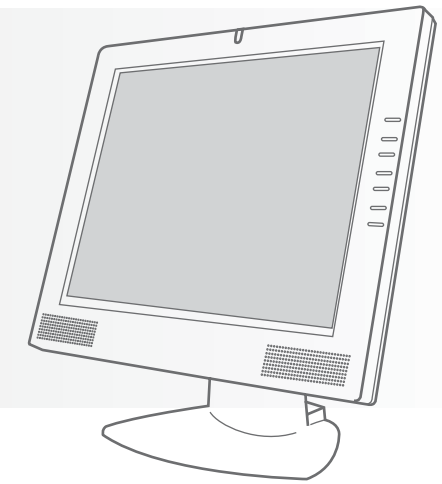CAMOS

INSTRUCTION MANUAL
17" DIGITAL TFT LCD COLOR MONITOR

CM-1710D/TM-1710D(Option)

Thank you for choosing this product.
Please read this instruction manual carefully before
operating this product.

CAMOS

Contents

1. Safety Rules

Please read the "Safety Rules" carefully before using this product. Following of the safety rules prevents users from any damage related with the misuse of this product.
It is very important that users follow these safety rules. We state "Caution" and "Warning" to clarify any potential for damage associated with misuse of the product.

Warning ⚠	May cause bodily harm or even death if users ignore warnings in the safety rules.
Caution ⚠	May cause bodily harm or even death if users ignore cautions in the safety rules.

About signs
⚠ "Precautions"
🚫 "Do not"
❗ "Follow directions carefully"

⚠ Warning

🚫 Place the product where it doesn't prevent the driver from driving.
––– The driver's view of sight should not be blocked.

🚫 Do not watch or operate the product while driving.
––– This may cause a major accident.

🚫 Do not place the product near the passenger-side airbag.
––– Airbags may not operate properly or may cause personal damage and accident when accidentally opening.

🚫 Do not get product wet and operate with wet hands.
––– This may cause electric shock.

Do not use in bathtub. Do not pull the plug with wet hands.
--- This may cause electric shock.

Do not use unapproved power voltage.
--- This may cause fire or electric shock.

Do not use unapproved Cigarette Lighter Adapter.
--- This may cause fire ,electric shock and/or malfunction.

Do not damage or bend electric cord. Do not place heavy objects on electric cord.
--- This may cause fire from electric sparks.

Do not use damaged electric cord.
--- This may cause fire and/or electric shock.

Do not put pins or needles into the product or electric cord of product.
--- If this happens, stop the product operation immediately. Continuous use may cause fire, electric shock and/or malfunction.

Do not place any containers with water or any small metal objects on top of the product or nearby it.
--- Unplug the product when water or metal comes in contact with the product. Continuous use may cause fire, electric shock and/or malfunction.

Stop using the product immediately when you drop it or damage the outside shell.
--- Continuous use may cause fire, electric shock and/or malfunction.

Be careful when thunder and lighting occurs.
--- There is a danger of electric shock.

Do not use non-specified double socket and extended car battery cord.
--- This may cause excess heat and/or fire.

Do not attempt to open, disassemble or repair the product by any person except an authorized service dealer.
--- This may cause electric shock and/or malfunction. You should request an authorized service dealer for any inspection and repair of the product.

⚠ Caution

Do not put the product in a place where sudden temperature increase occurs such as the vehicle's dashboard.

Do not place the product where high temperature and/or the direct ray of the sun occurs.
--- This may cause fire, electric shock and/or malfunction.

Do not put the product in an unstable place where the product may be exposed to shock and/or impact.
--- The product may fall and be damaged.

Do not place electric cord near a heating product.
--- The cord surface may melt and cause fire and/or electric shock.

Do not press or drop LCD panel.
--- You should not give any shock on LCD panel because it may cause damage.

Always clean the cigarette lighter socket before using product.
--- Bad connection may cause fire.

Clean electric socket area often.
--- Dust in the area may cause fire.

Keep electric cord properly positioned.
--- An improperly positioned electric cord may cause fire or electric shock when metal material is in contact with the power source.

● Unplug the product and remove cords when moving.
--- It may damage cords and cause fire and/or electric shock.

● The car engine should be running when you use the product in a car.
----Without the engine running, you may have excessive discharge of the car battery.

● Do not pull the cord line when you unplug it.
---Damaged cords may cause fire and/or electric shock.

● Hold the plug when you unplug the product. Put a battery in the remote control properly with +, – signs as directed in this manual.
--- Improper use of batteries may cause fire and/or damage.

● Unplug the product when you don't use it for a long period of time.
---Insulation may cause electric shock, electric leak and/or fire.

● Unplug the product when you clean or care for it.
---Not unplugging product may cause electric shock.

● Do not watch Monitor for a long period of time.
---This may damage your eyesight.

● When you transport the product, remove all cords and do not give any shock.
---This may cause a malfunction.

● Do not place volatile materials such as insecticides on the product. The product should not come in contact with rubber or vinyl for a long period of time.
---The surface of the product may change and paint may peel off.

If you find any strange occurrences or malfunction in the product or any foreign substance gets into the product, please contact the authorized retailer where you purchased the product.

● Do not use the product in the following locations.
  ---This may cause malfunction.
    ● In direct rays of the sun and near heating products
    ● High in humidity and with bad ventilation
    ● Dusty or oily locations
    ● Low temperatures
    ● Unstable environment

2. Before Use

- To safely use the product, please read the user's manual carefully before use.

- Connect all lines as directed in the product connection map in the manual.

- Do not touch the LCD panel.

- Use the product at the temperature range of $0^{o}C \sim 50^{o}C$.

- Screen may be a little dark when the product is operated in low temperature areas. Screen will be shown normal luminosity after a few minutes.

- Do not disassemble and modify the product in any way. This may cause fire and/or electric shock.

- When you install the product in a car, do not set a volume level too loud for others to hear outside.

- When you install the product in a car and watch TV, the car engine should be running as there might occur excessive discharge of the car battery.

- Any liquid leaking into product may cause malfunction.

### ■ Precautions (when you use the product in a car)

- The driver should not use the product while he/she is driving.

- Quality of pictures on screen may vary depending on the radio field strength in different locations. You should use video equipment where you experience weak radio field strength.

- Follow traffic laws when you use the Navigation Route System.

- Be cautious of humidity and shock when you use the product in a car.

- The product should not be placed on the dashboard or near engine

- Cover the product when exposed to direct rays of the sun for a long period of time. (You should keep the product at a temperature range of -20℃ ~ 60℃.)

3. Special Features of the Product

- Applied high resolution and low reflection DIGITAL TFT LCD (1280 x 1024)
- All electronic control functions
- Convenient Graphic OSD
- All functions are displayed on screen (OSD function)
- System auto recognition function(PAL/ NTSC/ AUTO)
- PC auto adjustment
- 7 Languages display

  (Italian, Korean, Japanese, English, German, French, Spanish)
- MODE selection function(DSUB ANALOG, DVI DIGITAL, AV, S-VIDEO,TV)
- One-touch Dimmer(Remote control)
- 4W speaker built-in
- STAND BY Function
- Low Power consumption

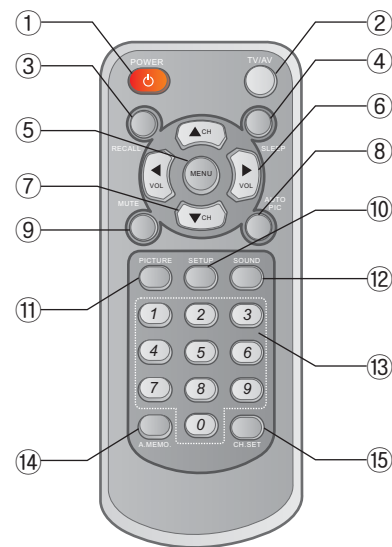## 4. Terms of part
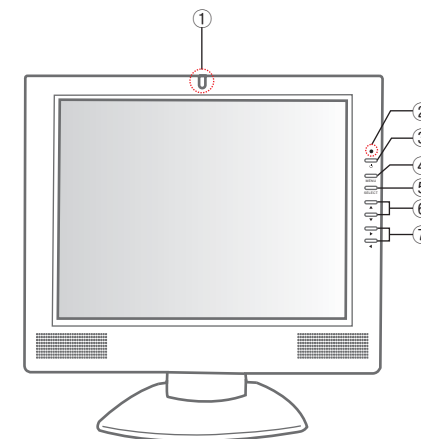
| ① REMOTE SENSOR WINDOW	Sensor for receiving signal from the remote control.
② S/BY LED	Displays STAND BY and ON/OFF
③ POWER	Power ON/OFF button
④ MENU	Selects menu and changes function
⑤ SELECT	DSUB ANALOG / DVI DIGITAL / AV / S-VIDEO/TV selection button.
⑥ ▼▲	Button to select Menu and Mode
⑦ ◀▶	Button to Control level of sound

5. Remote Control

①	POWER	Power ON/OFF Key
②	TV/AV	Select TV, external video, s-video, DVI, D-sub analog
③	RECALL	Displays present status and volume level
④	SLEEP	Reserves time for sleep in 10 minute increments (0 ~120 min.)
⑤	MENU	Selects menu and changes function
⑥	◀▶VOL	Controls Volume and changes MENU level
⑦	▼▲CH	Selects channel and moves to MENU
⑧	AUTO PIC	Selects DYNAMIC, NORMAL, MILD, USER for PICTURE
⑨	MUTE	For muting sound Returns to the previous sound level when you push again
⑩	SETUP	Setup selection button
⑪	PICTURE	Picture selection button

⑫	SOUND	Sound selection button
⑬	0~9KEY	Changes CHANNEL by selecting numbers directly (only TM-1710D)
⑭	A.MEMO.	Quick channel scan and channel store (only TM-1710D)
⑮	CH.SET	Changes the memorized channel (only TM-1710D)

6. Functions

① POWER (POWER)

● POWER ON/OFF KEY
  ① Push POWER(POWER) button. POWER is on.
  ② Push POWER (POWER) button again. POWER is OFF.

② SELECT(TV/AV)

● It is function to change external video signals to DSUB ANALOG/ DVI/ VIDEO/ S-VIDEO/ TV

■ DSUB ANALOG/ DVI DIGITAL/ AV/ S-VIDEO/ TV

SOURCE
DSUB ANALOG
DVI DIGITAL
AV
S-VIDEO
T V

※ Adjust it with CH ▲ ▼

■ DSUB ANALOG/ DVI DIGITAL/ AV1/ AV2/ TV

SOURCE
DSUB ANALOG
DVI DIGITAL
AV1
AV2
T V

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③ MENU (MENU)

AV/ S-VIDEO

■ 🖵 PICTURE(PICTURE)

PICTURE	BRIGHTNESS	55	—	+
SETUP	CONTRAST	40	—	+
SOUND	SHARPNESS	14	—	+
	COLOR TINT	50	—	+
	COLOR TONE	60	—	+
	SYSTEM	AUTO NTSC PAL		

※ With VOL ▶ , go to SUB MENU. After adjusting in SUB MENU, press MENU to exit.
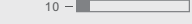
① BRIGHTNESS   Adjust the brightness of video without affecting RGB's brightness.
② CONTRAST   Adjust the contrast of video without affecting RGB's contrast.
③ SHARPNESS   Adjust the sharpness of video image.
④ COLOR TINT   Change the richness of color.
⑤ COLOR TONE   Change the tone of color.
⑥ SYSTEM   Change broadcast system NTSC, PAL, AUTO

※ Press MENU MENU button to go to the Main menu.

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■ 🖵 SETUP(SETUP)
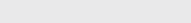
PICTURE	LANGUAGE	▶ ENGLISH
SETUP	OSD TIME	10
SOUND	TRANSLUCENT	14
	OSD H POS.	50
	OSD V POS.	50
	FACTORY RESET	▶ OFF

※ With VOL ▶ , go to SUB MENU. After adjusting in SUB MENU, press MENU to exit.

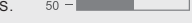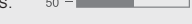① LANGUAGE   Change language English, France, German, Spanish, Italian, Japanese, Korean.

② OSD TIME   The number of seconds that the OSD will remain visible before disappearing.

③ TRANSLUCENT   Change the opaqueness of the background of the OSD.

④ OSD H POS.   Move the OSD Window to the horizontal direction.

⑤ OSD V POS.   Move the OSD Window to the vertical direction.

⑥ FACTORY RESET   A factory default reset will clear all of OSD information.

※ Press   (MENU)   MENU button to go to the Main menu.

■ 🔊 SOUND(SOUND)

PICTURE	MUTE	▶ OFF
SETUP	VOLUME	10
SOUND	TREBLE	50
	BASS	50

※ With VOL ▶ , go to SUB MENU. After adjusting in SUB MENU, press MENU to exit.

① MUTE   Mute the sound temporarily. Mute is released when you change channel and adjust volume.

② VOLUME   Adjust the sound volume.

③ TREBLE   Emphasize high frequency audio.

④ BASS   Emphasize low frequency audio.

※ Press   (MENU)   MENU button to go to the Main menu.

TV Mode (only TM-1710D)

■ ◁CH▷ TV

TV	TYPE	▶ CATV
PICTURE	CHANNEL	9
SETUP	ADD/DELETG	▶ ADD
SOUND	FINE TUNE	+0
	AUTO SEARCH	▶ OFF
	TV REGION	GERMANY / B/G

※With VOL ▶, go to SUB MENU. After adjusting in SUB MENU, press MENU to exit.

① SYSTEM   TV signal selection.

② CHANNEL   Channel selection.

③ ADD/DELETION   Deleting/Adding the selected channel.

④ FINE TUNE   Channel fine tuning.

⑤ AUTO SEARCH   Automatic channel scan.

⑥ TV REGION   NTSC: USA, JAPAN, KOREA

PAL: EUROPE

※Press [MENU] MENU button to go to the Main menu.

■ PICTURE(PICTURE)

TV	BRIGHTNESS	50 – ▬▬▬ +
PICTURE	CONTRAST	50 – ▬▬▬ +
SETUP	SHARPNESS	14 – ▬▬▬ +
SOUND	COLOR TINT	50 – ▬▬▬ +
	COLOR TONE	50 – ▬▬▬ +

※With VOL ▶, go to SUB MENU. After adjusting in SUB MENU, press MENU to exit.

① BRIGHTNESS   Adjust the brightness of video.

② CONTRAST   Adjust the contrast of video.

③ SHARPNESS   Adjust the sharpness of video.

④ COLOR TINT   Change the richness of color.

⑤ COLOR TONE   Change the tone of color.

※Press [MENU] MENU button to go to the Main menu.

■ 🖥 PICTURE

PICTURE	BRIGHTNESS	75	− ▓▓▓▓▓░░░ +
COLOR	CONTRAST	50	− ▓▓▓░░░░ +
SETUP	H POSITION	50	− ▓▓▓░░░░ +
SOUND	V POSITION	50	− ▓▓▓░░░░ +
	PHASE	14	− ▓░░░░░ +
	PIXEL FREQ.	100	− ▓▓▓▓░░░ +

※ With VOL ▶ . go to SUB MENU. After adjusting in SUB MENU, press MENU to exit.

① BRIGHTNESS Adjust the brightness of video without affecting RGB s brightness.

② CONTRAST Adjust the contrast of video without affecting RGB s contrast.

③ H POSITION Adjust the horizontal position of the image.

④ V POSITION Adjust the vertical position of the image.

⑤ PHASE Remove the noises. When phase value is wrong, the image has vertical lines especially in 1 dot on and off.

⑥ PIXEL FREQ. Adjust the sampling frequency of DSUB analog signal.

※ Press   (MENU)   MENU button to go to the Main menu.

■ ▮ COLOR

The tone of color can be changed from red-dish white to bluish white.
The individual color components are also user customizable.

PICTURE	9300K	7300K	6500K	USER
COLOR				
SETUP	RED	50	− ▓▓▓░░░ +
SOUND	GREEN	50	− ▓▓▓░░░ +
	BLUE	50	− ▓▓▓░░░ +

※ With VOL ▶ . go to SUB MENU. After adjusting in SUB MENU, press MENU to exit.

① 9300K Change color temperature : Red 45 Green 43 Blue 50

② 7300K Change color temperature : Red 50 Green 47 Blue 47

③ 6500K Change color temperature : Red 50 Green 47 Blue 47

④ USER User customizable. (RED, GREEN, BLUE)

※ Press   (MENU)   MENU button to go to the Main menu.

PC (DVI)

■ 🖳 PICTURE

PICTURE	BRIGHTNESS	75 ▬▬▬▬ +
COLOR	CONTRAST	50 ▬▬▬▬ +
SETUP	H POSITION	1 ▬▬▬▬ +
SOUND	V POSITION	50 ▬▬▬▬ +
	PHASE	50 ▬▬▬▬ +
	PIXEL FREQ.	50 ▬▬▬▬ +

※ With VOL ▶ , go to SUB MENU. After adjusting in SUB MENU, press MENU to exit.

① BRIGHTNESS   Adjust the brightness of video without affecting RGB s brightness.

※ Press 〔MENU〕 MENU button to go to the Main menu.

∴ DISPLAY MODES

For the display modes listed below, the screen image has been optimized during manufacture.

Mode	Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)	Pixel Clock Frequency(MHz)	Sync Polarity (H/V)
VGA	720 x 400	31.469	70.087	28.322	- / +
	640 x 480	31.469	59.940	25.175	- / -
	640 x 480	37.500	75.000	31.500	- / -
SVGA	800 x 600	37.880	60.300	40.000	+ / +
	800 x 600	46.875	75.000	49.500	+ / +
XGA	1024 x 768	48.363	60.004	65.000	- / -
	1024 x 768	60.023	75.029	78.750	+ / +
SXGA	1280 x 1024	63.981	60.02	108.000	+ / +
	1280 x 1024	79.976	75.025	135.000	+ / +

4	**RECALL**	Displays present status and volume level.
5	**AUTO PIC**	TV channel scan and memory.
6	**SLEEP**	Sleep timer(0/10/20/30/60/90/120)
7	**TV/CATV**	Select TV, external video, s-video, DVI, D-sub analog.

8 **MUTE**

● It is a function of Mute control.
When you push MUTE button, OSD display this image.
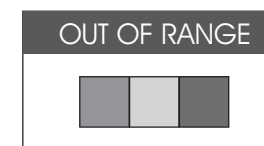This image can be toggle.

9 **CH.SET**

ex) when the memorized board PR2 moves PR4, press CH.SET button, number 4 and then MENU button.
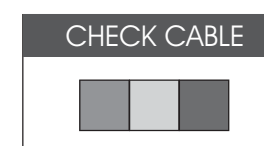
| PR ___ | → | PR 4 |

10 **OSD MESSAGE**

OUT OF RANGE

① The screen shows this when signal is out of range.

NO SIGNAL
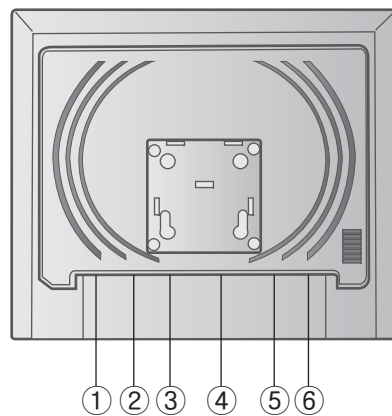
② The screen shows this when there is no signal.

CHECK CABLE
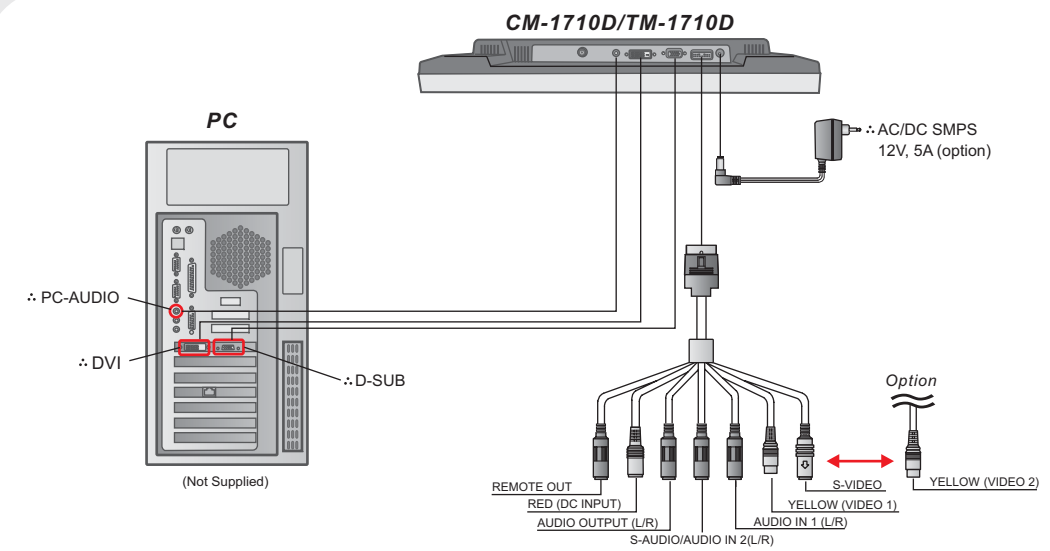
③ The screen shows this when the signal cable is not connected.

Backside, monitor stand detached
(without monitor stand / distance between each mounting hole 75mm)

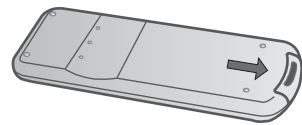| ①	ANT IN	Ant in for TM-1710D
②	PC-AUDIO IN	Audio input DSUB ANALOG, DVI DIGITAL mode
③	DVI IN	DVI DIGITAL input
④	DSUB IN	DSUB ANALOG input
⑤	MULTI CONNECTOR	DC12V, AV, S-VIDEO, AUDIO input
⑥	DC IN 12V	DC 12V Input

CM-1710D/TM-1710D

PC

∴ PC-AUDIO

∴ DVI

∴ D-SUB

(Not Supplied)

∴ AC/DC SMPS
12V, 5A (option)

Option

REMOTE OUT
RED (DC INPUT)
AUDIO OUTPUT (L/R)
S-AUDIO/AUDIO IN 2(L/R)
AUDIO IN 1 (L/R)
YELLOW (VIDEO 1)
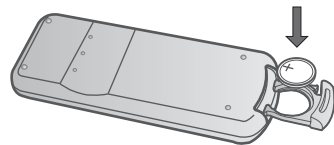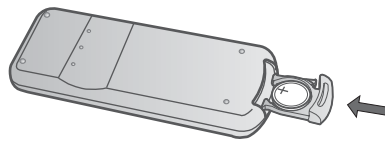S-VIDEO
YELLOW (VIDEO 2)

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8. Changing Remote Control Battery

1. Slide and open the battery cover.

2. Insert new batteries and ensure that the polarities are correct when inserting.

3. Slide and close the battery cover.

9. Specifications

CM-1710D/TM-1710D

I T E M		SPECIFICATION
LCD PANEL	SIZE	43.18cm (17.0 INCH)
	MAKER	SAMSUNG(LTM170EU-L11 & L21)
	NUMBER OF PIXELS	1280 X 1024
	PIXEL PITCH	0.264(H) X 0.264(V)mm
	BRIGHTNESS	300cd/㎡
	CONTRAST RATIO	500 : 1
	VIEW ANGLE CR≥5	75˚ / 75˚ / 75˚ / 60˚(L/R/U/D)
	DISPLAY COLOR	16.2M
INPUT SIGNAL	VIDEO	DIGITAL SIGNAL (DVI)
		ANALOG R.G.B 0.7Vp-p, TTL SEPARATE (DSUB)
		COMPOSITE VIDEO (VHS, SVHS)
		S-VIDEO
		TV (NTSC or PAL, OPTION)
	AUDIO	STEREO
		390mVrms L/R INPUT
FREQUENCY	HORIZONTAL	30~80KHz(AUTOMATIC)
	VERTICAL	56~75 Hz(AUTOMATIC)

I T E M		SPECIFICATION
USER CONTROLS		POWER, MENU, SELECT, ▼▲, ◀▶ S/BY LED, REMOTE SENSOR WINDOW
OSD DISPLAY LANGUAGES		7 LANGUAGES
POWER SUPPLY	VOLTAGE	DC 12V
	CONSUMPTION	36WATT
SOUND SIGNAL DIMENSION (W X H X D) OPERATING TEMPERATURE STORAGE TEMPERATURE WEIGHT		2WATT STEREO 422(W) X 371(H) X 38.5(D)mm 0 ℃~ + 50 ℃ -20 ℃~ + 60 ℃ 4.8Kg
ACCESSORIES		REMOTE CONTROL (WITH BATTERY) --------------------1 MONITOR CABLE --1 CHANGE CABLE（OPTION） VESA STAND（OPTION） AC/DC POWER ADAPTER (OPTION)
OPTION		TV TUNER (NTSC USA/JAPAN/KOREA, PAL 3MULTI/4MULTI)