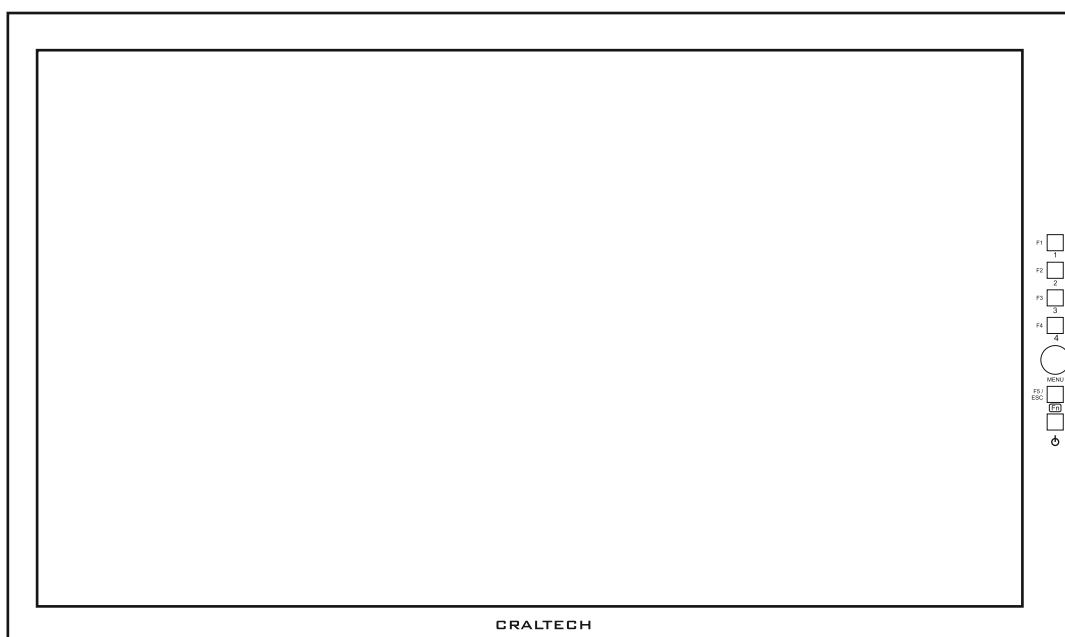# User Manual
CM185SL-3G
18.5" LCD Monitor

Version 1
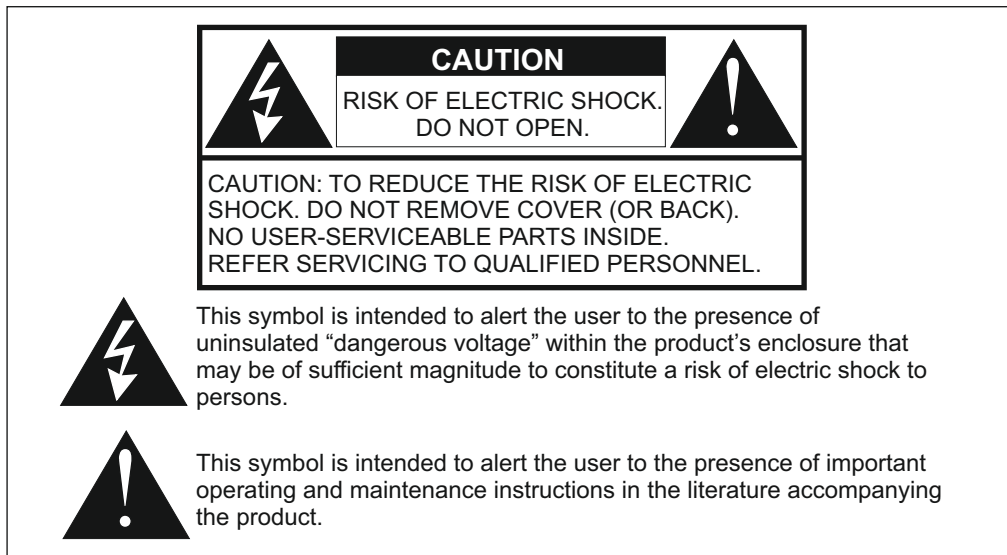**Updated 09/09/2020**

Please read this manual prior to installation and operation and save this manual for future reference.

CRALTECH
ELECTRONICA, S.L.

IMPORTANT INFORMATION

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT OPEN.

CAUTION: TO REDUCE THE RISK OF ELECTRIC
SHOCK. DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

SAFETY INSTRUCTIONS

This product has been designed with the highest priority on safety, however, there are basic precautions that should be taken to avoid injury or damage.

1) Read, keep and follow all these instructions.

2) Water and Moisture. Do not use this product near water and do not expose it to humidity. Keep the unit dry.

3) Handle and operate this product with care, and do not expose the unit to vibrations.

4) Clean only with dry cloth. Do not use liquid or aerosol cleaners to clean the product, and be sure not to spill liquid of any kind into it. Unplug the power cord before cleaning the product.

5) Do not insert anything into or block the ventilation slots, you could get a shock or cause fire.

6) Do not remove cover or back to reduce the risk of electric shock.

7) Keep the product away from heat sources such as radiators, heat registers, stoves, or other aparatus (including amplifiers) that produce heat.

8) Only use accessories specified by the manufacturer.

9) Power Sources: This product should be operated only from the type of power source indicated on the marking label. If you are not sure, check with your dealer or contact us for assistance.

10) Unplug this apparatus during lightning storms or when unused for long periods of time.

11) If any of the following occur, unplug the power cord and seek the assistance of a qualified service personnel for servicing:

Power cord or plug becomes damaged.
When any liquid is spilled on or in the product.
When the product has been exposed to water.
When the product does not operate properly as described in the instruction manual.
When the product has been damaged in any way.

12) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way.

If the product requires replacement parts, make sure that the service personnel uses replacement parts recommended by the manufacturer. Use of unauthorized parts can result in fire, electric shock, and other damage.
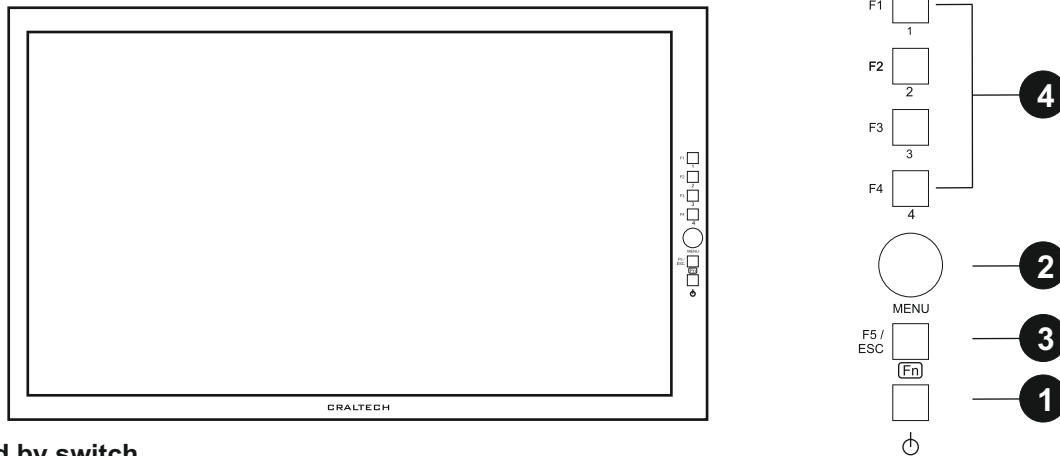
CONTENTS

CONTROLS AND CONNECTIONS

DOUBLE FUNCTIONALITY DIRECT KEYS

Direct Keys have double functionality. Main functions defined from factory and Custom F1 to F5 user configurable functions. To access to F1 to F5 function press (long press) Fn key until lights and select the function. To return to Main functions press (long press) Fn key until stops lighting.

1. **Stand by switch.**
2. **Menu Encoder.** Used to access to menu and navigate through it.
3. **F5 / ESC / FN:** If menu is not selected: Configurable user key number 5.
        If menu is selected: ESC: Move back one position in menu.
3. **FN Mode:** Long Press to enable/disable CUSTOM configurable F1 to F5 Functions
4. **F1 to F5:** Direct access to inputs (1:SDI1, 2:SDI2, 3:HDMI, 4:CBVS) and Configurable user keys in FN Mode.
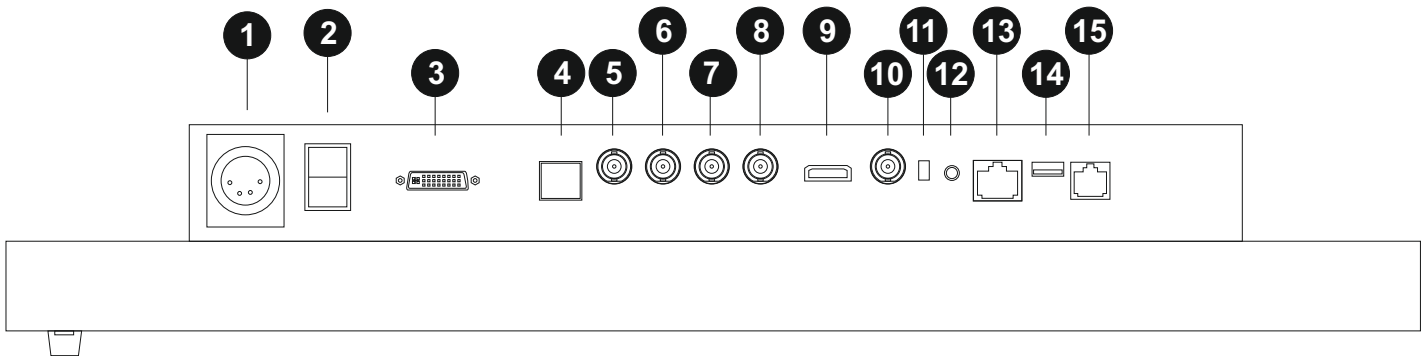
How to locate a Function in a F1 to F5 direct key?

To locate a function in F1 to F5 direct keys, select the function in the menu (function marked in white) and press the key where the function must be located (F1 to F5) until it flashes.

USER Mode must be selected in **SYSTEM / Fn Keys** Mode in OSD Menu, in order to be able to configure and select custom Functions.
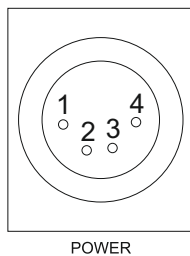
CONTROLS AND CONNECTIONS

REAR CONNECTORS

1. Power supply: 12V DC
2. Power ON
3. DVI-D
4. SFP Slot
5. 3G/HD/SD-SDI Output
6. 3G/HD/SD-SDI Input
7. 3G/HD/SD-SDI Output
8. 3G/HD/SD-SDI Input

9. HDMI Input (Not HDCP support)
10. CVBS (Composite Video) Input
11. 75 Ohm impedance (only switch nr 2)
12. Audio Out
13. Ethernet connector for remote control
14. USB connector for updates
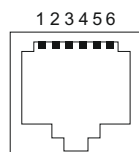**15. RJ11: RS-422, RS-485 and Tally**

12V DC IN SOCKET

POWER

1. GND
2. NC
3. NC
4. 12V

RJ-11 REMOTE CONTROL TSL and GPIO CONNECTOR

Used for RS-232. Only one equipment can be controlled.

1 2 3 4 5 6

PIN 1: RS-232 Out
PIN 2: RS-232 In
PIN 3: RS-485 +
PIN 4: RS-485 -
PIN 5: GND
PIN 6: GND

ON SCREEN MENU

- **IMAGE:** Brightness / Contrast / Saturation / Gamma Correction / RGB Channel / Sharpness

- **COLOR:** Gamut / DIT Luts / Color Temperature / Gain RGB / Bias RGB

- **AUDIO:** Select an input / Meters Mode / Meters Channels / Meters x/y Position / Meters Size / Transparency / Yellow Level / Red Level / Speakers / Speakers/Jack In / Speakers Channel / Volume

- **MARKERS:** Select an Input / Center Marker / Security Area / Markers / Marker H/V / Markers Color / Courtain

- **SCOPES:** Select an Input / Waveform / WFM Mode / WFM x/y Position / WFM Size / Vectorscope / VS x/y Position / VS Size / Transparency

- **INPUT:** Select an Input / UMD / Aspect Ratio / Data Conversion / Hide Image / ATC Timecode / Image Size / Image x/y Position / SFP1 to SDI 1 SFP2 to SDI 2 / HDMI / DVI Input

- **DISPLAY:** Layout / Pixel to Pixel 1:1 / Format Info / Border Color / UMDs Color / Focus Assist / FA Color / FA level / False Color / Y Exposure Check / Y Range Max / Y Max Color / Y Range Min / Y Min Color

- **ALARMS:** Alarm per Input / Video Black / Video Loss / Audio Loss / Silence select chan / Alarm Status / Video Black Mode / Video Black Color / Black Waiting time / Video Loss Mode / Video Loss Color / Audio Loss Mode / Audio Loss Color / Silence Waiting Time / Silence Level

- **NETWORK:** LAN IP / IP MASK / GATE IP / UDP PORT / Apply Config / Default Config

- **SYSTEM:** Backlight / Equipment ID / Encoder Sensitivity / Fn Keys Mode / Keys light / Tally UMD Source / Display On UMD / Display Squares / OSD Size / OSD x/y Position / OSD Transparency / Start Calibration / Display Data Conv / Factory Default / Update Firmware

IMAGE MENU

SFX-3G By Craltech		
IMAGE ▶	Brightness	15
COLOR	Contrast	15
AUDIO	Saturation	15
MARKERS	Gamma	2.2
SCOPES	RGB Channel	OFF
INPUT	Sharpness	00
DISPLAY		
ALARMS		
NETWORK		
SYSTEM		

1*.* Press Menu Encoder to access Menu. And use the Encoder to navigate through it.
3. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
4. Press *ESC* button to move back to main menu.

BRIGHTNESS, CONTRAST, SATURATION

Select the adjustment to be modified and use the Encoder up and down to modify value.
The scale of these adjustments is from 0 to 31, being 15 the value where no *Brightness* or *Contrast* or *Saturation* is applied to the image.

GAMMA CORRECTION

1. Select *Gamma Correction* adjustment and use the Encoder up and down to modify value. Values are: 1.00, 1.50, 2.00, 2.20, 2.35, 2.50. Default Gamma is 2.20.
2. Press *ESC* button to move back in menu

RGB CHANNEL

Select *RGB Channel* adjustment and use the Encoder up and down to modify value. Values are: OFF, Monochrome, Blue Only, Green Only, Red Only, Blue All, Green All, Red All, Invert.

SHARPNESS

Select *Sharpness* adjustment and press the encoder to enter. Use the Encoder up and down to modify value. Default value is 0.

COLOR MENU

SFX-3G By Craltech		
IMAGE	Gamut	REC 709 2.4
COLOR ▶	DIT Luts	LUT 01
AUDIO	Color Temperature	User
MARKERS	Gain Red	128
SCOPES	Gain Green	128
INPUT	Gain Blue	128
DISPLAY	Bias Red	064
ALARMS	Bias Green	064
NETWORK	Bias Blue	064
SYSTEM		

1. Select the **COLOR** menu and press the encoder to enter.
2. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
3. Press *ESC* button to move back to main menu.

Gamut: Select the colour space that you want to use (Values are Wide Gamut 2.2/2.4, REC 709 2.2/2.4/HLG/PQ/SLOG, EBU 2.2/.4, SMPTE-C 2.2/2.4, DCI P3)

DIT Luts: Select your own LUT (Upload them through USB Pendrive).

USER MODE: Custom adjustment for R, G and B Gain and Bias. Default value is 128 for R, G and B Gain, and 64 for R, G, B Bias.

ON SCREEN MENU

AUDIO MENU

```
        SFX-3G By Craltech
  IMAGE          Selected an input:    SDI1
  COLOR             Meters Mode        OFF
  AUDIO    ▶        Meters Channels    016
  MARKERS           Meters x Position  004
  SCOPES            Meters y Position  004
  INPUT             Meters Size        Small
  DISPLAY         Transparency         Min
  ALARMS          Yellow Level         -18dB
  NETWORK         Red Level            -05dB
  SYSTEM          Speakers             OFF
                  Speakers/Jack In     SDI1
                  Speakers Channel     2
                  Volume               63
```

1. Select the **AUDIO** menu and press the encoder to enter.
2. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
3. Press *ESC* button to move back to main menu.

SELECT AN INPUT

Used to select the the input which audio is going to be modified.

MODE

Used to select the audio level meters mode. Available different modes with Scale, No Scale, Pairs/Odds,...
1. Select *Meters Mode* adjustment and press the encoder to enter.
2. Use the Encoder up and down to select the mode.
3. Press Menu Encoder again to Exit adjustment.

METERS CHANNELS

Used to select the audio channels to be displayed in the Audio Level Meters.
1. Select *Meters Channels* adjustment and use the Encoder up and down to modify value. Values are: 2, 4, 6, 8, 12, 14 and 16 channels.
2. Press Menu Encoder again to Exit adjustment.

METERS x/y POSITION

Used to select position of Audio Level Meters. Audio Level Meters can be located anywhere on the window.
1. Select *Meters x/y Position* adjustment and use the Encoder up and down to modify value.
2. Press Menu Encoder again to Exit adjustment.

METERS SIZE

Used to select Audio Level Meters size. Values are: Small, Large
1. Select *Meters Size* adjustment and use the Encoder up and down to modify value.
2. Press Menu Encoder again to Exit adjustment.

YELLOW/RED LEVEL

Used to select Yellow / Red Level.
1. Select *Yellow/Red Level* adjustment and use the Encoder up and down to modify value.
2. Press Menu Encoder again to Exit adjustment.

SPEAKERS

Used to Enable/Disable the Speakers.

SPEAKERS/JACK IN

Used to select the Input (signal) of the audio output (Speakers and Phone Jack).

SPEAKERS CHANNEL

Used to select the audio channels (pair) of the audio output (Speakers and Phone Jack).

VOLUME

Used to adjust the audio volume of the audio output (Phone Jack and speakers).

ON SCREEN MENU

MARKERS MENU

```
        SFX-3G By Craltech
  IMAGE         Selected an input    SDI1
  COLOR           Center Marker      OFF
  AUDIO           Security Area      OFF
  MARKERS ▶       Markers            OFF
  SCOPES          Marker H           000
  INPUT           Marker V           000
  DISPLAY       Markers Color        White
  ALARMS        Courtain             OFF
  NETWORK
  SYSTEM
```

1. Select the **MARKERS** menu and press the encoder to enter.
2. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
3. Press *ESC* button to move back to main menu.

SELECT AN INPUT

Used to select the the input which Markers are going to be modified.

CENTER MARKER

Used to enable/disable Center Marker.
1. Select *Center Marker* adjustment and press the encoder to enter.
2. Use the Encoder up and down to enable/disable.
3. Press Menu Encoder again to Exit adjustment.

SECURITY AREA

Used to enable/disable Security Area. Options: OFF, 80, 85, 88, 90, 93, 100.
1. Select *Security Area* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify value.
3. Press Menu Encoder again to Exit adjustment.

MARKER

Used to select the Marker. Options: OFF, 16:9, 4:3, 15:9, 14:9, 13:9, 1.85:1, 2.35:1, 1.85:1 and 4:3, User.
1. Select *Marker Status* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify value.
3.Press Menu Encoder again to Exit adjustment.

MARKER H/V

Select USER option at Markers Adjustment.
1. Select *Marker H/V* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify value.
3. Press Menu Encoder again to Exit adjustment.

MARKER COLOUR

1. Select *Marker Color* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify color.
3. Press Menu Encoder again to Exit adjustment.

COURTAIN

1. Select *Courtain* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify color.
3. Press Menu Encoder again to Exit adjustment.

Version 1
Updated 09/09/2020

ON SCREEN MENU

SCOPES MENU

```
┌─────────────────────────────────────────┐
│        SFX-3G By Craltech                │
│  IMAGE        Select an input      SDI1  │
│  COLOR        Waveform             OFF   │
│  AUDIO        WFM Mode             RGB   │
│  MARKERS      WFM x Position       000   │
│  SCOPES    ▶  WFM y Position       255   │
│  INPUT        WFM Size             OFF   │
│  DISPLAY      Vectorscope          000   │
│  ALARMS       VS x Position        000   │
│  NETWORK      VS y Position        255   │
│  SYSTEM       VS Size              OFF   │
│               Transparency         Medium│
│                                          │
└─────────────────────────────────────────┘
```

1. Select the **SCOPES** menu and press the encoder to enter.
2. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
3. Press *ESC* button to move back to main menu.

SELECT AN INPUT

Used to select the input which Scopes are going to be modified.

WAVEFORM

Used to enable/disable Waveform.
1. Select *Waveform* adjustment and press the encoder to enter.
2. Use the Encoder up and down to enable/disable.
3. Press Menu Encoder again to Exit adjustment.

WFM MODE

Used to select Waveform mode. Available modes are: RGB parade, R, G, B, YCbCr Parade, Y, Cb and Cr.
1. Select *Waveform Mode* adjustment and press the encoder to enter.
2. Use the Encoder up and down modify Waveform Mode.
3. Press Menu Encoder again to Exit adjustment.

WAVEFORM x/y POSITION

Used to select Waveform position. Waveform can be located anywhere in the window.
1. Select *Waveform x/y Position* adjustment and use the Encoder up and down to modify value.
2. Press Menu Encoder again to Exit adjustment.

WAVEFORM SIZE

 Values are: Small, Large.
1. Select *Waveform Size* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify value.
3. Press Menu Encoder again to Exit adjustment.

VECTORSCOPE

Used to enable/disable Vectorsope.
1. Select *Vectorsope* adjustment and press the encoder to enter.
2. Use the Encoder up and down to enable/disable.
3. Press Menu Encoder again to Exit adjustment.

NOTE: Vectorscope graticules are adapted automatically to HD and SD if *Data Conversion* adjustment in **INPUT Menu** is set to AUTO. If REC 601 is selected, SD graticule is displayed, if REC 709 is selected HD graticule is displayed.

VECTORSCOPE x/y POSITION

 Used to select Vectroscope position. Vectorscope can be located anywhere in the window.
 1. Select *Vectorscope x/y* adjustment and use the Encoder up and down to modify value.
 2. Press Menu Encoder again to Exit adjustment.

ON SCREEN MENU

VECTORSCOPE SIZE

 Values are: Small, Large
1. Select *Vectorscope Zoom* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify value.
3. Press Menu Encoder again to Exit adjustment.

TRANSPARENCY

Used to select Transparency of the Waveform, Vectorscope and Audio Level Meters. Values are: OFF, Min, Medium, Max.
1. Select *Transparency* adjustment and press the encoder to enter.
2. Use the Encoder up and down modify value.
3. Press Menu Encoder again to Exit adjustment.

INPUT MENU

SFX-3G By Craltech		
IMAGE	Select an Input	SDI1
COLOR	UMD	[UMD 1]
AUDIO	Display UMD	ON
MARKERS	UMD Size	Large
SCOPES	Aspect Ratio	16:9
INPUT ▶	Data conversion	AUTO
DISPLAY	Hide Image	OFF
ALARMS	ATC Timecode	OFF
NETWORK	Image Size	254
SYSTEM	Image x/y Position	00
	SFP1 to SDI 1	OFF
	SFP2 to SDI 2	OFF
	HDMI / DVI Input	HDMI

1. Select the **INPUT** menu and press the encoder to enter.
2. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
3. Press *ESC* button to move back to main menu.

SELECT AN INPUT

Used to select the Input which UMD,...is going to be modified.

UMD

16 character UMD per input.
1. Select the *Input NUMBER* to be modified and press the encoder to enter.
2. Use the Encoder up and down to modify value.
3. Press Menu Encoder again to Exit adjustment.

Display UMD

Display the UMD of the selected input

UMD Size

Select the size of the UMD (Normal or Large)

ASPECT RATIO

Used to select *Aspect Ratio.* Values are 4:3 and 16:9.

DATA CONVERSION

Data Conversion is used to select the mode of data conversion form YCbCr to RGB. Values are REC 601, REC 709 and AUTO. Default Value is AUTO. AUTO mode uses REC 601 data conversion for SD SDI inputs and REC 709 data conversion for HD SDI inputs.

HIDE IMAGE

Used to hide or display the image.

ATC TIMECODE

Used to Enable/Disable *ATC Timecode* Function.

IMAGE SIZE

 Used to modify image size. Image Size can be modified in Full screen view and in Quad Mode.

IMAGE X/Y POSITION

 Used to modify image position.

ON SCREEN MENU

SFP1 TO SDI1

This function activates input 1 of SFP Module. This input will be multiplexed with SDI 1 of the monitor.

SFP2 TO SDI2

This function activates input 2 of SFP Module. This input will be multiplexed with SDI 2 of the monitor.

HDMI / DVI Input

Select between HDMI OR DVI. This input will be shown on the 3rd quadrant on quad-mode.

DISPLAY MENU

```
        SFX-3G By Craltech

IMAGE        Layout              3G01
COLOR        Pixel to Pixel 1:1   OFF
AUDIO        Format Info          OFF
MARKERS      Border Color       Grey 1
SCOPES       UMDs Color         Grey 1
INPUT        Focus Assist         OFF
DISPLAY  ▶     FA Color           Red
ALARMS         FA Level           040
NETWORK      False Color          OFF
SYSTEM       Y Exposure Check     OFF
               Y Range Max        940
               Y Max Color      Magenta
               Y Range Min        064
               Y Min Color        Blue
             Fast Mode            ON
```

1. Select the **DISPLAY** menu and press the encoder to enter.
2. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
3. Press *ESC* button to move back to main menu.

LAYOUT

Used to select a screen layout. Options are: Quad View, SDI1, SDI2, HDMI, CVBS, PaP

PIXEL TO PIXEL 1:1

Used to Enable/Disable 1:1 Function.

FORMAT INFO

Used to Enable/Disable visualization of source's format information (resolution). This information will be displayed in right-up corner of the image.

BORDER COLOR

Used to select color of Border/Frame of the image in Quad View.

UMD COLOR

Used to select UMD color

FOCUS ASSIST

Used to Enable/Disable Focus Assist Function. FA color can be modified using FA Color Function. Intensity of FA can be modified using FA Level Adjustment.

FALSE COLOR

Used to Enable/Disable False Color Function.

Y EXPOSURE CHECK

Used to Enable/Disable Y Exposure Check Function. Maximum and Minimum range can be modified using Y Range Max and Y Range Min, and color for Underexposure and Overexposure can be modified.

FAST MODE

If FAST MODE is ON the image is displayed as full interlaced so a bit of flickering can be appreciated but the refresh on the image is faster (Best option for sports)
If FAST MODE is OFF the scan is turned into "PROGRESSIVE SCAN" that will remove the flickering.

ON SCREEN MENU

ALARMS MENU

```
       SFX-3G By Craltech
IMAGE      Alarm per input      01
COLOR        Video Black       OFF
AUDIO        Video Loss        OFF
MARKERS      Audio Loss        OFF
SCOPES     Silence select chan  01
INPUT        Alarm Status      OFF
DISPLAY    Video Black Mode    OFF
ALARMS  ▶  Video Black Color  Black
NETWORK    Black Waiting time  00s
SYSTEM     Video Loss Mode     OFF
           Video Loss Color   Black
           Audio Loss Mode     OFF
           Audio Loss Color   Black
           Silence Waiting Time 00s
           Silence Level     -60dB
```

1. Select the **ALARMS** menu and press the encoder to enter.
2. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
3. Press *ESC* button to move back to main menu.

Video Black, Video Loss and Audio Loss Alarms can be activated "Per Input" or "ALL" inputs.
To activate alarms per inputs, use the *"Alarm per input"* selector at the top of Alarm menu, and select the input which alarm is going to be activated or modified. Then select the alarm to be activated. Then select *"Per Input"* option at *"Video Black Mode", "Video Loss Mode" "Audio Loss Mode"* adjustment.

To activate alarm in all inputs, select *"All"* option at *"Video Black Mode", "Video Loss Mode" "Audio Loss Mode"* adjustment. Silence alarm only can be activated per input.

SELECTED INPUT

Used to select the the input which Alarms are going to be modified.

VIDEO BLACK

Used to Enable/Disable Video Black Alarm per input. This alarm will be only active in the input selected in " Alarm per input".

VIDEO LOSS

Used to Enable/Disable Video Loss Alarm per input. This alarm will be only active in the input selected in " Alarm per input".

AUDIO LOSS

Used to Enable/Disable Audio Loss Alarm per input. This alarm will be only active in the input selected in " Alarm per input".

SILENCE SELECT CHAN

Used to select the audio channel for Silence Alarm. Options are: 01, 02, 03,...16. This option does not activate the Silence Alarm, that must be activated using *"Alarm Status"*. This alarm will be only active in the input selected in " Alarm per input". This alarm will be indicated on screen with a SILENCE text at the right-top of the image and the channel blinking in grey.

VIDEO BLACK MODE

Video Black Alarm can be activated per input or for ALL inputs. Video Black Mode values are: Per Input, ALL and OFF.
- Select **ALL** to activate Video Black Alarm in all the inputs.
- Select **OFF** to disable Video Black Alarm in all the inputs.
- Select **Per Input** to activate Video Black Alarm using *Alarm per input*.

ON SCREEN MENU

VIDEO BLACK COLOR

Used to select Video Black alarm color.

BLACK WAITING TIME

Used to select Video Black alarm waiting time (period before the alarms is activated). Values form 0 to 60s.

VIDEO LOSS MODE

Video Loss Mode alarm can be activated per input or for ALL inputs. Video Loss Mode values are: Per Input, ALL and OFF.
- Select **ALL** to activate Video Loss Alarm in all the inputs.
- Select **OFF** to disable Video Loss Alarm in all the inputs.
- Select **Per Input** to activate Video Loss Alarm using *Alarm per input*.

VIDEO LOSS COLOR

Used to select Video Loss alarm color.

AUDIO LOSS MODE

Audio Loss Mode alarm can be activated per input or for ALL inputs. Video Loss Mode values are: Per Input, ALL and OFF.
- Select **ALL** to activate Audio Loss Alarm in all the inputs.
- Select **OFF** to disable Audio Loss Alarm in all the inputs.
- Select **Per Input** to activate Audio Loss Alarm using *Alarm per input*.

AUDIO LOSS COLOR

Used to select Audio Loss alarm color.

SILENCE WAITING TIME

1. Select *Silence Waiting Time* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify value (form 0 to 60s).
3. Press Menu Encoder again to Exit adjustment.

SILENCE LEVEL

1. Select *Silence Level* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify value (form -60 to 0dBFS).
3. Press Menu Encoder again to Exit adjustment.

ON SCREEN MENU

NETWORK MENU

```
┌─────────────────────────────────┐
│      SFX-3G By Craltech          │
│                                  │
│ IMAGE      LAN IP    127.000.000.002 │
│ COLOR      IP MASK   255.255.255.000 │
│ AUDIO      GATE IP   127.000.000.001 │
│ MARKERS    SOFT IP   127.000.000.003 │
│ SCOPES     SOFT PORT      20002  │
│ INPUT      UDP PORT       01030  │
│ DISPLAY    UPDATE IP 127.000.000.004 │
│ ALARMS     UPDATE PORT    20001  │
│ NETWORK▶   Apply Config      NO  │
│ SYSTEM     Default Config    NO  │
│                                  │
└─────────────────────────────────┘
```

1. Select the **NETWORK** menu and press the encoder to enter.
2. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
3. Press *ESC* button to move back to main menu.

LAN IP

This option is used to modify LAN IP.
1. Select *LAN IP* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify values.
3. To apply the new Network configuration Select "Yes" at Apply Config in Network Menu, and unplug (not stand by) the equipment, then switch ON the equipment to start with new configuration.

IP MASK

This option is used to modify IP MASK.
1. Select *IP MASK* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify values.
3. To apply the new Network configuration Select "Yes" at Apply Config in Network Menu, and unplug (not stand by) the equipment, then switch ON the equipment to start with new configuration.

GATE IP

This option is used to modify GATE IP. GATE IP is the router LAN IP.
1. Select *GATE IP* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify values.
3. To apply the new Network configuration Select "Yes" at Apply Config in Network Menu, and unplug (not stand by) the equipment, then switch ON the equipment to start with new configuration.

SOFT IP and PORT

This option is used to modify SOFT IP. (For connecting with Light illusion software to create 3D LUT tables)
1. Select *SOFT IP* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify values.
3. To apply the new Network configuration Select "Yes" at Apply Config in Network Menu, and unplug (not stand by) the equipment, then switch ON the equipment to start with new configuration.

UDP PORT

This option is used to modify UDP PORT.
1. Select *UDP PORT* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify values.
3. To apply the new Network configuration Select "Yes" at Apply Config in Network Menu, and unplug (not stand by) the equipment.

UPDATE IP and PORT

This option is used to modify UPDATE IP. (For using our Soft4Boxes software to update the equipment)
1. Select *SOFT IP* adjustment and press the encoder to enter.
2. Use the Encoder up and down to modify values.
3. To apply the new Network configuration Select "Yes" at Apply Config in Network Menu, and unplug (not stand by) the equipment, then switch ON the equipment to start with new configuration.

Apply Config

This option is used to apply all the modifications/values of the Network Menu, so after modifying a value of any of the adjustments of the Network Menu select "Yes" at Apply Config and unplug (not stand by) the equipment to apply the new network configuration, then switch ON the equipment to start with new configuration.

Default Config

This option is used to set to default (factory settings) the monitor.

ON SCREEN MENU

SYSTEM MENU

```
     SFX-3G By Craltech

IMAGE        Backlight           15
COLOR        Equipment ID        01
AUDIO        Encoder Sensitivity IMAGE0
MARKERS      Fn Keys Mode        USER
SCOPES       Keys Light          ON
INPUT        Tally UMD Source    TSL
DISPLAY        Display on UMD    ON
ALARMS         Display Squares   ON
NETWORK      OSD Size            Small
SYSTEM    ►  OSD x/y Position    00
             OSD Transparency    00
             Start Calibration   No
             Display Data Conv   Rec709
             Factory Default     NO
             Update Firmware     NO
```

1. Select the **SYSTEM** menu and press the encoder to enter.
2. Press Menu Encoder to select the adjustment to be modified (adjustment will be marked in white), and use the encoder to adjust the value. Press Menu Encoder again to Exit adjustment (adjustment will be marked in grey), and continue navigating.
3. Press *ESC* button to move back to main menu.

BACKLIGHT

Used to adjust backlight value (form 0 to 15). The backlight brightness affect to LED Backlight and not to signal.

EQUIPMENT ID

Used to set Equipment ID to identify it for Ethernet communications.
For TSL, the equipment ID is the Offset on the first UMD and Tally that will be used.
For example: To control 2 equipments with 8 inputs, first equipment will have ID 01 and the second equipment will have ID 09.

ENCODER SENSITIVITY

Used to adjust sensitivity of the encoder.

Fn KEYS MODE

Used to configure direct keys. Values are: IMAGE, AUDIO, MARKERS, SCOPES, MULTI, LAYOUT, USER. These options locate adjustments in direct keys. USER option is used to select customized the direct keys. Customization of F1 to F11 direct keys explained in pag 3 of this manual.

KEYS LIGHT

Used to enable/disable Keys Light.

TALLY UMD SOURCE

Used to select Tally and UMD Source. Values are: GPIO, RS-232, TSL. Tally can be displayed on UMD and/or with squares at the bottom of the image.

OSD SIZE

Used to select OSD size. Values are: Small, Large

OSD x/y POSITION

Used to select OSD position.

OSD TRANSPARENCY

Used to select OSD Transparency.

START CALIBRATION

Connect the Monitor to Light illusion software to create a table of the monitor.

DISPLAY DATA CONV

Display Data Conversion is used to select the mode of data conversion form YCbCr to RGB for the display. Values are REC 601, REC 709. Default Value is REC 709.

FACTORY DEFAULT

This option is used to reset the monitor. **NOTE: This option will set Equipment ID to 01 (Factory value).**
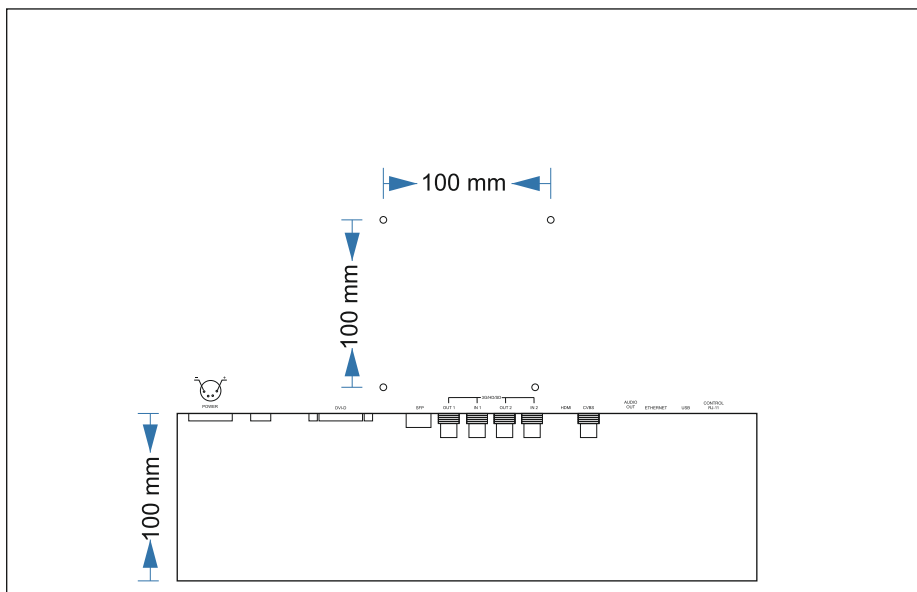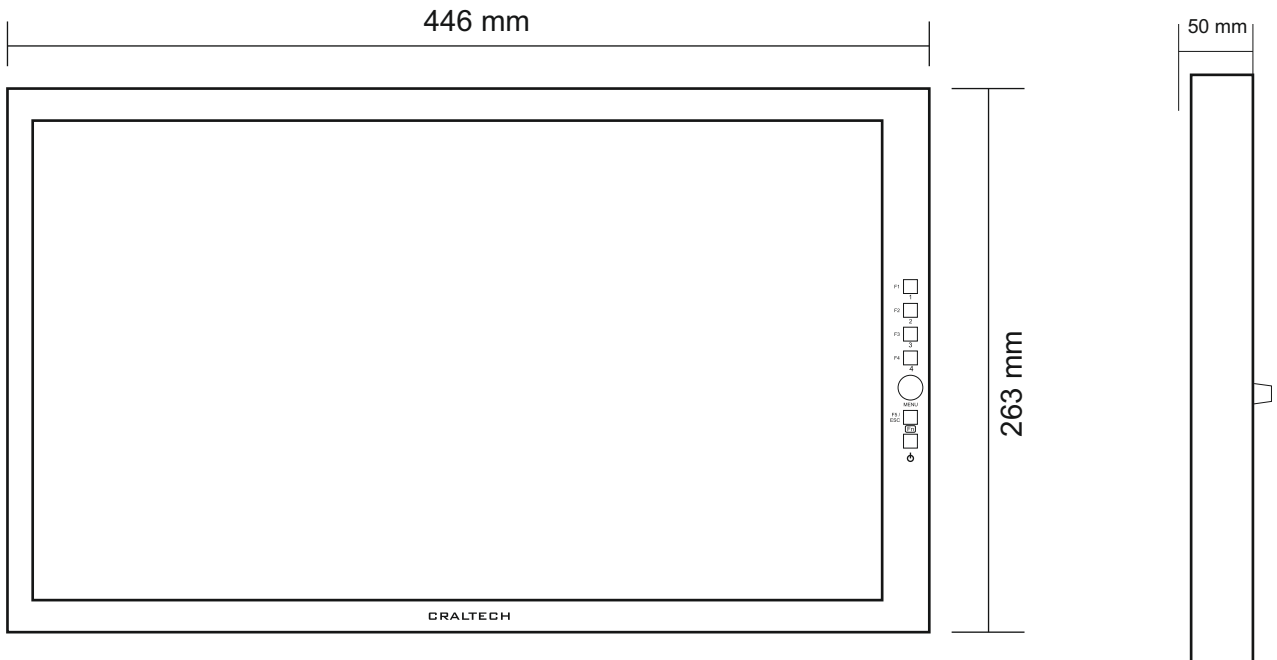
UPDATE FIRMWARE

Used to update the monitor.

SPECIFICATIONS

Display size	18.5" LED Backlight
Resolution	1920x1080
Pixel Pitch	213 (per one triad) x 213
Viewing angle	H 178, V 178
Brightness	350 cd/m^2
Contrast	1000:1
Color	16.7M
SDI Inputs	2 x 3G/HD/SD-SDI inputs (2 x BNC)
SDI Input Formats	1080p (60 / 59.84 / 50 / 30/ 29.97 /25 / 24 / 23.98 / 25sF / 24sF/ 23.98sF) 1080i (60 / 59.94 / 50) 720p (60 / 59.94 / 50) 480i (59.94) 576i (50)
SDI Outputs	2 x 3G/HD/SD-SDI outputs (2 x BNC)
HDMI Input and DVI-D Input	1 x HDMI (Not HDCP support) / 1 X DVI-D Input
HDMI / DVI-D Formats	1080p (60 / 59.84 / 50 / 30/ 29.97 /25 / 24 / 23.98 / 25sF / 24sF/ 23.98sF) 1080i (60 / 59.94 / 50), 720p (60 / 59.94 / 50) 480i (59.94), 576i (50)
Aspect Ratios	16.9, 4:3
Audio IN	Embedded Audio.16 Channel Audio Level Meter (SDI inputs)
Audio OUT	Analog Stereo (Phone Jack), 2 x Speakers 1,5W Stereo
UMD	16 characters (IMD) TSL comp.
Tally	Green and Red, TSL comp.
Waveform	Color waveform. YCbCr, Y, Cb, Cr, RGB, R, G,B
Vectorscope	Color Vectorscope
Remote control	Ethernet
Cabinet	Aluminium. Textured Black Powder Coat
Dimensions	446 x 263 x 50 mm. 2,9KG
Power supply	12V DC (XLR Connector)
Power Consumption (Approx.)	36W
Operating temperature	5 ºC a 40 ºC
Accessories	AC185R: 19" Rack mounting kit AC185S: Stand

DIMENSIONS

446 mm

263 mm

50 mm

CRALTECH

100 mm

100 mm

100 mm

POWER DVI-D SFP OUT 1 IN 1 OUT 2 IN 2 HDMI CVBS AUDIO OUT ETHERNET USB CONTROL IN / O

(*) IMPORTANT: Screews must not exceed 8 mm depth into cover.

50 mm