

Installation Manual

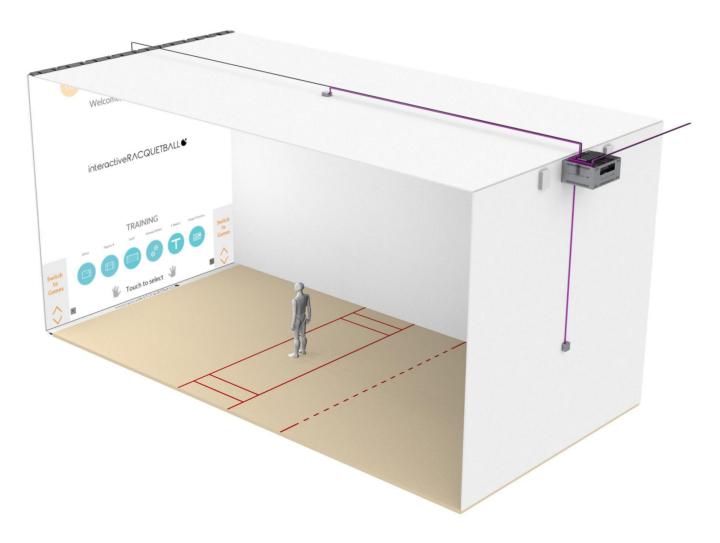
interactiveR∧CQUETB∧LL**€**

Fun With Balls GmbH Gyßlingstraße 72 80805 Munich Germany © 2020



1. Hardware:

With the following simple guidelines we would like to guide you to an easy installation of interactive RACQUETBALL. Our system consists of one console, two sensor bars and four cameras.



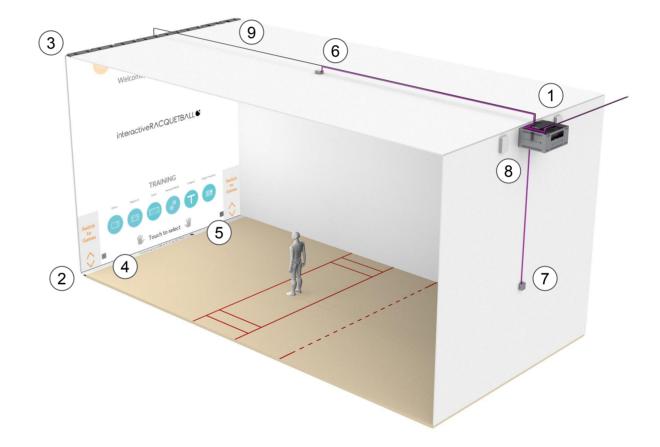


1. Hardware:

Included hardware components of interactiveRACQUETBALL:

Components:

- 1. Console
- 2. Sensor Bar Bottom
- 3. Sensor Bar Top
- 4. Camera Front Left
- 5. Camera Front Right
- 6. Camera Top
- 7. Camera Rear
- 8. Speakers
- 9. Main Cable



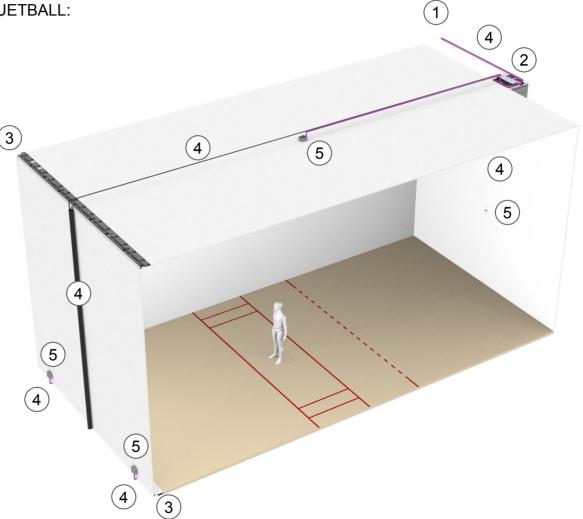


1. Hardware:

Required court properties to install interactive RACQUETBALL:

Requirements:

- Dedicated Power Outlet Active Internet Connection
- Console Mounting Space
 Ceiling Load-Bearing 100kg/220lbs
 or Stand Load-Bearing 100kg/220lbs
- 3. Floor and Ceiling Spaces to integrate the Sensor Bars
- 4. Cable Ducts
- 5. Wall Spaces for Cameras





2. Installation:

First delivery: Second delivery:

Console mounting plate Console

Front Wall Paint Sensor Bars

Cameras

Main Cable

The system will be installed and activated by our team or you will get remote installation support.

Installation Steps:

- 1. Check delivered components
- 2. Check already sent components before for court preparation
- 3. Check court measurements
- 4. Check internet and power plug
- 5. Unpack & arrange
- 6. Installation console
- 7. Mount sensor bar top
- 8. Mount sensor bar bottom
- 9. Connect sensor bars
- 10. Install cameras
- 11. Projector adjustment
- 12. Hardware adjustments with setup



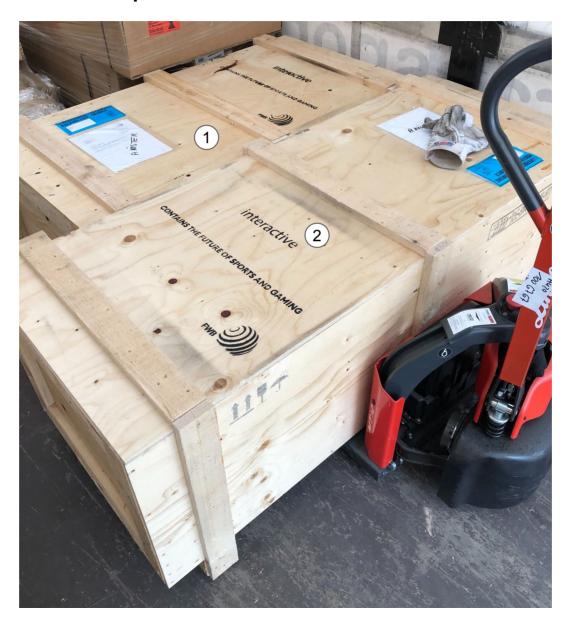
2. 1. Check delivered components:

Box 1:

1x Console 2x Speakers

Box 2:

8x Sensor Bar Parts4x Cameras1x Wiring Harness





2. 2. Check already mounted components before installation:

The front wall should always be painted with our white paint.

The console mounting plate (1) should already be fixed (load-bearing 100kg/220lbs) on the ceiling before starting installation.

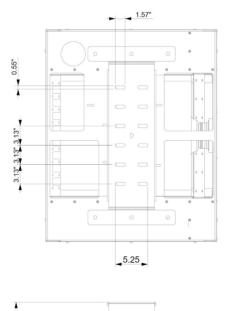
The console can also be placed on a stand (load-bearing 100kg/220lbs).

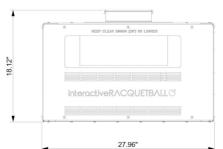
Make sure that the console is placed in middle at the rear of the court at the most up position.

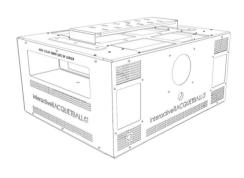
The front of the console must be aligned with the inner court surface (2).

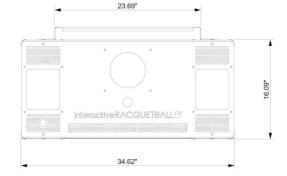








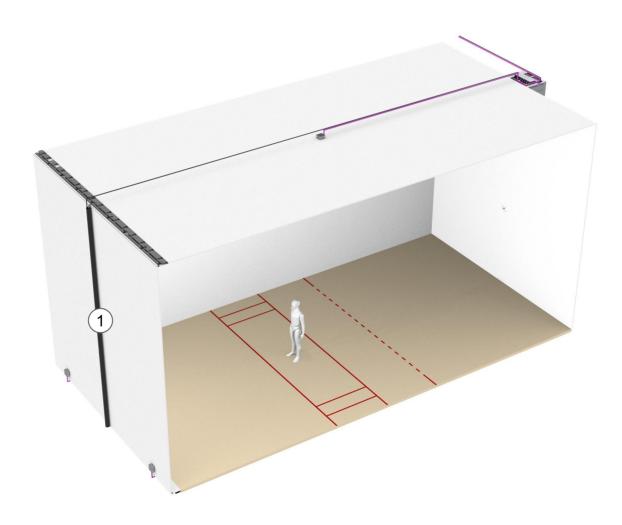






2. 2. Check already mounted components before installation:

Cable channel (1) in the middle behind the front wall with a diameter of minimum 4 inch.



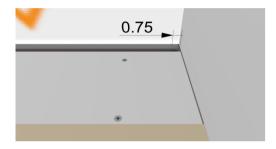


2. 3. Check court measurements:

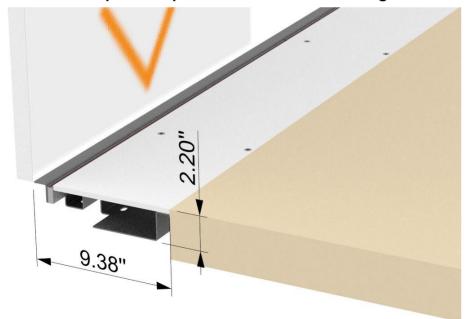
With the help of a laser measurement device, check the front wall's measurements.

Front wall: Left side wall to right side wall inside length is minimum 239.85 inch.

Optional the sensor bars can be cut by 0,75 inch for a wall inside length of minimum 239.1 inch.



Sensor Bar Space Requirements Floor and Ceiling:



Camera Space Requirements Front/Rear Wall and Ceiling:



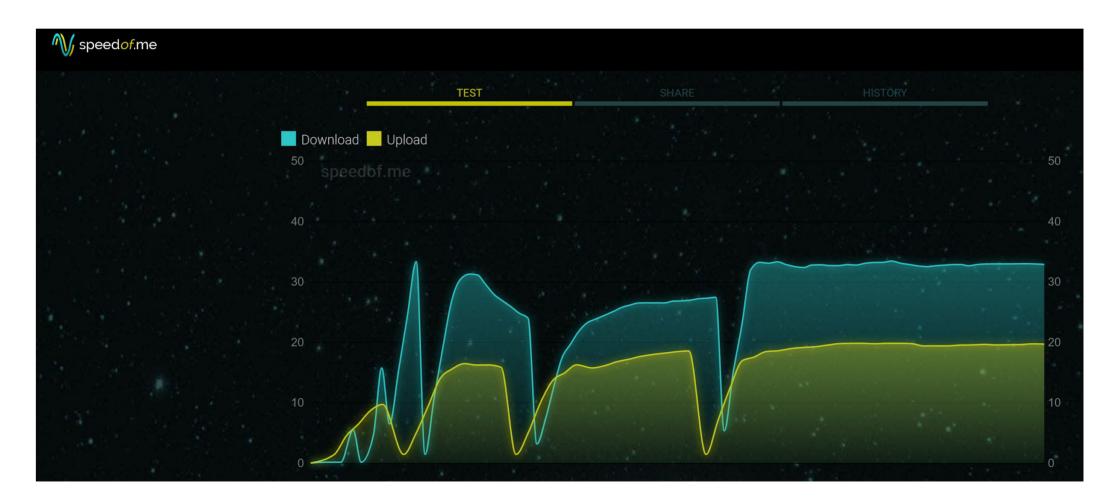


2. 4. Check Internet and Power Plug:

Connect a laptop to the provided Ethernet connection with a cable.

Open up a network browser window and go to website "speedof.me" to run an Internet Speed Test.

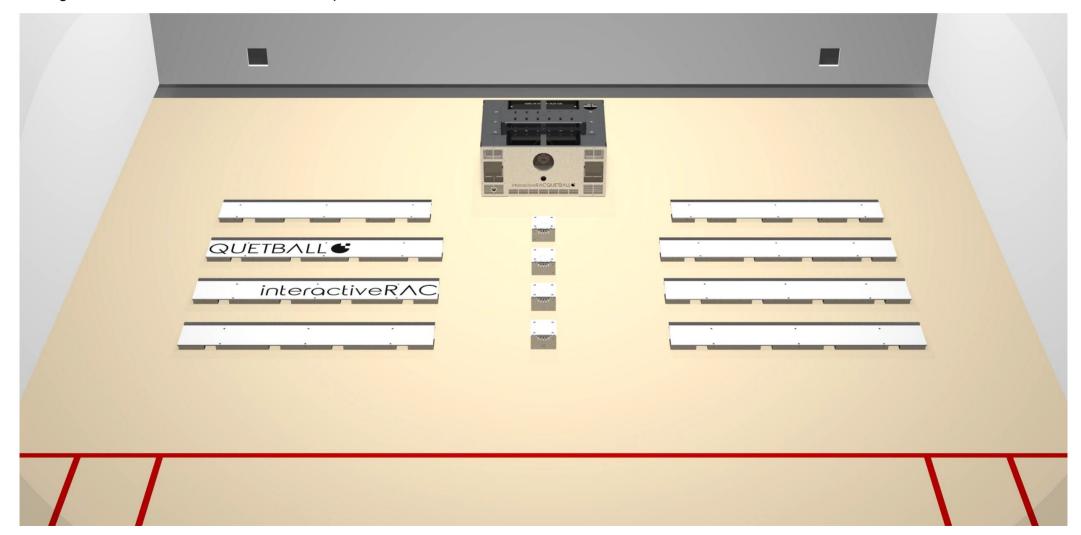
Connect a device (Laptop charger, phone charger, etc.) to the provided power plug & check the device is charging.





2. 5. Unpack & Arrange:

Remove the nails that hold the box's wooden walls together to bring the material out of its delivery box & bring them into the court. Arrange them to ease and make installation process fast.





Set anchor on the holding plate for the rope/chain hoist to lift up the console.

Secure the chain hoist to the console metal structure.

With the help of a scaffold, accompany the console as it's being lifted up.

Secure the console to the holding plate.

Open the all side covers of the console.

Connect the console to power and internet.

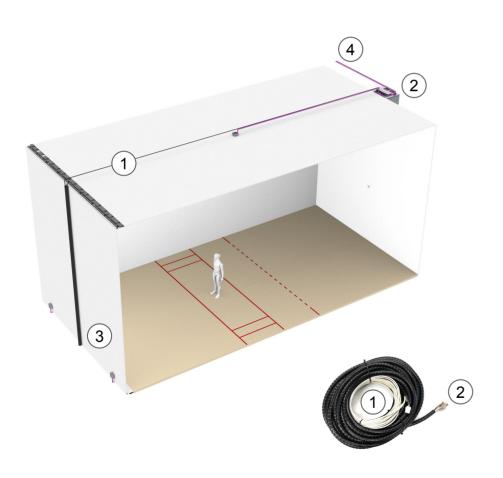


Reference video links (interactiveSQUASH):

- 1 Projector box tieing
- 2 Projector box lifting to ceiling
- 3 Projector box fixing to mounting plate

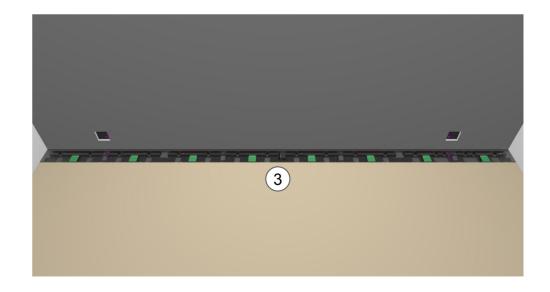


Run the main cable (1) from the console (2) to the middle of the sensor bar bottom (3). Connect the console to power and internet (4).







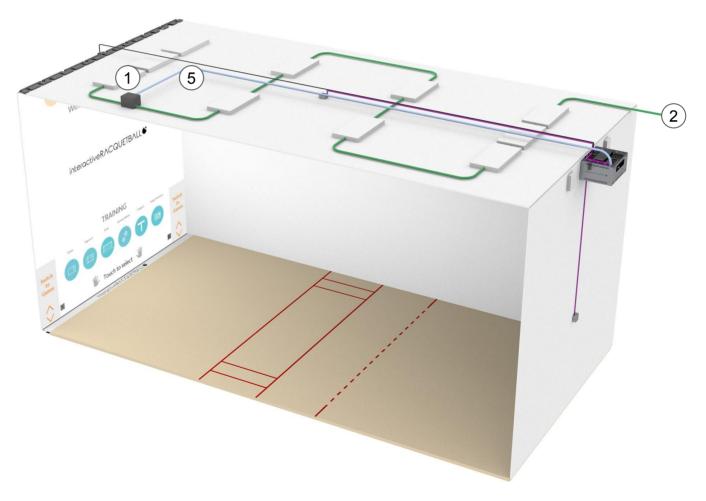




Front light control:

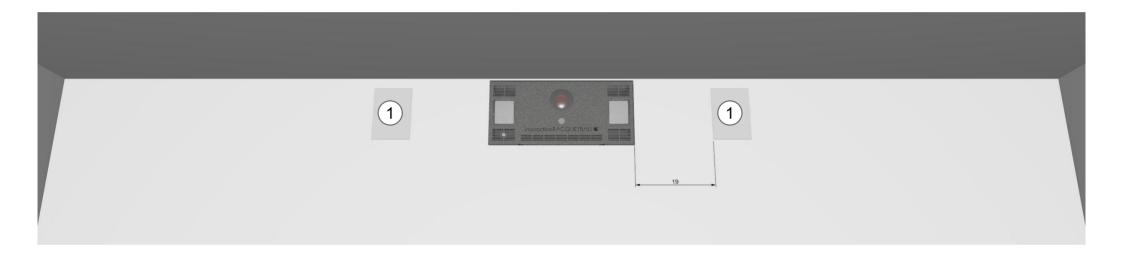
Place the switch (1) in the power supply system (2) of the court lights so that the front lights can be controlled by the console. Connect the female plug (3) with the power supply, the male plug (4) with the front light and connect the control cable (5) with the console.







Install the speakers (1) left and right next to the console with a distance of 19 inch. IW 406 FG II Installation Speaker: https://www.jamo.com/products/iw-406-fg-ii#manuals Connect the speakers (2) with the console.







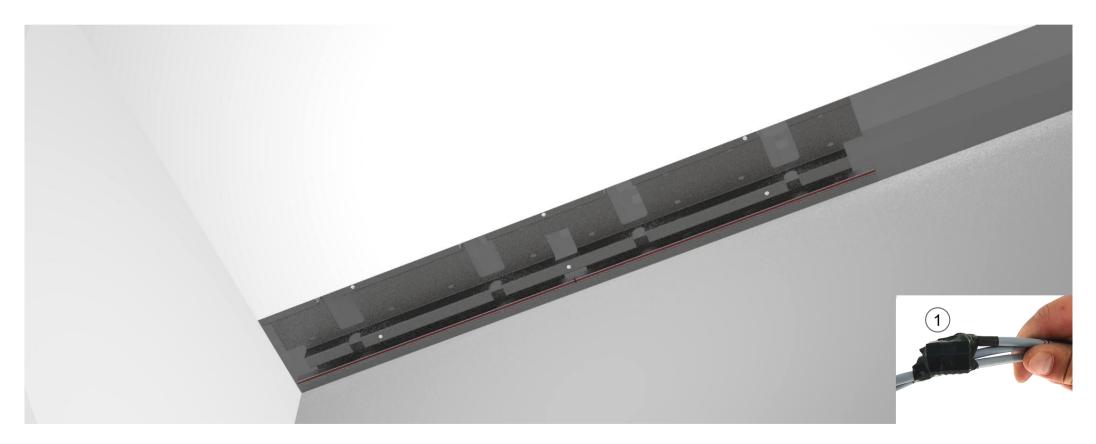


2. 7. Mount Sensor Bar Top:

Start with sensor part number 1 from the left side.

Remove the covers and mount the sensor bar flush into the ceiling directly in the connection to the front wall.

Secure the green plugs (1) and run the cables through the cable duct behind the front wall to the sensor bar bottom. Mount the covers.



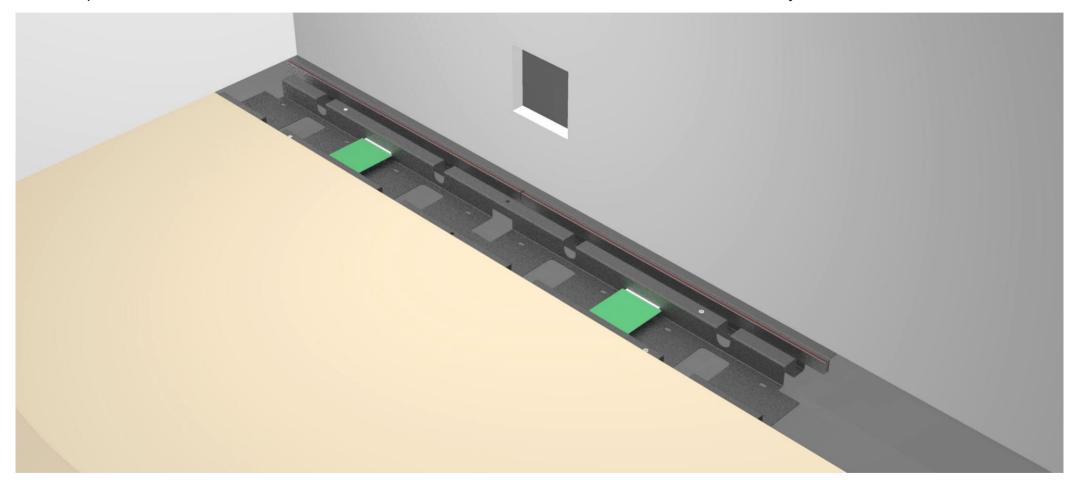
Reference video links (interactiveSQUASH):

- 4 Mounting upper sensor bars
- <u>5 Mounted and cabled upper sensor bars</u>



2. 8. Mount Sensor Bar Bottom:

Start with part no. 1 from the left side. Remove the covers and mount the sensor bar flush into the floor directly in the connection to the front wall.



Reference video links (interactiveSQUASH):

- 10 Sensor tin bottom mounting
- 11 Connecting light bar connector
- 12 Connecting upper sensor bars to lower sensor tins via connector
- 13 Connecting lower sensor tins together



2. 9. Connect Sensor Bars:

Plug the red marked cables (1) coming from the sensor bar top into the SEA (2) port of the corresponding bottom sensor bar's LVX (green board). Plug the black marked cables (3) coming from the sensor bar top into the EMA (4) port of the corresponding bottom sensor bar's LVX.





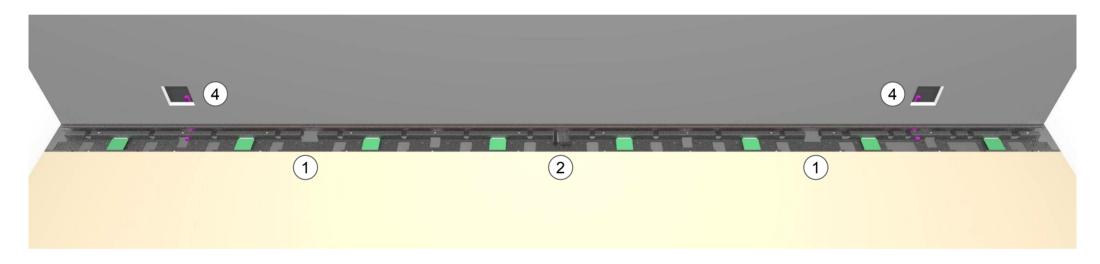
2. 9. Connect Sensor Bars:

Connect the sensor bar parts with each other (1).

Connect the main cable (2) with the sensor bar bottom.

Run the LAN cables (3) from the main cable (2) to the camera spots (4).









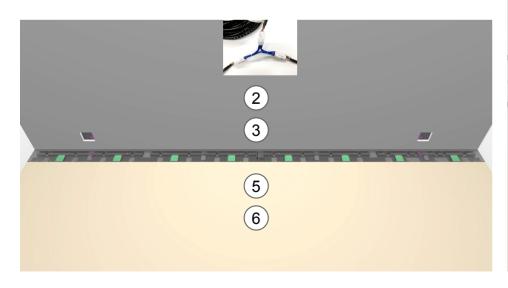


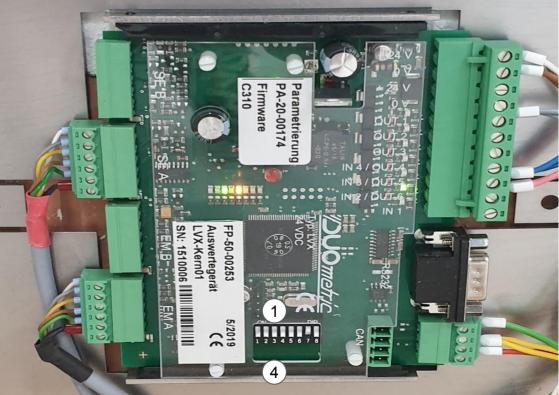


2. 9. Connect Sensor Bars:

When all tins are installed - Perform the calibration steps:

- 1. Switch up the PIN 3 on **all** LVXs (green board)
- 2. Unplug the power supply by disconnecting the main cable going in the y-splitter.
- 3. Plug back in the power supply.
- 4. Switch down the PIN 3 on all LVXs
- 5. Unplug the power supply.
- 6. Plug back in the power supply.







2. 10. Install cameras:

Position front cameras.



The camera housing measures 6.1 x 6.1 inch.

The distance from the center (1) of the camera housing to the side walls is 31.5 and to the floor 9.22 inch.

The distance from the outer edge (2) of the camera housing to the side walls is 28.44 and to the floor 6.17 inch.

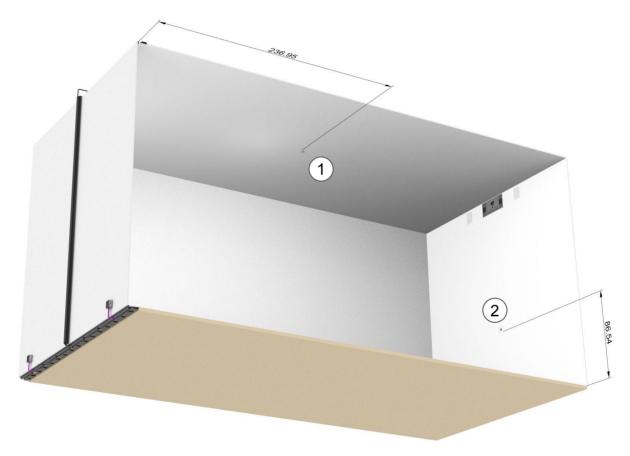
Reference video links (interactiveSQUASH):

• 15 Front camera installation 21



2. 10. Install cameras:

Middle position ceiling and rear camera.



The distance from the front wall to the ceiling camera (1) is 234 inch.

The distance from the the floor to the rear camera (2) is 86.5 inch.



2. 10. Install cameras:

Open the camera housing by removing the front glass.

Mount the cameras flush into the walls and ceiling.

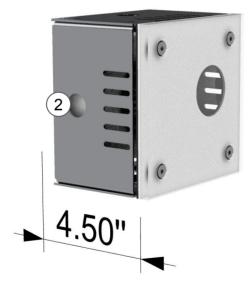
Use the long holes (1) to fix the metal housing with screws.

Bring the LAN cable through the hole (2), open the internal camera by 3 security screws (tool is in the boxes) and connect (3) the camera.

Connect the LAN cables of the cameras with internet switch located in the console (4).

Leave the camera housing open for final testing.









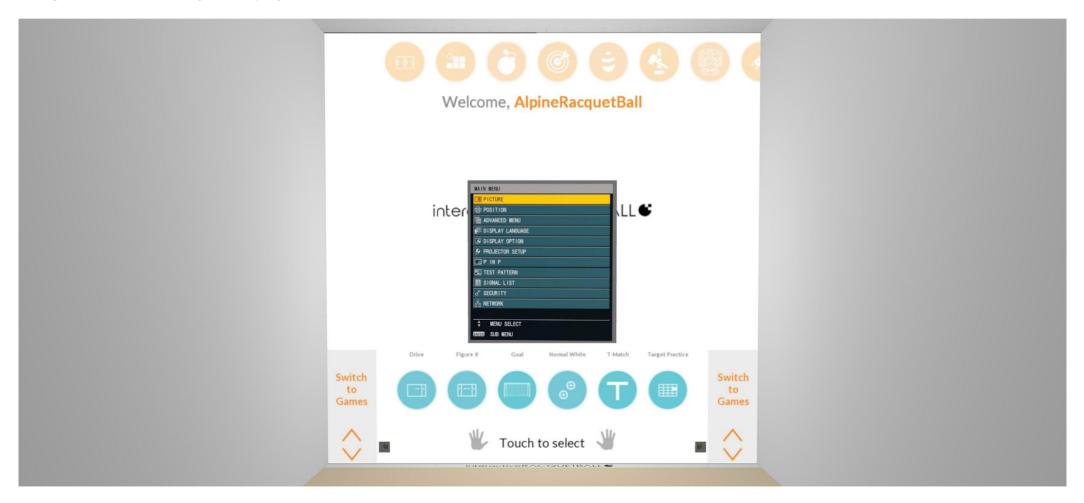
Reference video links (interactiveSQUASH):

• 9 Back camera cabling 23



2. 11. Projector Adjustment:

Using focus, adjust the projector's focus to the point that it's as sharp and accurate as it gets. Using Zoom and Shift, adjust the projection to cover the entire front wall.



You're now all set for the final installation stage of your interactiveSQUASH system. Once you've mounted all our hardware, our technical team is ready to support the setting of the hardware.



2. 12. Hardware adjustments with setup:

After all hardware mounting is done, your system will get set up for use. Our technical support will guide you on video / audio how to set all devices.

Hardware adjustments include IR camera focus, IR lights setting. Checking the difference images & ball detection accuracy. Setting top camera (Tracker camera), front cameras and back camera.

Install glass covers of the cameras.
Install covers of bottom sensors.
Install side covers of the console.



Once devices are set you have to test the system via app and also check by playing on it.

Test interactive squash mobile app.

Test court admin login.



3. The Final Court:

Now enjoy interactive RACQUETBALL.

