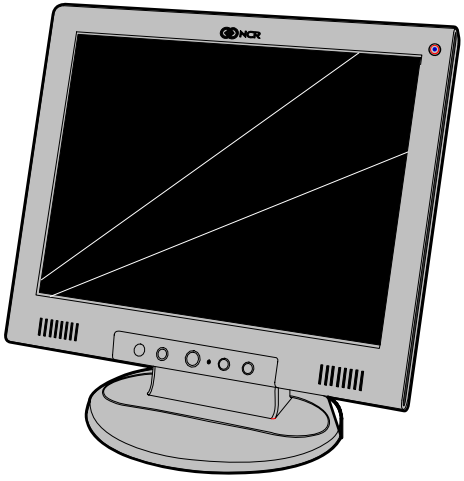
NCR 5942 15-Inch LCD Monitor

Release 1.0

User's Guide



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Issue B

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Preface

This manual is designed to assist users in setting up and using the LCD Monitor. Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice.

Safety and Regulatory Information

The NCR RealPOS 5942 conforms to all applicable legal requirements. To view the compliance statements see the *NCR RealPOS Peripherals Safety and Regulatory Statements* (B005-0000-1701).

Table of Contents

Revision Record

Issue	Date	Remarks
A	Dec 2003	First Issue
B	Jan 2009	Added 5942-7xxx models

Chapter 1: Installation

Important Safety Instructions

Please read the following instructions carefully. This manual should be retained for future use.

1. To clean LCD Monitor screen;
   -- Power off LCD Monitor and unplug the AC Cord.
   -- Spray a non-solvent cleaning solution onto a rag.
   -- Gently clean the screen with dampened rag.
2. Do not place the LCD Monitor near a window. Exposing the monitor to rain water, moisture or sunlight can severely damage it.
3. Do not apply pressure to the LCD screen. Excess pressure may cause permanent damage to the display.
4. Do not remove the cover or attempt to service this unit by yourself. Servicing of any nature should be performed by an authorized technician.
5. Store LCD Monitor in a room with a room temperature of -20° ~ 60°C (or -4° ~ 140°F). Storing the LCD Monitor outside this range could result in permanent damage.
6. If any of the following occurs, immediately unplug your monitor and call an authorized technician.
   - Monitor to PC signal cable is frayed or damaged.
   - Liquid spilled into LCD Monitor or the monitor has been exposed to rain.
   - LCD Monitor or the case is damaged.

Model Numbers

Major Model	CPU
5942-6000	15” Active Matrix Color LCD Display, Remote Mount, High Brightness, (G11)
5942-6100	15” Active Matrix Color LCD Display, Remote Mount, High Brightness, (CG1)
5942-7000	15” Active Matrix Color LCD Display, Remote Mount, High Brightness, Detachable VGA Cable, (G11)
5942-7100	15” Active Matrix Color LCD Display, Remote Mount, High Brightness, Detachable VGA Cable, (CG1)

Unpacking

Before unpacking the LCD Monitor, prepare a suitable workspace for your Monitor and computer. You need a stable and clean surface near a wall power outlet. Make sure that LCD Monitor has enough space around it for sufficient airflow. Though the LCD Monitor uses very little power, some ventilation is needed to ensure that the Monitor does not become too hot.

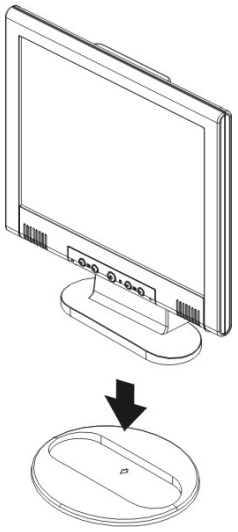
After you unpack the LCD Monitor, make sure that the following items were included in the box:

- LCD Monitor
- User's Manual
- Monitor-to-PC signal Cable
- Power Cord
- Stereo Jack Audio Cable
- Base

If you find that any of these items is missing or appears damaged, contact NCR immediately.

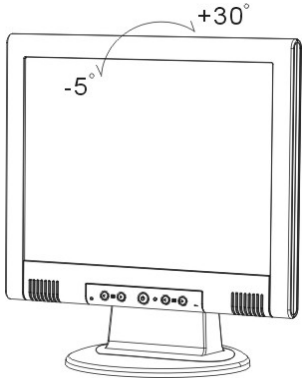
LCD Monitor and Base

Connect the LCD Monitor to the base.



Adjustment

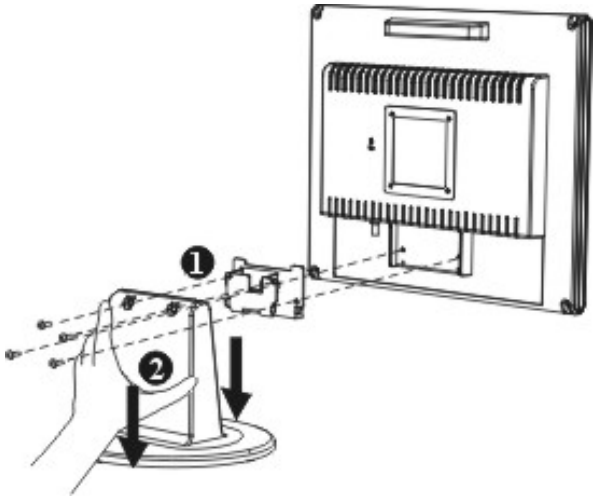
The LCD Monitor is designed to allow users to have a comfortable viewing angle. The viewing angle can be adjusted from -5°to +30°.



Warning: Do not force the LCD Monitor over its maximum viewing angle settings as stated above. Attempting this will result in damaging the Monitor and Monitor stand.

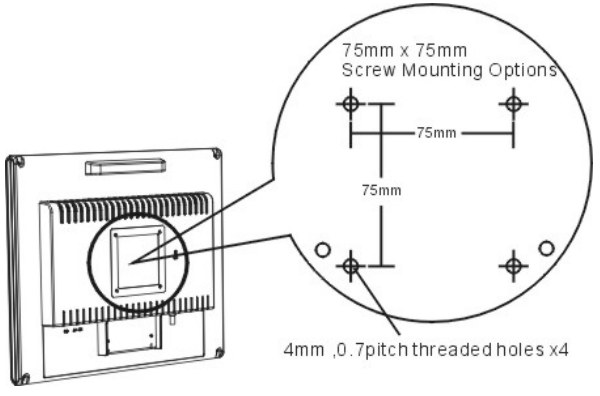
Detaching the Monitor from Its Stand

1. Remove the screws (2) from the hinge bracket ❶
2. Remove the stand from LCD monitor ❷



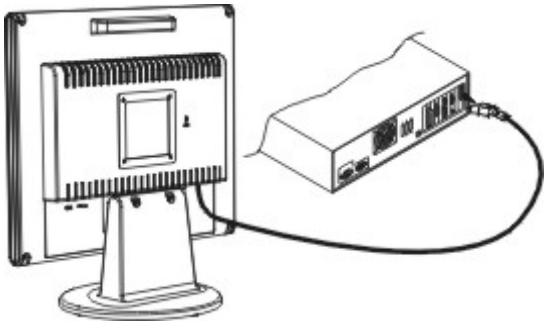
Interface for Arm Applications

The rear of the display has four integrated 4 mm, 0.7 pitch-threaded nuts, as well as four 5 mm access holes in the plastic covering, which meet the *VESA Flat Panel Monitor Physical Mounting Interface Standard* specifications (paragraphs 2.1 and 2.1.3, version 1, dated 13 November 1997).



Connecting the Display to the POS Terminal

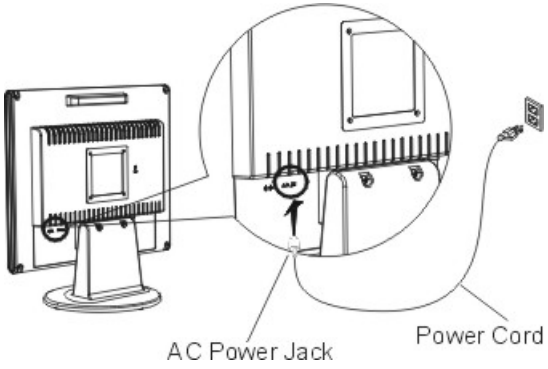
1. Power off the POS terminal.
2. Connect the signal cable to the VGA ports on the 5942 and the POS terminal.
3. Make sure the connections are secure.



Attention: This device must be connected to an off-the-shelf video cable in order to comply with FCC regulations. A ferrite-core interface cable is included in the LCD Monitor package. This device will not be in compliance with FCC regulations if a non-ferrite-core video cable is used.

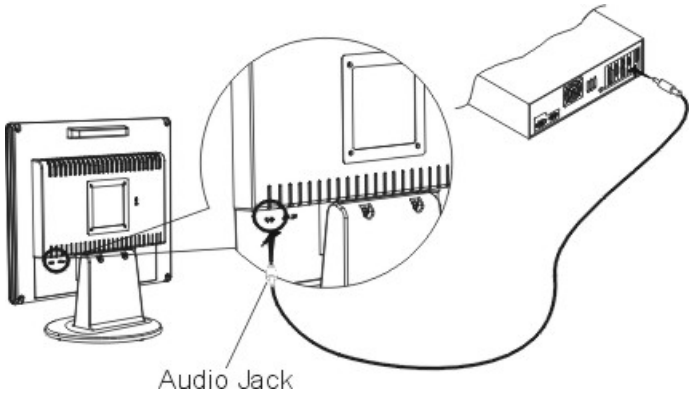
Connecting the AC Power

1. Connect the power cord to the 5942 AC Power Jack and to an AC power source.



Connecting the Audio Cable

1. Connect the audio cable to the Audio Jack the 5942 (Line In) and the POS terminal (Line Out).



Power Management System

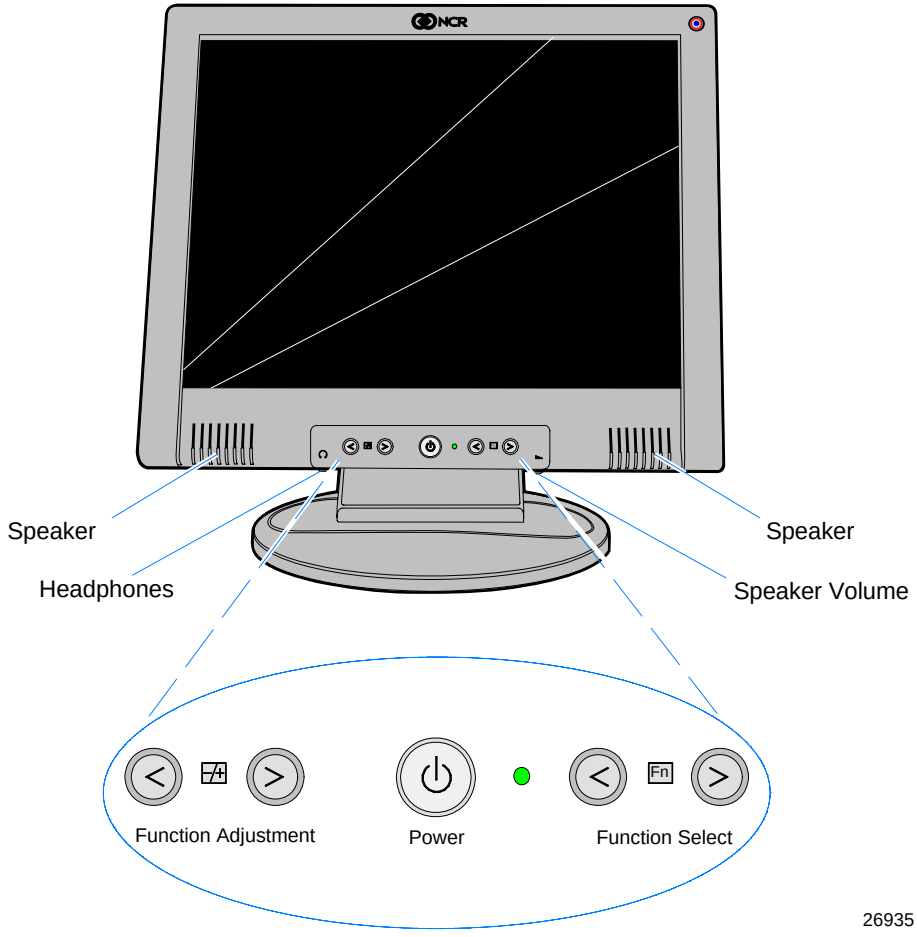
This LCD Monitor complies with the VESA DPMS (version 1.0) Power Management guidelines. The VESA DPMS provides four power saving modes through detecting a horizontal or vertical sync. signal.

When the LCD Monitor is in power saving mode, the monitor screen will be blank and the power LED indicator will light yellow.

Chapter 2: Display Controls

On Screen Display (OSD)

The OSD is accessed through four pushbuttons on the Fro0nt Bezel. These buttons provide a way to adjust display parameters of the unit.



Function Adjustment Buttons (<) (>)

Press the left button (<) to decrease the OSD function setting and press the right button (>) to increase the OSD function setting.

Function Select Buttons (<) (>)

Press either of these buttons to disply the OSD Menu. Then press the left (<) or right (>) button to navigate through the OSD Menu functions.

DC Power Switch

Press the power switch to turn the monitor ON/OFF.

DC Power-On Indicator

LED Green: Power is ON.

LED Yellow: Monitor is in "Power Saving Mode".

LED Off: Power is OFF.

Speakers

PC Audio Stereo Output

External Headphone Jack

Connect headphones or external speakers.

Note: The monitor speakers are disabled when using external headphones or external speakers.

Speaker Volume Control

Increase Volume: Turn knob clockwise.
Decrease Volume: Turn knob counter clockwise

Enabling the OSD Menus

The OSD Menus can be *Enabled* or *Disabled*. By default, they are disabled at the factory.

Enabling the OSD Menus (Unlocked)

Press and hold the Function Adjustment buttons (<) (>) and the Function Select (>) button for three seconds. A message is displayed indicating the *OSD Unlocked*.

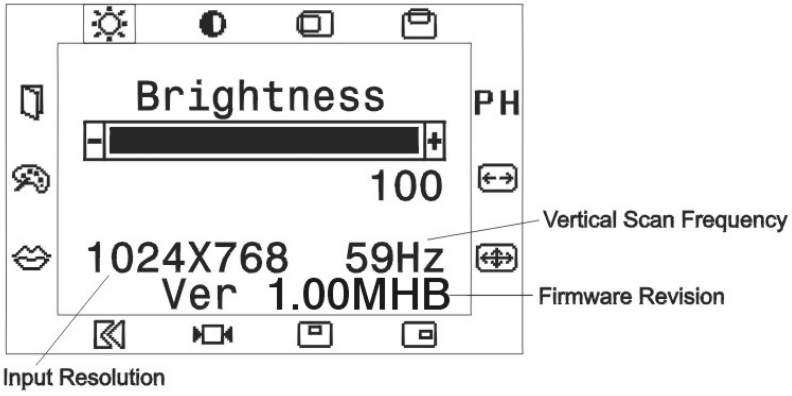
Disabling the OSD Menus (Locked)

Press and hold the Function Adjustment buttons (<) (>) and the Function Select (>) button for three seconds. A message is displayed indicating the *OSD Locked Out*.

Adjusting the Display

To access OSD Main menu, press one of the Function Select buttons and the menu diagram will be displayed.

Continue pressing the Function Select buttons to scroll through the entire menu of items. Then press the Adjustment buttons to adjust content of selected item.



Icon	Function	Function Description
	Brightness	This function increases or decreases the brightness of the image.
	Contrast	This function increases or decreases the difference between the dark and light color.
	H-Position	This function shifts the entire display image left or right.
	V-Position	This function shifts the entire display image up or down.
PH	Phase	A total of 32 scales (0 to 100) are available to adjust the focus and clarity of the display.
	Clock	This function carries a frequency tracking feature that offers the user to have better stability and clarity. Increasing Clock value can be up to +127 scales. The number of decreasing Clock (minus) is depend on the input timing.
	Auto Adjustment	This function will adjust the display size automatically to fit full screen.
	OSD H-Position	This function moves the OSD menu window left or right.
	OSD V-Position	This function moves the OSD menu window up or down.
	Graph Text	This function is to choose a display that allows maximum graphics text quality. The resolution selection can either be 640 x 400 or 720 x 400. Please refer to Chapter 3 " Standard Timing" Table for of different timing modes.

Icon	Function	Function Description
	Recall	The recall function will return all adjusted parameters to factory preset values.
	Language	Five OSD language options are available: English, German, French, Spanish and Italian. Press the left or right Adjustment Control button to select other language.
	Color Temperature	**Color Temp.:** Push the (+ -) button to select a different color temperature. Please see the diagram below for function and description.
	Save Exit	Saves the values of this setting and exits the OSD menu function.

Icon	Function	Description
9300	CIE coordinated Color	Sets the CIE coordinate color
SRGB	CIE coordinated Color	Sets the CIE coordinate color
User	Three colors (Red, Green, Blue) can be adjusted from the OSD menu	Sets the settings to a by user defined CIE Temperature.

Chapter 3: Technical Information

Specifications

LCD Panel	Hannstar
Size	15.0" (38 cm)
Display Type	Active matrix color TFT LCD
Resolution	1024 x 768
Display Dot	1024 x (RGB) x 768
Display Area (mm)	304 x 228 (H x V)
Display Color	262K
Brightness	250 cd/m2 (typical)
Contrast Ratio	400:1 (typical)
Response Time	35 ms (typical)
Lamp Voltage	750 Vrms (typical)
Lamp Current	6.0 mA rms. (typical)
Viewing Angle	Vertical: -55° ~ +45°
	Horizontal: -65° ~ +65°

Display Colors

16.7M with FRC or Dithering

Video

Input Signal:	Analog RGB 0.7Vp-p
Input Impedance:	75 Ohm ± 2%
Polarity:	Positive, Negative
Amplitude:	(0 - 0.7)-0.035V/+0.07V
Multi-mode:	Horizontal Frequency: 24 ~ 61 KHz
Supported:	Vertical Frequency: 55 ~ 75 Hz

Audio

Input:	500mVrms
Output:	1W+1W

Control

Power:	On/Off switch with LED indicator

OSD

Brightness:	Digital
Contrast:	Digital
Horizontal Position:	Digital
Vertical Position:	Digital
Phase:	Digital
Clock:	Digital
Display Mode Setup	Use EEPROM to save settings in memory
OSD Format:	20 characters x 9 rows

Power Management

MODE	POWER CONSUMPTION*	AC INPUT	LED COLOR
On	25W maximum	240 VAC	Green
Standby**	5W maximum	240 VAC	Yellow
Suspend**	5W maximum	240 VAC	Yellow
Off**	2W maximum	240 VAC	Yellow
DC Power Off	1W maximum	240 VAC	Dark
Disconnected	2W maximum	240 VAC	Yellow: Standby, Suspend, Off Dark: DC Power off

* Meeting VESA DPMS requirements measured from AC Input end of AC adapter.

** The status of standby, suspend and off don't include the power consumption of the audio components.

Sync Input

Signal:	Separate TTL compatible horizontal and vertical synchronization
Polarity:	Positive and Negative

Plug & Play

Supports VESA DDC1 and DDC2B functions.

External Connection

Power Input (AC input):	AC Socket
Video Cable:	15-pin D-sub connector
Audio Cable:	Stereo Jack

Environment

Operating Condition

Temperature:	5°C to 40°C/41°F to 104°F
Relative Humidity:	20% to 80%

Storage

Temperature:	-20°C to 60° C/-4°F to140° F
Relaive Humidity:	5% to 85%

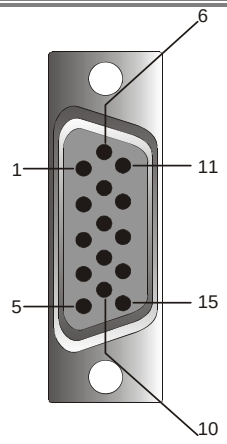
Power Supply (AC Input)

Input Voltage:	Single phase, 100 ~ 240VAC, 50 / 60 Hz
Input Current:	1.5 A maximum

Size and Weight

Dimensions:	353 (W) x 346 (H) x 204 (D) mm
Net Weight:	3 ± 0.3 kg (6.6 ± 0.66lbs)
Gross Weight:	4.5 ± 0.3 kg (9.9 ± 0.66lbs)

Pin Assignments



Signal		Signal	
PIN	***Description***	***PIN***	***Description***
1	Red	9	+5V
2	Green	10	PC Detect
3	Blue	11	Digital GND
4	Digital GND	12	SDA
5	Digital GND	13	H. Sync.
6	Red Rtn	14	V. Sync.
7	Green Rtn	15	SCL
8	Blue Rtn		

Standard Timing Table

If the selected timing is NOT included in table below, this LCD monitor will use the most suitable available timing.

Resolution	H. Freq. (KHz)	V. Freq. (Hz)	Pixel Freq. (MHz)	H/V Sync. Polarity	Mode
640 x 350	31.469	70.087	25.175	+/-	VGA-350
640 x 400	24.830	56.420	21.050	-/-	NEC PC9801
640 x 400	31.469	70.087	25.175	-/+,-/-	VGA-400-GRAPH NEC PC9821
640 x 480	31.469	59.940	25.175	-/-	VGA-480
640 x 480	37.861	72.809	31.500	-/-	VESA - 480 - 72Hz
640 x 480	37.500	75.000	31.500	-/-	VESA - 480 - 75Hz
720 x 400	31.469	70.087	28.322	-/+	VESA-400-TEXT
800 x 600	35.156	56.250	36.000	+/+	SVGA
800 x 600	37.879	60.317	40.000	+/+	VESA-600-60 Hz
800 x 600	48.077	72.188	50.000	+/+	VESA-600-72 Hz
800 x 600	46.875	75.000	49.500	+/+	VESA-600-75 Hz
832 x 624	49.725	74.55	57.2832	-/-	APPLE MAC-800
1024x 768	48.363	60.004	65.000	-/-	XGA
1024x 768	53.964	66.132	71.664	+/+	COMPAQ-XGA
1024x 768	56.476	70.069	75.000	-/-	VESA-768-70 Hz
1024x 768	60.023	75.029	78.750	+/+	VESA-768-75 Hz

Troubleshooting

This LCD Monitor has pre-adjusted using factory standard VGA timings. Due to the output timing differences among various VGA cards in the market, users may initially experience an unstable or unclear display whenever a new display mode or new VGA card is selected.

Attention: This LCD Monitor Supports Multiple VGA Modes. Refer to the Standard Timing Table for a listing of modes supported by this LCD Monitor.

Problem: Picture is unclear and unstable

The picture is unclear and unstable, please perform the following steps:

1. Enter PC to "Shut Down Windows" status while you're in MS-Windows environment.
2. Check the screen to see if there's any black vertical stripes appear. If there are, take advantage of the "Clock" function in OSD menu and adjust (by increment or decrement numbers) until those bars disappear.
3. Move to "Phase" function in OSD menu again and adjust the monitor screen to its most clear display.
4. Click "No" on "Shut Down Windows" and back to the normal PC operating environment.

PROBLEM: There is no picture on LCD Monitor

If there's no picture on the LCD Monitor, please perform the following steps:

1. Make sure the power indicator on the LCD Monitor is ON, all connections are secured, and the system is running on the correct timing. Refer to Chapter 3 for information on timing.

2. Turn off the LCD Monitor and then turn it back on again. If there is still no picture, press the Adjustment Control button several times.
3. If step 2 doesn't work, connect your PC system to another external CRT. If your PC system Functions properly with a CRT Monitor but it does not function with the LCD Monitor, the output timing of the VGA card may be out of the LCD's synchronous range. Please change to an alternative mode listed in the Standard Timing Table or replace the VGA card, and then repeat steps 1 and 2.

PROBLEM: There is no picture on LCD Monitor

If you have chosen an output timing that is outside of the LCD Monitor's synchronous range (Horizontal: 24 ~ 61 KHz and Vertical: 56 ~ 75 Hz), the OSD will display a "***Out of Range***" message. Choose a mode that is supported by your LCD Monitor.

Also, if the signal cable is not connected to LCD monitor at all or properly, the monitor screen will display a message "***No Input Signal***".