Monitor 12"
RLED
RLED Serial
RLED CAN
RLED CAN Radar
RLED Serial PL
RLED PL

User manual
Manual No. UM0972050 R1-6

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English

ORLACO
Specialised Camera Solutions

User Manual

ORLACO Monitor 12"
RLED, RLED Serial, RLED CAN,
RLED Radar, RLED Serial PL, RLED PL

Manual No. IM0972050, R1-6

Introduction
Check with Orlaco which language versions are available. This manual contains user instructions. Used photographs and illustrations give general information and may differ from the products you use.

Contact your Orlaco dealer if you have questions, additional information, or want to make changes that are not described in this manual.

The camera and monitor systems from Orlaco comply with the latest CE, ADR, EMC and mirror-directive regulations. All products are manufactured in accordance with the ISO 9001 quality management system, ISO 14001 environmental management systems.

See System Manual SM0973230 for installation.

Article numbers ORLACO Monitor 12" RLED

0207900 Monitor 12" RLED
0207910 Monitor 12" RLED Serial
0207920 Monitor 12" RLED CAN
0207930 Monitor 12" RLED CAN Radar
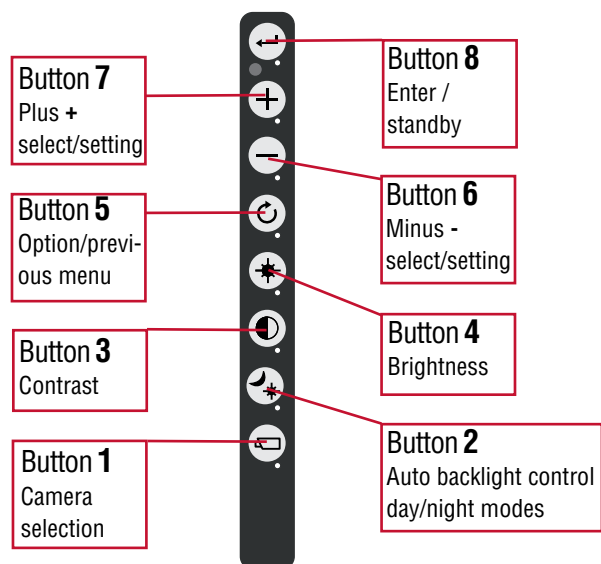0207950 Monitor 12" RLED Serial PL
0207970 Monitor 12" RLED PL

Used abbreviations

ABC	= Auto Backlight Control
AFZ	= Auto Focus Zoom
AGC	= Automatic Gain Control
BHO	= Black Hot
CCC	= Compact Color Camera
LUT	= Look Up Table
DDE	= Digital Detail Enhancement
FFC	= Flat Field Correction
FUS	= Fusion
I&F	= Ice and Fire
NTS	= NTSC
OSD	= On Screen Display
PIP	= Picture in Picture
PTZ	= Pan & Tilt Zoom
RB	= Rainbow
Stndrd = Std	= Standard
TCH	= Tachometer
TIC	= Thermal Image Camera
WHO	= White Hot
ZOO	= Zoom

Keyboard

Below is a brief description of the button functions. See sections 3 and 4 for a more detailed explanation.

Button **7**
Plus **+**
select/setting

Button **5**
Option/previous menu

Button **3**
Contrast

Button **1**
Camera selection

Button **8**
Enter / standby

Button **6**
Minus **-**
select/setting

Button **4**
Brightness

Button **2**
Auto backlight control day/night modes

Button 1, camera selection
Press the camera selection button once. The camera LED flashes to indicate that manual camera selection is enabled. Use the minus and plus buttons to select the camera. Press the button again to disable manual camera selection.

Button 1

Button 2, auto backlight control day/night settings
Press this button to switch between the auto backlight day and night settings.

Button 2

Button 3, setting the contrast
Press the button once in order to enable the setting mode. Use the minus and plus buttons to set the required contrast. Press the button again to disable the setting mode.

Button 3

Button 4, setting the brightness
Press the brightness button once in order to enable the setting mode. Set the required brightness using the minus and plus buttons. Press the button again to disable the setting mode.

Button 4

Buttons 3 and 4, setting color saturation
Press the contrast (3) and brightness (4) buttons simultaneously to enable the setting mode. Set the required color saturation using the minus and plus buttons. This setting must be set separately for each camera.

Button 3   Button 4

Button 5, option/previous menu
Return to the previous menu.

Button 5

Button 6, minus
Go to the next menu option or move left.

Button 6

Button 7, plus
Go to the previous menu option or move right.

Button 7

Button 8, enter
Switch to Standby or in the menus, select or activate the chosen option.

Button 8

2.1. Disclaimer
When switching on the monitor for the first time, a disclaimer appears in English for 5 seconds (see Figure 1).
Displayed text: *Do not operate display functions during safety critical operations. Objects in the monitor are closer than they appear.* If a different language is subsequently set, the disclaimer text appears in the set language.

2.2. Description of the keyboard
Button no. **1** = Camera selection
Button no. **2** = Auto LCD backlight control day/night settings
Button no. **3** = Contrast
Button no. **4** = Brightness
Button no. **5** = Option/previous menu
Button no. **6** = Minus selection/setting button (-)
Button no. **7** = Plus selection/setting button (+)
Button no. **8** = Enter/Standby

2.3. Language setting for the OSD (On Screen Display) menu
The OSD menu language is set as English by default. If you would like to operate the OSD menu in a different language, open the service menu → system settings. See section 4 on page 13. The OSD menu is available in English, Dutch, German, French, Italian, Polish, Spanish and Swedish.

Button **8** = Enter/Standby
Button **7** = Selection/setting Plus(+)
Button **6** = Selection/setting Minus(-)
Button **5** = Option/previous menu
Button **4** = Brightness
Button **3** = Contrast
Button **2** = ABC, day/night settings
Button **1** = Camera selection

```
① Disclaimer
Do not operate display
functions during safety
critical operations.
Objects in the monitor
are closer than they
appear.

Press any key to continue
```
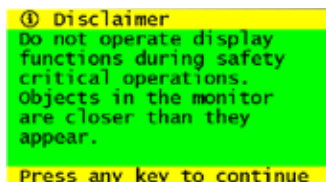*Figure 1*

3.1. Button 1, camera selection
Press the camera selection button (1) once (see Figure 2). The camera LED flashes to indicate that manual camera selection is enabled (see Figure 3). Press the button again to disable manual camera selection.
Use the minus and plus buttons to select the desired camera.

The other buttons (3 = contrast, 4 = brightness and 3+4 = saturation) can also be used and these functions can be adjusted with the minus and plus buttons. Disable these functions by reselecting a camera with the minus and plus buttons.

Manual camera selection has priority over the scan function and the automatic camera selection. The button function can be disabled in the service menu via the option 'system settings → keyboard → keyboard lock'. See system settings for more information (section 4.3. on page 13).

3.2. Button 2, auto LCD backlight control day/night settings
See figure 4.
For a compact camera, press this button to switch between:
• The ABC mode
• The LCD backlight day setting
• The LCD backlight night setting
TIC and AFZ cameras are exceptions. For these, pressing button 2 makes other functions available (see sections 3.8.1. and 3.8.2. on page 9).

The ABC mode controls the backlight between a minimum (adjustable; see also under service menu on page 16) and a maximum level depending on the intensity of the ambient light. A light sensor on the keyboard measures the ambient light (see Figure 6).

In the day and night mode the brightness of the backlight can be manually set using the minus and plus buttons (the settings are saved). These settings are not camera dependent and therefore apply for all cameras (see Figure 5).

Button **8** = Enter/Standby
Button **7** = Selection/setting Plus(+)
Button **6** = Selection/setting Minus(-)
Button **5** = Option/previous menu
Button **4** = Brightness
Button **3** = Contrast
Button **2** = ABC, day/night settings
Button **1** = Camera selection

Button 1
Figure 2

Button 1
Figure 3

Button 2
Figure 4

Figure 5

Button 8
Button 7
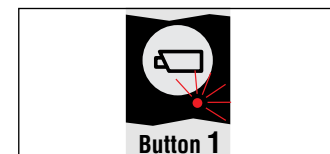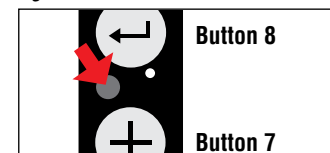*Figure 6*

3.3. Button 3, setting the contrast
Press the contrast button (3) once to enable the setting mode (see Figure 7). Use the minus and plus buttons to set the required contrast. This setting must be set separately for each camera.

3.4. Button 4, setting the brightness
Press the brightness button (4) once to enable the setting mode (see Figure 8). Set the required brightness using the minus and plus buttons. This setting must be set separately for each camera.

3.5. Buttons 3 and 4, setting color saturation
Press the contrast (3) and brightness (4) buttons simultaneously to enable the setting mode.
Set the required color saturation using the minus and plus buttons. This setting must be set separately for each camera.

3.6. Locking buttons 2, 3 and 4
These buttons can be locked in the service menu (section 4.3.3. keyboard, see page 13).

3.7. Button 5, option button
- **Single scan sequence**
  If the option button (5) is pressed and a CCC is selected (see camera settings on page 10), then the LEDD monitor generates a single scan (not continuous) of multiple connected cameras in a sequence (using the set time interval. The scan time must only be set if the main scan is started and then stopped again). See page 15, scanning.
- **Connection with an AFI/AFZoom camera**
  This option enables the zoom function (indicated by the illuminated button). The zoom factor can be changed using the plus and minus buttons.
- **Connection with a TIC camera**
  Zoom factors for a TIC camera are: 1x (standard display), 2x and 4x. When zooming out to 1x, the pan/tilt function is set at the starting point.
- **Connection with a PTZ camera**
  If pan/tilt is enabled and the option button (button 5) is pressed several times, then the ZOOM, PAN, TILT sequence is run through (see Figure 10). The minus and plus buttons are used to activate the ZOOM, PAN or TILT movement (PAN and TILT for a TIC camera only work if the digital zoom is 2x or 4x).

The TIC camera video standard and spot meter settings are only accessible via the camera menus. There are no keys for direct access to these settings.
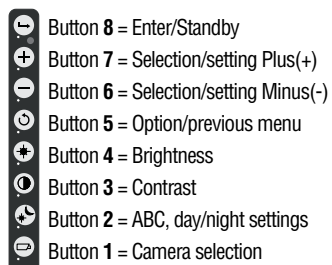See page 10, section 4: service menu, camera settings.

Button **8** = Enter/Standby
Button **7** = Selection/setting Plus(+)
Button **6** = Selection/setting Minus(-)
Button **5** = Option/previous menu
Button **4** = Brightness
Button **3** = Contrast
Button **2** = ABC, day/night settings
Button **1** = Camera selection

Button 3
Figure 7

Button 4
Figure 8

Button 5
Figure 9

3.8. Quick settings
When in normal image mode, the following quick settings are available as shortcuts:

3.8.1. TIC camera
When a TIC camera is selected and button 2 (Figure 12) is pressed, then Color LUT and DDE quick settings are enabled (indicated by illuminated button 2). Using the minus button (button 6), the Color LUT settings (WHO, BHO, FUS, RB, I&F) can be selected (see Figure 11). Using the plus button (button 7), the DDE settings (OFF, LOW, MED, HI) can be selected.
If button 2 (Figure 12) is pressed for more than 3 seconds, then the TIC camera performs a FFC (Flat Field Correction) cycle.

3.8.2. AFZ camera
If an AFZ camera is selected and button 2 is pressed (Figure 12), then the zero lux and backlight functions of the AFZ camera are enabled/disabled.

3.8.3. CCC camera
If a CCC is selected, then pressing button 2 (Figure 12) switches between all backlight settings for the entire system (DAY, NIGHT, ABC). See section 3.2.

Figure 10

Figure 11

Button 2
Figure 12

4. Using the service menu

To open the service menu, simultaneously press the camera selection button (1), the minus button (6) and the plus button (7) (see Figure 13). The display (see Figure 14) will appear. The following buttons are used to navigate through the menus:

5 - Option/previous menu: Return to the previous menu
6 - Minus: Go to the next menu option
7 - Plus: Go to the previous menu option
8 - Enter: Select or enable the chosen option

4.1. Camera settings

Select camera settings. Press enter to open the 'Camera settings' menu. Use the minus (6) and plus (7) buttons to select which camera to configure. Then confirm this selection by pressing the enter button (8). The yellow cursor is now activated in the list of items. Use the minus (6) and plus (7) buttons to select the item to adjust and then confirm this selection by pressing the enter button. If the selection is an on/off switch, you can choose between on and off. If the selection is a number, you can change the value using the minus (6) and plus (7) buttons. Save the new settings by pressing the enter button (8).

4.1.1. Mirror
Enable this option to reverse the image (left/right).

4.1.2. Upside down
This option flips the image (upside down).

4.1.3. Brightness
The setting for the brightness of the monitor. For direct button operation: Button 4.

4.1.4. Contrast
The setting for contrast on the monitor. For direct button operation: Button 3.

4.1.5. Saturation
The color saturation setting for the camera image. For direct button operation: Buttons 3+4.

4.1.6. Switch delay
Enable this option if the switchwire is controlled by an intermittent signal (e.g. from an indicator light).

4.1.7. Horizontal line mark
Enable this option to show a reference line. The reference line is displayed as a horizontal green line. See Figure 40 on page 17.

4.1.8. Marker position
Adjusts the vertical height of the reference line. 0 corresponds to the top edge of the monitor and 100 to the bottom edge.

Button **8** = Enter/Standby
Button **7** = Selection/setting Plus(+)
Button **6** = Selection/setting Minus(-)
Button **5** = Option/previous menu
Button **4** = Brightness
Button **3** = Contrast
Button **2** = ABC, day/night settings
Button **1** = Camera selection
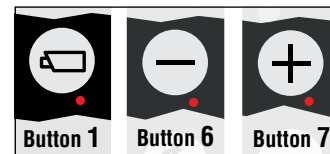

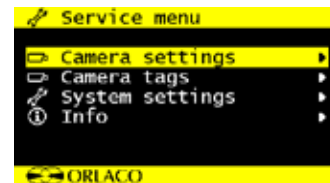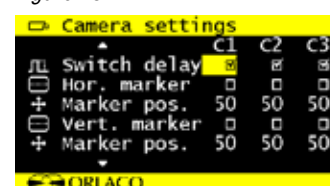| Button 1 | Button 6 | Button 7 |
Figure 13

Figure 14

Figure 15

Figure 16

4.1.9. Vertical line mark
Enable this option to show a reference line. The reference line is displayed as a vertical green line. See Figure 40 on page 17.

4.1.10. Marker position
Adjusts the vertical position of the reference line. This can be set between 38 and 63. The left and right sides swap position depending on the settings of the camera mirror-image function.

4.1.11. Graticule
This option shows a graticule for a rearview camera on the monitor. See Figure 40 on page 17.

4.1.12. Camera type
Select the camera type that is connected. The special features of that camera type will then become available. The camera types that can be selected are:

AFZ: Enable this option if an AFI/AF zoom camera is connected. If AFZ is selected, the backlight, zero lux and stabilizer options are enabled.
Operation of the zoom function:
> **Button 5 -** Enable the zoom function. The zoom function is disabled if the button is pressed again.
> **Button 6 -** Zoom out.
> **Button 7 -** Zoom in.

TIC: Enable this option if a Thermal Image Camera (TIC) is connected. If TIC is selected, then the video standard, color LUT, TIC DDE and spot meter options are enabled.

CCC: Enable this option if a Compact Color Camera (CCC) is connected.

4.1.13. Video stndrd
Video standard: The camera type must be set to TIC. Select the standard video output for the camera: PAL or NTSC (NTS).

4.1.14. Backlight
This option corrects the background light in order to improve the screen display of dark objects in bright/lit surroundings. This option is only available if an AFZ camera is connected to a serial 12" monitor. For direct button operation: Button 2.

Figure 17

Depending on the choice of camera type (see Figure 17), the settings marked in blue will or will not be available.

4.1.15. Zero lux
Enable this option to improve the light sensitivity of the camera in dark surroundings. This option is only available if an AFZ camera is connected to the monitor 12" serial.

4.1.16. Stabilizer
This option enables the stabilizer function, if the camera has one. This option is only available if an AFZ camera is connected to a serial 12" monitor.

4.1.17. Color LUT (look up table)
The camera type must be set to TIC. Select the color palette to be used to give the correct color temperature. Select from WHO (white hot), BHO (black hot), FUS (mixed), RB (rainbow) and I&F (ice and fire). The AGC (automatic gain control) is automatically set for the WHO, BHO, FUS and RB settings.

4.1.18. TIC DDE (TIC digital detail enhancement)
Possible settings are: OFF, LOW, MED and HI. Select the desired degree of image enhancement.

4.1.19. Spot meter
Only works if TIC is selected as the camera type (see section 4.1.13. on page 11):
  OFF (spot meter off)
  B C (bar in Celsius)
  B F (bar in Fahrenheit)
  N C (number in Celsius)
  N F (number in Fahrenheit)
  BNC (bar + number in Celsius)
  BNF (bar + number in Fahrenheit)

4.1.20. Pan/tilt
Enabling the pan/tilt function makes standard pan and tilt operation possible (option button = button 5). It is possible to use digital pan/tilt when the TIC image is zoomed 2x or 4x.

4.1.21. PIP/Split Screen
Set this option to ON to enable Picture In Picture or Split Screen. Visible only when the camera switch is set to 2C or 4C, see section 4.3.8.
  PIP Mirror
  Select this option to see the monitor in mirror mode.
  Camera No.
  Select which camera should be shown in the PIP or Split Screen window.
  Width, Height, Horizontal position, Vertical position of the PIP or Split Screen window can be adapted. See figure 19 and 20.

4.2. Camera tags
In this menu, names can be given to the camera inputs. See Figure 21. The number of inputs depends on the video switch type that is set (see section 4.3.8. on page 15).
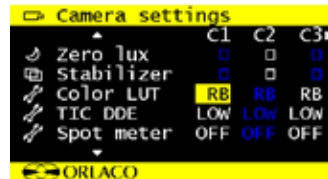

Figure 18
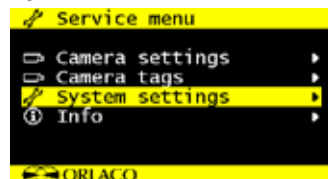

Figure 19

Figure 20

Figure 21

Figure 22

4.3. System settings (see Figure 22)
4.3.1. Language
See Figure 23. This option opens the language selection menu. The selected language will be used for all OSD menus. The OSD menu is available in English, Dutch, German, French, Italian, Polish, Spanish, Swedish.

4.3.2. On Screen Display (OSD)
This option opens the OSD settings menu. See Figures 24. The following can be set in this menu:
  OSD time-out
  Sets the time (in seconds) that the OSD (camera number/name, top left) appears on the monitor. Select 'Off' to disable this and 'On' to have this permanently enabled.
  OSD menu help
  This function enables or disables the automatic text messages of the OSD help menus. If enabled, help messages automatically appear in all menus after 10 seconds of inactivity.

4.3.3. Keyboard
This option opens the keyboard menu. See Figure 26. This menu has the following 3 options:
  Keyboard lock
  This option opens the settings menu for the keyboard lock. It is possible to lock various functions in order to prevent any unwanted changes. See Figure 27.
  The **keyboard sound** and **beeper volume** functions are not available on all Orlaco monitors.

4.3.4. Power settings
See Figure 28. This menu has the following 2 options:
  Standby mode
  There are three available choices — use the minus and plus buttons to select the various functions.
    MNU = With this setting you access the operator menu via the enter button (8). Select the required setting.
    IMM = Immediate standby
    2S = Standby after a delay of 2 seconds
  Standby, camera off
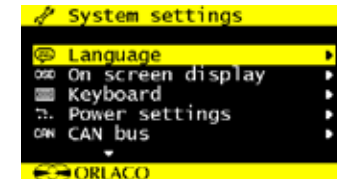 If this option is enabled, the camera power is off during standby.
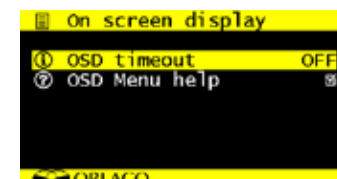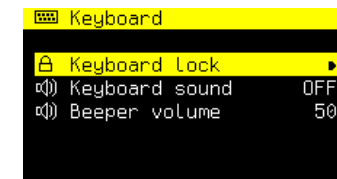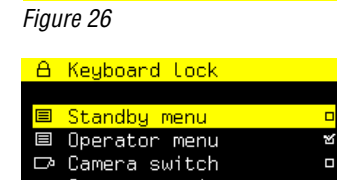

Figure 23
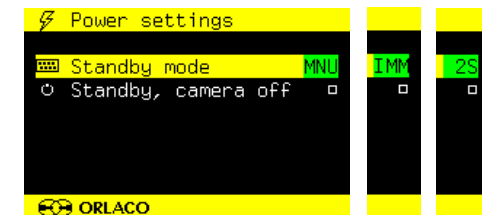

Figure 24

Figure 26

Figure 27

Figure 28

4.3.5. CAN bus

See Figure 29. This option opens the CAN bus menu. This menu has the following 4 options:

CAN protocol
This option selects the signal, or CAN protocol, that the monitor uses. By default this is Orlaco CAN protocol 1. For the Orlaco Radar system, Orlaco CAN protocol 6 must be set. Other protocols are customer-specific. The CAN speed is automatically adjusted, but it can also be set manually once the protocol has been selected.

Set CAN-ID
The Orlaco CAN protocol has an ID (default 0) to control multiple monitors via one CAN bus. The ID is inactive when the text is blue and becomes active when the protocol is set to 1. The CAN-ID can be set from 0-15 where 0 is the default value.

CAN speed
This option selects the bit rate of the CAN bus. Available options are: 100, 125, 200, 250, 500 and 1000 kbit.

Main terminator
Enable/disable the 120 Ω terminator (CAN or RS485) between Rx and Tx.

AUX terminator
Enable/disable the 120 Ω terminator (CAN or RS485) between AUX1 and AUX2.

4.3.6. LCD backlight

This option opens the backlight submenu for the monitor 12". See Figure 30. This menu has the following 4 options:

LCD backlight mode
This option enables automatic backlight control (ABC). The monitor automatically adapts its brightness to the ambient light. Metering sensor on the keyboard. If required, a specific day or night brightness can be manually set.

ABC minimum level
This setting determines the minimum brightness the ABC can use when there is low ambient light.

LCD backlight day
This option allows the day brightness setting to be manually adjusted (50–100%).

LCD backlight night
This option allows the night brightness setting to be manually adjusted (0–50%).

4.3.7. Scanning

This option opens the camera scanning submenu. See Figure 31. This menu has the following options:

Scan sequence
This option selects the cameras from which images are to be shown in sequence.

Scan interval
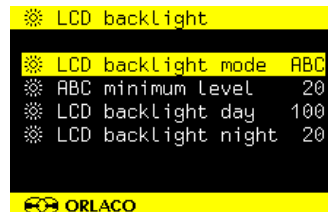This option selects how long a camera image is displayed.
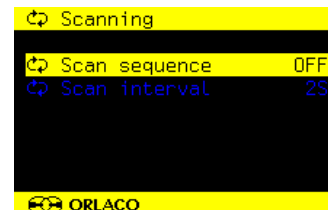

Figure 29

Figure 30

Figure 31

4.3.8. Camera switch

This option configures the type of video switch that is used. See Figure 32.

'OFF' if no camera switch is used → 1 camera system.
'3C' for an external camera switch → 3 camera system.
'2C' if a *2–4 camera cable* is used → 2 camera system.
'4C' if a combination of internal and external switches and a *2–4 camera cable* are used → 4 camera system.
'QUA' for a quad system, only in combination with the quad switch.

With the settings **2C** and **4C** the PIP or Split Screen function can be used, see also chapter 4.1.21.

Figure 32

4.3.9. AUX wire function

Defines the function of the AUX1 & AUX2 switching wires (grey and yellow).

Select **TCH** for the tachometer function (Tacho to AUX1 and hand brake to AUX2) or **ZOO** for the camera zoom function (only available in combination with an auto focus camera). Use in this case the AUX1 and AUX2 switching wires to zoom in and out.

Switch AUX to OFF to use the gray wire as trigger wire for the **4C** system. Select **KEY** to block the keyboard fully by activating the wire AUX1.

Figure 32a

4.3.10. Default settings

This option opens the menu to restore the factory default settings. Select the number of the factory settings that you require (1 = default Orlaco settings). You can choose between 30 sets of default settings. Contact ORLACO for further information. Select the option 'Restore defaults' to restore the factory settings.

Warning:
All user settings are lost when the factory defaults are restored!

Figure 33

4.3.11. External device configuration

This option opens the configuration menu for an external device. Only use this option if a device is connected that has its own OSD (Multiview, Spectrum Scanner, etc.). Exit the menu by pressing the option button (5) for 3 seconds.

Figure 34

4.4. Info

This user manual describes the functions of the software version indicated on this display (see Figure 35).
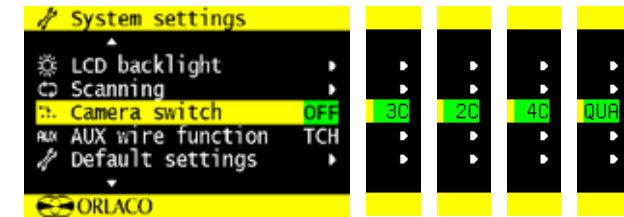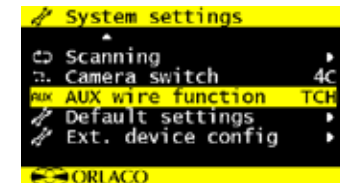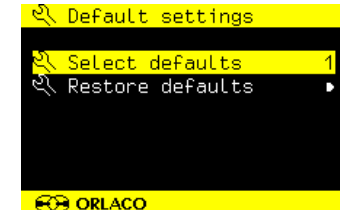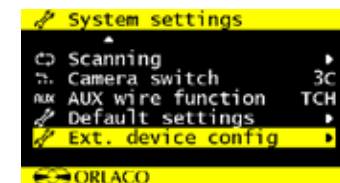

Figure 35

5. Using the operator menu

The operator menu is not available by default due to the keyboard lock. To disable the lock, refer to system settings on page 13.

Press the minus and plus buttons simultaneously to open the operator menu. The following buttons are used for navigation:

5 - Option/previous menu:
Return to the previous menu
6 - Minus:
Go to the next menu option
7 - Plus:
Go to the previous menu option
8 - Enter:
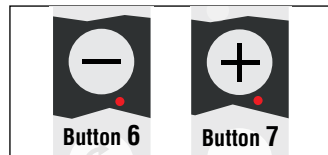Select or enable the chosen option

The following settings can be adjusted (see Figure 37):
Language
Camera settings
Set video channel

5.1. Language

This option opens the language selection menu (see Figure 38). The selected language will be used for all OSD (On Screen Display) menus. The OSD menu is available in English, Dutch, German, French, Italian, Polish, Spanish and Swedish.

5.2. Camera settings (see Figure 39)

Horizontal line mark
Enable this option to show a reference line. The reference line is displayed as a horizontal green line. See Figure 40.
Line position
Adjusts the vertical height of the reference line. 0 corresponds to the top edge of the monitor and 100 to the bottom edge.
Vertical line mark
Enable this option to show a reference line. The reference line is displayed as a vertical green line. This option is not available on all 12" models. See Figure 40.
Line position
Adjusts the vertical position of the reference line. This can be set between 38 and 63. The left and right sides swap position depending on the settings of the camera mirror-image function.
Graticule
This option shows a graticule for a rearview camera on the monitor. See Figure 40.

Button **8** = Enter/Standby
Button **7** = Selection/setting Plus(+)
Button **6** = Selection/setting Minus(-)
Button **5** = Option/previous menu
Button **4** = Brightness
Button **3** = Contrast
Button **2** = ABC, day/night settings
Button **1** = Camera selection

| Button 6 | Button 7 |
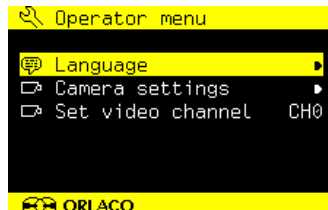
Figure 36

Figure 37

Figure 38

Figure 39

Horizontal	*Graticule*
Vertical	*Horizontal and vertical*
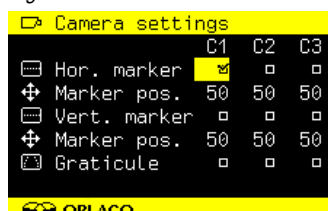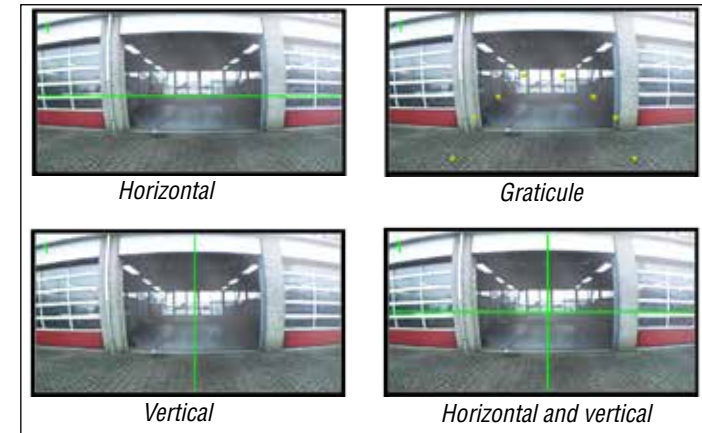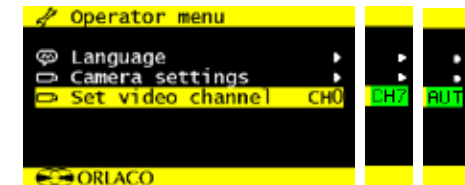
Figure 40

Figure 41

5.3. Video channel settings

See Figure 41.
This option sets the video channel for the Orlaco Spectrum Scanner (see Figure 42).
The following options are available:
CH0 = channel 0 to CH7 = channel 7
AUT = automatic
See the Spectrum Scanner IM0004060 installation manual for descriptions of these channels.

Figure 42

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One camera system

Monitor 12"

Power

Camera CMOS

Two camera system
With Picture in Picture

Monitor 12"

Molded Y-Cable

Camera CMOS

Power

Camera CMOS
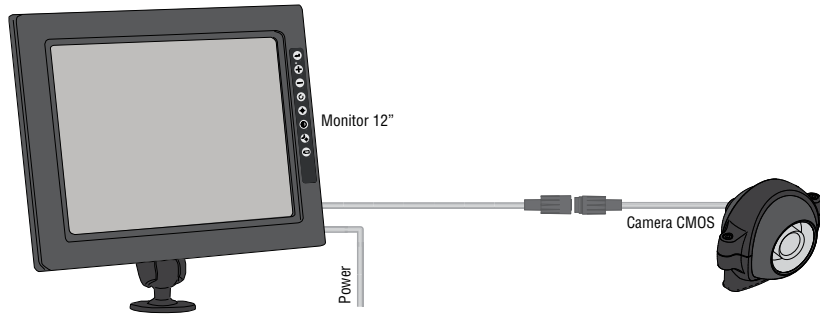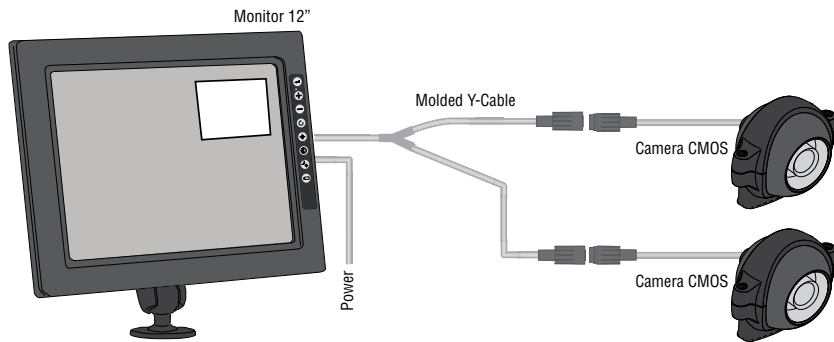
System options: Indicated are some basic examples, there are more combinations possible, ask ORLACO for the possibilities.

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Three Camera System
With Picture in Picture

Camera CMOS

Monitor 12"

Molded Y-Cable

Camera AFZ

Power

Camera CMOS

Switcher
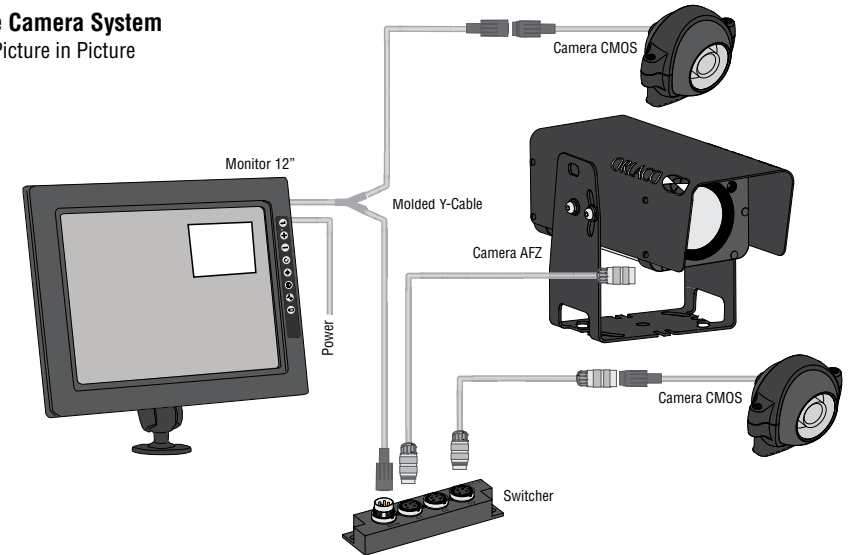
Four Camera System
With Quad picture

Monitor 12"

Camera AFZ

Multiview box

Power

Camera CMOS

Camera CMOS

Camera CMOS

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Version R1-0. First release, August 2012.
Version R1-1. Chapter 4; menu and text changes, Chapter 6; System overview changed, Chapter 7; Menu and text changes, October 2012.
Version R1-2. Monitor Article number added, page 3; January 2013.
Version R1-3. PIP Mirror added, CAN-ID added, August 2013.
Version R1-4. Explanation splitscreen in menu added, Chapter 4.1.21.; February 2014.
Version R1-5. Barcode added, September 2014.
Version R1-6. Monitor Article number added, page 3; January 2015.

Standby menu
Enter

Standby menu ↓	
Standby	Display is on but there is no picture
Info	Software information

Operator menu   The operator menu is not available by default due to the keyboard lock.
Minus- and Plus buttons

Operator menu ↓	
Language	➤ English, Dutch, German, French, Italian, Polish, Spanish, Swedish.
Camera settings	➤ Horizontal Marker, Marker position, Vertical Marker, Marker position, Graticule
Set video channel	➤ CH0, CH1, CH2, CH3, CH4, CH5, CH6, CH7, AUT

Service menu
Camera- + Minus- and Plus buttons

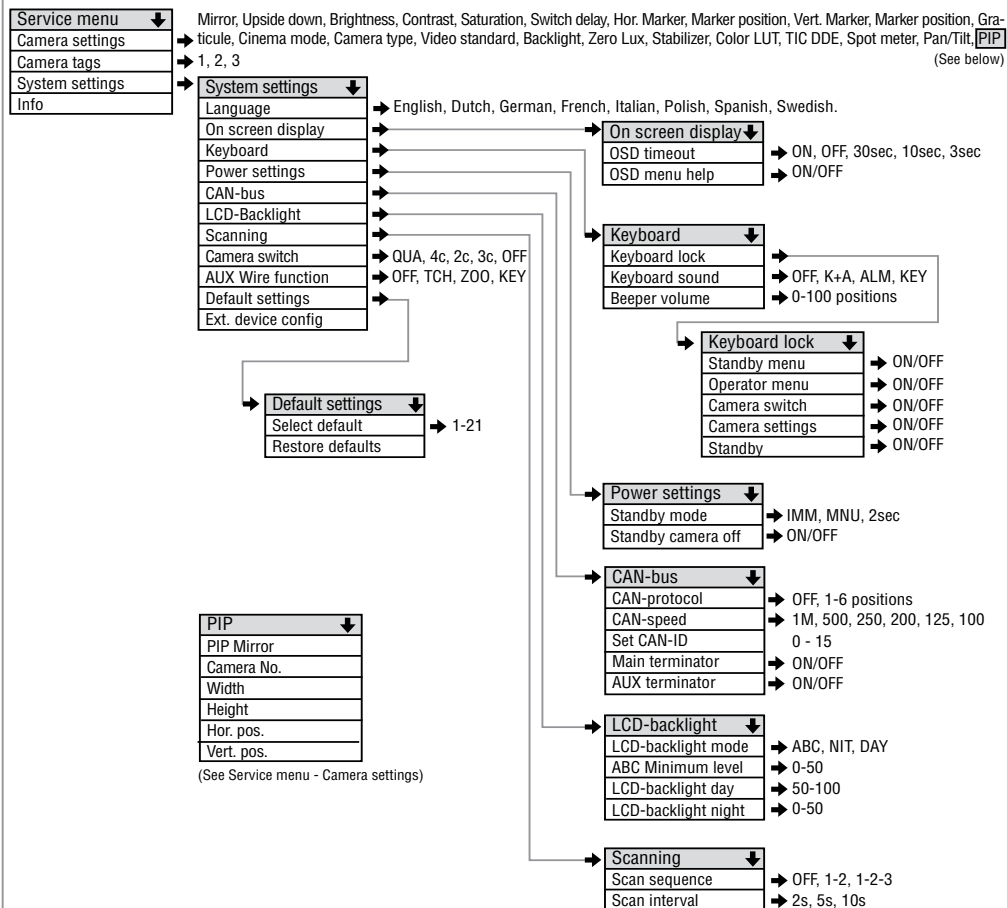| Service menu ↓	
Camera settings	➤ Mirror, Upside down, Brightness, Contrast, Saturation, Switch delay, Hor. Marker, Marker position, Vert. Marker, Marker position, Graticule, Cinema mode, Camera type, Video standard, Backlight, Zero Lux, Stabilizer, Color LUT, TIC DDE, Spot meter, Pan/Tilt, PIP (See below)
Camera tags	➤ 1, 2, 3
System settings	➤
Info	

System settings ↓	
Language	➤ English, Dutch, German, French, Italian, Polish, Spanish, Swedish.
On screen display	➤
Keyboard	➤
Power settings	➤
CAN-bus	➤
LCD-Backlight	➤
Scanning	➤
Camera switch	➤ QUA, 4c, 2c, 3c, OFF
AUX Wire function	➤ OFF, TCH, ZOO, KEY
Default settings	➤
Ext. device config	

On screen display ↓	
OSD timeout	➤ ON, OFF, 30sec, 10sec, 3sec
OSD menu help	➤ ON/OFF

Keyboard ↓	
Keyboard lock	➤
Keyboard sound	➤ OFF, K+A, ALM, KEY
Beeper volume	➤ 0-100 positions

Keyboard lock ↓	
Standby menu	➤ ON/OFF
Operator menu	➤ ON/OFF
Camera switch	➤ ON/OFF
Camera settings	➤ ON/OFF
Standby	➤ ON/OFF

Default settings ↓	
Select default	➤ 1-21
Restore defaults	

Power settings ↓	
Standby mode	➤ IMM, MNU, 2sec
Standby camera off	➤ ON/OFF

CAN-bus ↓	
CAN-protocol	➤ OFF, 1-6 positions
CAN-speed	➤ 1M, 500, 250, 200, 125, 100
Set CAN-ID	0 - 15
Main terminator	➤ ON/OFF
AUX terminator	➤ ON/OFF

PIP ↓
PIP Mirror
Camera No.
Width
Height
Hor. pos.
Vert. pos.

(See Service menu - Camera settings)

LCD-backlight ↓	
LCD-backlight mode	➤ ABC, NIT, DAY
ABC Minimum level	➤ 0-50
LCD-backlight day	➤ 50-100
LCD-backlight night	➤ 0-50

Scanning ↓	
Scan sequence	➤ OFF, 1-2, 1-2-3
Scan interval	➤ 2s, 5s, 10s

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ORLACO

Orlaco is a Manufacturing company that specializes in making cameras and monitor systems for commercial vehicles, fork-lift trucks, cranes, off shore and maritime.

Our objective is to design and produce camera systems for the professional market that improve the drivers' view and increase operating efficiency.

At our facility in Barneveld we locate our design, manufacturing, warehousing and service department.

Vision is our mission®. Orlaco therefore deploys the development, manu- facture, supply and service of camera and display systems that will improve safety and efficiency of all vehicles, machinery and vessels. Our systems give the end user a view on each blind spot and will create comfort and improved working conditions. Our active approach will support market demands and innovations and will lead to enthusiastic ambassadors in the market; our customers.

For more information: www.orlaco.com

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