

数码监视器 MONITOR



Never dispose of your product with other household waste. Please inform yourself about the local rules on the separate collection of electrical and electronic products. The correct disposal of your old product helps prevent potentially negative consequences for the environment and human health.



FCC Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Recycling

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 technician for help.

72-MS91JT-EU1A

TCL CORPORATION
No.19 District, Zhongkai High-tech Development Zone, Huizhou City, Guangdong Province
www.tcl.com

OPERATION MANUAL

This unit is with multi functions, so for best performance please read the instructions carefully before your operation.

ML17/ML19/ML22/ML26

LCD MONITOR

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Packing List

- Main Unit - one set
- Remote Control Handset - one set, including two AAA batteries
- Operation Manual - one pc
- Power Adapter - one pc (for Model ML17)
- Power Cable - one pc

Warnings and Precautions

Read all of the instructions before operating the set. Keep these instructions well for later use.

PRODUCT

All instructions must be followed during the operation.

- ◆ Do not cover or block the ventilation openings on the back cover.
- ◆ Do not use the sharp objects, the metal or the liquid to touch the signal plugs or push the object of this kind into the ventilation slots as it may cause short circuit and damage the unit.
- ◆ Unplug the set when it is not used for a long period of time.
- ◆ Do not dismantle or disassemble any parts of this product by yourself as this may damage the product, cause personal injuries and violate the warranty of your products.
- ◆ Do not touch the screen surface with fingers as this may scratch the LCD screen. Also it is hard to clear the skin grease left on the screen.
- ◆ Do not impact the LCD screen with hard pressure as the LCD screen is very delicate and fragile.

POWER

- ◆ Please use the 2-pin plug.

PLUG

Unplug the set under the following conditions:

- ◆ If the set will not be used for a long period of time;
- ◆ If the power cord or the power outlet/plug is damaged;
- ◆ Following the instructions to install and adjust the product. Do not adjust or operate the unit by the method or programmes not covered in this operation manual. Once you insist on doing so and unexpected circumstance happens, unplug the set and call the service/technical personnel for an assistance;
- ◆ If the set is subject to impact or has been dropped to have the cabinet damaged.

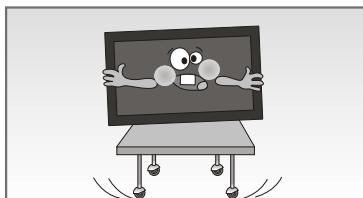


Note: Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

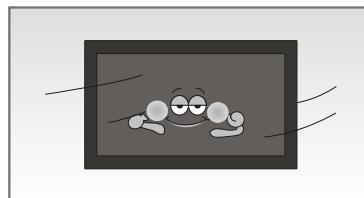
POWER CORD & SIGNAL CABLE

- ◆ Do not allow anything to rest on the power cord or signal cable.
- ◆ To prevent the power cord or signal cable from being trampled, do not make them through the walkway, or the place where people often walk.
- ◆ Do not overload the power cord or power outlet.
- ◆ Do not expose the power cord or signal cable to moisture.

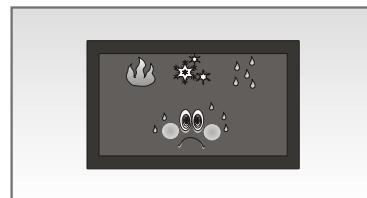
USE ENVIRONMENT



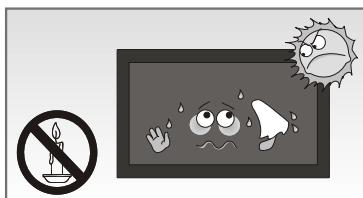
Do not place the set on an unstable cart, stand, or table.



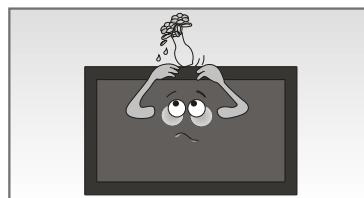
Put the set on a place that allows good ventilation.



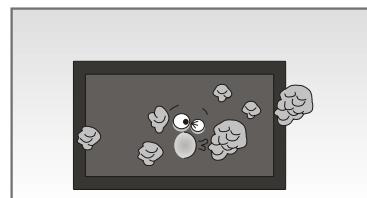
Do not put the set near the too hot, cold or damp place.



Never place the set, remote control or batteries near naked flames or other heat sources, including direct sunlight.
To prevent the spread of fire, keep candles or other flames away from the set, remote control and batteries at all times.



Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.



Do not put the set near the heavy dust place.

CLEANING

- ◆ When cleaning the LCD screen, please use a dry, soft and hairy cloth or use the specific cleaner for liquid crystal to clear the dust and the smudge.
- ◆ Do not apply excessive force to the screen when cleaning.
- ◆ Do not use water or other chemical cleaner to clean the screen as this may damage the surface of the LCD screen.



Note: The unit is applied to industry, not fit for domestic use.

Features of Model ML17

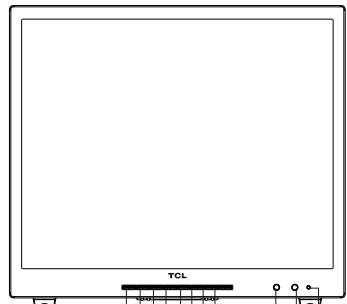
Slim Bezel Design	Over Scan Selection	Two Video Input/Loop Output
Full Metal Shell	Source Browse Function	One S-Video Input
Embedded 3D Y/C Separative Tech.	Running State Display	One VGA (PC) Input
Auto Backlight System		

Specifications of Model ML17

Model	ML17
Resolution	1280 × 1024
Visible Diagonal Size	43cm
Video Input Socket	BNC socket, 1Vp-p;
S-Video Socket	Y/C component; Y signal 1.0Vp-p, C signal 0.7Vp-p
VGA Socket	D-sub15 socket
Video System	PAL, NTSC3.58, NTSC4.43
Operating Voltage	12V DC
Power Consumption	40W
Dimensions	366.5mm × 327mm × 71.5mm(WxHxD)
Dimensions of Display Area	340mm × 272.3mm(W × H)
Weight	About 5.5Kg

Connections of Model ML17

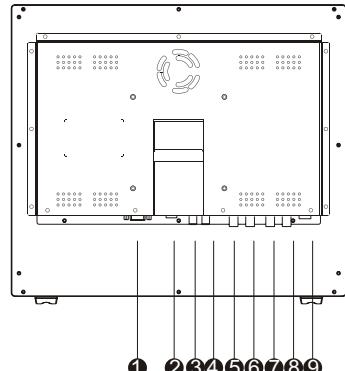
Front View



1. STANDBY
2. FUNCTION
3. SOURCE
4. MENU
5. LEFT button
6. RIGHT button
7. DOWN button
8. UP button
9. Intelligent Light Sensor
10. Remote Sensor
11. Power Indicator

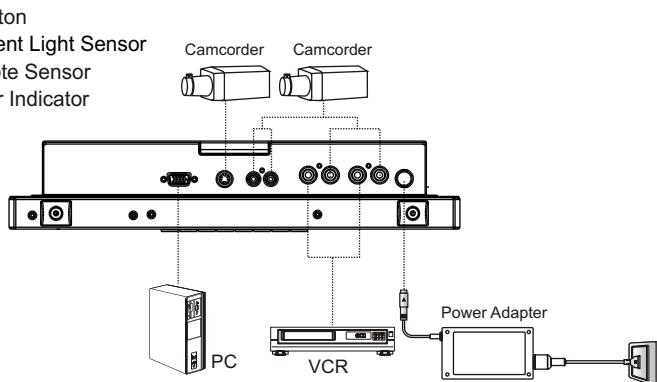
Note: The FUNCTION button is the shortcut key to adjust the brightness and contrast.

Back View



1. VGA Input
2. S-Video Input
3. Audio Input 2
4. Audio Input 1
5. Video Output 2
6. Video Input 2
7. Video Output 1
8. Video Input 1
9. Power Input

Note: S-Video Input and Video Input 2 are sharing the Audio Input 2 socket. And there is no audio input function in VGA mode.



Features of Model ML19

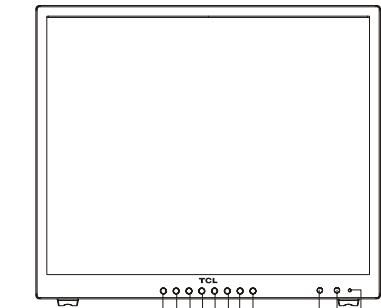
Slim Bezel Design	Wide Voltage Design	Two Video Input/Loop Output
Full Metal Shell	Over Scan Selection	One S-Video Input
Embedded 3D Y/C Separative Tech.	Source Browse Function	One VGA (PC) Input
Auto Backlight System	Running State Display	

Specifications of Model ML19

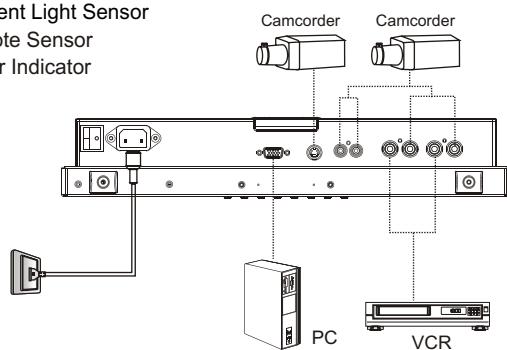
Model	ML19
Resolution	1280 × 1024
Visible Diagonal Size	48cm
Video Input Socket	BNC socket, 1Vp-p;
S-Video Socket	Y/C component; Y signal 1.0Vp-p, C signal 0.7Vp-p
VGA Socket	D-sub15 socket
Video System	PAL, NTSC3.58, NTSC4.43
Operating Voltage	100-240V ~ 50Hz/60Hz
Power Consumption	45W
Dimensions	404mm × 344mm × 70.3mm(W×H×D)
Dimensions of Display Area	378.3mm × 302.1mm(W × H)
Weight	About 6.2Kg

Connections of Model ML19

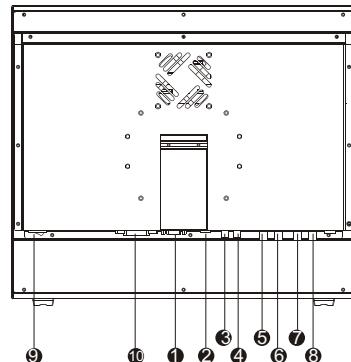
Front View



1. STANDBY
2. FUNCTION **① ③ ⑤ ⑦**
3. SOURCE
4. MENU **Note:** The FUNCTION button is the shortcut key to adjust the brightness and contrast.
5. LEFT button
6. RIGHT button
7. DOWN button
8. UP button
9. Intelligent Light Sensor
10. Remote Sensor
11. Power Indicator



Back View



1. VGA Input
2. S-Video Input
3. Audio Input 2
4. Audio Input 1
5. Video Output 2
6. Video Input 2
7. Video Output 1
8. Video Input 1
9. AC Power Switch
10. AC Power Input

Note: S-Video Input and Video Input 2 are sharing the Audio Input 2 socket. And there is no audio input function in VGA mode.

Features of Model ML22

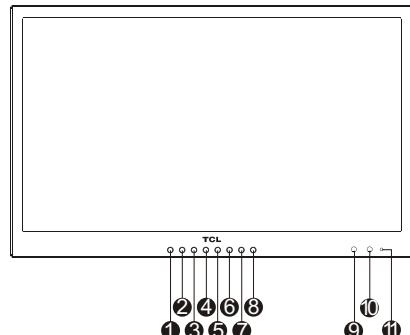
Slim Bezel Design	Wide Voltage Design	Two Video Input/Loop Output
Full Metal Shell	Over Scan Selection	One S-Video Input
Embedded 3D Y/C Separative Tech.	Source Browse Function	One VGA (PC) Input
Auto Backlight System	Running State Display	

Specifications of Model ML22

Model	ML22
Resolution	1366 × 768
Visible Diagonal Size	55cm
Video Input Socket	BNC socket, 1Vp-p;
S-Video Socket	Y/C component; Y signal 1.0Vp-p, C signal 0.7Vp-p
VGA Socket	D-sub15 socket
Video System	PAL, NTSC3.58, NTSC4.43
Operating Voltage	100-240V ~ 50Hz/60Hz
Power Consumption	50W
Dimensions	509mm × 319mm × 70.3mm(W×H×D)
Dimensions of Display Area	479.5mm × 269.5mm(W × H)
Weight	About 6.5Kg

Connections of Model ML22

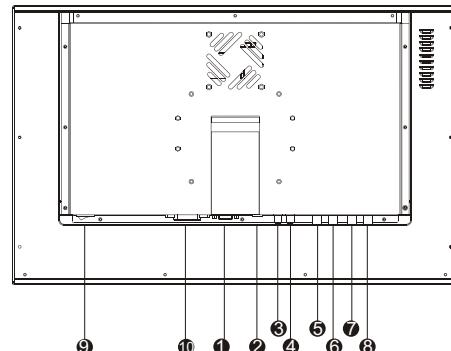
Front View



1. STANDBY
2. FUNCTION
3. SOURCE
4. MENU
5. LEFT button
6. RIGHT button
7. DOWN button
8. UP button
9. Intelligent Light Sensor
10. Remote Sensor
11. Power Indicator

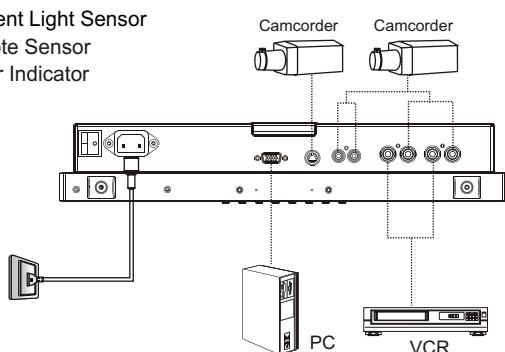
Note: The FUNCTION button is the shortcut key to adjust the brightness and contrast.

Back View



1. VGA Input
2. S-Video Input
3. Audio Input 2
4. Audio Input 1
5. Video Output 2
6. Video Input 2
7. Video Output 1
8. Video Input 1
9. AC Power Switch
10. AC Power Input

Note: S-Video Input and Video Input 2 are sharing the Audio Input 2 socket. And there is no audio input function in VGA mode.



Features of Model ML26

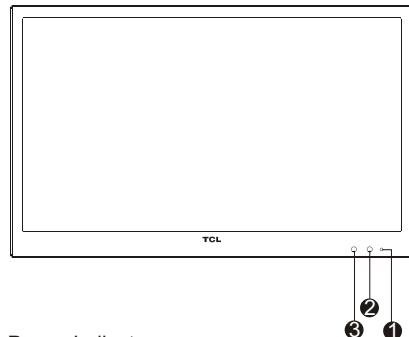
Slim Bezel Design	Wide Voltage Design	Two Video Input/Loop Output
Full Metal Shell	Over Scan Selection	One S-Video Input
Embedded 3D Y/C Separative Tech.	Source Browse Function	One VGA (PC) Input
Auto Backlight System	Running State Display	

Specifications of Model ML26

Model	ML26
Resolution	1366 × 768
Visible Diagonal Size	68cm
Video Input Socket	BNC socket, 1Vp-p;
S-Video Socket	Y/C component; Y signal 1.0Vp-p, C signal 0.7Vp-p
VGA Socket	D-sub15 socket
Video System	PAL, NTSC3.58, NTSC4.43
Operating Voltage	100-240V ~ 50Hz/60Hz
Power Consumption	80W
Dimensions	635mm × 400mm × 94mm(WxHxD)
Dimensions of Display Area	575mm × 323mm(W × H)
Weight	About 10.5Kg

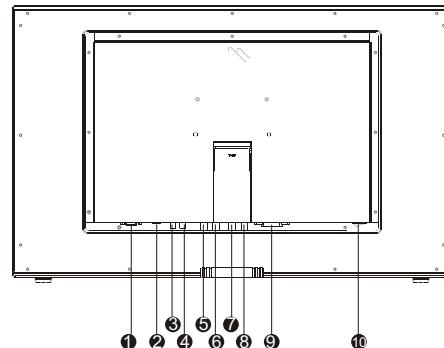
Connections of Model ML26

Front View



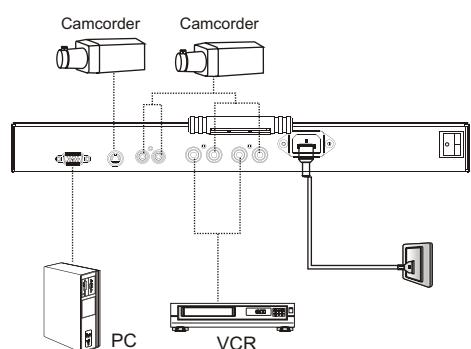
1. Power Indicator
2. Remote Sensor
3. Intelligent Light Sensor

Back View



1. VGA Input
2. S-Video Input
3. Audio Input 2
4. Audio Input 1
5. Video Output 2
6. Video Input 2
7. Video Output 1
8. Video Input 1
9. AC Power Input
10. AC Power Switch

Note: S-Video Input and Video Input 2 are sharing the Audio Input 2 socket. And there is no audio input function in VGA mode.



Remote Control

Battery Installation

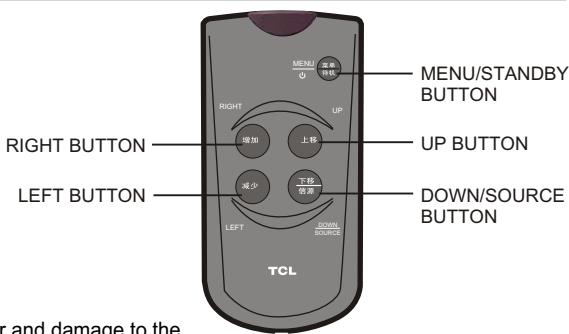
Remove the battery compartment lid from the back of the remote, insert the 2 x 1.5V AAA batteries, paying attention to the polarity, and then replace the cover.

Using the Remote Control

Point the remote directly toward the infra-red sensor on the unit.

Notes:

1. For better performance, once you find the operation is abnormal, please replace the batteries and have a try again.
2. Do not mix old and new batteries or different types.
3. When the batteries are to be exhausted, battery leakage may occur and damage to the remote. When the operation is not sensitive enough, the battery may be low, so please change batteries immediately.
4. If the device is not to be used for a long period of time, remove the batteries to prevent battery leakage.



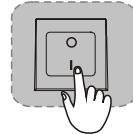
Basic Operations

Turning On the Unit

Plug one end of the power cable to the power socket on the rear of the unit, and plug the other end to an appropriate outlet. Press the power switch (Model ML19, ML22 and ML26), then the unit goes to normal operation mode, and the power indicator lights up in green.

Note:

Press "I" on the power switch to connect the power and press "O" to disconnect the power.



Turning Off the Unit (Standby)

Press and hold the MENU/STANDBY button on the remote control or the STANDBY button on the front panel, the unit enters into standby mode, and the power indicator lights up in red.

Note: Unplug the set when it is not used for a long period of time.

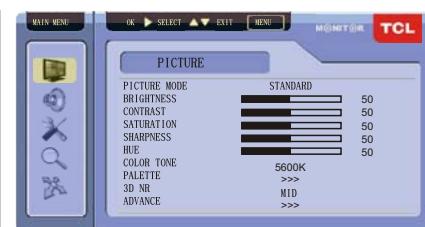
Menu Functions

1、Menu Operations

1. Press MENU/STANDBY on the remote or MENU on the front panel to display the main menu.
2. Press UP/DOWN to highlight the desired menu/item.
3. Press RIGHT/LEFT to enter the selected menu/item.
4. Press MENU to go back to the previous menu.
5. Press RIGHT/LEFT to change the setting.
6. Press MENU/STANDBY to exit a menu.

2、Picture

TYPE	ITEM	FUNCTION	OPERATION	RANGE	APPLICABILITY
PICTURE	PICTURE MODE	Selects display types	Press RIGHT/LEFT to adjust	USER/STANDARD /BRIGHTNESS /SOFT	ALL INPUTS
	BRIGHTNESS	Adjusts the darkest parts of the picture, usually the adjustments are made together with the CONTRAST setting		0-100	ALL INPUTS
	CONTRAST	Adjusts the distinction between the black and white parts of the picture. The proper contrast can make the picture clear and bright		0-100	ALL INPUTS
	SATURATION	Adjusts the richness of color.		0-100	ALL INPUTS except VGA
	SHARPNESS	Improves picture details.		0-100	ALL INPUTS except VGA
	HUE	Compensates color variations		0-100	Only available in NTSC mode
	COLOR TONE	Adjusts the color components to achieve a warm or cold effect		5600K/6500K/9300K/11000K	ALL INPUTS
	PALETTE	RED		0-15	ALL INPUTS except VGA
		GREEN		0-15	
		BLUE		0-15	
		CYAN		0-15	
		MAGENTA		0-15	
		YELLOW		0-15	
		FLESH		0-15	
		PALETTE RESET		Display "OK" when the operation completes	



Menu Functions

TYPE	ITEM	FUNCTION	OPERATION	RANGE	APPLICABILITY
PICTURE	3D NR	Reduce the noise level of the picture	Press RIGHT/LEFT to adjust	OFF/LOW/MID/HIGH	ALL INPUTS except VGA
	OVER SCAN		Press RIGHT/LEFT to adjust	NO SCAN 90%/95%/100% /105%/110%	ALL INPUTS except VGA
	H-POSITION			0-100	ALL INPUTS except VGA
	V-POSITION			0-100	ALL INPUTS except VGA
	H-SIZE			0-100	ALL INPUTS except VGA
	V-SIZE			0-100	ALL INPUTS except VGA
	SCALE			4:3/16:9/14:9	ALL INPUTS Note: only 4:3 and 16:9 are available in VGA mode
	FLESH COLOR			ON/OFF	ALL INPUTS except VGA
	DCC			ON/OFF	ALL INPUTS except VGA
	GAMMA			ON/OFF	The setting is ON by default
	COLOR MODE			ON/OFF	ALL INPUTS except VGA
	NO SIGNAL LOGO			ON/OFF	ALL INPUTS



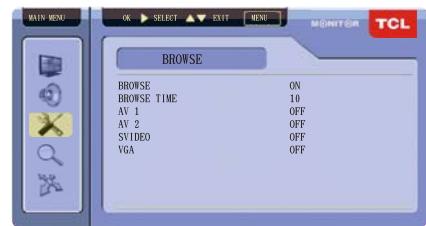
3. Sound

TYPE	ITEM	FUNCTION	OPERATION	RANGE	APPLICABILITY
SOUND	VOLUME	Adjusts the volume	Press RIGHT/LEFT to adjust	0-100	ALL INPUTS except VGA
	SOUND MUTE	Switches on/off the sound		ON/OFF	
	SOUND INPUT	Selects the source of the sound		AUTO: The source of sound is consistent with picture's. NULL: No sound input. AV 1: selects the sound from AV 1 AV 2: selects the sound from AV 2	



4. Setting

TYPE	ITEM	FUNCTION	OPERATION	RANGE	APPLICABILITY
SETTING	LANGUAGE	Selects the OSD language	Press RIGHT/LEFT to adjust	中文/English	ALL INPUTS
	COLOR SYSTEM	Selects color system		AUTO/PAL/NTSC3.58/NTSC4.43	ALL INPUTS except VGA
	KEY BOARD	Switch on/off KEY BOARD		ON/OFF	ALL INPUTS Note: This function is not available for model ML26.
	MENU TIMER	Sets the time to exit a menu automatically		5S/10S/30S/60S/180S/360S	ALL INPUTS
	HALF TONE	Sets the transparency of the menu		OFF/30%/50%/70%	ALL INPUTS
	BROWSE			ON/OFF	ALL INPUTS
	BROWSE TIME			5-100s	Note: BROWSE takes effect only when at least two interfaces are ON. If you want to stop the browse, press MENU to exit and BROWSE OFF will appear at the bottom of the screen. If you want to activate this function, enter the BROWSE menu again.
	BROWSE AV1			ON/OFF	
	AV2			ON/OFF	
	SVVIDEO			ON/OFF	
	VGA			ON/OFF	
TEMPERATURE	FAN SWITCH		ON/OFF/MAX RATE	ON/OFF/MAX RATE	ALL INPUTS
	TEMP. PROTECT			20-40°C (unadjustable in the MAXRATE mode)	
	LOCAL TEMP.			Display the temperature of the unit, which cannot be adjusted.	
	FAN RATE			Display the rate of the fan, which cannot be adjusted.	



Menu Functions

TYPE	ITEM	FUNCTION	OPERATION	RANGE	APPLICABILITY
SETTING	BACKLIGHT	Adjusts the brightness of the initiative backlight		0-100	ALL INPUTS
	LIGHT	Automatically set the state of the brightness, which varies along with the room lighting		ON/OFF	ALL INPUTS
	USER RESET	Restore user parameter to factory default settings		Displays "USER RESET" when adjusting	ALL INPUTS

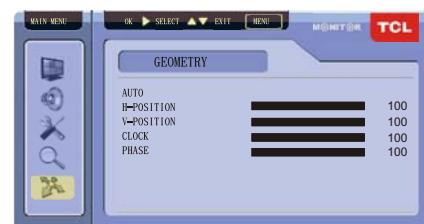
5. Info

TYPE	ITEM	FUNCTION	OPERATION	RANGE	APPLICABILITY
INFO	COLOR SYSTEM	Displays the current color system	Cannot adjust, for the check only	Refers to the range of the related item	Refers to the applicability of the related item
	PICTURE MODE	Displays the current picture mode			
	VOLUME	Displays the current volume			
	SCALE	Displays the current scale			
	COLOR TONE	Displays the current color tone			
	OVER SCAN	Displays the current state of over scan			
	3D NR	Displays the current state of 3D NR			
	BROWSE	Displays the current state of the browse			
	FAN SWITCH	Displays the current state of fan switch			
	BACKLIGHT	Displays the current state of backlight			
	MENU TIMER	Displays the current time setting of exiting menu			

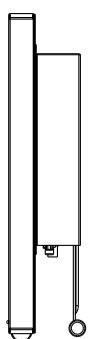


6. Geometry

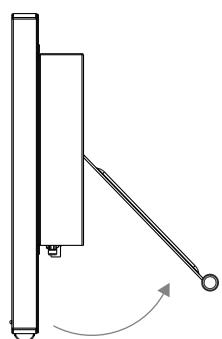
TYPE	ITEM	FUNCTION	OPERATION	RANGE	APPLICABILITY
GEOMETRY	AUTO	Adjusts the geometry position of the picture automatically	Press RIGHT/LEFT to adjust	Displays "AUTO ADJUST" when adjusting	VGA INPUT
	H-POSITION	Adjusts the horizontal position			
	V-POSITION	Adjusts the vertical position			
	CLOCK	Adjusts the frequency of clock			
	PHASE	Adjusts the phase of A/D			



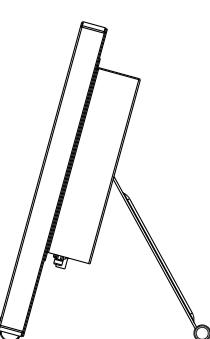
Installation



①



②



③

Troubleshooting

Before contacting with the service personnel, consult the following troubleshooting list.

SYMPTOM	POSSIBLE CAUSES
The power indicator doesn't light up and the unit won't turn on	<ul style="list-style-type: none">The power cord is not connected.The POWER button on the main unit is off.
No picture, no color	<ul style="list-style-type: none">Brightness & contrast may be set to min. (Refer to the PICTURE settings section.)The color system is not appropriate.
Noisy picture	<ul style="list-style-type: none">Possible interference from the surroundings.Replace the power outlet
The remote control doesn't work.	<ul style="list-style-type: none">The batteries need to be replaced.Clean the front of the remote control (the transmitter).Check the battery connection.
Blank screen in VGA mode (When used as the PC monitor)	<ul style="list-style-type: none">The resolution set in the PC is not identified. Suggest changing the resolution into the optimum resolution or other standard WINDOWS resolution.

If you still cannot solve the problems, please call the local service center.

Maintenance

The LCD screen is the core part of LCD monitor. If the maintenance and use are incorrect, the useful life will be shortened in a large extent, so it is very important to use and maintain LCD monitor appropriately.

1. Do not overwork the screen

First, do not highlight the screen too long period of time. The display manner of LCD is different from that of CRT screen. Keeping the picture highlighted too long period of time can short down the life of backlight tube. Therefore, turn off the screen or decrease the display brightness if the unit will not be used for a long period of time in order to prevent parts inside from being aged or burned out. Please attach great importance to this kind of damage because it is permanent and beyond retrieval. To avoid this circumstance, suggest to follow the precautions below.

- 1) Turn off the screen if no used;
- 2) Change the display contents in different intervals frequently;
- 3) Adjust the backlight to a lower level;
- 4) Display a blank screen;

2. Keep the dry working environment

According to its working principle, LCD screen is very rigorous about the air temperature, so please keep the unit working in a relatively dry environment, especially prevent the moisture from entering the parts inside. Users who are working in the moist environment (for example: in some southern area where the air is relatively moist) should pay more attention to this. Suggest to use some drying agents to keep the surroundings of the screen dry, or use a clean soft cloth to keep the screen dry any time. If the moisture has entered the screen, place the unit in a dry position to vaporize the moisture. And in the meantime, do not turn on the power, otherwise the LCD pole may be eroded and destroyed permanently..

3. Avoid unnecessary touch or vibration

The LCD screen is very fragile, do not point to the screen randomly by hand, because any slight touch may cause partial bad spots, even form a patch of bad spots if seriously. This is why some users find more and more bad spots after using the LCD screen a period of time. Moreover, the impact resistance is also inferior to the CRT screen, even of the latest model, because the LCD screen is made from the precise glass parts and the alarmed and sensitive electric parts and the serious impact will damage the screen, the related parts and the circuit. When moving the LCD screen, people often hold one part of the screen carelessly, which may damage the LCD screen. Therefore, strongly suggest to avoid the big vibration and heavy impact to the screen. Only hold the frame and stand When moving the unit.

Maintenance

4. Timely and correctly cleaning the LCD screen in time

Because of the dirty substances, e.g. dust, there will be some smudges on the surface of LCD screen, so please clean it in time and in a correct way. Usually drop the soft, non-fibre material e.g. absorbent cotton, lens tissue or glasses fabric, into some water to clean the screen. If it cannot be cleaned well, you can buy some cleaning products which are special for LCD. Because nowadays the LCD manufacturing techniques focus on the design of low radiation, anti reflector, glare resistance, antistatic interference and environmental protection, all of the parts have been processed in the multi-protective treatment, e.g. multi layer of film, or painted with more special macromolecule polymer elements, which are easily destroyed by some chemicals containing alkaline, alcohol or inorganic salt. Do not use the cleanser containing those substances to clear the screen. Moreover, the frame of the screen is processed in triple antistatic techniques, which achieves anti bacterial and antistatic effects, reduces the adhesive dusts, easily keeps the unit clean and prevent the user against electric shock when touching the screen in a dry environment.

5. Do not disassemble the LCD screen by yourself when encountering the problems

Because the LCD screen is very delicate and fragile, do not replace the parts at random like the CRT monitor. Do not disassemble the LCD screen by yourself regardless of any problems. If the LCD screen cannot work normally, please refer to the professionals for an assistance. Within a certain period of time after powering off the unit, the CFL converter in the LCD backlight illumination assembly still carries 1000V high voltage (although it is micro electric current). For the LCD screen, even if it may not cause personal harm, the new trouble may occur and the screen may be damaged permanently once non professionals cannot dispose of it well.