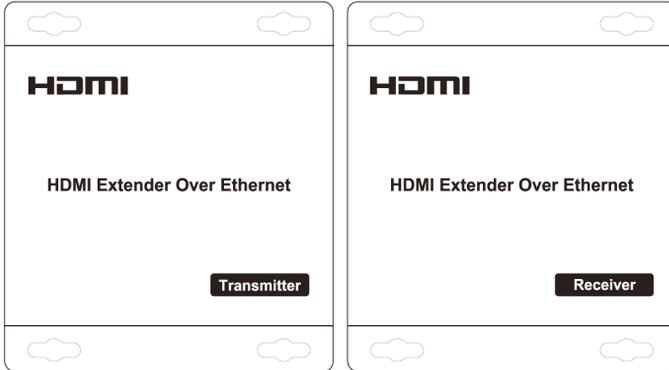


HDMI Extender over Ethernet

MODEL: SX-EX22

Operating Instructions



Dear Customer

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

FEATURES

- Compliant HDCP 1.2
- Uses off-the-shelf gigabit IP switches for extension and distribution
- Extends 1080p HDMI signals up to 120m over a single UTP Cat5e/6 cable
- Flexible and scalable HDMI 1080p Video Wall Broadcasting with Gigabit Ethernet LAN
- Multicasting and broadcasting architecture, adding more displays without adding LAN bandwidth loading
- Support Point-to-Point, Point-to-Many and Many-to-Many network configuration
- With IR Control function ,it allows you control back the source at the end of destination
- Maximum 3 layers of ethernet switches could be passed through

NOTICE

Our company reserve the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

TABLE OF CONTENTS

Specifications
Package Contents
Panel Descriptions
Connecting and Operating
Typical Application
Maintenance
Product Service
Warranty

SPECIFICATIONS

Operating Temperature Range	-5 to +35°C (+23 to +95°F)
Operating Humidity Range	5 to 90%RH (No Condensation)
Input Video Signal	0.5-1.0 Volts P-P
Input DDC Signal	5 volts p-p(TTL)
Support Video Format	DTV/HDTV:480i/576i/480P/576P/720P/1080i/1080P
Video Output	HDMI
Transmission Distance	1080P 8-bit 120m(Maximum) over single CAT5E/6 /24AWG/Solid
Power consumption	TX:3watts;RX:3watts((Maximum)
IR wave length &frequency	Wave length:940nm,frequency 38kHz
Dimension (L×W×H)	103.5x93.5x24.6mm
Net Weight	Receiver:220g,Transmitter:220g
TX	Default IP address:192.168.168.55 MAC address:00:0b:78:00:60:01
RX	Default IP address:192.168.168.56 MAC address:00:0b:78:00:60:02

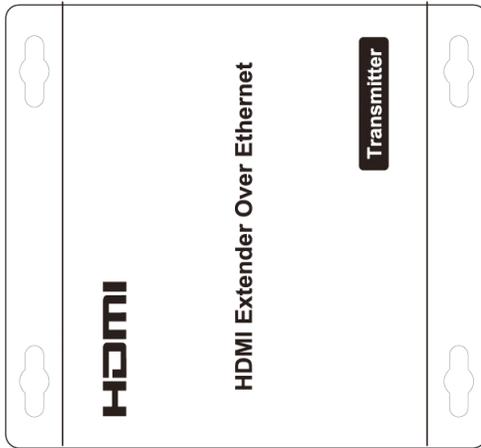
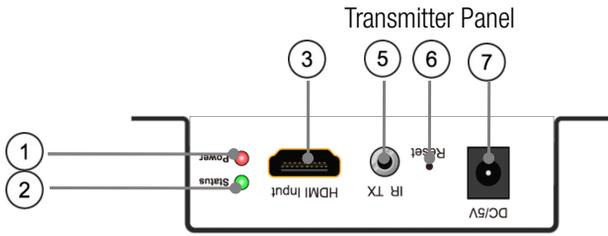
Note1: Specifications are subject to change without notice. Mass and dimensions are approximate.

Note2: One TX to many RX or many TX connect to many RX, IP and MAC address must be different.

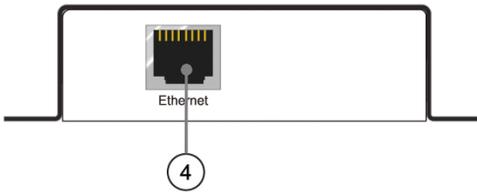
PACKING CONTENTS

- 1) Main Unit. Transmitter & Receiver HDMI Extender
- 2) Power adapter DC 5V 1Ax2PCS
- 3) IR-TX cable & IR-RX cable
- 4) Operating Instructions

PANEL DESCRIPTIONS

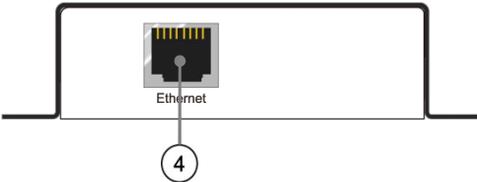
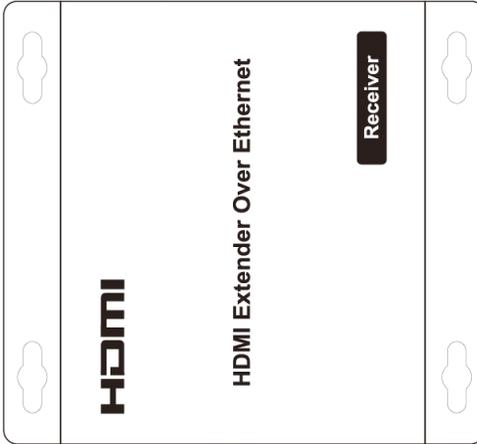
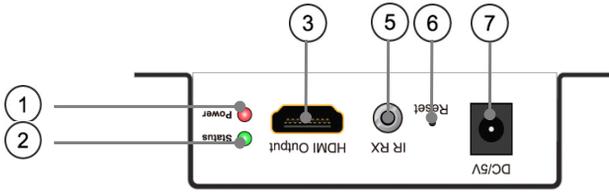


⑦



- ① Indicator of power input
- ② Status of signal connection
- ③ HDMI input
- ④ Ethernet port
- ⑤ IR-TX port
- ⑥ Reset button
- ⑦ Power input port

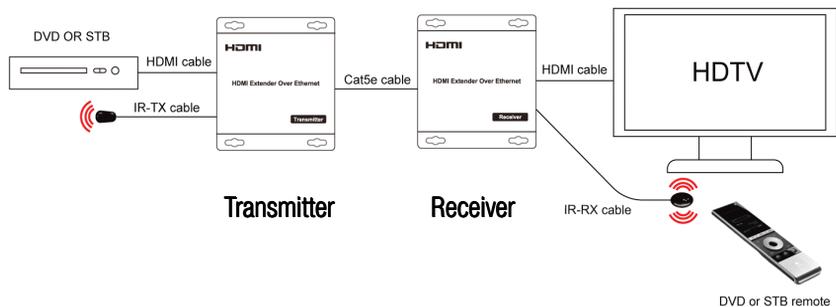
Receiver Panel



- ① Indicator of power input
- ② Status of signal connection
- ③ HDMI output
- ④ Ethernet port
- ⑤ IR-RX port
- ⑥ Reset button
- ⑦ Power input port

TYPICAL APPLICATION

1) One to One

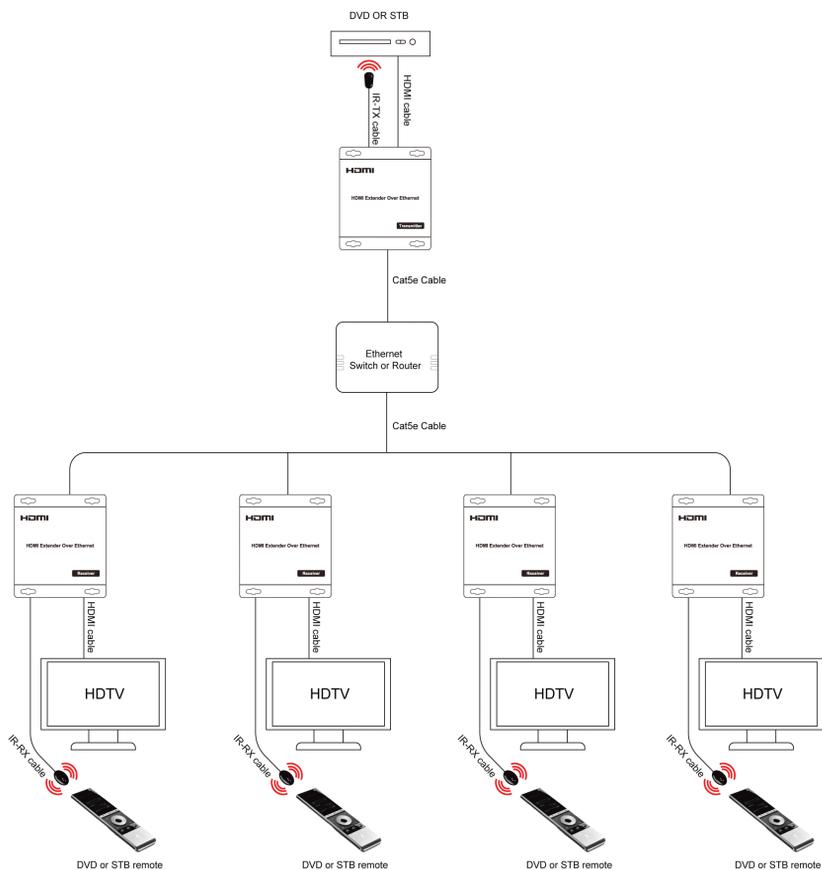


CONNECTING AND OPERATING

- 1) Connect the HDMI signal sources (Such as DVD, STB etc) to HDMI Transmitter.
- 2) Connect CAT5e or 6 cables to both the Ethernet of the transmitter and Ethernet port of the Receiver.
(The cables must follow the standard of EIA-TIA 568B).
- 3) Connect the HDMI output (Such as HD-LCD, HD-DLP) into the Receiver.
- 4) Connect the power supply into Power port.
- 5) Connect the IR TX receiving cables into IR TX port on the back panel and affix the emitter onto the source IR windows.
- 6) Connect IR-RX cable into IR-RX port on the receiver and affix the IR receiver in direct line of site with the handheld remote control. It is recommended to affix the receiver on the display frame /bezel or the display stand.

Attention: Insert/Extract cables gently.

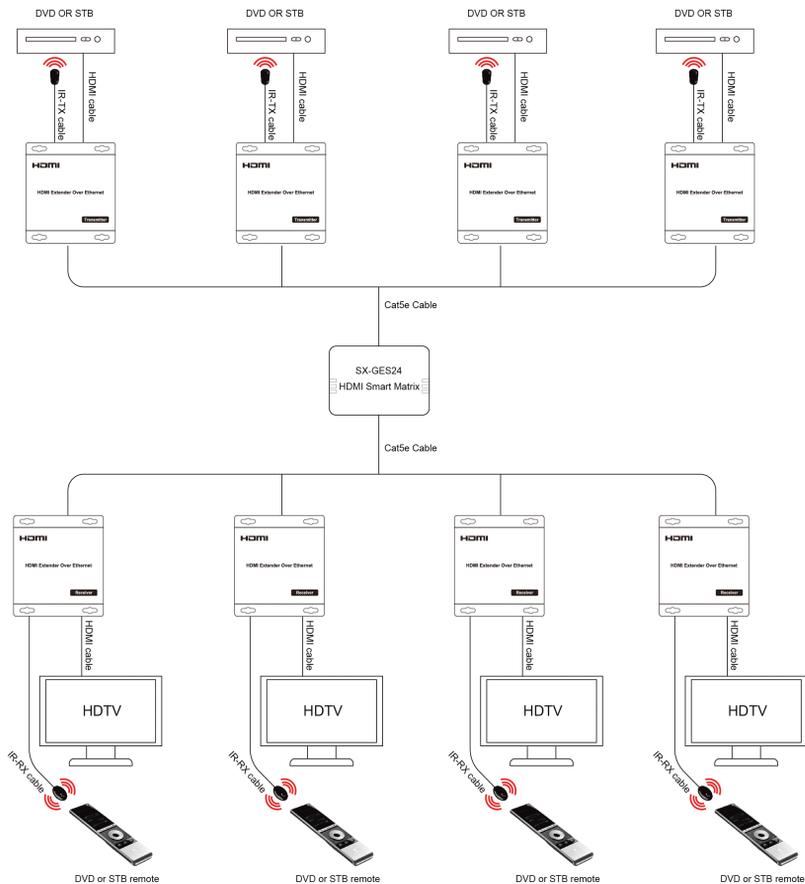
2). One to more



CONNECTING AND OPERATING

1. You can use common IP switch to work with SX-EX22 for one to more connection.
2. when one TX connect to many RX or many TX connect to many RX, IP and MAC address must be different.
IP:192.168.168.XX (XX:1-255) ;MAC:00:0b:78:XX:XX-XX (XX:01-FF)
3. A HTTP server is embedded in each TX and RX. You can setup the HDMI extender via web browser. Please refer to "Setup HDMI TX and RX" in **page 7**. but you only need to set HDMI RX for one to many connection.

3). More to more



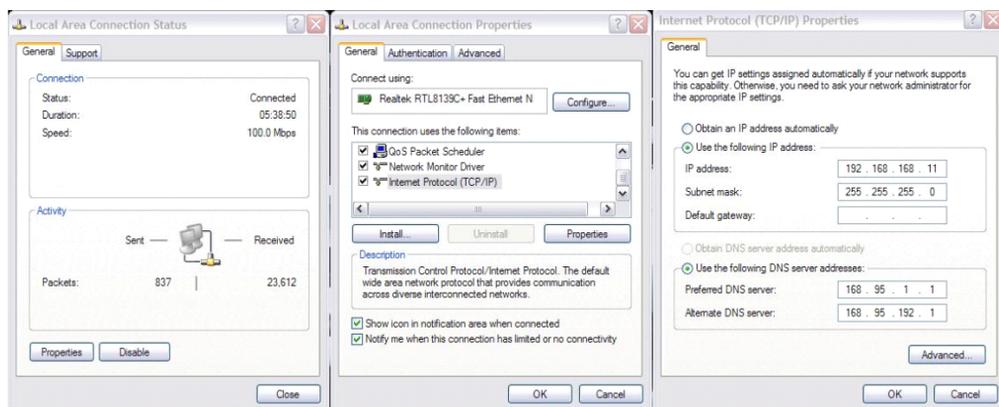
CONNECTING AND OPERATING

1. For more to more connection, SX-EX22 has to work with HDMI smart matrix (SX-GES24).
2. Connect HDMI TX ports with SX-GES24 ports, also connect HDMI RX ports with SX-GES24 ports.
(for SX-GES24, any one of 24 ports can be set "input port" or "output port" by yourself. Please refer to page 9.10.)

3. Setup HDMI TX and HDMI RX

A HTTP server is embedded in each TX and RX. You can setup the HDMI extender via web browser. The default IP address of the TX is **192.168.168.55** and the RX is **192.168.168.56**. The default IP address will not be changed no matter what you assign the device IP address (one TX to many RX or many TX connect to many RX, IP and MAC address must be different), **IP:192.168.168.XX (XX:1-255) ;MAC:00:0b:78:XX:XX-XX (XX:01-FF)**

Step 1: Assign the PC or laptop IP address through Control Panel, Network Connections, Local Area Connections Status, Properties, Internet Protocol (TCP/IP), Use the following IP address. Type the IP address field with **192.168.168.11 (0-255)and Subnet mask with 255.255.255.0**. After that press OK to save the configuration.

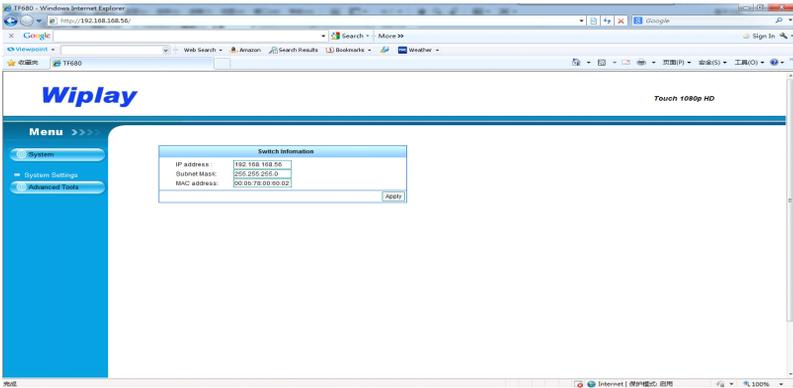


Step 2: turn on the device, the red light becomes lighting, waiting about 10 seconds, the green light starts working, at this time to press the reset button about 5-10 seconds to turn off the green light.

Step 3: Use an Ethernet Cable to connect the PC or laptop and the device. The power LED is still red and the status LED becomes green blink.

Step 4: Ping the connected device through the sequence, Start, Run, cmd, ping **192.168.168.55** or ping **192.168.168.56**. You will receive the reply if the connection is established. Use IE browser to get access the web server. You can setup IP address, subnet mask, gateway, and MAC address in this page.

Step 5: After click Apply button, the device shows Status LED green turn off. Turn off the device.



4: Login in

Default IP address for Switch : 192.168.168.254, Username: admin, Password: admin, connect your PC with IP Switch, revise your PC's IP address to be in the same segment with IP Switch, Login in IE :192.168.168.254

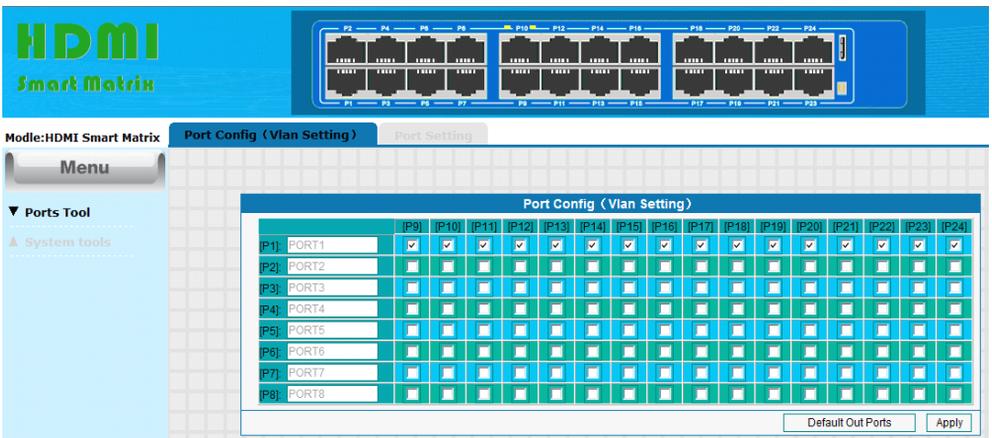
5: Input and Output setting of Switch

Select "setting " in port tool as below picture, you can click "input "or "output " by your own choice. When the port is set as "Input ", it should be connected to HDMI TX, when the port is set as "Output", it should be connect to HDMI RX.



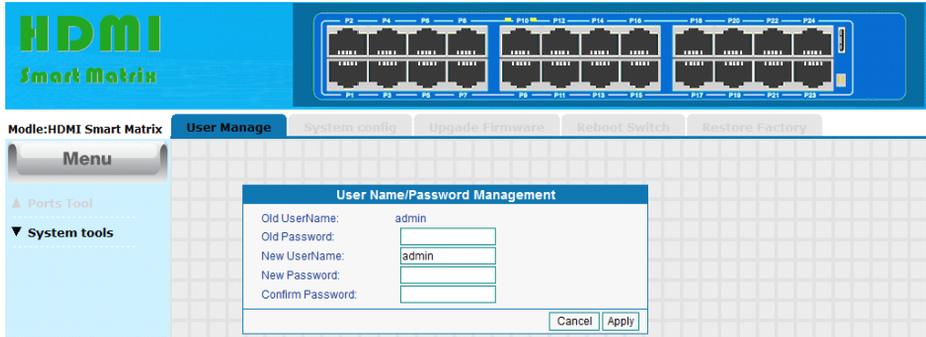
6: Setting your Switch

Select "Port Config" in Ports Tool, You can set every "Output" port to display and any "Input" port which connected to HDMI Extender TX. For example, if you need all the output ports to display the same input source which connected to port 1 , you can set it as below picture :



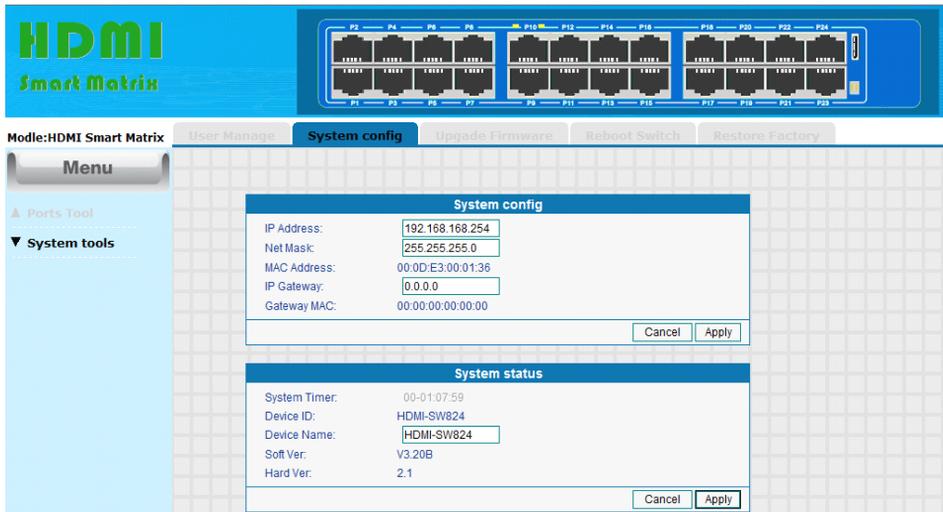
6. Set your Username and Password in your device

Select "User Manage" in System tool, you can revise your Username and Password in your device.



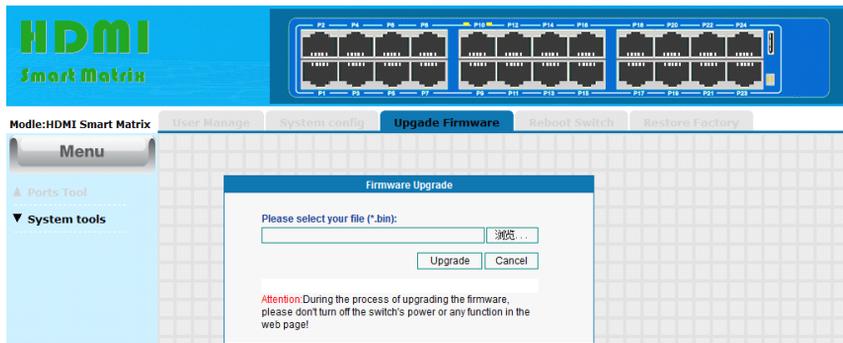
7: Set your IP address in your device

Select "System config" in System tools, you can revise the device's IP address and name.



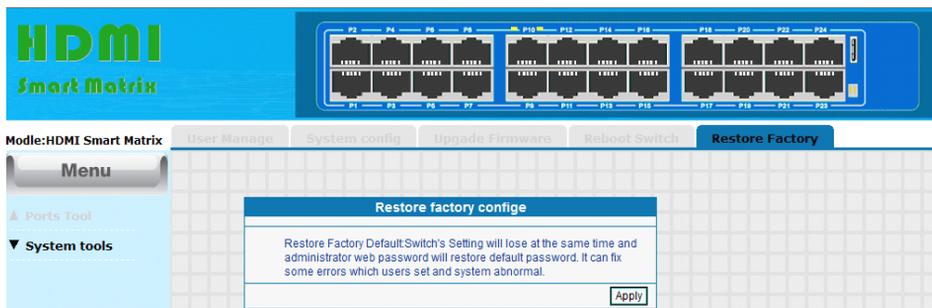
8. Upgrade your device

Select "Upgrade Firmware" in System tools, you can upgrade the device's software .



Restore equipment default Settings

Click "Restore Factory" in System tools, restore the device to it's factory default settings



MAINTENANCE

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzine to clean this unit.

PRODUCT SERVICE

- 1) **Damage requiring service:** The unit should be serviced by qualified service personnel if:
 - (a)The DC power supply cord or AC adapter has been damaged;
 - (b)Objects or liquids have gotten into the unit;
 - (c)The unit has been exposed to rain;
 - (d)The unit does not operate normally or exhibits a marked change in performance;
 - (e)The unit has been dropped or the cabinet damaged.
- 2) **Servicing Personnel:** Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
- 3) **Replacement parts:** When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
- 4) **Safety check:** After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.