INSTRUCTION MANUAL

COLOR MONITOR

Model No. : EFL-1702X

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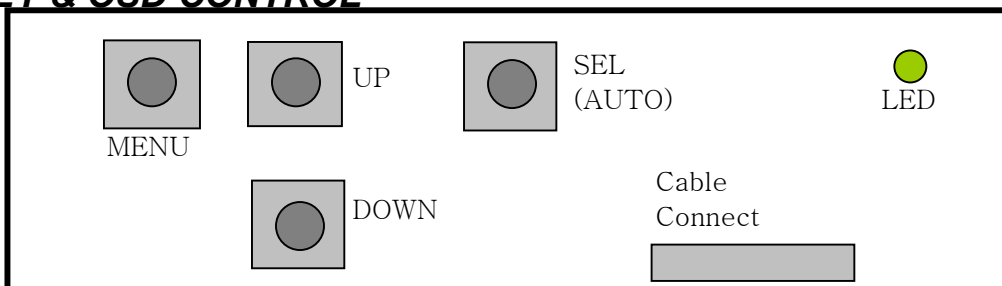
IMPORTANT SAFEGUARDS

1. Read all of these instructions.

2. Save these instructions for later use.

3. Unplug this monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. Do not use attachments not recommended by the monitor manufacturer as they may cause hazards.

5. Do not use this monitor near water, e.g., near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.

6. Do not place this monitor on an unstable cart, stand, or table. The monitor may fall, causing serious injury to a child or adult, and serious damage to the appliance.

7. This monitor should be operated only from the type of power source indicated on the marking label. If you are not sure of the power supplied to your home, consult your monitor dealer or local power company.

8. For added protection for this monitor during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the monitor and/or the computer due to lightning and power line surges.

9. Do not overload wall outlets and extension cords as this can result in fire or electric shock.

10. Never push objects of any kind into this monitor through cabinet openings, as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the monitor.

11. Do not attempt to service this monitor yourself, as opening or removing covers may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.

12. Unplug this monitor 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 monitor.

    c. If the monitor has been exposed to rain or water.

    d. If the monitor does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore normal operation.

    e. If the monitor has been dropped or the cabinet has been damaged.

    f. When the monitor exhibits a distinct change in performance, this indicates a need for service.

13. When replacement parts are required be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

14. Upon completion of any service or repairs to this monitor, ask the service technician to perform routine safety checks to determine that the monitor is safe to operate.

QUICK REFERENCE TABLE OF CHARACTERISTICS

EFL-1702X

Panel	Size	17" Diagonal
	Active Display Area	337.92 x 270.34 mm
	Type No.	Samsung LTM170E6 LG-Philips LM170E1
	Number of Pixels	1280 (H) x 1024 (V)
	Pixel Pitch	0.264 mm x 0.264 mm
	Color Depth	16.7M True Color
	Surface Treatments	Hard Coating (3H), Haze 25%
	Viewing Angle (degrees)	Horizontal ΘL : 85 / ΘR 85 Vertical ΦH : 85 / ΦL 85
	Contrast Ratio	Typ. 450 : 1
	Response Time(Typ.)	Rise time(tr) : 15ms / Fall time(tf) : 10ms
	Average Brightness	Typ. 230 cd/ m^2
	Panel Dimension	(WHD) 383.5 x 306.0 x 22.8 mm
	CCFT	4 Lamps(2 Dual)
Scanning Frequency	Horizontal	30 ~ 80KHz
	Vertical	50 ~ 75Hz
	Standard	720x400 @70 Hz, 640x480 @60/67/72/75 Hz 800x600 @56/60/72/75 Hz, 832x624 @75 Hz 1024x768 @60/70/75 Hz 1280x1024 @60/75 Hz
Power	AC Input	AC 90 ~ 265V @60/50Hz, Universal Power
	Max. Power Dissipation	34Watts
Environmental Conditions	Operating	Temperature : 10 to 50ºC Humidity : 8 to 80%
	Storage	Temperature : -20 to 70ºC Humidity : 5 to 90%
White Color Temperature		9300°K : CIE x=0.281±0.015 / y=0.311±0.015 6500°K : CIE x=0.313±0.015 / y=0.329±0.015
Demonstrated MTBF		More than 20,000 hours
Regulation		CUL(UL+ CSA), CE, FCC
Touch Screen		Optional

KEY & OSD CONTROL

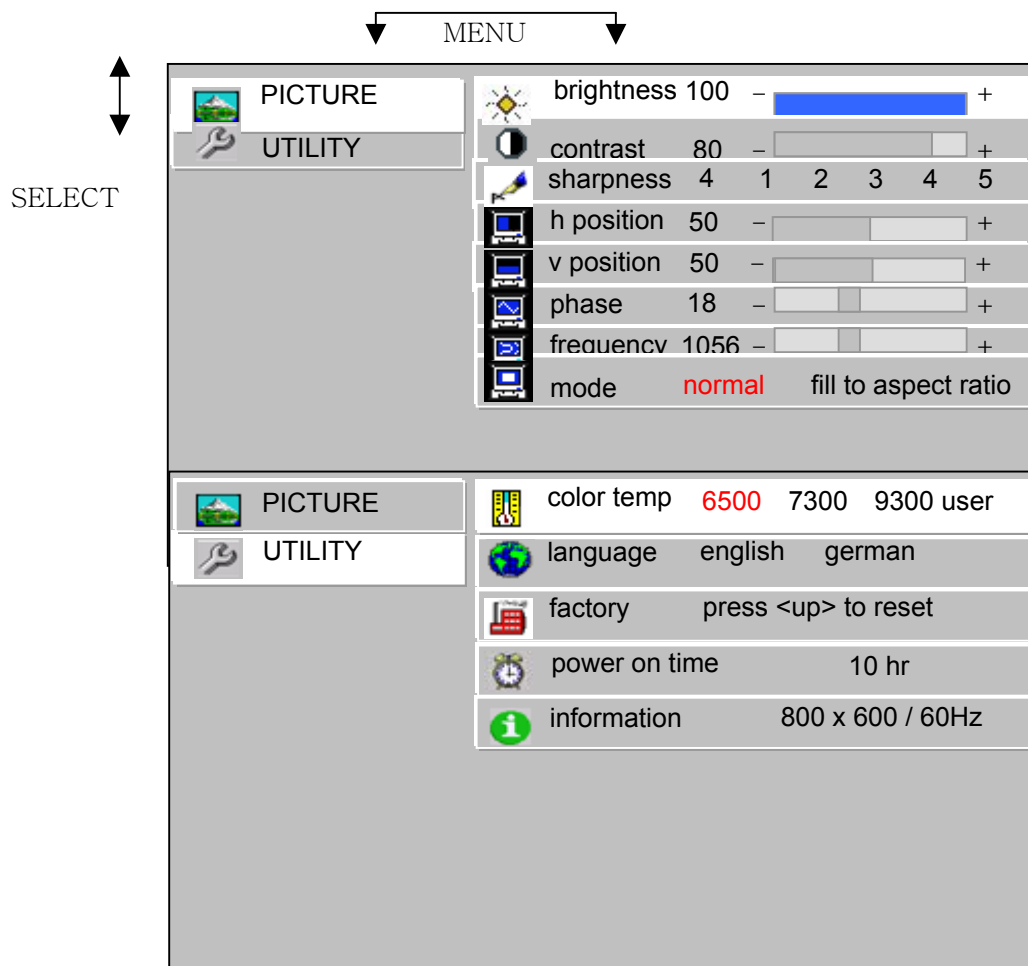|			
⬤ MENU	⬤ UP	⬤ SEL (AUTO)	🟢 LED
	⬤ DOWN		Cable Connect

MENU : Launch OSD (On-Screen Display) MENU window and select the Menu Page
SEL : Move the cursor in the PICTURE / UTILITY mode.
(AUTO) Auto Tracking (pressing "SEL" key for 2 seconds)
UP : Increase the value of the selected function.
DOWN : Decrease the value of the selected function.

↕ MENU ↕

SELECT

PICTURE		
UTILITY		

brightness	100	– [████████████] +
contrast	80	– [_____] +
sharpness	4	1 2 3 4 5
h position	50	– [_____] +
v position	50	– [_____] +
phase	18	– [_____] +
frequency	1056	– [_____] +
mode	normal	fill to aspect ratio

PICTURE		
UTILITY		

color temp	6500 7300 9300 user
language	english german
factory	press <up> to reset
power on time	10 hr
information	800 x 600 / 60Hz

KEY & OSD CONTROL
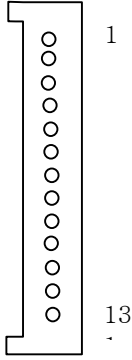
OSD Control Functions

Control	Function
Auto Tracking	Automatic screen adjustment process. If there is any noise on the screen or screen shift, just press " SEL" button for more than two(2) seconds. Since this monitor is equipped with "Auto Tracking" function, it will automatically configure the monitor setting.
Brightness	Adjust the brightness level of the Display.
Contrast	Adjust the contrast level of the Display.
Sharpness	Adjust the sharpness level of the Display
H position	Adjust the position of the display horizontally.
V position	Adjust the position of the display vertically.
Phase	Adjust the clock phase of the display.
Frequency	Adjust the clock frequency of the display
Mode	Select the video aspect ratio. It depends on the input video format.
COLOR TEMP	Choose different preset color temperatures (6500/7300/9300) or set your own customized color parameters.
Red/Green/Blue Gain	Adjust the Red/ Green / Blue Gain
Language	Select the OSD language
Factory recall	Recall the factory setting value.
Power On time	Displayed the total power on time.
Information	Displayed the resolution of input signal

1. Signal(VGA) Cable

1-1) 15pin D-sub type

Connector Shape	Pin	Description	Pin	Description
	1	Red	9	No Connection
	2	Green	10	Ground – Sync
	3	Blue	11	Ground – Sync
	4	Ground	12	No Connection
	5	Ground	13	Horizontal Sync
	6	Ground – Red	14	Vertical Sync
	7	Ground – Green	15	No Connection
	8	Ground – Blue		

1-2) 13pin Board-In type

Connector Shape	Pin	Description	Pin	Description
	1	GND	9	Signal – Blue
	2	SDA	10	Ground – Blue
	3	SCL	11	Vertical Sync
	4	Ground	12	GND
	5	Signal– Red	13	Horizontal Sync
	6	Ground – Red		
	7	Signal – Green		
	8	Ground – Green		

. STANDARD DISPLAY MODE

No.	Mode	Resolution	Horizontal		Vertical		Pixel clock
			Frequency	Polarity	Frequency	Polarity	
1	VGA	720 x 400	31.47 KHz	N	70.0 Hz	P	28.322 MHz
2		640 x 480	31.47 KHz	N	60.0 Hz	N	25.175 MHz
3		640 x 480	35.00 KHz	N	66.7 Hz	N	30.240 MHz
4		640 x 480	37.86 KHz	N	72.8 Hz	N	31.500 MHz
5		640 x 480	37.50 KHZ	N	75.0 Hz	N	31.500 MHz
6	SVGA	800 X 600	35.16 KHz	N / P	56.3 Hz	N / P	36.000 MHz
7		800 X 600	37.88 KHz	P	60.3 Hz	P	40.000 MHz
8		800 X 600	48.08 KHz	P	72.2 Hz	P	50.000 MHz
9		800 X 600	46.87 KHz	P	75.0 Hz	P	49.500 MHz
10		832 X 624	49.73 KHz	N	74.6 HZ	N	57.284 MHz
11	XGA	1024 X 768	48.36 KHz	N	60.0 Hz	N	65.000 MHz
12		1024 X 768	56.49 KHz	N	70.1 Hz	N	75.000 MHz
13		1024 X 768	60.02 KHz	P	75.0 Hz	P	78.750 MHz
14	SXGA	1280 X 1024	63.98 KHz	P	60.0 Hz	P	108.00 MHz
15		1280 X 1024	79.98 KHz	P	75.0 Hz	P	135.00 MHz

FCC RF

INTERFERENCE STATEMENT

NOTE :

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the 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 equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio, TV technical for help.
- Only shielded interface cable should be used.

Caution

Do not change or modify the product without permission or authority of manufacturer. It may cause undesirable operations, permanent damages or harmful interferences.

◎ Notice

· Design and specification are subject to change without notice for product improvement purposes.