

**Unicont SPb Ltd**

**Marine LCD Display  
MV-1501/1701/1901/2101**

Operating Manual  
(01-1-28112011)

**St. Petersburg**  
2011

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This operating manual (OM) is designed for marine LCD display MV-1501/1701/1901/2101.

The OM is designed for study of design, operation principles and operation rules of the device for its intended use and maintenance. The OM may also be a source of information about the device to compile relevant sections of the equipment operational documentation in which the device can be used as an integral part.

**Important!** The company-manufacturer does not assume any responsibility that comes with loss or damage resulting from use of this product or related documentation.

All information in this manual is distributed by the company for information purposes only. They are subject to change without notice of consumers; they may contain errors or inaccuracies. Information specified may not include an obligation on the part of the company Unicont Spb Ltd.

## 1. GENERAL INFORMATION

Marine LCD MV-1501/1701/1901/2101 series MasterView is a multipurpose display used to output visual data received from the navigation system and other automated systems.

## 2. DELIVERY SET

1. Marine LCD MV-xx01	1 piece
2. Plate/desktop mounting brackets	1 piece
3. Operation Manual	1 piece
4. VGA cable	1 piece
5. DVI cable	1 piece
6. Feeding cable	1 piece
7. Sunscreen	1 piece

As an option you may choose to add the following items to the scope of supply:

- Touch-sensitive screen (touch screen), model of execution is marked with MV-xx01 TS
- CD with drivers.

## 3. SPECIFICATIONS

Table 1. Versions

Parameter	MV-1501	MV-1701	MV-1901	MV-2101
Power supply voltage	110/220 VAC / 9...36 VDC			
Power demand	40 W	60 W	80 W	100 W
Display diagonal	15"	17"	19"	21"
Viewable area of the screen	305 x 229 mm	337 x 270 mm	377 x 302 mm	432 x 324 mm
Angle of view	160°	170°	170°	178°
Contrast	400:1	1000:1	700:1	1000:1
Brightness	430 Cd/m <sup>2</sup>	300 Cd/m <sup>2</sup>	300 Cd/m <sup>2</sup>	300 Cd/m <sup>2</sup>
Response time	25 ms	5 ms	5 ms	5 ms
Resolution	1024 x 768	1280 x 1024	1280 x 1024	1600 x 1200
Point size	0.297 mm	0.264 mm	0.294 mm	0.27 mm
Vertical repetition frequency:	56–75 Hz			
Horizontal repetition frequency:	30–63 kHz	30–81 kHz	30–81 kHz	31–91 kHz
Dimensions (mm)	371x340.5x77	411.5x388x75	449x418x75	510x443x81
Max. weight:	7 kg	9 kg	12 kg	15 kg
Protection class:	IP 22			
Storage temperature	-55...+75°C			
Operating temperature	-25...+55°C			

Backlight intensity is adjusted by the dimmer and can be fully cancelled (“deep dimming”).

## 4. MOUNTING AND CONNECTION

Device casing provides for it to be mounted on the desktop and on the plate.

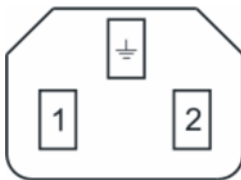
If plate mounting is chosen, refer to the dimensional drawing (Figure 1) to prepare the location where the display is to be mounted to the control panel plate with fixing holes. If desktop mounting is chosen, attach the brackets to the display casing, prepare the location and tighten M5 screws to fix the display to the brackets.

Mounting being completed, lay connecting cables from external devices and connect it to the matching display connectors. Tighten the fixing screws to avoid their inadvertent disengagement.

After mounting and connection are completed, power the device up and ensure that the graphical data are properly output on the screen.

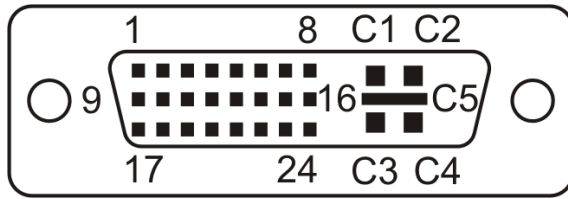
It is possible to connect several video signal sources (1 x VGA, 1 x DVI, 2 x AV and 1 x S-Video).

### Power Connector



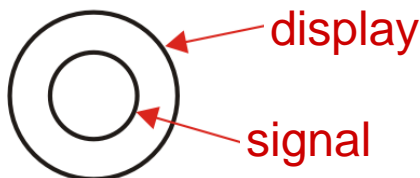
Power	Pin 1	Pin 2
24 VDC	+18...36 VDC	0 VDC
220 VAC	L	N

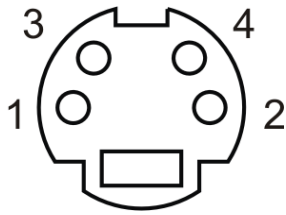
**DVI Connector**



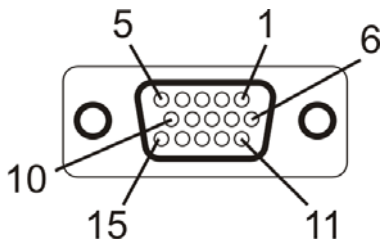
Pin number	Designation	Pin number	Designation
1	DATA2-	16	HOT PLUG DET
2	DATA2+	17	DATA0-
3	DATA2/4 SHIELD	18	DATA0+
4	DATA4-	19	DATA0/5 SHIELD
5	DATA4+	20	DATA5-
6	DDC CLK	21	DATA5+
7	DDC DATA	22	CLOCK SHIELD
8	ANALOG VSYNC	23	CLOCK+
9	DATA1-	24	CLOCK-
10	DATA1+		
11	DATA1/3 SHIELD	C1	ANALOG RED
12	DATA3-	C2	ANALOG GREEN
13	DATA3+	C3	ANALOG BLUE
14	+5V POWER	C4	ANALOG HSYNC
15	GND	C5	ANALOG GND

**Composite Connection (Composite Input)**



**S-Video Connector**

Pin number	Designation	Pin number	Designation
1	GND	3	Brightness
2	GND	4	Color

**VGA Connector**

Pin number	Designation	Pin number	Designation
1	Red	9	NC
2	Green	10	GND
3	Blue	11	GND
4	GND	12	SDA
5	GND	13	HSYNC
6	Red GND	14	VSYNC
7	Green GND	15	SCL
8	Blue GND		

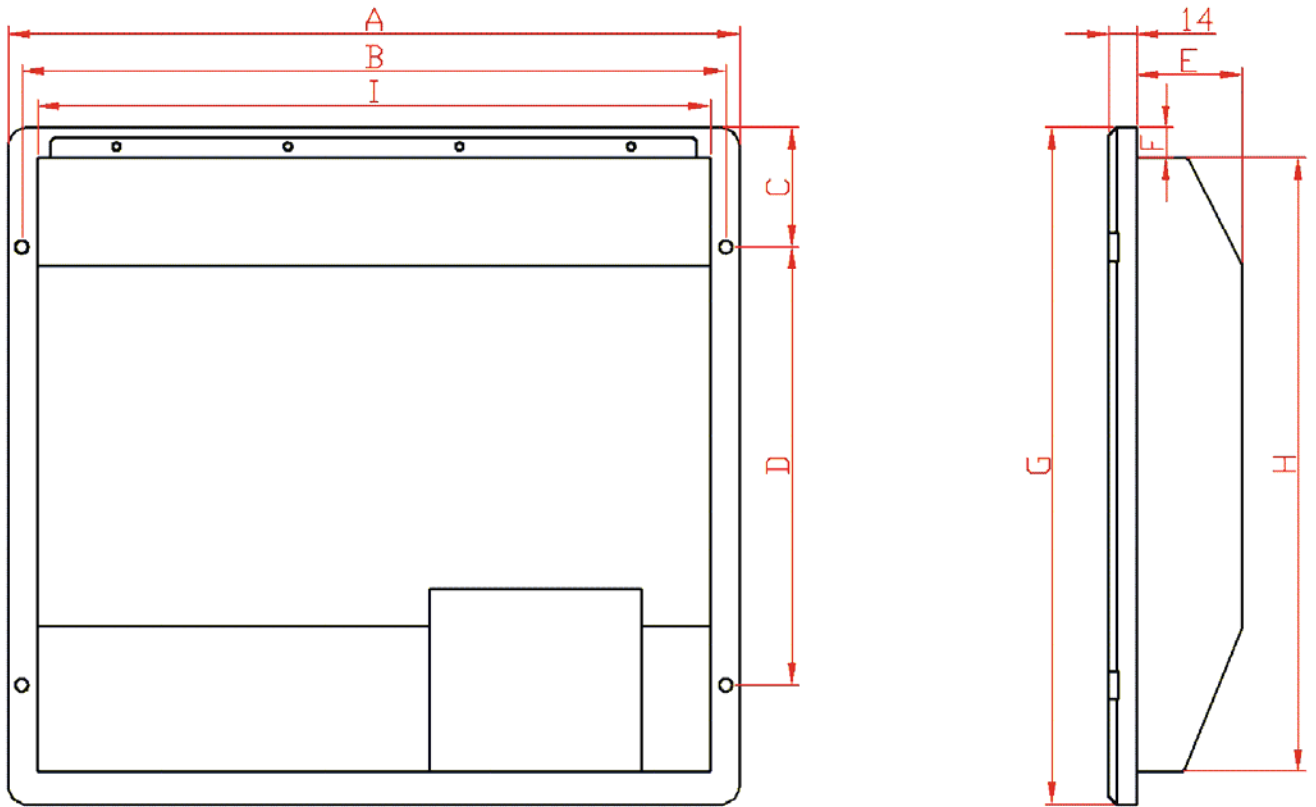
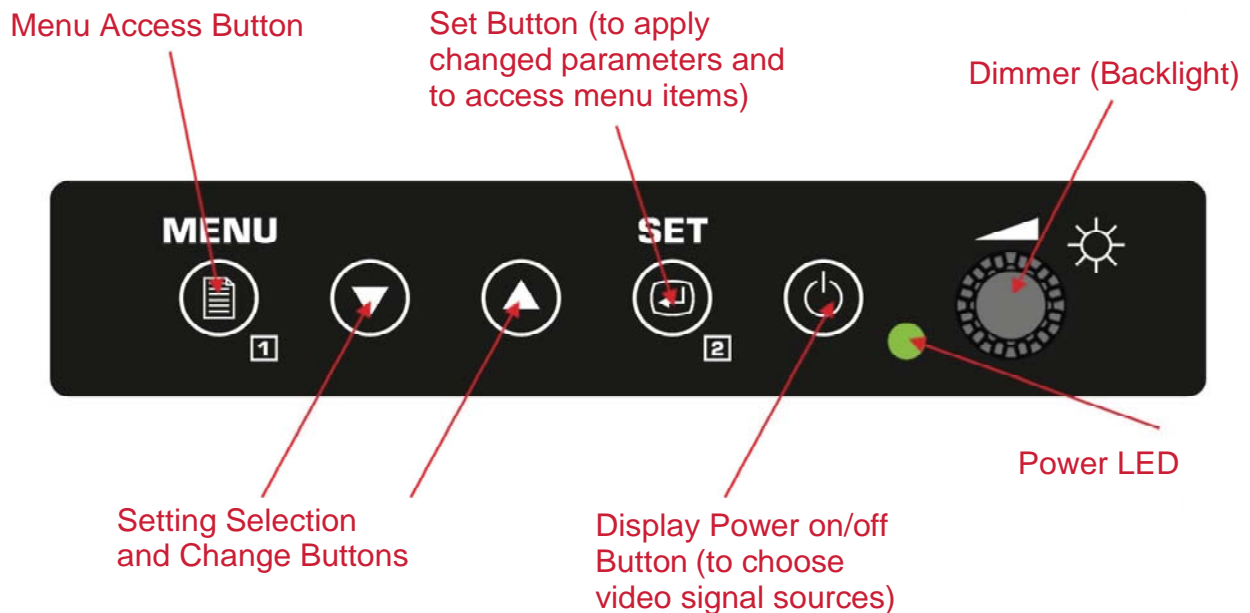


Figure 1. Dimensions

Version	Dimension (mm)								
	A	B	C	D	E	F	G	H	I
<b>MV-1501</b>	371	357	60	220.5	58	14	340.5	311	343
<b>MV-1701</b>	411.5	395.5	75.5	217	58	19.5	388	352	373
<b>MV-1901</b>	449	433	75.5	247	58	19.5	418	382.5	411.5
<b>MV-2101</b>	509.5	493.5	77	269	67	17	443	410.5	475.5



## 5. CONTROLS



The following controls are located on the front panel:

1. Display Power on/off button (short-time pushing switches the display over cycle-wise according to the video signal sources).
2. “MENU”. Enter/exit button to access the display settings menu. When in the menu, this button allows to exit the active setting without saving the changed parameter.
3. “▲” and “▼”. Selection buttons to select a menu item/parameter measurement. When in the menu, this buttons allow to scroll up the items (settings) up and down. If any setting is changed, they are used to increase/decrease its value.
4. Dimmer to control the backlight intensity. Turn it up to the stop in direction right to maximize the backlight intensity. Turn it up to the stop in direction left to cancel it (no backlight).
5. Power LED shows that power is available and the device is operating. If power is on and video signals are received from the current video input, this LED is green. If power is off or no video signal available in the current input, the LED goes out.

**Warning!** Changing backlight intensity automatically and correspondingly changes the LED-light intensity. If it is in the minimum (backlight cancelled), the LED will go out.

## 6. TRANSPORTATION AND STORAGE

The battery charger shall be stored in heated space at air temperature of +5 °C to +35 °C (maximum values of -55 °C to +75 °C), at relative humidity of air not exceeding 95 % at temperature of +25 °C and content of dust, oil, moisture and aggressive admixtures in the air not exceeding the norms envisaged by GOST 12.1.005-88 for the working zone of production areas.

The device shall be transported in transport container of the manufacturer in closed transport.

Means of transport:

- automobile and railway closed transport (covered wagons, universal containers)
- by air (in pressurized and heated bays of airplane)
- by sea (in dry service spaces).

The device shall be transported in accordance with the transport regulations in force for the particular transport.

During handling operations and transportations strictly observe the requirements of handling marks on boxes and do not allow bumps and impacts which can affect preservation and serviceability of the device.

Packed devices shall be reliably secured in vehicles.

After storage in stores or transportation at temperature below +10 °C the devices shall be unpacked only in heated spaces after keeping them unpacked in under normal climatic conditions for 12 hours.

## 7. WARRANTY

The manufacturer guarantees the unit complies with this manual provided that the operation, transportation and storage conditions are adhered to during the warranty period.

The unit's warranty period expires 24 months from the date of its shipping from the manufacturer's storehouse.

Within the warranty period, the owner is entitled for a free repair, or a replacement of a separate part, provided that the malfunction occurred through the manufacturer's fault.

Warranty repair is provided if the unit is submitted with the manufacturer's label and a legible serial number available on it, as well as this operating manual.

The manufacturer is not responsible and cannot guarantee the unit's operation:

1. After the warranty period is over;
2. In case of the failure to observe the unit's operation, transportation, storage and installation rules and conditions;
3. If the unit is in an unmarketable condition, or has a damaged body, and other causes beyond the manufacturer's control;
4. If self-made electrical devices were used.
5. If there was an attempt to repair the unit by a person who is not an authorized representative of the manufacturer.

If the owner loses this operating manual or the manufacturer's label with a serial number, the manufacturer shall not provide their copies, and the owner shall be divested of the right for a free repair during the warranty period.

Upon the warranty expiry, the manufacturer shall facilitate the repair of the unit at the owner's expense.

Note: in case of warranty repair, the unit's disassembling from the installation site and its delivery to the manufacturer's service center are done at the owner's expense.

Visit the manufacturer's website [www.unicont.spb.ru](http://www.unicont.spb.ru) (section "support/warranty") to find:

- forms to fill in claims,
- full warranty description;
- full description of the warranty service rendering procedure.

**The manufacturer service center's address and contact details:**

**Unicont SPb, Ltd.**

**Bld. 26E Kibalchich Str., Saint Petersburg, 192174, Russia**

**tel.: +7 (812) 622 23 10, +7 (812) 622 23 11**

**fax: +7 (812) 362 76 36**

**e-mail: [service@unicont.spb.ru](mailto:service@unicont.spb.ru)**

## 8. DATE OF PACKING

Marine LCD Display	_____	№
name of article	designation	serial number

Packed \_\_\_\_\_  
*Unicont SPb Ltd., Russia.*  
 Manufacturer

according to the requirements of the current technical documentation.

_____	_____	_____
post	signature	clarification of signature

\_\_\_\_\_  
 year, month, day

## 9. ACCEPTANCE DETAILS

Marine LCD Display	_____	№
name of article	designation	serial number

was manufactured and accepted in accordance with the regulatory requirements of the state standards and applicable technical documentation, and is suitable for operation.

Quality control representative

Stamp	_____	_____
here	signature	clarification of signature

\_\_\_\_\_  
 year, month, day

## 10. DATE OF COMMISSIONING

Marine LCD Display	_____	№
name of article	designation	serial number

The unit has been put into operation.

Date of installation: \_\_\_\_\_

Place of installation: \_\_\_\_\_

Person in charge of installation: \_\_\_\_\_