



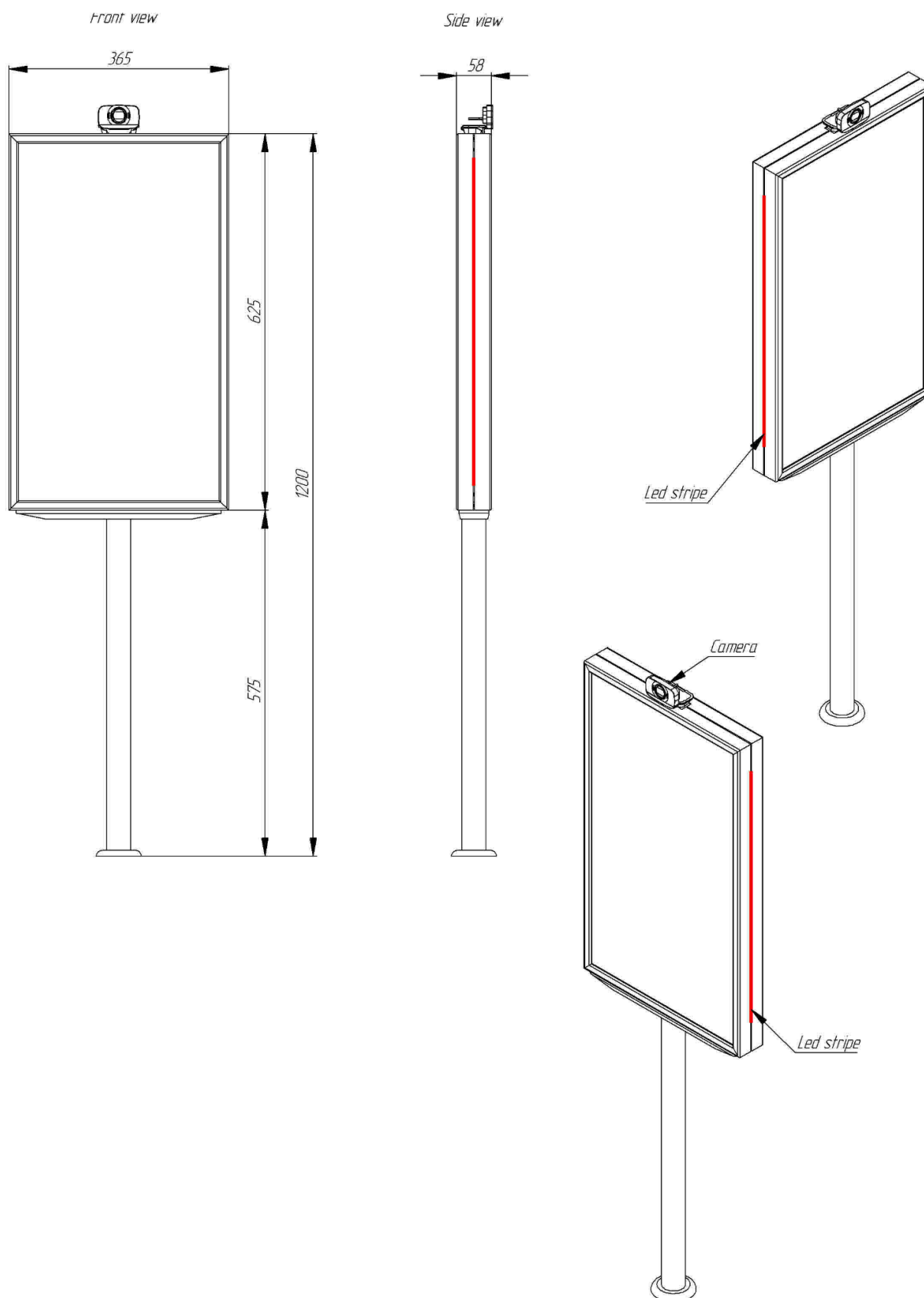
AMERICAN ROULETTE DISPLAY SYSTEM (ARDS) USER'S MANUAL



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PRODUCT DIMENSIONS



1. Technical Specifications.

ARDS (American Roulette Display System) consists of one or two 27" Full HD LED monitors with a viewing angle of 178° and an industrial grade fanless industrial grade PC.

ARDS operates using 110/220V voltage and 60Hz/50Hz frequency. Fuse rating must be 1A.

If voltage is lower than 100V or higher than 240V use of Smart Online Double-Conversion UPS is strictly required. CTC HOLDINGS recommend using APC Smart-UPS 750VA LCD 230V. Please find more information on www.apc.com In case of electromagnetic interferences and voltage spikes use of Line-Interactive UPS is strictly required. CTC HOLDINGS recommend using APC Smart-UPS 750VA LCD 230V. Please find more information on www.apc.com ARDS must be connected only to an electrical outlet with grounding.

Connection to electricity mains must be done using only the specific power supply units provided by the supplier and included in the installation kit.

Power consumption of the monitor does not exceed 25W for a single sided display and 50W for a double sided one.

Power consumption of the industrial PC unit does not exceed 40W.

Power consumption of the LED strips controller is 5W.

Dimensions of the 27" monitor 27" 1256 X 374 mm with thickness of 55 mm.

Computer software is based on LINUX OS.

Important notice: use of other power supply units can damage the equipment and warranty will be void.

2. Installation kit.

The installation kit includes the following items:

- 27" Full HD monitors in a metal frame mounted on a metal pole (standard finishes are black & gold, black & chrome, black, gold or chrome) – 1 (2 for a double sided ARDS)
- Fanless rugged industrial grade computer (under LINUX OS) - 1.
- 12V Power supply unit for the monitor - 1 (2 for a double sided ARDS).
- 12V Power supply unit for computer -1.
- Video FHD camera - 1 (excluded in case of a Direct Link).
- USB wireless mini keypad - 1.
- RS-485 (only in case of a Direct Link) -1.
- Integrated LED RGB side strips with controller - 1 set.
- Interactive RGB LED THEME side strips with controller - 1 set (only upon request).

3. ARDS Installation Procedures.

Important: ARDS must be operated indoors only under normal temperature and humidity conditions at temperatures not lower than + 5° C OR higher than + 30° C. Avoid dusty environments and cover the display if maintenance is being performed nearby to avoid dust getting in. Mains supply must be grounded to prevent static electricity damaging the display system.

Choose your preferred position of ARDS on a roulette table (please read this manual for instructions).

Make sure that position of ARDS complies with requirements of camera reader positioning (please read this manual for details).

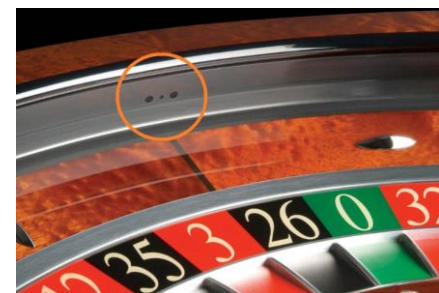
To install ARDS you should do the following:

1. Make a 30 mm hole in the roulette table plate at the preferred position of ARDS. Put the cables through the hole and secure the monitor pole using the tightening nut.
2. The video camera must be directed towards the roulette wheel so that the video camera has full and undistorted view of the wheel. The whole rotor must be visible. It is possible to tilt the camera to the right and to the left horizontally along its axis, but not more than to 2 and 10 o'clock.
3. Lighting conditions must be sufficient for the camera to detect the colours of the pockets and the number ring. Lighting must be even and without reflection from the number ring or the pockets.
4. Place the mounting plate with PSU and industrial PC under the table in such a way that it would be possible to connect the monitor cables to the PC unit.
5. Connect the PC unit to power supply cable, USB keypad, USB video camera cable and HDMI monitor cable(s).
6. Connect the power supply cable to electric socket. Electric current must comply with electrical safety requirements for ARDS.
7. If using a wheel with built-in sensors, connect the wheel to the PC using USB to RS232 adapter and Null Modem cable (for Cammegh wheels) or USB to RS485 adaptor (for Abbiati, Bohm or TCS Saturn wheels). Configure the serial port name and baud rate in the file /home/display/display.properties
8. To turn on ARDS, press PC power button. The button will illuminate. The screens are always on and do not have their own power switches, but they enter into power saving mode when the PC is off. Therefore, it is necessary to wait for about 30 seconds after turning on the PC for the monitors to start working. Do not press the PC power button again during this time.
9. To turn off ARDS safely:
 - If software is running, press the power button on the USB keypad for 5 seconds.
 - If the operating system desktop is visible, go to the bottom-left corner of the screen, click to show the menu, and select Leave/shut down.
 - If no display is visible, try pressing the power button on the USB keypad for 5 seconds. If the PC does not shut down within 30 seconds, try pressing the PC power button briefly. As a last resort, the PC can be forced to turn off by holding the PC power button for 5 seconds.

4. Introduction and general description.

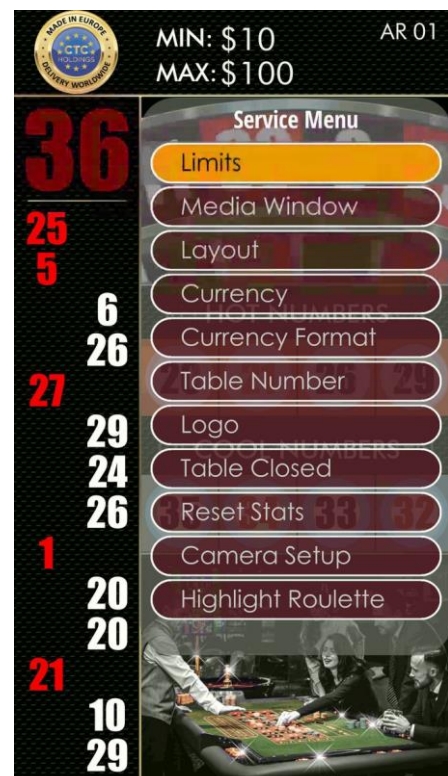
ARDS detects winning numbers and shows visual information related to the game of American Roulette. ARDS operates in the following modes: New Spin, No More Bets, Winning Number and Idle mode. ARDS shows 14 last winning numbers, casino logo, currency type, min/max bet, gaming table number, hot/cool numbers, gaming statistics and promotional videos or slide shows.

ARDS can detect winning numbers via image recognition by using Camera Reader connected to PC or via Direct Link with roulette wheels that have built-in or on-rim reading sensors.



5. SERVICE MENU.

Press Menu Key on the keypad (or ALT on a full size keyboard) to open Service Menu. Press Menu Key to close Service Menu. Navigate Service Menu by up and down arrows on the keypad (or 2 and 8 keys, or + and -). Use scrolling if necessary. Press Enter to select an item. Choose or modify required settings. All changes are saved automatically even if ARDS is turned off or restarted



6. DISPLAY MENU LIST.

Limits	Used to set up value of minimum and maximum bet.
Media Window	Used to manage promotional media files.
Layout	Used to select a visual template (game type, colour skins, languages, type of statistics shown, number of media windows, special event videos).
Currency	Used to select currency symbol from a list of available currencies.
Currency Format	Used for decimal and currency formats and international settings.
Table Number	Used to set up table number.
Logo	Used to show casino logo.
Table Closed	Used to go into Table Closed Mode. Press corresponding key on the keypad to turn on and off Table Closed Mode.
Reset Stats	Used to reset all gaming results statistics. Reset can be made by using Reset Stats item in Service Menu or by pressing Clear Stats key on the keypad.
Camera Setup	Used to adjust brightness and exposure of the camera reader. NB: for qualified technicians only.
Highlight Roulette	Used to manage settings related to High Light Roulette. Works only if connected with High Light Roulette controller.





7. Keypad Functions

It is not necessary to use Service Menu in day-to-day operations. Most important functions can be executed by using the keypad.

This key resets winning results statistics. It requires double confirmation to avoid accidental reset.



Press to call for Security (top section flashes in red).



Press to call for Manager (top section flashes in blue).



Press to call for Service (top section flashes in green).



Press to open Camera Setup mode. To exit press Menu and select one of the Layout from the list.



Press for 5 seconds to turn off ARDS safely.



Press to delete the last winning number, to undo Clear Stats operation or to edit text in the menu when the green cursor is visible (min/max bets, table number, etc.).



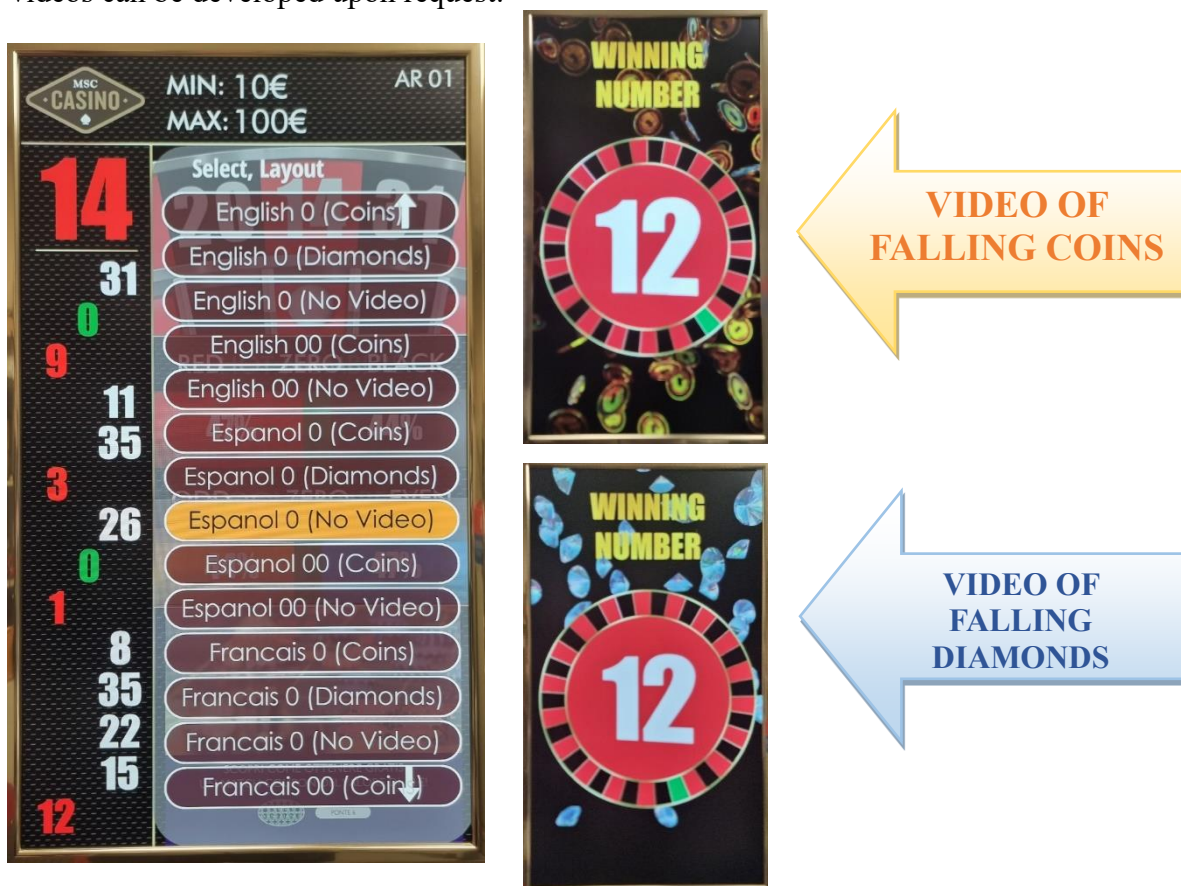
Use these keys to enter winning numbers manually, in case the automatic reading system is not working. Just type the number and press Enter to confirm. To enter 00 type zero two times 00 and press Enter to confirm.



8. Menu LAYOUTS

ARDS supports by default templates in English, Spanish and French. Other language templates can be designed upon to request.

Each language template can be selected for use with single or double zero roulette wheel, with different video effects (falling coins, falling diamonds etc.). Custom-designed videos can be developed upon request.



ARDS supports all international decimal and currency formats.



9. Visual information displayed on ARDS monitors.

- Different game modes (new spin, no more bets, result, table closed) **Picture 1.**
- Tree of last 14 winning numbers.
- Wheel animation in upper media window.
- Full screen video animation with current winning number.
- Latest game result and result history (roulette number tree).
- Gaming results statistics (hot/cold numbers, red/black, odd/even, zero).
- Casino logo (static or animated).
- Game name (AR, RA etc.) and table number.
- Minimum and maximum bets.
- Media files in media window (still images, slideshows or videos).

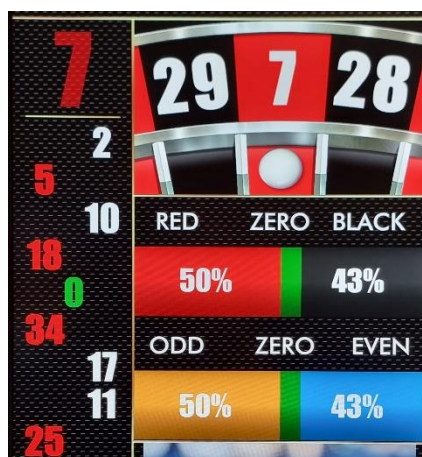
Picture 1.



NEW SPIN



NO MORE BETS



RESULT



Animated Video
RESULT



TABLE CLOSED



MEDIA WINDOW

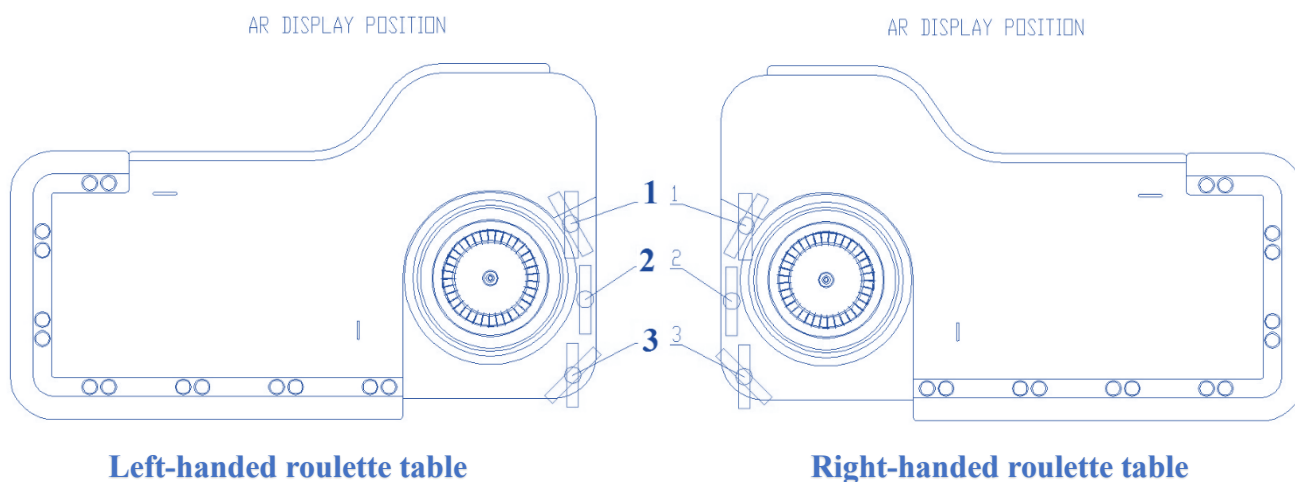


STATISTIC WINDOW

10. ARDS camera reader positioning and adjustment.

Follow instructions to choose the correct position of ARDS monitors on the gaming table.

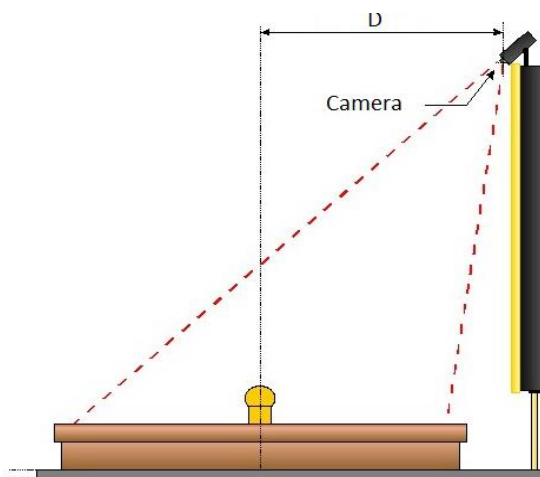
- It is possible to turn ARDS monitors slightly for a better viewing angle, but angle of rotation of the video camera against its axis must not exceed 30 degrees.
- Recommended ARDS positions on the gaming table are shown on **Drawing 1** and **Picture 1**.
- Distance (**D**) from roulette wheel center to ARDS should be 500 mm. To guarantee stable performance of ARDS this distance must not exceed 650 mm. Please see a corresponding **Picture 2**.
- Install ARDS next to the roulette wheel in such a way that video camera reader can see centre of the wheel and maximum of the track (**picture 3**).



Drawing 1.



Picture 1.



Picture 2.

11. POSITIONING CAMERA

To adjust the camera, press camera button on wireless Keypad  to enter Camera Setup mode.

Move the camera to see the wheel in center of picture.



Picture 3.

Camera calibration:

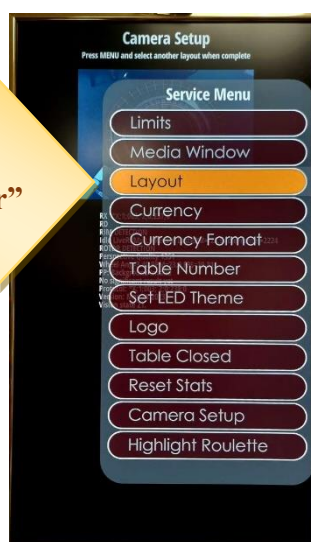
Please rotate the roulette wheel for automatic camera calibration. You will see that the grid (picture 4) corresponds with the wheel shape and green line follows the zero (two green lines for a double zero wheel).



Picture 4.

To EXIT the Camera Setup mode press MENU  button and select another layout as shown on the pictures below:

Select "Layout" and press "Enter"



Select language, zero (0 or 00) with effect of winning number and press "Enter"



12. CAMERA SETUP

- In case light conditions in the casino are too dark or too bright, press MENU  button and select “Camera Setup” from the menu list. Select “**Set Exposure**”:



By default, exposure has value of 100. You can change it to make video picture darker or brighter. (On Keypad press “Enter”, press “DEL”, enter a new value and press “Enter” to confirm)

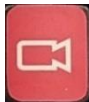


- To set brightness, press MENU  button, “Camera Setup” from the menu list and select “**Set Brightness**”:



By default, brightness has 64 units. You can change it to make video picture darker or brighter. (On Keypad press “Enter”, press “DEL”, enter a new value and press “Enter” to confirm)

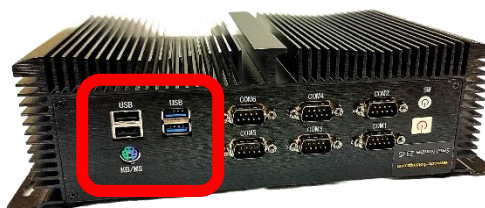


- To see the result of adjusted picture, press camera button on wireless Keypad  to enter Camera Setup mode.



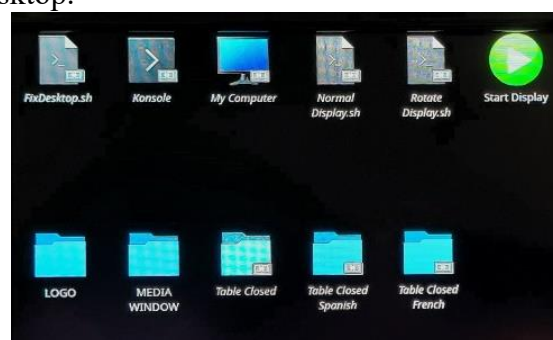
13. Downloading media files (Casino logo, videos, pictures, Table Closed media files).

- a. Video and still image files for casino logo, Table Closed window and for Media Window can be in most commonly used formats.
 - Media files for Table Closed window must be made in portrait orientation.
 - Media files for Logo and for Media Window must be made in landscape orientation.
 - All media files must be in FHD resolution (1920 x 1080) pixels or lower.
- b. To download media files, please connect a full-size keyboard and mouse to USB port or to analog port on the front side of PC. Plug in USB stick with media files.



- c. Press “Q” button on the keyboard to access Service Desktop.
On the desktop there are 5 folders:

- LOGO
- MEDIA WINDOW
- TABLE CLOSED (EN)
- TABLE CLOSED SPANISH
- TABLE CLOSED FRENCH



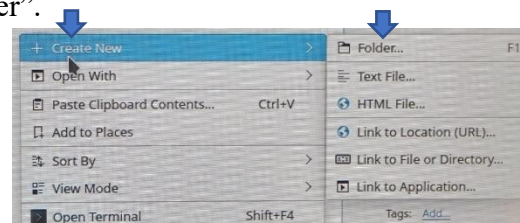
To have a new media file on the Menu List folder (See pages 4 and 5 of the user’s manual) you need to create a sub folder with a new name.

For example, if you want to create a new item in MENU MEDIA WINDOW, with video “PROMO”, do following:

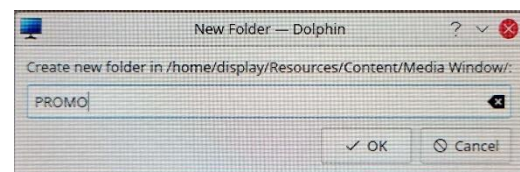
- Using the mouse double Click on MEDIA WINDOW folder.



- Press left button, select “+ Create New” and select “Folder”.



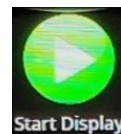
- Using the keyboard, type name of your media and click OK button. New folder is created.



- Download your media file from USB stick into this folder.

- Close all windows (click on red circle )

- To restart ARDS double click on left mouse button “start display icon”:



New item with your new media name will appear in Media Menu list. Select new item from menu to play your new media file.



- d. Video and still image files for logo, Table Closed window and for Media Window can be in most commonly used formats.
 - Media files for Table Closed windows must be made in portrait orientation.
 - The media files for Logo and for Media window must be made in landscape orientation
 - All media files must be in FHD resolution (1920 x 1080) pixels or lower.

14. Remote service.

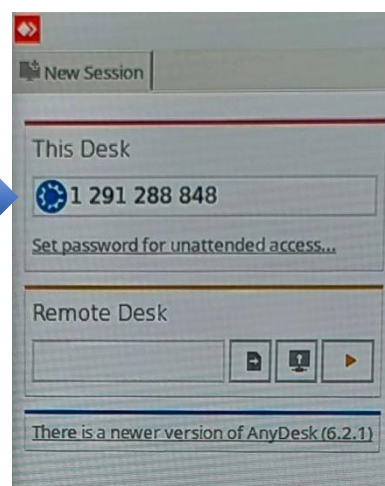


Our technical support team can provide remote support via AnyDesk.
To give access to our technical and IT specialist to your ARDS, please make the following steps:

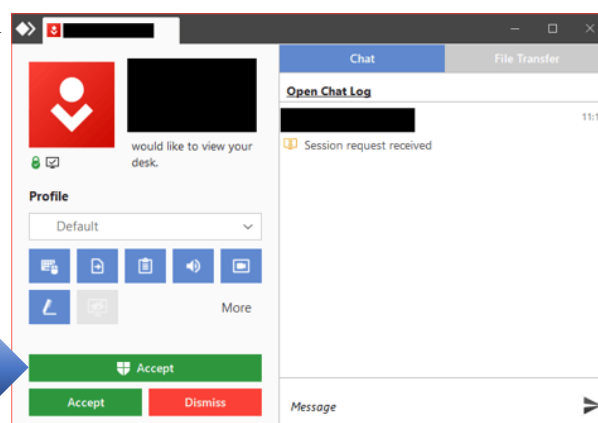
- Please connect full-size keyboard and mouse to USB port or to analog port on the front side of PC.
- Press “Q” button on the keyboard to access Service Desktop.
- Please connect PC to internet with LAN cable or via Wi-Fi.
- On the left bottom corner of the screen there is an icon for remote service AnyDesk and Wi-Fi connection.



- To start AnyDesk double click on the left mouse button.
- Send onetime access code from “This Desk” window to our technical or IT specialist.



After our specialist is connected to ARDS, please give him an access by clicking on “Accept” bar.



15. Storage and transportation.

ARDS must be stored in a dry and ventilated storage at a temperature not lower than + 5° C.

Transportation is allowed by all kinds of transport vessels but in strict compliance with general carriage and packaging regulations. To avoid damage, the crate containing the ARDS must be placed on an even surface. Excessive vibration and shock (e.g. dropping of the crate) during transportation are not permitted.

16. Limited warranty terms and conditions.

16.1 Manufacturer warrants that there will be no defects in ARDS related to quality of materials or manufacturing during 12 months after the shipment date.

16.2 ARDS is manufactured in accordance with CTC HOLDINGS technical regulations and corresponds to the general requirements of the gaming industry.

16.3 Warranty is a valid subject to all rules of installation and use of the product being strictly followed, and the product being used for the intended purpose in accordance with its technical characteristics.

16.4 If the rules of installation or use are not properly observed, or an unauthorized repair or modification of product (including software) occurs, the warranty will become void.

16.5. Manufacturer's responsibility:

16.5.1. CTC HOLDINGS is not responsible for direct or indirect material loss, which is related to defect of its products.

16.5.2. CTC HOLDINGS' responsibility is limited to the obligation to restore the operational capability of its products.

16.5.3. The operational capability of the product may be restored by repair.

16.5.4. In case, when repair is not possible, defective product will be replaced by a new CTC HOLDINGS product with the same specifications and characteristics.

16.6. Accomplishment of warranty obligations:

16.6.1. All claims regarding quality of CTC HOLDINGS products are accepted only in written form with notice of matter of claim, reference to invoice number or contract, last name and signature of person in charge and date.

16.6.2. CTC HOLDINGS must review the claim and reply within 5 (five) working days after receipt of the claim.

16.6.3. Repair or replacement of the defected product must be effected within 30 (thirty) calendar days after acceptance by CTC HOLDINGS of validity of the claim and delivery of the defective product to CTC HOLDINGS factory.

16.6.4. Repair of all defective products is done at CTC HOLDINGS factory (1 Starta Str., LV-1026, Riga, Latvia).

16.6.5. In special cases, only by mutual agreement between CTC HOLDINGS and the Customer, repair can be performed by CTC HOLDINGS technicians at the location of the defective product.

16.7. Costs of warranty repair or cost of replacement of defective products are covered by CTC HOLDINGS.

16.8. Customer covers all transport charges, travelling costs and other possible direct expenses related to delivery of the defective product to CTC HOLDINGS factory in Riga or to the trips of CTC HOLDINGS technicians to repair the product on site.

16.9. CTC Holdings does not guarantee the commercial value or applicability for specific purposes of its products beyond what is clearly stipulated by CTC HOLDINGS technical specifications.

16.10. Compensation that is defined by the present Warranty is the sole remedy available to the Customer.

16.11. CTC Holdings never carries automatic responsibility for any direct, indirect, specific, accidental or consequential losses, which are as a result of contract, civil or other legal relationship, regardless of whether CTC HOLDINGS have been advised of the possibility of such losses.

16.12. CTC HOLDINGS has no liability for any advice, opinion or information provided by its employees or agents unless given in writing and signed by an authorized representative of CTC HOLDINGS

17. Package contents.



Pic. 1.



Pic. 2.



Pic. 3.



Pic. 4.



Pic. 5.

- ❖ Pic.1. Display(s) in metal frame on a mounting pole -1pcs
- ❖ Pic. 2. Wireless Keypad -1pcs
- ❖ Pic. 3. Industrial PC -1pcs
- ❖ Pic. 4. PSU block -1pcs
- ❖ Pic. 5. Warranty card -1pcs

For technical or sales support please do not hesitate to contact us!

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