



1. Product Name

ROMPA® Interactive Lighting System

2. Product Code

20127, 20128

3. Colour

Not applicable

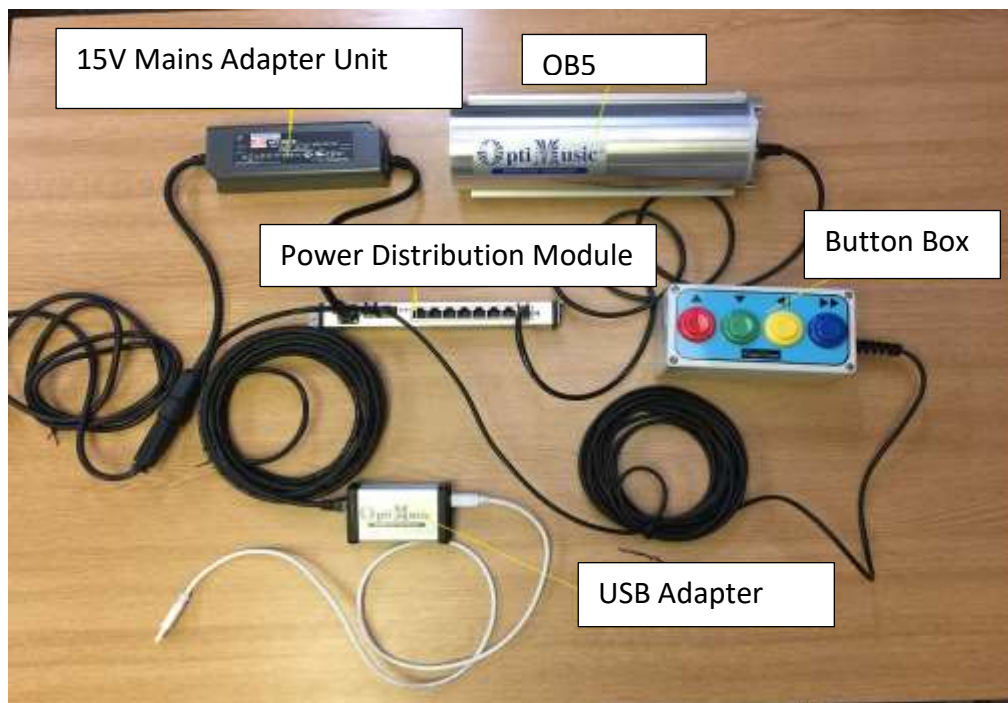
4. Brief Description

Music through movement! A whole new meaning to air-guitar and pretend drums! Interact with beams of coloured light by passing a hand, foot or reflective bat through them.

Trigger sounds at the wave of an arm ... Activate chords at the sweep of a bat ... Play interactive music games whilst setting off images, videos and graphics.

5. Contents

- PC or Laptop - - i3 4gb minimum (Windows OS 10)
- Interactive light units with long-life low voltage bulbs, all cables and accessories (latest model OB5)
- Control Box (brain of the system)
- Button Box (to scroll through settings)
- 1x PSU 15V– MAINS ADAPTER UNIT – NPE-90-15
- Software with license (OMPC1 Interactive Software -latest version)
- Reflective foam bats
- Reflective floor pads (for floors and other surfaces)
- Manuals – technical and programming
- **Ready Made Content:** Over 75 Interactive settings and games with a large library of Music, Sound effects and Images



6. Snoezelen® Stimulations

- Sight
- Sound
- Movement
- Control

7. Best Use

Install indoors. Place the beams in a configuration to suit your room – in a line, wave or a circle.

8. Compatible ROMPA® Products

- 17032 Spare Paddle (Single)
- 17029 Spare Halogen Light
- 21033 Sensory Magic Connected to 4 Beam
- 21461 Link Box
- 20849 4 Beam system Plus Link Box (no PC)

9. Starting Up

Installation: Choose a suitable location where the item can be used and interacted with safely. Decide on the layout of your beams and the plan of the equipment in your space (ROMPA® can install this system – please enquire with our installations team on 01246 211777 for details).

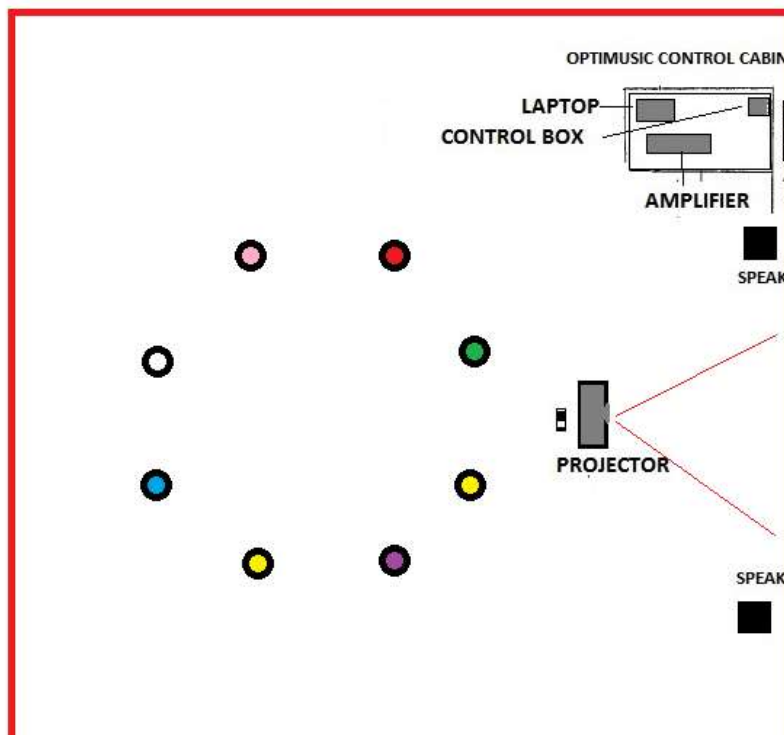
Design overview:

The most popular configurations comprise of 8, 12, or 16 light modules hanging from the ceiling shining the light downward (90 degrees) creating colourful “pools” of light on the floor. The beams are normally positioned in a circle or semi circles shape, but any other shapes like snake, zig zag, random etc. will also work very well. A good gap between the beams is desired approx. 90cm -100cm, but smaller gaps are also practical subject to the size of the room. The design should facilitate enough space for small group interaction, drama, movement, dance, wheelchairs, interactive games and more.

The control box, PC, amp etc. are normally housed in a control cabinet. The PC connects to the system’s USB adapter, projector and sound system.

See drawing below showing location of the system components with peripheral equipment.

DRAWING OF TYPICAL SYSTEM DESIGN AND EQUIPMENT LOCATION



Additional peripheral equipment required to suit room conditions but not supplied include:

- Projector/s or *TV screen/s to provide a large image/ s
- Sound system (amplifier and speakers or power speakers)

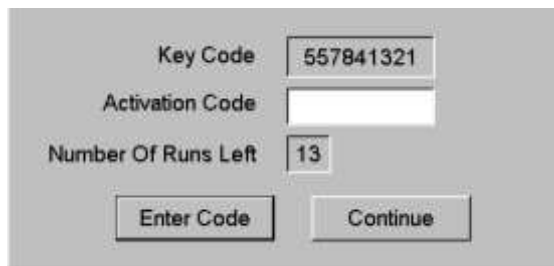
*When using a TV screen via HDMI the audio can be derived from the TV speakers

See **Installation** section below

Use of System:

Licensing your software

Once the OMPC1 software has been installed – ICON OMPC1 will appear on the PC's desktop. When you click on the OMPC1 icon for the first time a window with your key code will open:



Key Code	557841321
Activation Code	
Number Of Runs Left	13
<input type="button" value="Enter Code"/> <input type="button" value="Continue"/>	



E-mail your 9-digit Key Code with your details to: info@optimusic.com . Once received an E-mail with your Activation Code will be sent for you to enter and confirm. **If urgent call +44 20 8441 8080.**

Unauthorised copying of this software is illegal!

This product is licensed as a single product – its components may not be separated for use on more than one computer. All rights for educational material and media files are reserved to OptiMusic.

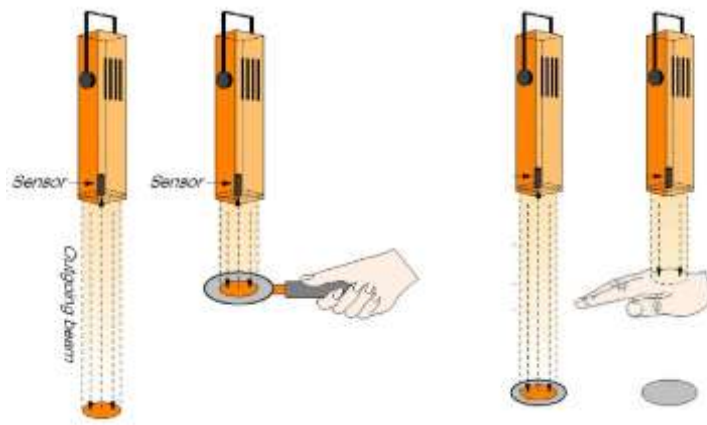
How Does it Work?

In its simplest form, the ROMPA® Interactive Lighting System is a 'virtual light switch'. Coloured light beams shine down acting as clear visual reference points for the user. When a beam is 'broken' or interrupted, a signal is created which activates previously selected events.

The beams can be played in two modes: **Normal** and **Inverse**:

Normal mode uses hand held reflective bat to trigger the beams.

Inverse mode uses floor/surface mat reflectors so the beams can be triggered by hands and/or body movement.



The OMPC1 software can control from 1 - 32 Light modules or other types of sensors. A PC mouse is required for the majority of the functions, from choosing settings to editing beam sequences. The computer keyboard is mainly used when typing in the names of new projects, settings or beams.

Setting

The name given to a group of beams programmed with events of interactive content.

Project

The name given to a group of settings.

Important note: Navigation in the software is done by left and right mouse clicks on the +/- feature:

In Order to be familiar with this function, we recommend to click on all the +/- Boxes (in both Play and Edit pages) to see the effect and to understand what these boxes control.

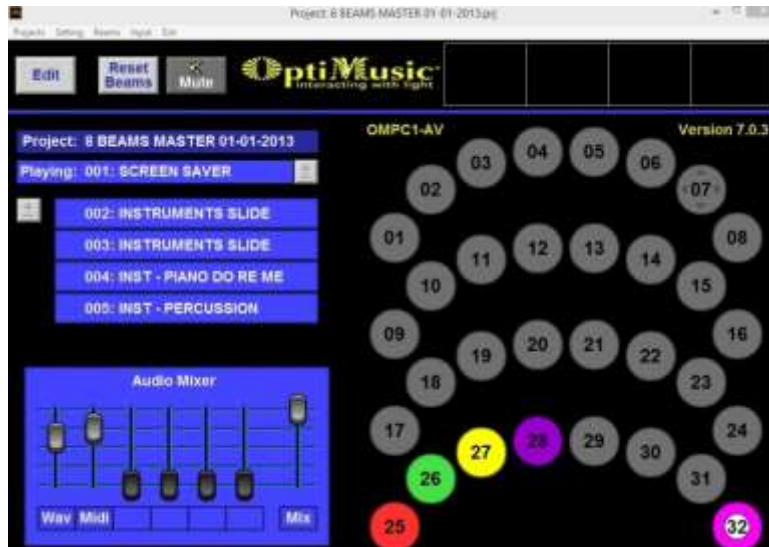


To create new and modify existing content, the edit page (see below) allows the user to save beam content as Settings (setting) and Projects. An easy way to understand the OMPC1 Software is to compare it to a PowerPoint presentation where users inserts images and sounds into SLIDES.

In each project, a maximum of 128 settings (settings) can be saved. And there can be an unlimited amount of projects. Events are created by loading images and sounds from the OMPC1 library folders (found on the LOCAL C DRIVE / OMPC1) into the table of events (TOE).

Always make sure you copy all your Media files (Audio, images and videos) to the correct folders inside the OMPC1 main folder. The OmPc1 Software comprises of two main pages:

Play Page: allows the user to load project, to observe the system in operation (showing all the interaction between the 32 beams or input channels) and control the audio output.



Edit Page: allows the user to create new content and projects by loading into the various beams locations all type of multimedia events. I.e. musical notes, audio files (Wav and Mp3) image files (Jpeg, bmp) and video files. In this page only 8 beams can be shown at one time with the media input editors.



Beam programming:

Up to 256 Events of all media type can be programmed per beam.

Each beam has a TOE (table of events) which is similar to a playlist in modern digital media players. A playlist can include all type of events in the following colour-coding.

Blue: keyboard note & MIDI OUT

Green: Audio file

Table Of Events					
Ch	Note / File / Shutt / Sec	Vel	Trig		
001:001	C3	-080	Ind		
002:001	(ON) COLOURS.wav	-100	Ind		
003:002	(ON) Red.bmp	-M1	Ind		
004:001	(ON) Butterfly.wmv	-M1	Ind		
005:017	(CL)	-N/A	Ind		
006:001	(ON) RED WALL + SC	00.00	Ind		
007:					
008:					

- Red:** Image File
- Pink:** Video file
- Orange:** Relay events (turning beam on/off).
- Yellow:** DMX events (Lighting)

To programme a beam follow the instructions below: (These are instructions to use the system in NORMAL MODE)

Using the virtual keyboard: The Note Event Editor

The Note Event Editor is an on-screen musical keyboard. Here you can listen to your notes, create chords, choose from 127 different instruments, assign channel numbers and decide on the volume & velocity of each note. The keyboard has a range of eight octaves from C-1 to C8.



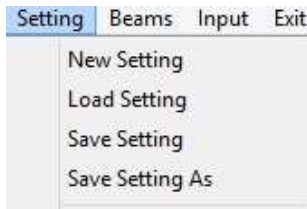
Example:

- Click on beam 1 (the Red circular spot) to confirm beam choice. Inside the spot, you will see four dark triangles in an off-axis square.
- On the right bottom of the screen click on any note on the keyboard. As you hold the mouse click and move the cursor left and right, you will hear the notes being played from the keyboard. (Note: If no sound is heard, check your audio settings).
- To input, once the desired note is chosen, left click on it. The name of the note will appear in the editor box (For example, C3).
- Click on the bottom left-pointing red arrow, to the bottom left side of the keyboard. You will see the chosen note now appear in the **TOE** as step 001.
- To hear your first event programmed, activate beam one with reflective bat or use the mouse to click on the on-screen beam spots.
- This process can be repeated either in beam one or in any other beams.
- The virtual keyboard has 127 sounds (GM Midi) which can be accessed by using the +/- button as mentioned above.

- To play the same note programmed but with a different instrument, scroll through the instrument box to choose your instrument and then trigger the beam to hear the sound.

Now save your work:

Saving a setting:

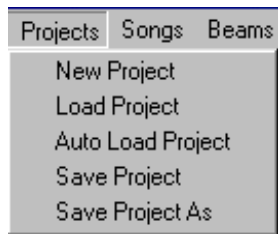


Go to **Setting** drop-down menu

Go to **Save As** and save your selected name.

This name will appear in **Setting** name box and will be saved into the **Setting Folder**

Saving a project:



Go to **Project** drop-down menu

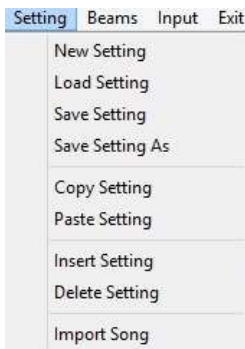
Go to **Save As** and save your selected name.

This name will appear in **Project** name box and will be saved into the **Project Folder**

From now on, you will be prompted to **save any changes to your project.**

Loading your work:

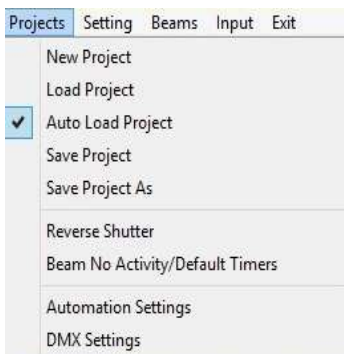
Loading a **Setting**:



Go to **Setting** drop-down menu

Go to **Load Setting** and load your desired setting

Loading a **Project**:



Go to **Project** drop-down menu

Go to **Load Project** and select desired project

To set this project as the default,

Click **Auto Load Project.**

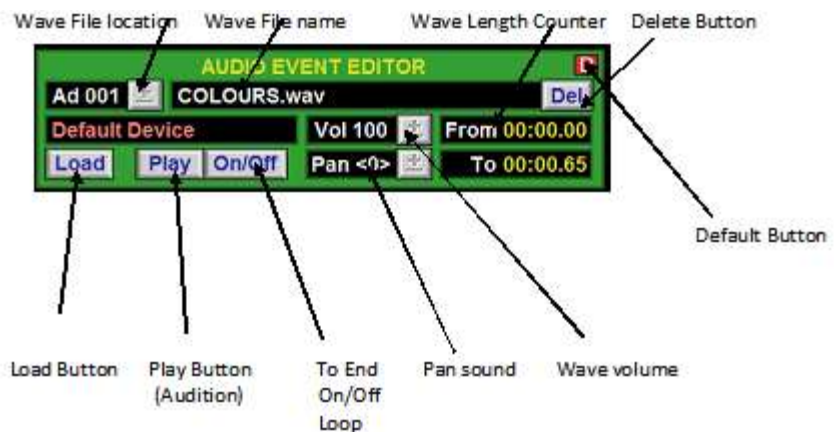
This project will now open when **OMPC1** software is opened.

Programming using the AUDIO Event Editor:

The AUDIO Event Editor (wav & mp3 files)

We recommend working with .wav files as they respond faster (being non compressed)

The function of the AUDIO Event Editor is to load and edit AUDIO files before they are assigned to the beams. Audio files include sound effects, voices and music samples that are of the file type **.wav** or **.mp3**



The editing processes include: shortening the length of the audio file, adjusting the volume and the panning (assigning) to Left or Right speakers). You can decide how these files will play on the beams. **There are three main play modes for each wave file:**

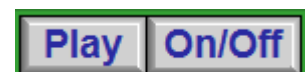
To play On/Off i.e. directly controlled by beam triggering,

To play once through (To end)

To play continuously and repeatedly (loop)

Wave Files in On/Off mode:

Example:



- Click on beam 2 (Green).
- Now go to the **audio event editor** (green) box. Left click on load.
- This will open an OMPC1 folder called **WAVEFILE**.
- There you will see library of audio files supplied, as well as your own.
- Click on the folder of choice. i.e. Animals. Locate wav file called cow.wav and open it (double left click)
- Now in the **audio editor**, you will see the wav file appear in the edit box.
- To hear the wav file (audio), hold left click on the **Play** button to hear the file. You can change the files duration by adjusting the start and end point. (Screen shot
- To input the loaded wav into beam 2, click on beam 2 spot. This time, click on the top left pointing red arrow to insert the file into the **TOE**.
- Note: the wave file is in On/Off mode
- Now trigger the beam. Note: the duration of the played file will depend on the amount of time the beam is triggered for.
- This mode is called **ON/OFF** (Short segments of the start of the file can be triggered rapidly).

Important note:

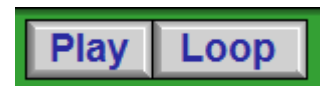
The longer you trigger the beam (staying in the beam) the longer the audio file will be played.

Wave file in T/E mode:



- This time, load the file donkey.wav into the editor
- Choose option **save in the next location**
- You will now see the wav file in location 002 in the audio editor
- Now, click to change the **ON/Off** mode to **T/E** mode
- Assign to **beam 3** (Yellow)
- Now trigger the beam.
- This time you will see that the wav file plays in its entirety regardless of repeated or prolonged triggering. i.e a quick trigger will cause the file to play in its entirety.

Wave files in Loop mode:



- Load the file Cockerel.wav .
- Follow procedures as before.
- Now click to change **T/E** mode to **Loop** mode
- Now assign to **beam 4** (purple)
- Now activate the **beam**
- If you hold the beam triggered, the audio file will repeat until the beam is no longer triggered.

Toggling beams (Continuous playing):

- This is a special beam state where looped audio events are assigned to.
- If you require a wav file to play continuously (I.e. most effective with drums and percussion loops), click on the **Toggle**
- Select beam 4 and click the **Toggle** button for this **beam** - it will be highlighted
- Trigger the **beam** once
- The cockerel sound will now repeat indefinitely.
- To turn off, activate the **beam** once again.



Beams in toggle mode require **2 activations: On and Off**

Displaying Images:

Important note: In order to display images a secondary screen or projector will need to be connected to your PC or laptop. This will require a dual video output, this secondary screen will need to be set up in **Extended mode and not mirrored!**:



Using the IMAGE EVENT EDITOR:

We recommend working with image file .bmp or .jpeg in resolution of 1024 x 768 pixels



Example:

- Click load
- The IMAGE library (supplied or your own) will open.
- Go to the animal 1024x768 folder and select the Donkey.bmp image.
- The file will now load into location 001 in the **image editor**
- To preview the image, click and hold on the **view** button on the **image editor**
- Click on **Beam 3** (yellow)
- Click on step 002 on the **TOE**, which at the moment is assigned.
- Now click on the top left pointing red arrow to assign the image to **beam 3**.
- Now trigger **beam 3**.
- You will now hear the sound of the donkey played until end
- Trigger the **beam** again
- You will see the image of the donkey appear on your PC's extended monitor.
- For enhanced performance for triggering **beams**, preload images through the **"Preload"** button located above the image **"Load"** button.

Grouping Events:

Important Note: Grouped events will be played simultaneously upon activation.

Please note – Grouping more than ten events is not recommended and may affect PC performance.

Example:

- Look again at the **TOE** for **beam 3**.
- You will see on the right side of the table, three letters **IND** (Individual event)
- Observe that both events have **IND** letters on the right hand side
- Now double click on the bottom event (Donkey.bmp) on the letters **IND**
- You will see that the word has been replaced by this **^^^**.
- The donkey.wav file now has the letters **GRP** (heading a group below it).
- Now trigger the **beam**.
- To see the full effect of grouping, do the following:
- Load another wav e.g. Cat Meowing.
- Ensure it is set to **T/E** mode and assign it to step 003 of the **TOE** for **beam 3**.
- Now load another image e.g Cat.bmp
- Now assign this to step 004 the **TOE** for **beam 3**.
- Group the Cat Meowing.wav and the Cat.bmp
- There are now 2 **Groups** assigned to beam 3
- Now trigger the beam, the donkey sound and image will be activated.
- Wait for audio file to complete
- Now trigger the beam again, the cat sound and image will be activated.



Ch	Note / File / Shutt / Sec	Vel	Trlg
001:001	(ON) Donkey.wav	- 100	- Grp
002:001	(ON) donkey.2.bmp	- M1	- ^^^
003:002	(ON) Cat-miaowing.W	- 100	- Grp
004:002	(ON) cat.bmp	- M1	- ^^^

Using the VIDEO EVENT EDITOR:

Loading VIDEO File into the VIDEO EVENT EDITOR:

To load a Video file (Mpeg .AVI .VOB .WMV) from the VIDEO folder in OMPC1, follow the **exact procedure** as with loading wav and pictures.



Editing a video:

You can edit the length of the video and change the volume of its Audio in a similar fashion to how you edit Wav files.

Table Of Events						
±	Ch	Note / File / Shutt / Sec	Vel	Trig		
	001:001	(ON) Butterfly.wmv	- M1 -	Ind		
	002:					

Programming the Button Box:

Used for scrolling through the various settings

Most systems are supplied with a Button Box which is “HARD WIRED” to channels (beams) 25-28



Recommended functions to be programmed for the Button Box:

- Red Button (Beam 25) – Next Setting
- Green Button (Beam 26) – Previous Setting
- Yellow Button (Beam 27) – Reset Setting
- Blue Button (Beam 28) – Skip to next bank of settings

The Button Box set up is described below:

Navigation between settings can be achieved in OMPC1 using secondary control events. These can be programmed onto the Button Box via the **secondary events window**. This window is accessed by clicking on the **light blue arrow button** left pointing situated to the left of the Note event editor.



The secondary control events are typically used for navigation in the project or resetting and muting:

- Setting Up: Moves to next setting
- Setting Down: Moves to previous setting
- Setting Select: Moves to a specific setting
- Global Reset: Resets setting
- Global Mute: Mutes/stops all activity

These events can also be added to any beam's **TOE**, either on their own or after a series of other events.



Physical connections:

When connecting the Button Box to your USB adapter box, it should automatically be assigned to beams 25-28.

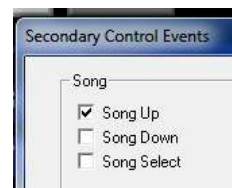


To program the Button Box:

1. Select beam 25 from the edit page by using +- near the beam number
2. Click the light blue arrow button, this brings up the Secondary Control Events editing window (pictured above)



3. Select 'Setting Up'

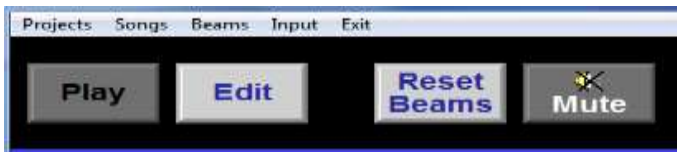


4. Assign this event to beam 25



5. Now **press the red button** on the Button Box and the programme will “jump” to the next setting
6. We recommend to investigate how the button box is programmed in the projects we supply with the system
7. Repeat similar steps for beams 26-28 as per **Recommended functions for the Button Box** (see above)

Edit, Play, Reset and Mute Buttons:



Edit button – This has no function in the Edit Screen.

(Click this in the Play Screen and it takes you to the Edit Screen.)

Play button – Click this in the Edit Screen and it takes you back to the Play Screen.

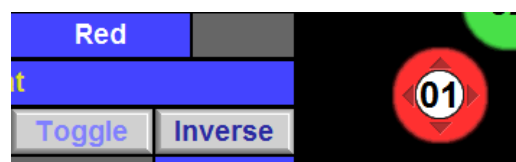
Reset Beams – This button resets all the beams back to the beginning of their sequence. Example: If a user “loses” their place in a melody whilst playing a beam, clicking this button resets all the beams back to event number 001.

Mute – Clicking the Mute button will stop and block any activity in the beams and will also terminate all audio, video and timer activities. This Button will flash red when the system and the beams are in Mute Mode. To un-mute the system click this button again.

Creating Inverse Beams

To programme a beam to play in Inverse mode simply select a beam, click on the inverse button which is near the toggle button and place a reflector in that beam (on the floor, on a tray of a wheelchair etc.) The beams that are programmed to play in Inverse mode will display a white circle in the coloured beam spots on the PC screen. This is a useful reminder to place your reflector.

The image on the right shows Beam number 1 is in **INVERSE MODE**



If you select a setting that has some beams programmed in Inverse mode and there are no floor reflectors put down inside the beams, the beams will become Active and will play the events programmed.

To stop this from happening, ensure a reflector is placed in the light beams.

Remember:

When playing in **inverse mode** (reflectors on the floor) any movement in the beams will trigger the sounds.

Working in **normal mode** means only those participants holding or wearing reflective bats / gloves can actually trigger and play the beams.

ANY BEAM PLAY FUNCTION (ABP):

When you are creating a setting where you wish for many beams to trigger the same sequence of events.

For example, playing a melody or telling a story with many users participating.

In order to avoid “cacophony” using the **ANY BEAM PLAY function** will simplify things. APB is a very effective way to interact with the system.

The idea behind is very simple:

One beam is chosen and programmed to become ANY BEAM MASTER i.e. the beam with all the events we wish to trigger

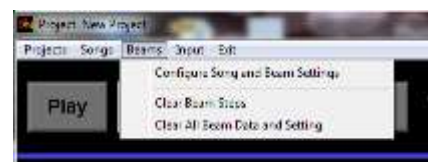
Some beams can be chosen to become ANY BEAM SLAVE i.e. their function is just to “activate” the master beam, no events can be programmed into the slave beams and their TOE is greyed out.

There can only be one MASTER BEAM in a setting!

Example -follow the instructions below:

In ABP mode we normally select **beam 31** as the ANY BEAM MASTER and we assign all the events to its TOE. Here we will choose beams 1-8 as the SLAVES BEAMS

1. Scroll and select beam 31 when in the edit page
2. Click on 'Beams' in the menu bar.
3. Click 'Configure Setting and Beam Settings'
4. In the **Beam Select** heading click on beam 31
5. Under the 'Beam Type' heading, select the check box next to 'Any Beam Master' (see red arrow in the image on the right)
6. Now In the **Beam Select** heading click on beam 1
7. Under the 'Beam Type' heading, select the check box next to 'Any Beam Slave' (see green arrow in the image on the right)
8. Do the same to all remaining beams 2-8
9. To exit and confirm click the Set button.
10. Now go to the Play Page and you will see that beam 31 has changed its shape to a “diamond” shape - which indicates this is a Master beam
11. Now trigger beams 1-8 and you will see that they all activate beam number 31



The OMPC1 software programme is a culmination of continuous development and innovation over many years. It is hugely diverse and packed with many interactive features listed below.

The OMPC1 software receives Real-Time inputs from up-to 32 sensor units via USB data communication hardware and is processing pre-programmed events.
 Channels input: OptiBeams / IR / switches / sonic / Laser / pressure - or any 5V input, can be connected to one computer.

Windows OS based application for Windows OS (Win 7, 8, 8.1)

The system triggers file formats for Audio: .WAV .MP3 .WMA, MIDI
 The system triggers file formats for Image/Video: .JPEG .BMP .MPEG .VOB .WMV.AVI .MP4
 The system controls DMX (Lighting) and MIDI (Music) events
 On board a Built-in DMX 512 channel virtual mixer

Main features:

- Processing up-to 32 inputs
- Real-time triggering
- 2 triggering modes - Normal and Inverse
- Outputs up-to 256 events per beam
- 128 settings per Auto Load project
- Event sequencing per beam in any conceivable order
- Outputs: MIDI or use internal audio card
- Outputs: DMX for Lighting control and stage effects
- Trigger: WAV .MP3 .WMA, MIDI
- Outputs: Jpeg, BMP, Mpeg2 Avi, WMA, VOB
- Virtual MIDI keyboard for note editing and assignment
- Record notes from any external MIDI source (keyboard)
- Wave / Mp3 file editor and assignment
- 3 Wave file play modes: On/Off, Play to End and Loop
- Shutter / Relay control output up-to 32 channels
- 4 modes for on/off Shutter / Relay
- Event Toggle
- Remote control navigation from any channel input
- Sensitivity input control per beam –Analogue input with thrash hold control
- Global Mute mode
- Global reset
- Using Quad graphic card - **Videos & Images can be projected** from 4 different projectors or monitors
- ASIO drivers built in for Audio Surround system of up to 24 Speakers
- Auto “Puzzle” image reveal maker.
- Auto-change of settings during the day.
- Calculator Engine to play simple Math Games from the inputs
- Timer mode per each channel
- Global Countdown timer
- And more.....



10. Detailed Description

Music through movement! A whole new meaning to air-guitar and pretend drums!

Interact with beams of coloured light by passing a hand, foot or reflective bat through them.

Trigger sounds at the wave of an arm ... Activate chords at the sweep of a bat ... Play interactive music games whilst setting off images, videos and graphics. 'Indestructible' beams act as powerful visual reference points for participants

- Turn-key operation
- Fits within the Curriculum
- Recognizable rhymes, tunes and fun sound effects
- Audio-visual effects in real-time
- Pre-programmed yet easily updated
- Space-saving
- Safe, hygienic and effective - nothing to trip over or touch!
- Multiple beams can be installed together

Helps understanding of cause and effect and stimulates hand-eye co-ordination, interaction as well as motor, musical and listening skills.

- NO SERVICE REQUIRED!
- NO NOISE! NO MOVING PARTS: No Fan, No Shutter,
- VERY HIGH LIGHT OUTPUT WITH BRIGHT AND VIVID COLOURS

11. Safety

- Please read all the following safety information before each use

ALWAYS SUPERVISE THE USE OF THIS PRODUCT

- Remove all packaging and either store this in a safe place out of reach of clients or dispose of this responsibly. Plastic bags and wrapping can be hazardous to children and vulnerable people.
- Keep away from sources of heat and fire.

12. Technical Specification

- Windows 10 Intel core I3 processor, SSD 128G 4gb RAM 2x USB slots
- VGA / HDMI connectivity
- LOW VOLTAGE: 8 Units are powered by 15V single power adapter (PSU)
- ECONOMICAL - LOW POWER CONSUMPTION: 15% from similar Halogen output
- SMALL CIRCULAR PROFILE: 29cm x 11cm = 14.5" x 4.3" DIAMETER
- LIGHT WEIGHT: Aluminium body, unit weighs approx. 0.95 = KG 1.9 Pounds
- NO BULBS TO REPLACE
- LONG LIFE: 40,000 – 50,000 hours!

13. Installation

Ensure that a risk assessment of the area has been made and the surrounding area is clear from obstruction and access routes are clear to enable safe use of the product.

Site preparation for installation:

Prior to the installation date, the site preparation for the "ROMPA® Interactive Lighting System area" will need to be completed.

The Site preparation to include:

1. Provision of a cabinet/enclosure with good ventilation for the laptop, control box and the amplifier.
2. Install all electrical sockets outlets in the various locations with required switches.
3. Provision of a wall switch panel (Optional) assigned as follows:

Switch 1 powering all the equipment in the control cabinet (laptop, amplifier etc..)

Switch 2 powering the socket for the Light modules

Switch 3 powering the socket for AV peripheral equipment

Mains Power supply:

1X 110V / 230V / (US Canada EUROPE) mains switch for the whole system (turn-key operation)

At the ceiling:

Power supply for the PSU

Power supply for the projector – *if large TV is used amp and speakers are optional

At the cabinet

Power supply for the Laptop

*Power supply for the amplifier

Cables run:

*1x Audio cable from PC to the Amplifier or Powered speakers (3.5mm jack plug lead with two PHONO or XLR)

1x VGA or HDMI Video cable from PC to the projector / TV screen

1x Cat5 cable from the USB control box (at the cabinet) to the Light Modules

1x Cat5 cable to the Button Box

1x standard Ethernet cable for Internet connection – recommended for remote log-in.

Additional installation info:

Running power to the Light modules from the Pc cabinet:

If the installing MAINS power socket in the ceiling is not desired. There is the option of having the 15v PSU with the Data connector box near the PC inside a cabinet. This will allow all the required Cat5 Cables to run in a loom to each of the light modules. Max distance is 30m per cable.



Outline of OB5 powered over CAT5 Cable

A single mains adapter supplies 1-8 OB5's LEDs at 15V via each beam's CAT5 cable. The cable also carries PC communications. This only requires a single cable (CAT5) which can be up to 30m long. A power distribution module distributes power to each OB5 CAT5 cable and links the beams to the USB adapter & Button Box.

Wiring a CAT5 powered system

Note: The power supplied over the CAT5 cable is not a standard POE configuration and the CAT5 cables MUST NOT be connected to normal network interfaces.

Each beam is connected to a power distribution module or Power Distribution Module, pictured below, via a CAT5 cable.



Power is routed from the single mains adapter (right) to each cable powering that beam's LED. The block of eight RJ45 connectors on the left supply power to the beam's LEDs. The cables also carry communications signals.

The RED led indicates Beam LED power from the mains adapter and the Green LED, communications power from the USB Adapter.



Communications signals are also routed back to the USB Adapter (and Button Box), using the two black RJ45 connector on the right. The PC is connected to the USB Adapter. The Button Box can also be connected directly to the USB Adapter, if this is more convenient.

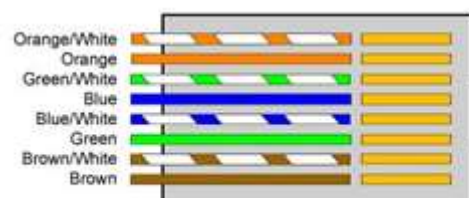
If more than 8 beams are connected, additional Power Distribution Modules are used and interconnected by CAT5 cables using the right RJ45 connectors. Each Power Distribution Module has its own main adapter to supply Beam LED power. It is best to even out the beams using each Power Distribution Module; for example with 11 beams, allocate 5 to one and 6 to the other. This minimises heat generated by each mains adapter.

Note:

- The power adapter is designed for LED lighting applications and can be used on the desktop or as part of a permanent installation. Allow adequate ventilation around the adapter and observe the temperature ratings on its label. Full specifications, certifications, etc can be found on the WWW.
- Do not extend the power output cable from the mains adapter to the Power Distribution Module.

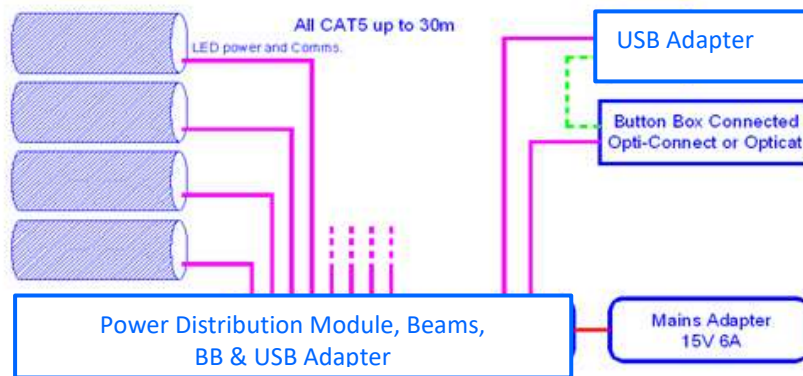
CAT5 cable must:

- Have all 8 conductors present (this is standard). Picture shows typical colour coding, but this can vary.
- Have solid or stranded copper conductors and NOT CCA (copper clad aluminium).
- Have straight through connections (i.e. pin1 to pin1, 2 to 2, etc). Crossover cables MUST NOT BE USED.
- Unshielded cable is normally used.
- CAT6 cable could be used but is less flexible.



OB5-15 Mains Adapter & Power Distribution Module

The following diagram shows typical wiring for a 4-beam system:



Location of Beams, Mains Adapter and Power Distribution Module

Location:

Choose a point near the middle of the beam cluster. Place the mains adapter, mains power connection point and USB Adapter here. This will minimize cable lengths and keep the installation tidy. Cables up to 30m long can be used.

Button Box:

If this is to be used close to the beams, plug it into the USB Adapter. If not, plug it into the USB Adapter.

USB Adapter:

Connect it to the Power Distribution Module with a cable up to 30m and to the PC with a USB cable up to 5m long (the shorter the better).

Making connections and Powering up the system.

Although the system is designed to allow hot plugging connection and disconnection, the following sequence is suggested;

- USB cable from the USB Adapter to the PC.
- Button Box to the USB Adapter (if used).
- USB Adapter to Power Distribution Module cable.
- All the OB5 CAT5 Cables.
- Mains adapter.
- Power the Mains Adapter.

If not convenient, connect and power the mains adapter last.

OB5 Metalwork & Earthing

The OB5's metalwork is isolated from all LED power and communications circuitry. The beam "chassis" or any metallic gantry can be connected to a protective ground if deemed appropriate.

Securing the Mains Adapter and Power Distribution Module

Both the mains adapter and power distribution module can be secured to an appropriate surface if required.

The fixing holes for the power distribution module are the ends of the unit. The hole is 4.5mm in diameter. The brackets can be removed, if required. Just unscrew the self-tapping screw (there is no internal washer or nut). The nominal distance between the holes is 250.5 ± 0.5 mm.

Instructions for Installation of the System

The system comprises of two main components:

- OB5 LED: Any number from 2-32 light units, each with a sensory that provides the interaction
- The control system – laptop, OMPC1 software, USB adapter and button box

The Colour order for installing the beams is as follows:

BEAM #1 =RED

BEAM #2=GREEN

BEAM #3=YELLOW

BEAM #4= PURPLE

BEAM #5= ORANGE

BEAM #6=BLUE

BEAM #7=WHITE

BEAM #8= PINK

BEAM #9 – #16 = same colour sequence

BEAM #17 – #24 = same colour sequence

BEAM #25 – #32 = same colour sequence

To focus the light beam to the best desired shape and clarity - swivel gently the focus button left or right. Do not force it if stopped (see image below button circled in RED below)



IMPORTANT NOTE:

TO POWER UP TO 8 OB5 UNITS - USE ONLY THE SUPPLIED MAINS ADAPTER UNIT – NPE-90-15



Vertical Hanging

If the Interactive Light modules are to be fitted pointing downwards (vertically) onto a frame or ceiling, the Holding Bracket needs to be fitted by Thumb Screws into the two threaded recesses which are situated at the rear of the main body.

Recommended height for vertical hanging - from 2.90m - 4.00m and above



Follow these steps as per images below for vertical hanging:

		
<p>The OB5 with all its components</p>	<p>Holding Bracket with a thumb screw</p>	<p>Holding Bracket with 2x thumb screws</p>
		
<p>Light module ready for hanging</p>	<p>Light module ready for hanging</p>	<p>Vertical hanging</p>

This completes the vertical set up for the OB5.



Horizontal Hanging:

If the Light modules are to be fitted to a frame or ceiling horizontally (using a mirror to direct the light to the floor). The Holding Bracket needs to be fitted by Thumb Screws into the two threaded recesses which are situated near in the centre of the main body.

Recommended height for horizontal hanging - from 2.20m - 2.90m and above



Follow these steps as per images below for horizontal hanging:



This completes the horizontal set up for the OB5.



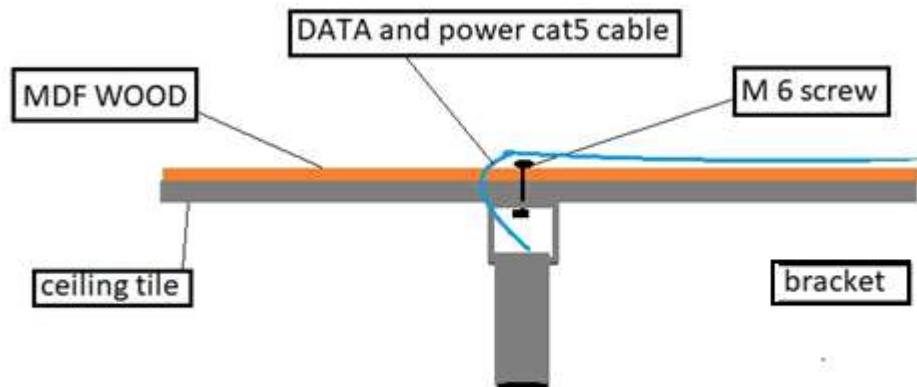
Installing the Light Modules in a suspended tiled ceiling:

Economical and fast solution to hang the Light modules from a suspended (drop down) tiled ceiling, which obviate the need to drill into the main building's structure ceiling inside the void. This also means that the beams can be moved easily when adding additional Light Modules or a change in the design is required.

Procedure:

Install a piece of MDF wood (6mm thick) above the ceiling tile with the same width as the tile, the wood should rest on the support metal of each tile so that it supports the weight of the Light Modules. (1kg)

Hang the Light Module bracket by drilling a small hole (6M) and use nut and a bolt to fasten it. A small hole for the Cat5 DATA and power is also required.

Vertical installation from a drop-ceiling**14. Care and Maintenance**

Current systems include LED lights that are unlikely to require changing. Older versions of the system included halogen bulbs that are likely to need changing over time.

15. Troubleshooting

In the unlikely event of any difficulties with this product please contact ROMPA®. Remote access via the internet to your system may be required to resolve any technical issues.

Further copies of these instructions can be downloaded at www.rompa.com
We hope you find our instructions invaluable. If you have any suggestions for improving them further your comments will be greatly received – please contact us at producthelp@rompa.com