



rugged. interactive

# CardioWall®

## Compact

### Installation and Instruction Manual

For OUTDOOR models from August 2019 onwards



#### **Rugged Interactive**

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# Section 1 – Safety Guidelines

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## 1.1 Installation Safety Guidelines

Before installing any Rugged Interactive product, please read the following:

### Dos:

- Ensure that a Site Survey form has been completed prior to installation.
- Have ready suitable equipment, tools and/or man power.
- Observe correct manual handling techniques whilst moving and installing the equipment.
- If being installed onto a wall, the product **MUST** be mounted onto a wall of a construction capable of supporting its weight and gameplay. If possible, avoid stud walls or unsupported portal infills. If in doubt always contact a suitably qualified surveyor to check.
- Visually check the product for any signs of damage, component failure and/or missing parts.
- To prevent electric shock, keep all electric components away from contact with water.
- Ensure to take anti-static precautions.
- Wear appropriate clothing: do not wear loose clothing or jewellery.
- Long hair should be tied back.
- Tidy back loose cables that could become a tripping hazard.
- Ensure that the playing area is clear.
- Immediately inform Rugged Interactive for maintenance advice if you have concerns.

### Don'ts:

- Do not wear shoes with leather soles or high heels.
- Do not use any tools that are not specifically recommended by the manufacturer.
- Do not distract others while they are installing the product.

## **1.2 In Play Safety Guidelines**

Please ensure you read the following points before using the equipment:

### **Dos:**

- Before beginning any exercise program, it is recommended that you consult with your doctor.
- Children under the age of 7 years should always be supervised by an adult (over 16 years) when using the equipment and/or recommended accessories.
- Visually check the equipment before using it for any signs of damage, component failure or loose cables that could become a tripping hazard. Report any concerns, e.g. loose holds or damaged equipment, to a member of staff immediately.
- Ensure you familiarise yourself with any additional facility rules that may apply.
- Ensure that the play area in front of the equipment is clear before attempting to participate.
- Only participate if you are in good physical condition. Participate only within your capabilities / recommended exercise level.
- Wear appropriate clothing.
- Remove all items from your pockets prior to participation.
- Long hair should be tied back.
- Before use, loosen up with warm up exercises and stretches.
- Only those participating are allowed in the activity area. If waiting to participate, stand back at a safe distance from the equipment.
- Report any unusual or inappropriate behaviour to a member of staff immediately.
- If you get tired, leave the equipment / activity area and take a break.
- If you feel any pain, dizziness, nausea or any other abnormal symptoms, STOP YOUR WORKOUT IMMEDIATELY. Consult your doctor immediately. Incorrect or excessive training may lead to injuries.

### **Don'ts:**

- Do not attempt to use any of the equipment without undertaking instruction / training carried out by an appropriate instructor.
- Do not participate if you are unwell or have any pre-existing medical conditions including heart, back, neck, bone and/or muscle conditions.
- Do NOT work to exhaustion.
- Do not participate if you are or maybe pregnant.
- Do not wear loose clothing or jewellery (including studs and watches). Clothing should not have any hard or sharp points (such as buckles, studs, toggles or alike).
- Do not wear shoes with leather soles, high heels, sandals, boots or bare feet.
- No food, drink or chewing gum during participation.

- No phones or cameras in the activity area.
- Do not leave clothing or personal belongings around the activity areas.
- Do not participate under the influence of alcohol and/or drugs.
- Do not distract others while they are using the equipment.
- Do not sit, lie, stand or rest on or under the activity equipment.
- Do not use any accessories that are not specifically recommended by the manufacturer. These might cause injuries or cause the equipment to fail.

**NOTE:** This activity can be great fun, but it can also be dangerous. There is a risk of serious injury if care is not taken when using the equipment. Use of this equipment is physically demanding: this is a high-impact, full body activity which requires intense focus, awareness of your body's strengths and limitations, awareness of the environment around you and extreme caution.



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# Section 2 – Installation

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Read this manual before installing the CardioWall Compact units.

### Installation Guidelines:

- Complete the Site Survey form prior to delivery and/or installation: <https://goo.gl/Rs3n5u>
- Please send a completed Installation Checklist after any installation to Rugged Interactive.
- A typical installation should take 2 people about 2 hours.
- No obstructions or protrusions in the installation area: e.g. skirting boards, pipes, cables and wiring conduits.
- Avoid trapped and/or pinched cables.
- Use good practice when running data cables to and from products, external pods and sensors. Support long cables at least every 50 cm and provide adequate strain relief for connection points.
- Power supply to be within 1000 mm of each CardioWall. CardioWall should be connected to the mains power supply by a qualified operative.
- To prevent electric shock, keep all electric components away from contact with water.
- IMPORTANT: Take anti-static precautions.

### Structure:

- The units must be mounted to a flat/level construction capable of supporting its weight and gameplay. (Uneven walls and surfaces make alignment and fitting very difficult.)
- The wall area for installation will need to exceed the width and height of the CardioWall (refer to System Specifications) plus an additional 10 cm of clear space around each edge. If two CardioWalls are being positioned side-by-side, leave a gap of 150 cm - 300 cm.
- Typical suitable construction would be block built, portal frame with structural infills or brick built.
- Alternatively, mount onto 18 mm plywood (12 mm minimum) mechanically mounted to a steel framework (50 mm box minimum). Preferably, the plywood should be painted prior to installation.
- Adequate holes will need to be cut during installation to provide clearance for cable access to rear if required.
- Do not fix to plasterboard faced partition. Avoid stud walls or unsupported portal infills.

### Fixings:

- The manufacturer will supply fixings.

- Use hex-headed screws of 50-70 mm length (2") x M10 for a plywood structure.
- Use Rawl Plugs (plastic wall plugs) if mounted to a solid block or brick wall.
- 10 x 35 'penny' washers to spread the load at each bolt head are recommended.
- All fixings must be tight and secure.

**Possible Equipment:**

- A spirit level – to check floor and CardioWall are level.
- An industrial vacuum cleaner, a dustpan and brush.
- Set of drills: An SDS impact drill, a cordless drill – with torque adjuster to avoid over-tightening of screws.
- A set of No.2 pozi bits.
- A socket set.

**Suggested Extras:**

- 3 m of 'mini' box trunking to secure the power cable.

(CardioWalls are supplied, unless otherwise requested, with a power adaptor cable that extends 1000 mm from the base of the CardioWall.)

- Cleaning cloth and gentle cleaning spray.

**Installation Heights:**

- Mount to a desirable level, depending on primary user group.
- Recommended height for CardioWall Compact: 300 - 780 mm above ground level.

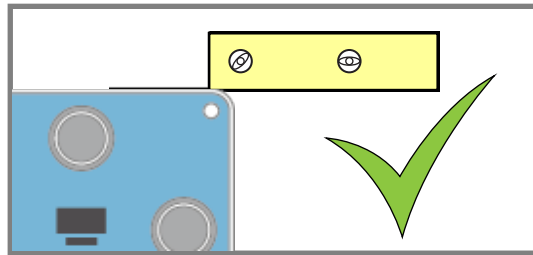
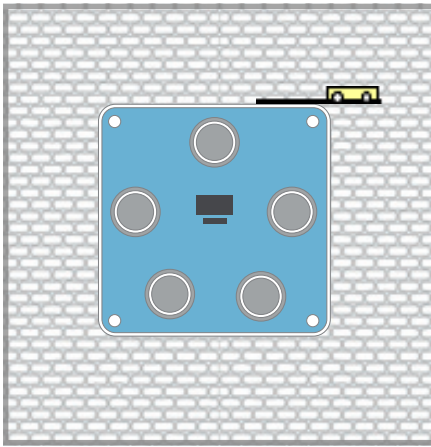
**Other Recommendations:**

- Keep out of direct sunlight; bright will reduce visibility
- Area clear in front of the CardioWall: 200 cm minimum.
- Instruction / training carried out by an appropriate instructor to all new users.
- A waiting / spectating area positioned nearby is advised.
- A Rugged Interactive leaderboard to go with each unit is highly recommended.

**IF YOU ARE IN ANY DOUBT, CALL RUGGED INTERACTIVE DIRECTLY ON +44 (0) 1726 833 882.**

## CardioWall Compact Installation

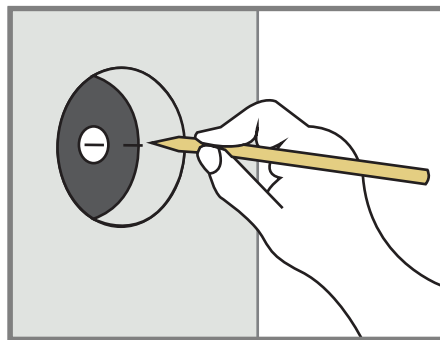
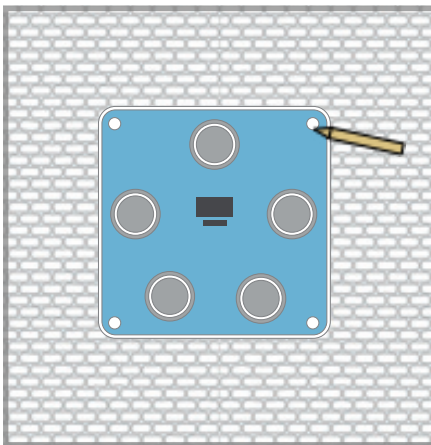
01



**2 people required:** one to hold the main body in place; one to ensure it is level.

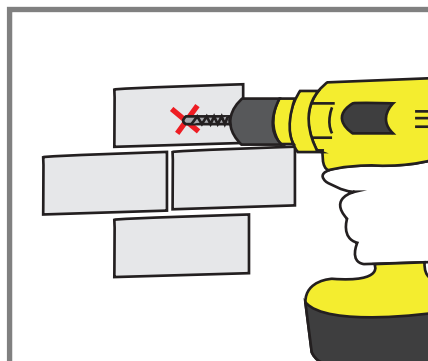
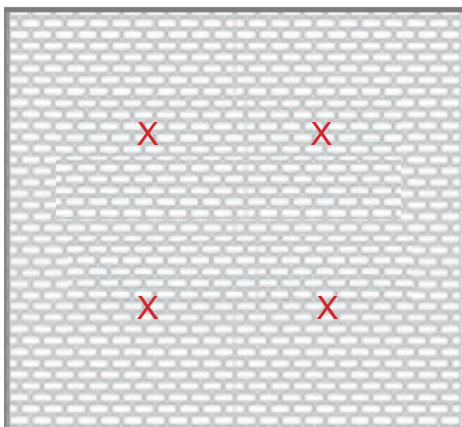
See Installation Heights (Section 1)

02



**2 people required:** one to hold the main body in place; one to clearly mark holes x 4

03



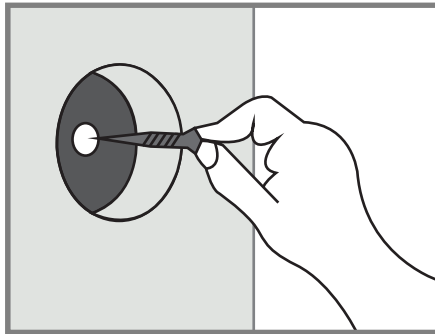
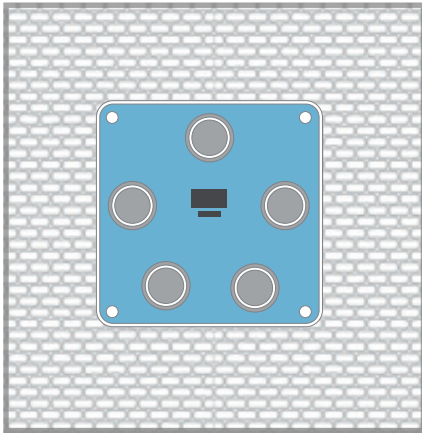
Drill holes and insert mountings x 4.



## CardioWall Compact Installation (cont.)

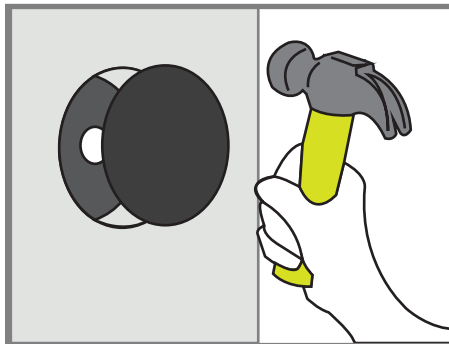
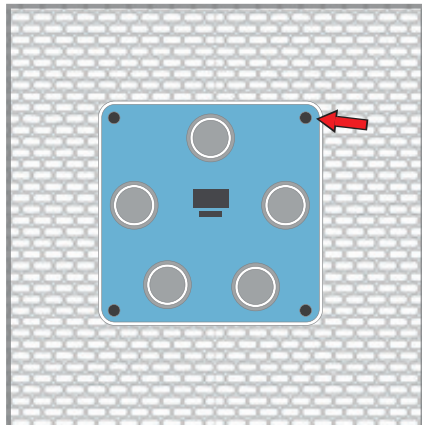
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04



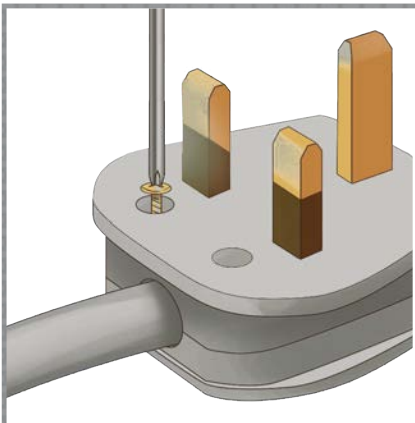
Position appropriate fixings by hand in all corners and tighten with a tool x 4, checking level

05



Position fixing covers and push in to place with a hammer x 4.

06



Attach suitable plug to lead with 5A fuse.  
**To be performed by a qualified operative.**



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## Section 3 – Pod LED Replacement

### 3.1 Removing the Pod LEDs

Read this manual before removing or installing any pods.

Pod LED boards are secured behind the full front plate. Remove this and then access the Pod LED boards.

**Retain all screws & washers.**

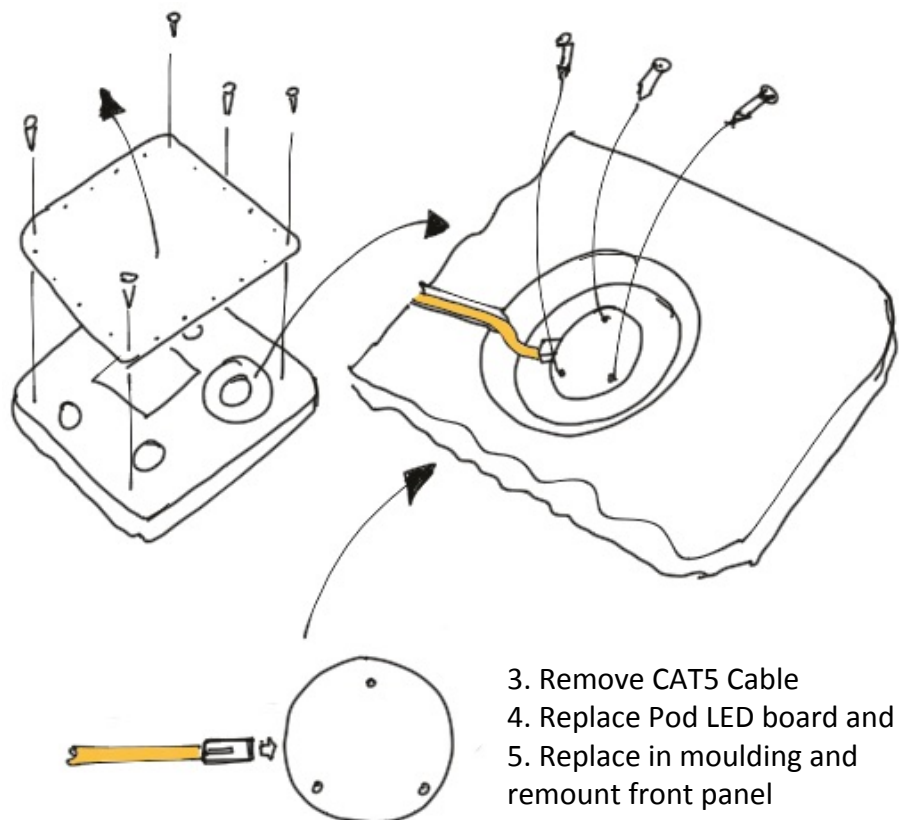
#### NOTE:

To remove the CAT5 cables, release the clip on the connector

**CAREFULLY.**

1. Remove the front panel

2. Remove mounting screws



3. Remove CAT5 Cable

4. Replace Pod LED board and test.

5. Replace in moulding and remount front panel



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# **Section 4 – How to Use**

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## **4.1 Standard CardioWall**

<b>4.1.1 Idle State</b>	Section 4 - 2
<b>4.1.2 Menu</b>	Section 4 - 3
<b>4.1.3 End of Program</b>	Section 4 - 5

## 4.1 Standard CardioWall

### 4.1.1 Idle State

On power up, the CardioWall will sound a 'laugh' and will turn to its idle state. Initially the dot matrix will display the **Hub Software Version Number** for the CardioWall.

The Standard CardioWall has one **Menu** option as standard where the playing time and level for specific programs can be set.

The Standard CardioWall has **four programs**:

1. **ClearOut**
2. **ClusterShot**
3. **Chaser**
4. **CardioBeat**

In this idle state, the **green pods** are QuickStart options for the programs. The **blue pod** is the menu option [Figure 4.1].

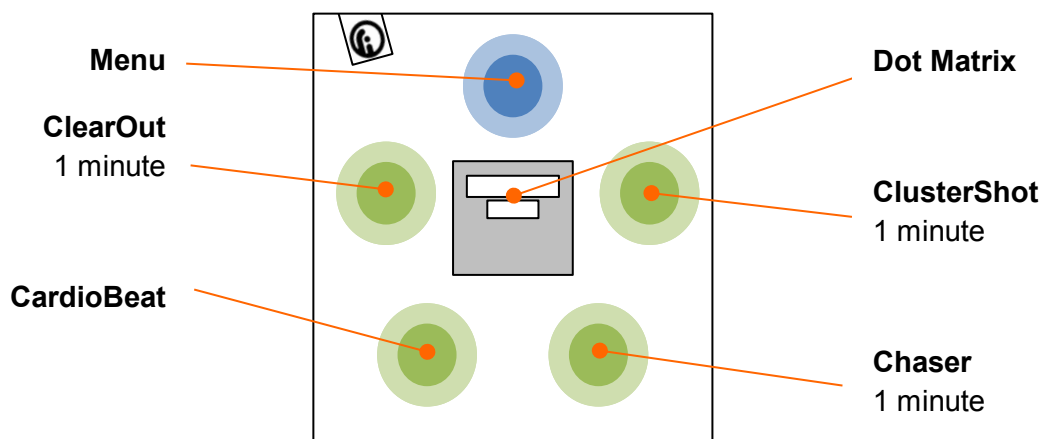


Figure 4.1: CardioWall Idle State

### 4.1.2 Menu

Select the **Menu** option to choose the playing duration and the range of playable pods for **ClearOut**, **Chaser** and **ClusterShot**. For **ClusterShot**, the difficulty level can also be set.

On selection of the **Menu** option, the CardioWall will sound “Select programme.” This will then be followed by “ClearOut,” “ClusterShot,” then “Chaser,” which will sound in synchronisation with the respective pods flashing up. This routine will be repeated until an option is selected or the CardioWall times out after 20 seconds.

Select the **blue pod** to return the CardioWall to its idle state. Select either the **yellow**, **green** or **red** pods to set the playing options for **ClearOut**, **ClusterShot** or **Chaser** respectively [Figure 4.2].

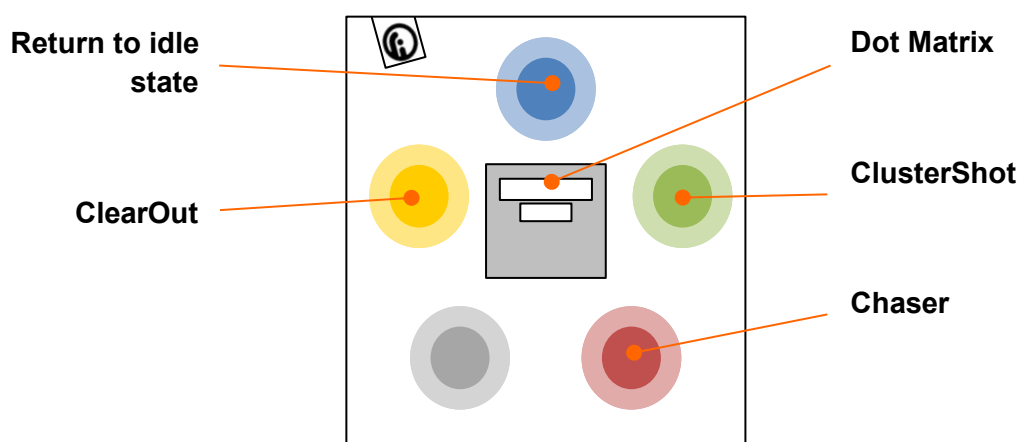


Figure 4.2: CardioWall Menu

Once the chosen program has been selected, the CardioWall will sound “Select time.” Select the **yellow pod** to increase the duration of the program. Select the **pink pod** to decrease the duration of the program. Select the **green pod** to confirm the chosen duration. The program duration will be shown on the time display [Figure 4.3].

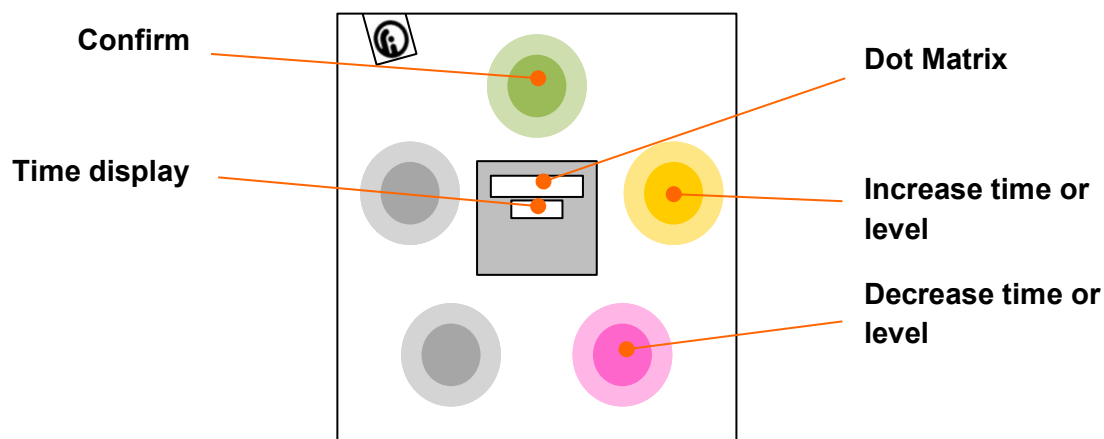


Figure 4.3: CardioWall Time Select

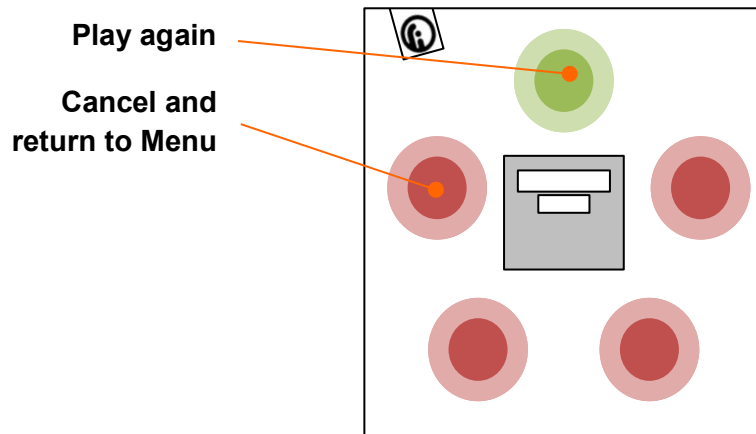
In the **ClusterShot** options menu, once the chosen program duration has been confirmed, the CardioWall will sound “Select level.” The lights will be illuminated in the same way as **Figure 4.3**.

Select the **yellow pod** to increase the difficulty level. Select the **pink pod** to decrease the difficulty level. Select the **green pod** to confirm the chosen difficulty level. The difficulty level will be shown on the time display.

**NOTE:** For **ClearOut** and **Chaser** programs, the select difficulty level option is unavailable as there is only one level setting available.

### 4.1.3 End of Program

At the end of any program, the CardioWall will sound, “Would you like to play again?” The pods will light up as shown in **Figure 4.4**. Selecting the **green pod** will replay the program. Selecting any of the **red pods** will return the CardioWall to its idle state.



**Figure 4.4:** “Would you like to play again?”

**NOTE:** At any time, if the CardioWall behaves unexpectedly, wait for at least 20 seconds for the unit to reset to its idle state.



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# Section 5 – Programs Guide

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## 5.1 ClearOut

**Summary:** For repetitive exercise, stamina building and core stability. Popular within circuit training routines and effective with all types of accessory. A good alternative to body weight squats.

**CardioWall:** Standard, Ability and Sensory.

**Gameplay:** All pods will appear **green**. On selection of each illuminated pod, the light will turn out. Once all lit pods are cleared, all pods will reappear **blue**. Once all of the **blue pods** are cleared, all pods will reappear **red**. Once all of the **red pods** are cleared, all pods will reappear **green**, etc.

**Aim:** To clear as many illuminated pods as possible within the given time limit.

**Scoring system:** +1 point for each pod hit

**Duration:** 0.5 / 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 minutes

**NOTE:** At any time, if the CardioWall behaves unexpectedly during gameplay, wait for at least 30 seconds for the unit to reset to its idle state. For gameplay greater than or equal to 10 minutes, wait for at least 2 minutes for the unit to reset to its idle state. This longer time-out period is designed to allow multiplayer circuit training.



## 5.2 ClusterShot

<b>Summary:</b>	A high intensity challenge of speed and visual awareness. Mentally testing.
<b>CardioWall:</b>	Standard, Ability and Sensory.
<b>Gameplay:</b>	Pods will illuminate in clusters of 3, 4 or 5 at random. The illuminated pods will firstly appear <b>green</b> , then <b>yellow</b> , then <b>red</b> . Once an entire cluster of lit pods are cleared, a new cluster of lit pods will appear at random.
<b>Aim:</b>	To earn as many points as possible within the given time limit by hitting the illuminated pods quickly.
<b>Difficulty:</b>	Beginner (Slow) – Level 1 Intermediate (Medium) – Level 2 Expert (Fast) – Level 3
<b>Scoring system:</b>	+3 point for each <b>green pod</b> hit +2 point for each <b>yellow pod</b> hit +1 point for each <b>red pod</b> hit
<b>Duration:</b>	0.5 / 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 minutes

**NOTE:** At any time, if the CardioWall behaves unexpectedly during gameplay, wait for at least 30 seconds for the unit to reset to its idle state. For gameplay greater than or equal to 10 minutes, wait for at least 2 minutes for the unit to reset to its idle state. This longer time-out period is designed to allow multiplayer circuit training.

### 5.3 Chaser

<b>Summary:</b>	A pure speed and reaction challenge which also tests peripheral vision.
<b>CardioWall:</b>	Standard, Ability and Sensory.
<b>Gameplay:</b>	A single <b>red pod</b> will illuminate at random. Other pods will be <b>green</b> . On selection of the <b>red pod</b> (the chaser), another pod will reappear <b>red</b> .
<b>Aim:</b>	To hit as many <b>red pods</b> with in the given time limit as possible.
<b>Scoring system:</b>	+1 point for each <b>red pod</b> hit -1 point for each <b>green pod</b> hit
<b>Duration:</b>	0.5 / 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 minutes

**NOTE:** At any time, if the CardioWall behaves unexpectedly during gameplay, wait for at least 30 seconds for the unit to reset to its idle state. For gameplay greater than or equal to 10 minutes, wait for at least 2 minutes for the unit to reset to its idle state. This longer time-out period is designed to allow multiplayer circuit training.

## 5.4 CardioBeat

- Summary:** A version of the 'bleep test.' A perfect measure of a user's fitness, including hand speed, accuracy and stamina. The first port of call for personal trainers with a new client. Helps to develop hand-eye coordination.
- CardioWall:** Standard only.
- Gameplay:** All pods will illuminate. Once each illuminated pod is hit, the light will turn out. All pods must be cleared within the given time to clear the level. If the level is cleared in time, a beep will sound and all pods will reappear. This is repeated until the user is unable to clear the entire wall of illuminated pods. The time that the lights are illuminated for decreases as the level increases, steadily increasing the games difficulty.
- Aim:** To clear the entire wall of illuminated pods as many times as possible with in time restrictions.
- Difficulty:** Increases as the level increases.
- Scoring system:** Level increases by 1.0 for each cleared level  
Level increases by 0.1 point for each pod hit  
e.g. L7.2

**NOTE:** At any time, if the CardioWall behaves unexpectedly, wait for the program to end and for the unit to reset to its idle state.

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# Section 6 – Troubleshooting Guide

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**Before beginning the troubleshooting, ensure you have made a note of the HUB Software Version Number** (e.g. V307.00). The HUB software version number is displayed on the HUB's dot-matrix immediately after the CardioWall is switched on.

**Call Rugged Interactive on +44 (0) 1726 981 123.**



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# CardioWall Compact System Specifications

### Dimensions and Weights:

	Approx. Shipment Details		Fully Assembled Details	
	Size (mm)	Weight	Size (mm)	Weight
<b>CardioWall Compact Duo (pair)</b>			1170 x 60 x 1170 (per CardioWall)	20 kg
<b>CardioWall Compact (single unit)</b>			1170 x 60 x 1170	20 kg
<b>Mobile Stand (without CardioWall)</b>				

### Power Supply:

<b>INPUT</b>	100-240V~ 1.0A 50/60Hz					
(輸入) λ:0.95	277V~ 0.38A 50/60Hz (277V~ for North America only)					
<b>OUTPUT</b>	24V 3.1A(恒压恒流型)					
(輸出)	Max.25V Max. Power(最大功率): 74.4W					
t <sub>c</sub> : 90 °C	<table border="1"> <tr> <td>t<sub>a</sub>:60 °C</td> <td>Input 200-240V~, 277V~</td> </tr> <tr> <td>t<sub>a</sub>:50 °C</td> <td>Input 100-200V~</td> </tr> </table>	t <sub>a</sub> :60 °C	Input 200-240V~, 277V~	t <sub>a</sub> :50 °C	Input 100-200V~	
t <sub>a</sub> :60 °C	Input 200-240V~, 277V~					
t <sub>a</sub> :50 °C	Input 100-200V~					
Suitable for use in Dry, Damp and Wet Locations						

**Warranty:** 1 year on electronics. 3 years on all other parts.

**Regulatory Requirements:** CE Approved.

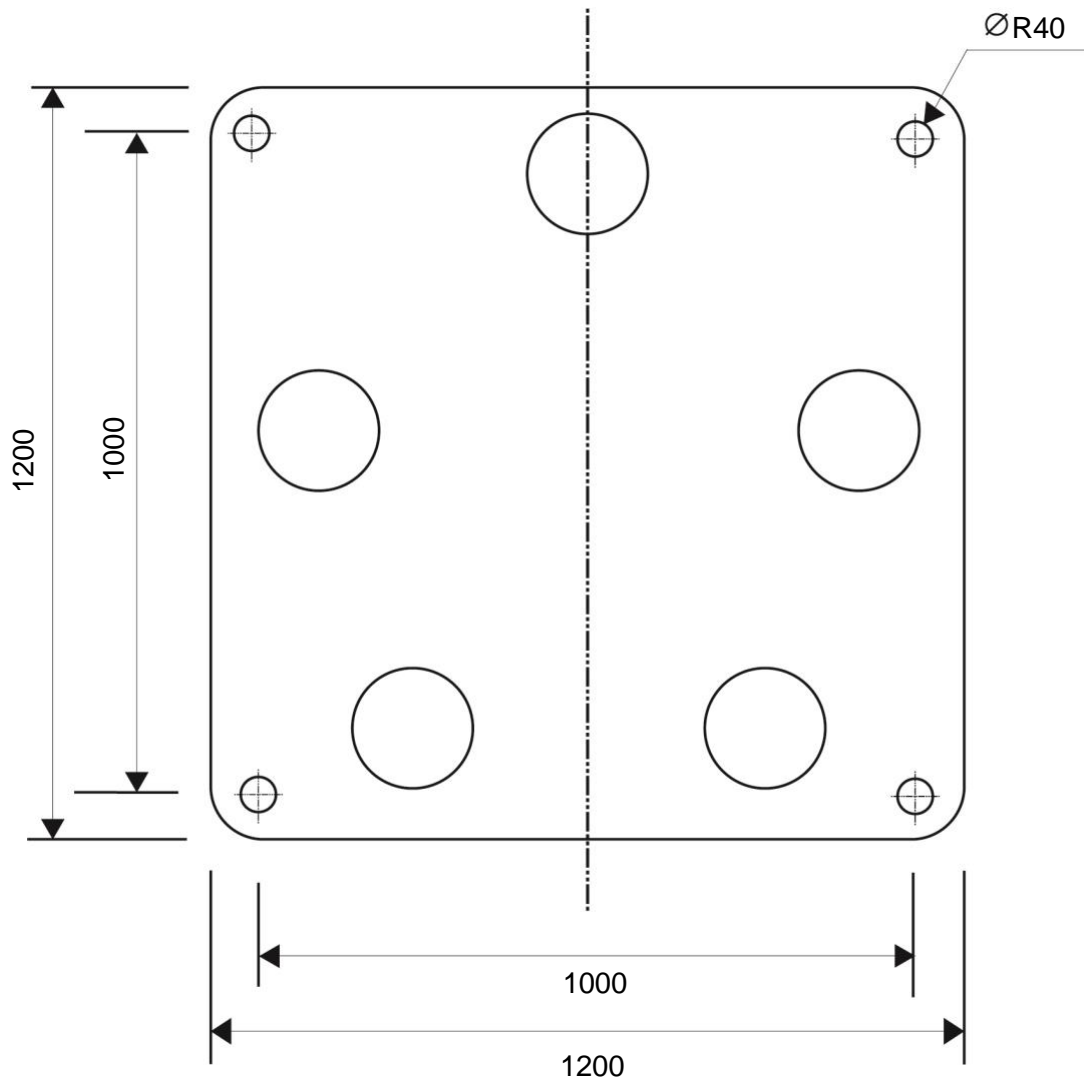
### Operating Environment:

Mount to a wall of a suitable construction.

Area required clear in front of the CardioWall: depth of 1 m minimum.

Optimum ambient temperature: 5°C to 30°C. Avoid extreme temperature fluctuation

**Other:** All parts designed for easy maintenance.



**Figure 1:** CardioWall Compact mounting points  
(Dimensions in mm)



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# CardioWall Compact Installation Checklist

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Please complete this checklist after any installation:

### Check 1: Pre-power up checks.

- Equipment is stable, secure and (if applicable) mounted to a wall of a suitable construction capable of supporting its weight and gameplay.
- All fixings are tight and secure.
- No signs of damage, component failure and/or missing parts.
- No trapped and/or pinched cables.
- No loose cables that could become a tripping hazard.
- All long cables are supported at least every 50 cm.
- Adequate strain relief provided for connection points.
- Kept out of direct sunlight.
- All electric components away from contact with water.
- Protective plastic sheets removed from front graphic panels and each pod.

### Check 2: Plug into a mains power and switch on.

- All pods light up.
- Text appears on the hub display and is as expected. *E.g. Compact Standard.*
- Sound volume is at a suitable level\*.

### Check 3: Select ClearOut (Speed) via Quick Start.

- Program counts down from 3 and begins.
- All pods active and operational.
- Check all pods for colours: red, green, blue.
- Sounds can be heard when the lights are hit.
- Program plays as described in the Programs Guide.

**Check 4: Select Menu then select ClusterShot** (*Standard / Ability CardioWalls only*).

- Time selection OK?
- Level selection OK?
- Program counts down from 3 and begins.
- All pods active and operational.
- Check all pods for colours: red, green, blue.
- Sounds can be heard when the lights are hit.
- Program plays as described in the Programs Guide.

**Check 6: Ready for use.**

- Play area is clear.
- Instruction / training carried out by an appropriate instructor to all new users.

**If anything unexpected occurs or problems persist after troubleshooting, call Rugged Interactive directly on +44 (0) 1726 833 882.**