

# LASERMAZE PINPOINT INSTRUCTIONS

## Overview

**LaserMaze PinPoint** is the successor to the original **LaserMaze** system. An amended wiring configuration makes connection even simpler than before and also provides the installer with visual indication of the status of all system components while in the maze proper.

The system consists of a **Power Supply**, up to 32 pairs of **Laser** and **Receiver** (Sensor) modules, one **Laser Control Box**, one **Receiver Control Box** (two of each Control Box for systems with more than 16 channels), an **Interface** to connect the Control Boxes to the PC.



**The component parts of the system**

All the **Laser** modules connect to the **Laser Control Box**, all the **Receiver** modules connect to the **Receiver Control Box**

Any switch modules, including **Start**, **Stop**, and **Skill** switch modules, connect to the **Receiver Control Box**. Any **Auxiliaries** connect to the **Laser Control Box**.

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- These instructions *are not applicable* to the original serially connected LaserMaze
  - If in doubt at any time *always* refer to the PinPoint help file!

# List of components

You will normally find an itemised packing list in the carton when you receive your **LaserMaze**.

**Each system** consists of a number of each of the following components, equal to number of channels in your system:

- Laser Modules
- Receiver Modules
- RJ11 cable and connectors plus crimp tool and cable tester

**Plus one of each** of the following:

- Interface
- Power Supply
- Power cord/lead
- 5m Cat5 (RJ45) lead to connect Interface to Laser Group Box
- 5m Cat5 (RJ45) lead to connect Interface to Receiver Group Box
- 5m Cat5 (RJ45) lead to inter-connect Group Box
- 9 pin 'D' to connect Interface to PC
- One each **Start** and **Stop (Midway)** switch modules plus cables
- 5/10m Cat5 (RJ45) lead to bridge Laser Control Box to Receiver Control Box – only required where the system has more than 16 channels, or where the cable run from Interface to Control Boxes has been increased from 5m

**You may have opted** to have one or more of the following included in your order:

- PC and Monitor
  - Second Monitor for remote score display
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# Installing the System

## The Play Area

The flexibility of **LaserMaze PinPoint** allows you to build a maze in any shape or size that you wish. It can be rectangular, 'L' or 'T' shaped, or whatever shape you wish.

As a rough guide you can install a 16 channel **LaserMaze** comfortably in an area 6m (20') long by 3m (10') wide. These dimensions are flexible in the extreme – we suggest you observe the following points:

- You can make the maze less than 3m wide, however a width of 3m or more allows you to set beam patterns that require the player to traverse in the left/right plan instead of just moving forward through the maze
- Do not make the maze so wide that the beams may be degraded excessively by smoke. We suggest 6m as a maximum

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## Theming the Maze

**LaserMaze** is a game of concentration and so it is perhaps not necessary to go to great lengths to decorate the maze. It is usually sufficient to have some good quality graphics painted on the walls using fluorescent paints, which will glow under UV light.

As to theme, this might depend on how and where the **LM** is being used. Is it part of a lasertag arena, or a stand-alone game?

Decoration as a vault, with a display of treasure trove at the end of the maze, is one option.

If you are using the **Midway Button** option, then the midway button might be a disabling button in a runaway nuclear reactor, for instance.

Escaping a modern-day POW camp or jail, gaining access to a lasertag arena, or to a lasertag arena recharge station, are other possibilities

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## Lighting the Maze

You need low lighting levels in order to be able to see the laser beams. Ideally, the only lighting in the play area should be UV strip lighting.

- Use 1.2m (4') UV strip lights. These are by far the lower cost method and replacement tubes are readily available. Purchasing from a disco supplier is often the cheapest option.
  - Depending on the ceiling height, you will need around one fitting per 5-6 sq m (55 – 65 sq ft)
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## Seeing the Beams

Laser beams can only be seen if they are passing through fog/smoke/haze. For a regular size maze only one machine will be required. This can be controlled from the **Smoke/Haze Tab** of **Pinpoint.exe**, via an **Auxiliary Output** on the **Laser Control Box**.

- Cheap smoke machines are not cost effective in the long run. Whether you opt for smoke or haze, pick a make that is known to be reliable and designed for continuous use, not just for the occasional kids' party. The Martin Pro Magnum is an example, but there are many others.
  - It is essential that the play area is not over-smoked. Too much smoke will prevent the beams reaching the **Receiver Modules** and you may experience spurious broken beam events
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## Positioning the Laser and Receiver Modules

It is a good idea to draw up an initial plan of where the beams will be.

- Remember that not all beams will be on in any game. The number of beams that will light will depend on the **Skill Level** that you set
- You can configure the system to **always** use certain beams
- Consider whether you will use the **Midway** option that requires the player to return through the maze, optionally with a different beam pattern, in order to complete the game

## Laser and Receiver Modules

The **Laser** and **Receiver** modules are supplied with heavy-duty ball joints which allow the modules to be aligned and then fixed in place. The back plate of the mounting should be screwed/bolted to a rigid surface. Generally speaking, the modules should be spaced more or less equally along the maze, however if you have an irregular shaped maze you will have to decide on spacings that will give you the best coverage.



**Receiver Module**



**Laser Module**

- All the **Laser** modules must run along one side of the maze. All the **Receiver** modules must run along the other side of the maze
  - **Note:** It is better to site the **Laser** modules along the side of the maze that is nearest to where you will place the **Interface**. This will ensure the shortest data cable run to the **Laser** modules, as they use more current than the **Receiver** modules.
  - You may find simulating your intended layout with string or coloured yarn a worthwhile investment in time. If you need help with your layout then we are happy to provide you with our ideas for your site.
  - **Important Note :** Looking at the picture above, you will see that there is a yellow label inside each laser module. If these have not been factory-attached, you will find them in your shipment and should affix them accordingly.
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## Height of the Laser and Receiver Modules

Some points to bear in mind when deciding the height of the modules from the floor:

- Beams can run diagonally in the vertical plane, ie can be higher at one side of the maze than the other
- Have one or more beams low enough that players cannot simply slide/wriggle through the maze on their stomachs
- Use height combinations and diagonals so that players have to negotiate the maze from left to right in order to proceed

## Positioning the Control Boxes



**Receiver Control Box**



**Laser Control Box**

Site the control boxes halfway along the maze. Ideally they should be slightly higher than the **Laser** and **Receiver** modules so that you can see the LED indicators easily. Make sure that you fix the **Laser Control Box** on the same side of the maze as the **Lasers** – ditto for the **Receiver Control Box**. The control boxes are identified at the top left of their PCBs.

**Remember** the note above – site the **Laser** modules (and **Laser Group Box**) on the same side of the play area that you intend to site the **Interface**

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## Making Data Cables

You will have been supplied with ample quantities of 4 way flat data cable, connectors, a crimp tool and a cable tester. Cut the cable into lengths that will allow you to route a cable between each Laser Modules and the Laser Group Box, ditto for the Sensor (Receiver) Modules to the Receiver Group Box. When measuring, allow a little extra to take up any movement in the module ball-joint mounting.

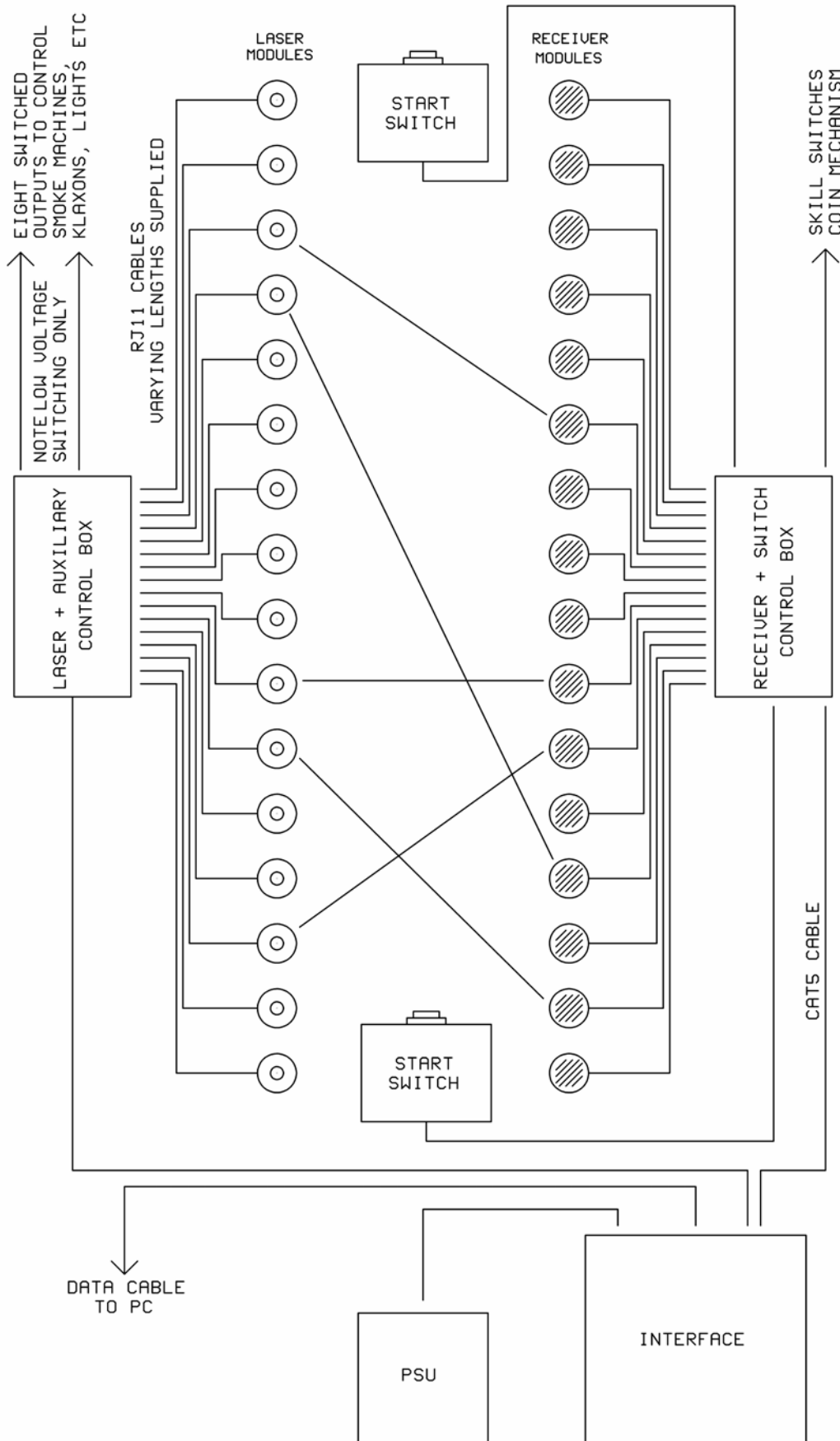
To make a cable, use the stripper section of the crimp tool to remove the outer sheath of the cable. The stripper section has a backstop so you strip the correct amount. Push the four conductors into a connector and then crimp. **Always** locate the cable in the connector in the same colour order.

When you have made a cable you can plug both ends into the supplied cable tester and test the cable.

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## Connection Diagram

On the following page is a diagram of the module positioning and wiring. None of this is 'written in stone'. Modules do not have to be wired in any particular order, although you may wish to do so for the sake of clarity. The **Association** process will take care of everything.

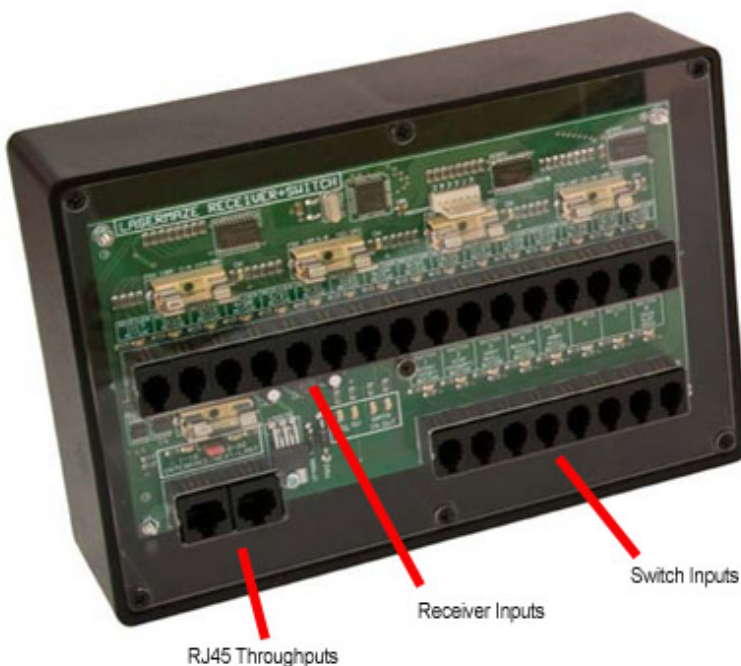
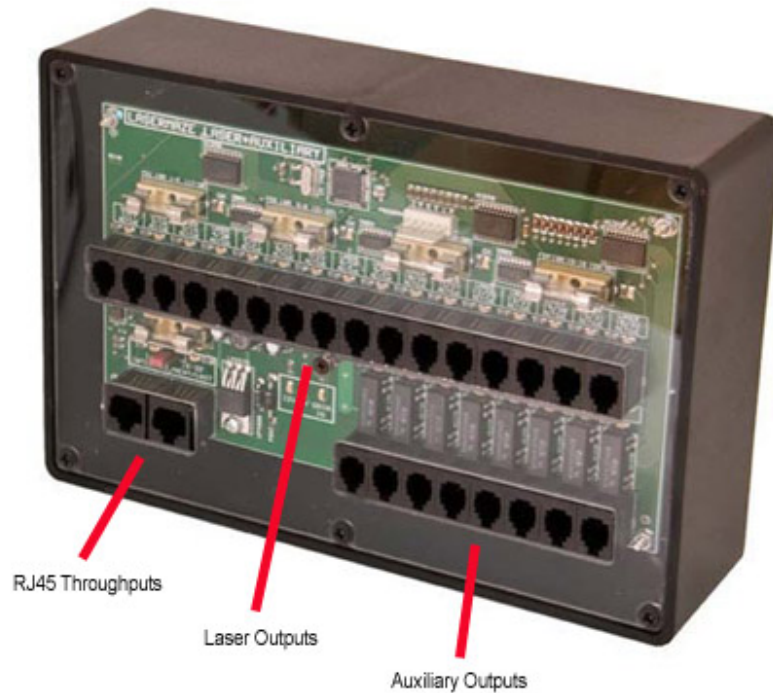


**Note:** Site Laser modules so that the cable run to the Interface is shortest (perhaps unlike this diagram!)

## Connecting the Lasers and Receivers

Unless ordered differently, each system is supplied with four each of eight lengths of **RJ11** cables, two of each four cables of each length being for the **Laser** connections and the other two for the **Receiver** connections. As the control boxes will be central in the lines of modules, channels 1 and 16 will use the longest cables and channels 8 and 9 will use the shortest.

- The relationship between cable length and channel number is for guidance only. **Laser and Receiver Modules** can be wired in any order to their respective group boxes. However you must not wire **laser Modules** to **Receiver Group Boxes** and vice-versa.



Starting middle from the outwards connect each **Laser** module to the **Laser Control Box** ensuring that the twist supplied with each module is used to secure the cable to the ball joint spigot. This ensures that the cable is not pulled sideways, with a possible bad connection resulting at the module's RJ11 socket.

Repeat the above procedure for the **Receiver Control Box**.

At this point, all the **Laser** and **Receiver Modules** should be connected to their respective control boxes.

There will almost certainly be some surplus **RJ11** cable – this can be neatly looped up and cable tied just below the Control Boxes. When the installation is completed, you may wish to hide this spare cable with a simple cover.

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# Installing the Switch Modules

Lasermaze is supplied with two heavy-duty **Start/Stop/Midway Switch Modules**. You will need to decide where you want to place the switches. The usual method is to place the one switch module near the entrance and the second module at the far end of the maze.

That way, if you wish to use the popular midway function, the **Start Switch** will also act as the **Stop Switch** when the player has navigated back through the maze. The module placed at the end of the maze will then be the **Midway Switch**. If you wish to use the game in one direction only then the module at the far end of the maze will be the **Stop Switch**. If you wish to have a separate **Stop Switch**, then you need to obtain a third module. This would be situated somewhere near the 'in' end of the maze.

Steps to install the **Switch Modules**.

- Remove the four cover screws and remove the cover of the first unit
  - Screw the back of the module to the wall of the maze, placing it at a good height to suit the age of the players. There are six raised screw towers on the inside face. We suggest that you drill through the top and bottom pair of towers with a 4mm or 5mm drill as clearance for the screws.
  - Snip the cable ties that hold the data cable coiled
  - Plug the RJ11 plug on the end of the cable into the appropriate socket on the **Receiver Group Box** – (Start/Stop/Midway etc).
  - Tack the data cable neatly, working back to the bottom of the switch module. **Note:** The switch module cable gland could be sited at the top or the bottom (or the side) of the module, as you wish.
  - Feed most of the unused data cable back through the gland plate and then place the front of the module in place and insert and tighten the four cover screws.
  - Feed the balance of the cable back through the gland and then tighten the gland.
  - Next, repeat this exercise for the **Switch Module** at the end of the maze, plugging the data cable into position **#2** (Stop [Midway] button)
  - If you intend to use the **Midway** function, then, when you initialise the control program **PinPoint**, you should click the **Game Play Tab** and then check the **use Midway Button** and **Stop As Midway** check boxes.
  - **Note (1):** You may, if you wish, have separate **Start, Midway and Stop** switches. In that case the Midway Switch should connect to input **#6** on the **Receiver Group Box** and you should check the **Use Midway Button** and **Stop As Midway** check boxes.
  - **Note (2):** The same module housings may be used for skill switches. One housing can accommodate all three switches. Three data cables are then run side by side, back to the **Receiver Group Box**.
  - **Switch** inputs should **only be connected** to actual isolated switch or relay contacts. **Do not** connect to any other circuitry.
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## Connecting Auxiliaries

The **Auxiliary Outputs** are a set of clean switch contacts. Each pair of contacts makes (connects together) when the associated event takes place.

Switching is limited to low voltages (less than 30 volts) and medium current (less than 1A AC/DC). If you wish to switch higher voltages and current then you must use slave conventional or solid-state relays.

Unlike the **Switch** inputs, which have dedicated channels **Start/Stop** etc, auxiliaries can be assigned on the **Hardware Tab** of **Pinpoint.exe**, therefore be sure that the channel you used is selected appropriately.

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**Auxiliary Outputs** are provided for:

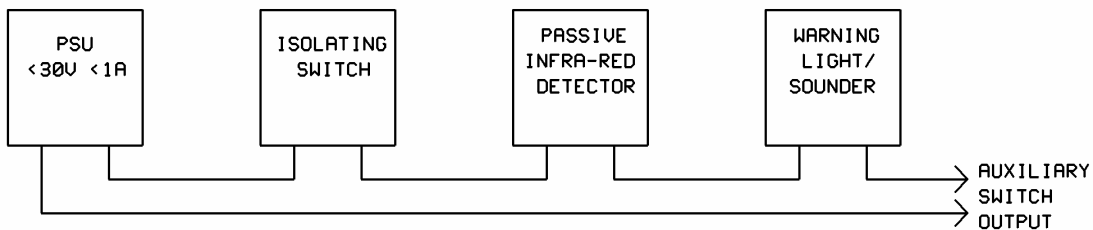
- Game start
- Beam is broken
- Midway button has been pressed (If Midway option is implemented)
- Player has won (beaten time and used less than allotted # tries)
- Player has run out of time
- Player has broken the allotted # of beams
- Security circuitry has been triggered

Smoke/Haze machine control

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## Security Switch Utility

**PinPoint.exe** allows you to monitor the play area in between games, using an passive infra-red detector. The utility activates 60 seconds after the end of a game.



**Security Switch Utility Wiring Diagram**

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## RJ11 Leads

### Additional RJ11 Leads

We supply ample cable and connectors, plus a crimp tool and a cable tester. To make a lead, use the stripper section of the tool to remove the correct amount of outer insulation, insert the conductors into a connector, ***always with the colours aligned the same way*** and then gently crimp the connector. A complete cable should be plugged into the cable tester. The test takes just a couple of seconds.

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### Removing a Cat5 or RJ11 Lead

To remove a connector push the tag on the side of the plug towards the plug and lift the whole cable gently in the same direction. It will then come free of the socket.

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### Connecting the Interface

Plug one 5m **Cat5** (RJ45) cables into the **Laser Control Unit** one 5m **Cat5** (RJ45) cables into the **Receiver Control Unit** and run them back towards the **PC**. Position the **Interface** near the PC and plug the **Cat5** cables into the sockets on the **Interface**.

Connect the **'D'** lead from the **Interface** to the serial port on the **PC**.

Connect the **power Supply** 2.1mm DC lead to the DC input socket on the **Interface**.

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# Setting the System up

## Setting up the PC

If you have supplied the **PC**, check if it has a serial port because one is required. This may already be on the motherboard. If not, obtain a serial card and fit it, then install the driver for the card. (Incidental note: If you go to purchase a serial card and are informed by a young shop assistant that 'serial cards are obsolete', put them right by suggesting that they Google 'serial cards'! Serial cards are still, and will remain, the communication device of choice for many specialist products. Then shop elsewhere!

You need to download the **Full Installation Package** of **PinPoint.exe** from <http://www.laserverventure.com/downloads-page.htm>

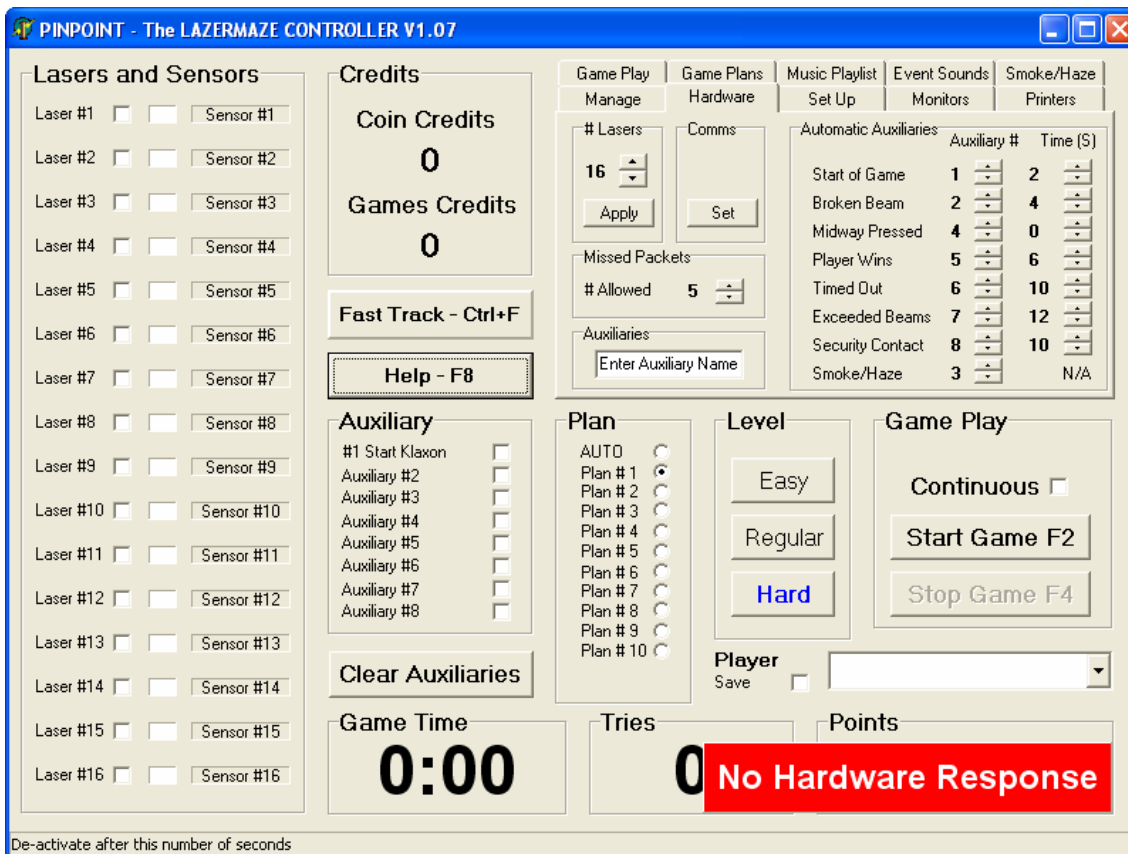
Put the installer on the desktop and run it, performing the 'No Questions Asked' installation.

- Only **PinPoint** should be operated on the PC. **Do not** run other programs – this may interfere with the operation of the system
- The exclusion of other programs applies to Internet and network connections – these should be disabled while **PinPoint.exe** is running
- If you wish to have a separate score monitor for use by the players, then you must have a dual monitor video card installed on the **PC** and must have set the video up for 'Dual View'. If you do not do this then any screen messages will straddle the monitors

Check that the number of **Lasers+Sensors** shown on the left are correct for your system. If not, click the **Hardware** tab, adjust the number of lasers and click **Apply**.

### **No Serial Conventional Port?!**

It is usually possible to operate the system using a **USB > Serial Adaptor**. This will require you to install the driver (this may already be available in the Windows folder) and to select the correct com port number in the **Comms Box** on the **Hardware Tab** in **PinPoint**.



## Turning the System on

Check that you have completed all wiring.

Start the PC and run Pinpoint.exe. After a few seconds you will see a warning message that there is 'No response on lasers 1, 2.....'. This is to be expected as you have not yet aligned the lasers.

If necessary set the **Comms Port** number on the **Hardware Tab**.

Power up the **Interface**. You should see the following LEDs lit on the two control boxes:

### Laser Control Box

- '12V' LED
- '5V' LED
- 'Data In' LED – this should be flashing very fast

### Receiver Control Box

- '12V' LED
- '5V' LED
- 'Data In' LED – this should be flashing very fast
- 'Data Out' LED – this should be flashing very fast

## Aligning the modules

Start by lining up the **Receiver Modules** with the **Laser Module** you have decided to pair with. This can be done by eye and is not too critical.

In **PinPoint.exe**, click the **Set Up Tab**. Click the **Align** button. Then click the **All On** button.

Check that all the **Laser Active** LEDs on the **Laser Control Box** are lit. Place a piece of paper in front of each **Laser Module** to check that the laser is on.

- ***Warning – When PinPoint is in Align mode the lasers will not switch off if the beam is broken - DO NOT look into laser beams***

One by one, line up the **Laser Modules** with the **Receiver Modules** so that the beam is as central as possible on the red face of the receiver.

As the beams are lined up the appropriate **Receiver Active** LED on the **Receiver Control Box** should light.

Additionally, in **PinPoint.exe** the appropriate box in the **Lasers And Sensors** box should turn red.

When all the beams are aligned, carefully secure the modules by tightening the wing-nuts.

- Do not over-tighten the wing-nuts. Very little pressure is need to fix the ball-joint in place
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## Associating the modules

This should be carried out with lighting conditions as they will be when the game is in normal use.

Still on the **PinPoint.exe Set Up Tab**, click the **All Off** button to turn the lasers off.

Then click the **Match Arrays** button. This is necessary to establish a starting point for the association process.

In the **Association Box**, check **Enable** and then click the **Run Button**. The **Association** process will take typically thirty seconds, during which time no-one should walk through the maze or switch any lighting on

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# Sound System

PinPoint outputs its sound effects via the sound card output. If you have no sound level then please check the PC **Volume Control**.

Two speakers, one at each end of the maze, are usually sufficient. There is no point in running a stereo system, as the **Event Sounds** are on single channel **WAV** files. Since most amplifiers supplied are twin-channel, either use just one channel, switch the amplifier to mono operation, or link the input signals.

The background sound, if you have selected one, must be **MP3** format, and must be long enough to last the duration of the game as the track will not repeat.

An amplifier power rating of 50 watts per channel should be more than adequate.

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## Event Sounds

Different **WAV** file sounds can be played to accompany various events:

- Easy Game button press
- Regular Game button press
- Hard Game button press
- Coin Insertion
- Start Switch press
- Beam Broken
- Midway Switch press
- Stop Switch press
- Game Terminated

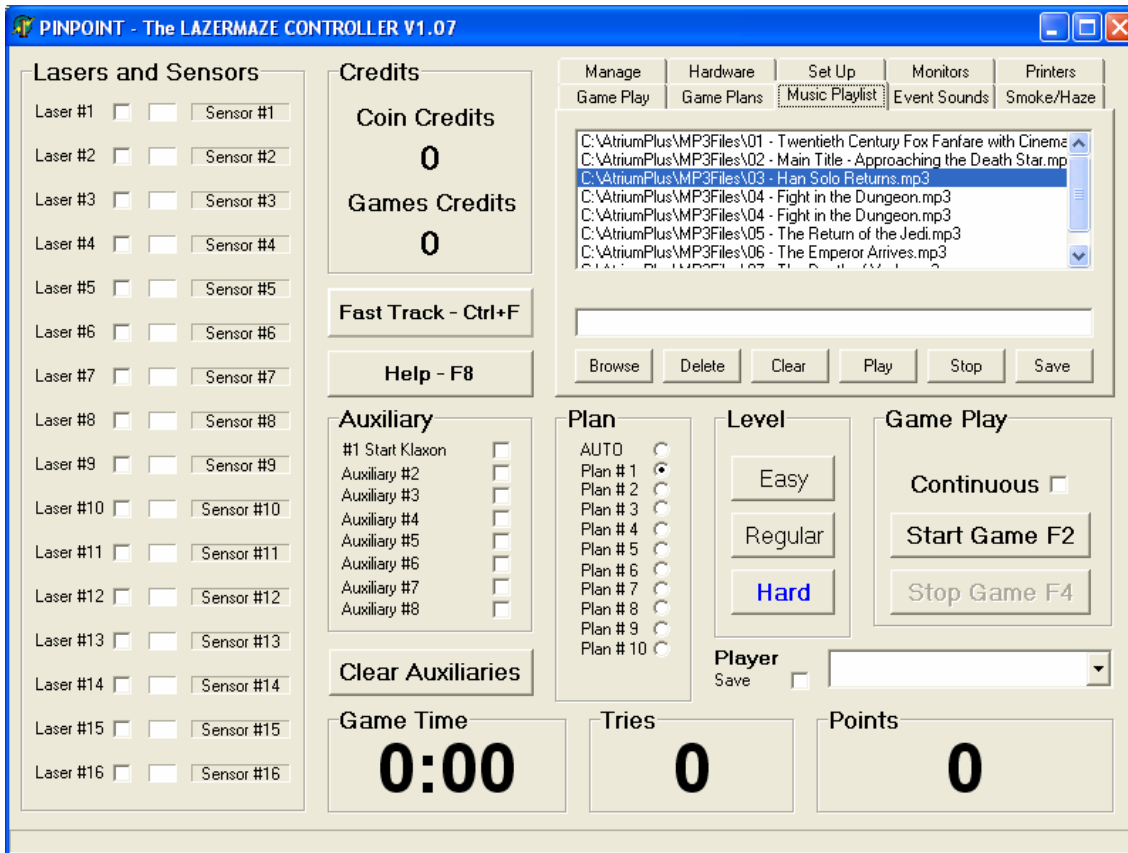
You may supply your own **WAV** files – these should be placed in the folder `c:\pinpoint\sounds`.

You can select and assign event sounds from the **Event Sounds Tab**.

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## Background Music

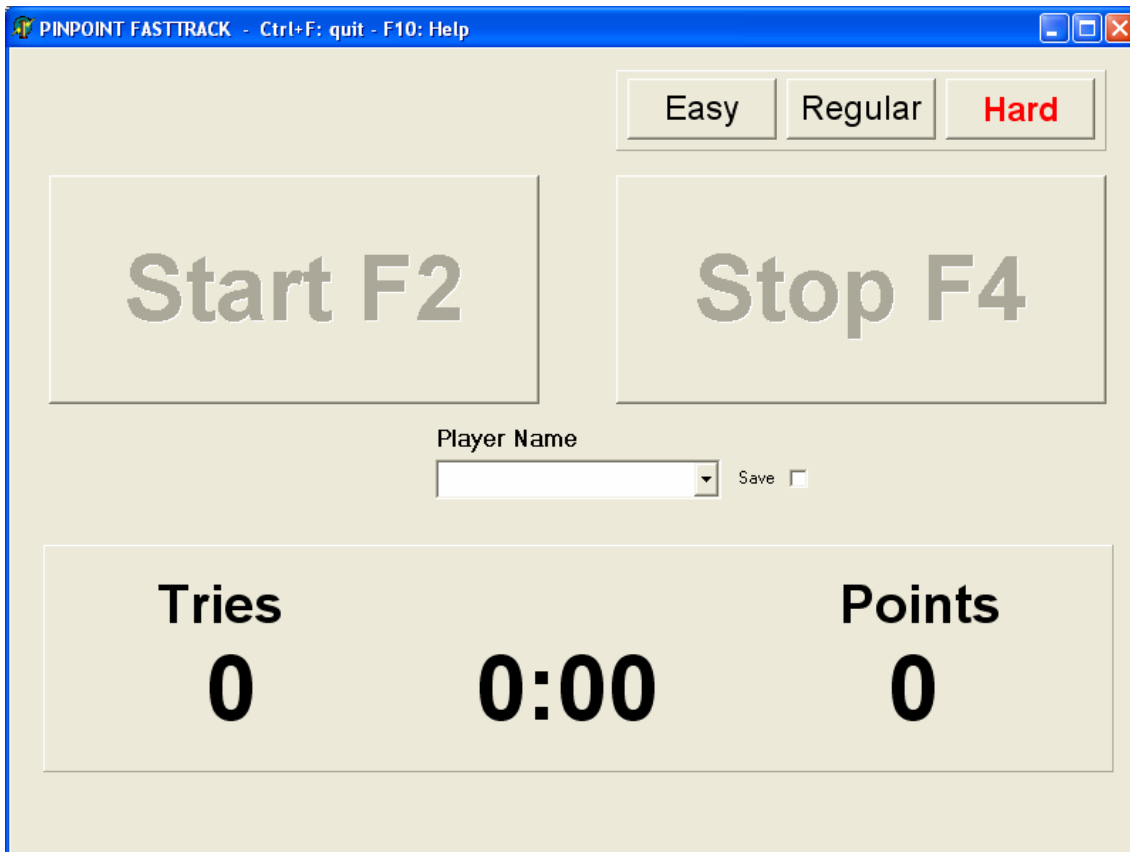
In addition to the game event sounds, you can also play a background music MP3 file. You may have this music pause or continue to play through game event sounds. Tracks are selected on the **Music Playlist Tab**.



You may also opt to manually select the **Background Track** or have **PinPoint.exe** randomly select a track at game start.

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# FastTrack Mode



**The FastTrack window**

Once you have the system up and running you may well prefer to switch to **FastTrack** or 'simple' mode. This is a much simplified way of operating the system, and all the set up and control components are hidden except those required for game play.

You enter **FastTrack Mode** by clicking the **FastTrack** button on the main screen or by pressing **Ctrl+F**.

**Ctrl+F** will also exit from **FastTrack Mode**.

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## Results Panel

The **Results Panel** appears automatically at the end of a game.



The screenshot shows a window titled "PINPOINT FASTTRACK - Ctrl+F: quit - F10: Help". The main content of the panel is as follows:

Player 122 Finished in 0:03  
No Beams Broken  
98970 Points

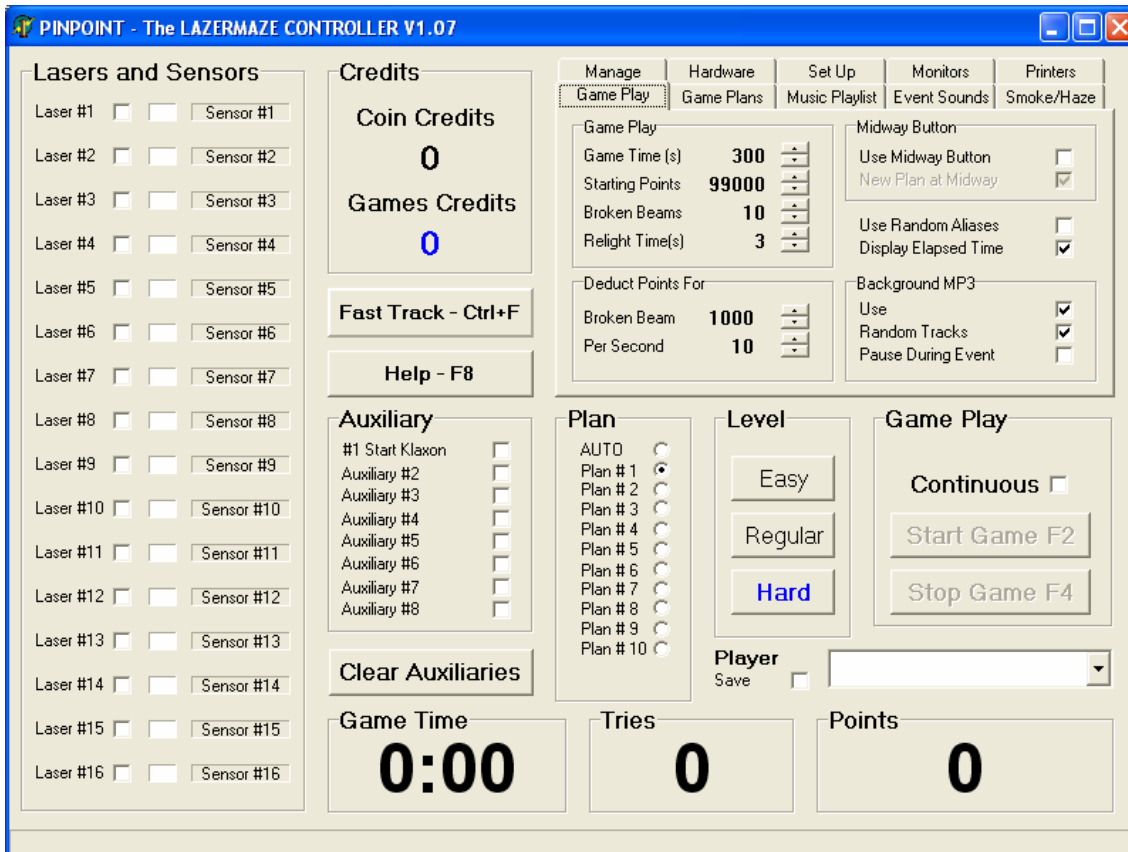
Player 21	99000
Player 48	99000
Player 50	99000
Player 64	99000
Player 83	99000

Click Panel or Delete Button to Close

To close the **Results Panel** simply click it, or click the visible part of the **Start Button** or check **Auto Close Score Display** on the **Miscellaneous Tab**.

# The PinPoint Main Screen

Whether or not you wish to operate **LaserMaze** in **FastTrack** mode, please first take a little time to look at the main screen and understand the operation of the program.



The PinPoint Main Screen

## Laser+Sensor Box

This box, at the left of the main screen, shows the status of the **Laser and Sensor Modules**. The colours of the status panels to the right of the laser check boxes indicate the sensor status:

- Grey = Laser checked 'ON' but beam broken - Relighting period
  - Black = Switched on but no response from sensor
  - White = Switched off or in Aligning mode
  - Red = Sensor responding OK
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## Manually Switching Lasers

If you click any laser check box or the label to its left (Laser # 1 etc) you will switch that laser on. If you are playing a game at the time, then the additional laser(s) will be included in the game.

If **Relight Time** is set to a non-zero value then the laser will relight after the beam is broken. If **Relight Time** is set to zero then the laser will not relight.

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## Disabling Sensors

If you click any sensor ID label (Sensor #1 etc) then that sensor will be disabled. The laser associated with it will operate just as before, but a broken beam will not give rise to a **Broken Beam** event.

To re-enable the sensor, click the label once more.

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## Other Main Screen Items

**Credits** shows current coin and game credit status if you have a coin mechanism connected.

**FastTrack** – invokes a simple screen to start and stop the game. **Ctrl+F** will also enter (and exit) **FastTrack Mode**.

**Auxiliary** – provision is made for up to 8 auxiliary channels. These can be manually switched, or automatically switched on various events in the game. Automatic switching is set up on the **Hardware** tab.

**Plan** – There are up to 10 choices of fixed plan for each of the three skill levels, plus an automatic option. In the automatic mode a new set of lasers are automatically assigned for each new game. The fixed plans are editable via the **Game Plans** tab.

**Skill** – Three levels of skill are provided. Essentially the harder the game, the more lasers are switched on. The skill level can also be set by **External Switch Modules** linked in to the data cable line to the **Laser and Sensor Modules**.

**Game Play** – Start and Stop buttons are provided in the main screen as well as the **Start and Stop Modules**. Either external or screen button will start/stop a game. The duration of the game is set on the **Game** tab. To have a game run with no time limit, click the **Untimed** check box.

## Player Name Entry

Players' names can be entered in a number of ways:

- Manually enter the player name in the edit box on either the **Main Screen** or the **FastTrack Screen**.
- Select an alias from the drop down list
- Enter a new alias and check the **Save** box to save the new alias to the list of aliases
- Have the system supply a random alias – check **Use Random Aliases** on the **Game Play** tab
- Do nothing – the system will enter a default 'Player #1', 'Player #2' etc

The aliases are stored in 'aliases.txt' in the c:\pinpoint' folder. The file can be edited using Notepad. Do not use Word or any other formatting program.

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## Help File

Help is available either by clicking the **Help** button on the main screen, or by pressing F8.

The topic 'A Quick How To List' will guide you through the operation of the system.

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## Hints

All controls in the program will display a description of what the control does, provided that **Show Hints** is checked on the **Manage Tab**.

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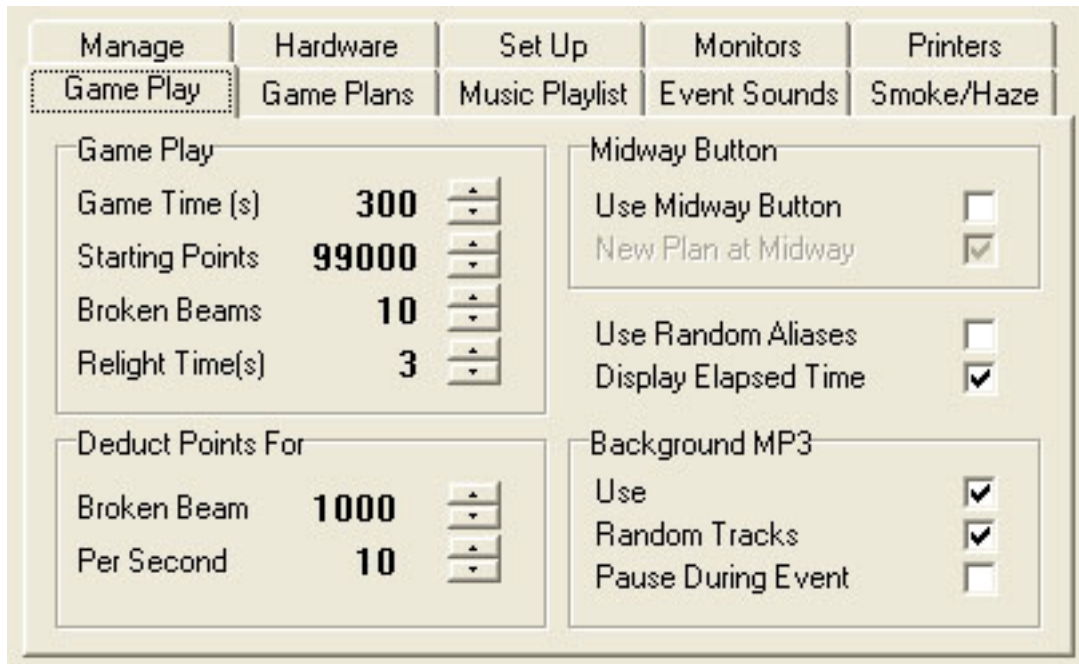
## Task Graphics

If you are using PinPoint in the play area, you can use the Hot Key F5 to display a sequence of 'tasks', basically themes for the player to be given as the point of the mission through the maze. With these images being displayed sequentially you can skip to the next image using F6.

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# Tab Index

## Game Play Tab



The **Game Tab** lets you set the parameters for the game.

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## Game Play

A maximum **Game Time** of 5 minutes is allowed. Players are allocated a number of **Starting Points**. Their score is decremented by time and broken beams and you can change the points deducted for each of these items. You can also set the maximum number of beams that can be broken before the player is forced to quit the game. **Relight Time**, mentioned above, is set on this tab. If you have the coin slot option then the number of coins required for a game is set on this tab also.

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**Relighting** - When the system is operating normally (ie not in **Align Mode**) any break in a beam will cause the laser to switch off immediately. After a preset period (The **Relight** period) the laser will switch on again. If the beam is still broken the system will keep trying until the laser is switched off. The **Relight Period** is set on the **Game** tab.

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- If the **Relight Period** is set to zero then the laser will not relight when the beam is broken.
  - **Warning – When PinPoint is in Align mode the lasers will not switch off if the beam is broken - DO NOT look into laser beams**
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**Midway Button** – Check this box if you are allowing the player to return through the maze. The **Start** button/switch doubles as the **Stop** button and the **Stop** Button becomes the **Midway** button.

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**New Plan At Midway** – Check this box to change the beam pattern on the return trip through the maze, if **Use Midway Button** is checked.

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**Use Random Aliases** – If checked then **PinPoint.exe** will insert a random alias from the file aliases.txt. This allows you to fully automate a game, without the system inserting 'Player # 1', 'Player # 2' etc.

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**Display Elapsed Time** – Normally the system will display the remaining time in a game. If this box is checked then the elapsed time will be shown instead.

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**Background MP3** – Check this box to have the selected background **MP3** track play during the game. This sound is interrupted by game event sounds.

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## Hardware Tab

	Auxiliary #	Time (S)
Start of Game	1	2
Broken Beam	2	4
Midway Pressed	4	0
Player Wins	5	6
Timed Out	6	10
Exceeded Beams	7	12
Security Contact	8	10
Smoke/Haze	3	N/A

The **Hardware** tab allows you to set up the number of **Lasers**, the names of any **Auxiliaries** and also to assign the events at which **Auxiliaries** operate and the duration for which they operate. On this tab you can also set the comms port used by the system.

**Lasers** - use the Up-Down buttons to select the # lasers and then click the **Apply** button.

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**Comms Port** - To set the **Comms Port** click **Set** and then select one of the available comms ports (may only be one). If there are multiple comms ports available, ensure that the **Interface** is connected to the port that you have selected.

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**Missed Packets** - This utility allows the system to deal with potential problems caused by Windows handling delays, and sets the number of packets from the **Receiver Control Box** that are allowed to be missed before the system shuts off the lasers. This is only effective when no data at all is returned – in other cases, regular broken beam event will occur. The default setting is 3.

---

**Auxiliary Name** - To change the name of any **Auxiliary** select it in the box under the **Help** button (on the main body of the screen) and then type in a new name and press **Enter**.

---

**Automatic Auxiliaries** - To assign an **Auxiliary** to a game event, set the **Auxiliary number** and the **Time** (in seconds) that you want the **Auxiliary** energised for. To have no **Auxiliary** for any particular event, set the value to zero.

---

## Event Sounds Tab

**PinPoint** comes with a defined set of sounds, library of other sounds. are stored in **c:\PinPoint\sounds**.

To assign a different any event, select one of events listed and then filename or browse for it. many changes as you like **Save All**. To reload the default settings click the button.



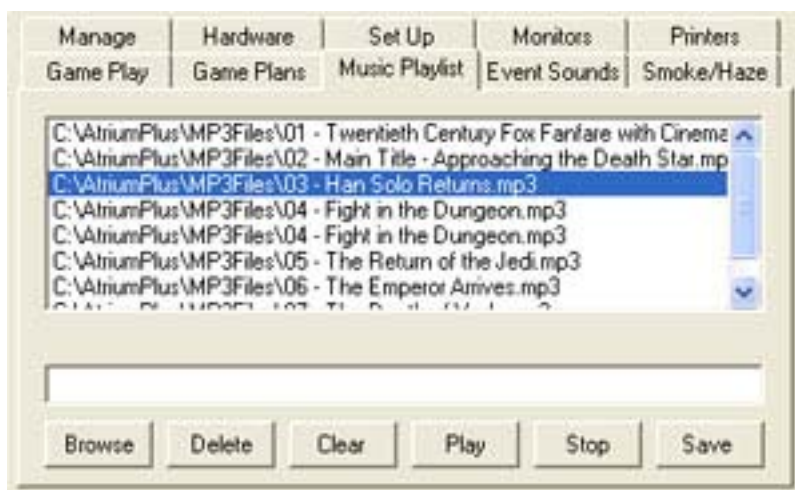
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**Defaults**

- Game Event sounds are WAV files
- The Background sound is MP3 and must be long enough to last the game

---

## Playlist Tab



This tab is used to set up a Playlist so that different tracks can be played in the background during a game. The Playlist may contain up to 20 tracks.

The playlist is stored (and must remain) in the c:\pinpoint folder as '**playlist.txt**'. MP3 files must be located in the folder c:\pinpoint\sounds

**Browse Files** - Select MP3 files

for addition to a playlist

**Delete Entry** - Delete the currently selected entry in the list box

**Clear All** - Clear all entries in the list box

**Save Playlist** - Save the playlist

Use the **Play** and **Stop** buttons to play any selected track.

---

## To play background sounds during a game

If **Background MP3** is checked on the **Game Play Tab** then the background track selected on the **Event Sounds Tab** will be played throughout the game, but will be interrupted by

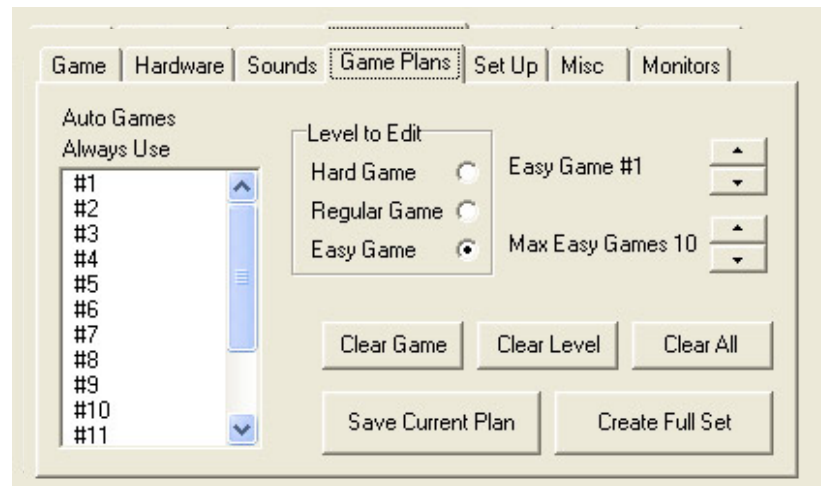
game event sounds. Note that this track does not auto repeat so you should ensure that the track is long enough for the game duration.

If **Random Tracks** is checked on the **Game Play Tab** then a random background track will be selected from the playlist for each game.

If **Pause During Event** is checked on the **Game Play Tab** then the background track will be paused whenever a game event sound is played.

## Gameplans Tab

This tab allows you create and save game plans. When on this tab the selected plan will appear in the box at the left of the screen. To edit a plan use the **Level To Edit** to select the skill level you want to edit



to edit or your own you click currently appear in the game, **Edit box** level you

(Hard/Regular/Easy), the plan number, and then click the checkboxes in the **Lasers And Sensors** box to create the desired pattern of lasers. Click **Save Current Game Plan** to save the new pattern.

You can limit the number of games per skill level if you wish.

- To ensure that certain beams are always used select the beam(s) in the list box at the left of the tab

## Manage Tab

### Password

The other tabs are enabled/disabled password .

If there is already a then you must (1) system (see below) (2) type the current in the top edit box (Password). Do not [Enter].

using a

password unlock the and then password

click

- Enter the new password, up to 5 characters in the New Password edit box and click [Enter]. If you do not wish to have password control, enter nothing and just click [Enter].
- To unlock controls enter the password in the top edit box and click [Enter].
- To lock an unlocked system enter the password in the top edit box and click [Enter].

**Note:** Passwords can be a combination of letters and digits and are case sensitive.

---

### Score Form Printing

Check **Auto Close Score Display** to have the results panel on the main PC monitor close automatically 10 seconds after it is displayed. The panel can be closed earlier by clicking it or clicking the **Delete** key.

- Check **Auto Print Score Form** to automatically print a score form at game end.
- Click **Score Form** to print the results of the last game.
- Click **Sample Form** to print a sample.

**Note:** The score form utility is intended to print results only onto pre-printed score forms. This allows you to personalise score forms for your site.

---

## Management

This section allows you to keep track of the games played since **Reset Records** was last clicked. A note is kept of the reset date.

**Zero Played** - Reset the number of games played to 0. This value is independent of **Reset Records**.

**Clear Previous** - Clears the system of the names of the last 5 highest scoring players and the scores.

---

**Game Fee** - You can set the number of games per coin or the number of coins per game. If set to zero then no coin insertion is required (Free Play). A Game Fee greater than zero requires the addition of a coin slot mechanism connected to **Switch Input #8** on the **Receiver Control Box**.

---

**Hints** – If this box is checked, then hints will be displayed in the status bar at the bottom of the screen as the cursor moves over different items.

---

## Tab Access

During gameplay all the controls on the tabs, and the tabs themselves, are disabled.

---

## Smoke/Haze Tab

Laser beams will not be seen unless there are particles in the air to reflect light from the beam. A low level of fog or haze is required in order for the laser beams to be seen. Always use a good quality machine.

If there is too much insufficient of the reach the sensor will experience false beam events during

You may control a machine from one output. The channel to be used controlling the machine can be on the **Hardware Tab**.



fog then beam will and you broken games.

Fog/Haze auxiliary **Auxiliary** for Fog/Haze selected

---

## Initialise Box

**Initialise** - Parameters for initialising fog levels in the play area.

**Init Delay (m)** - The time period in minutes after **PinPoint.exe** first runs until the initialisation outputting. The delay is to allow time for the fog machine to warm up, if required. The time period is variable, 0 - 20 minutes in 5 minute increments. Set to zero for no initialisation output.

**Init Output for (s)** - Duration of fog/haze outputting in 5 second increments, max 120 seconds. Set this period to obtain sufficient fog/haze for game play to start. Set to zero for no initialisation output.

**Skip Delay** - If the fog/haze machine is ready for use you can proceed direct to the initial outputting.

- The time remaining until the first output is shown to the right of the **Skip Delay** button.
-

## Periodic Output Box - Parameters for maintaining fog levels in the play area

**Delay (m)** - The time period in minutes between each outputting of fog/haze. Variable in increments of 5 minutes, max 20 minutes

**Output for (s)** - Duration of fog/haze outputting in 5 second increments, max 120 seconds.

**Next Output in** - Time remaining until next fog/haze output.

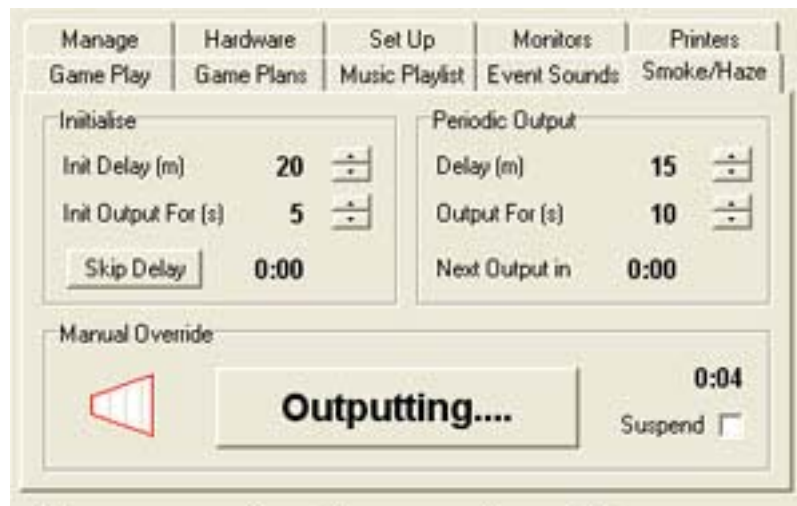
---

## Manual Override

**Output Now** - Press and release to manually output fog for the preset period. You can press again at any time to extend the output for a further period. The **Output Now** button will be recaptured and an icon will flash on and off showing that the smoke machine is active.

**Suspend** - Check to any outputting of fog. Suspend is checked outputting will be cancelled. When **Suspend** is unchecked the will continue from the suspension.

- Fog will not be output while a game is playing
- Once the initial outputting of fog/haze has started you can override with the Manual Override button and the machine will then only output for a further period equal to the **Periodic Output**



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## Monitor Tab

If you have a multi-monitor video card, and set it to **Dual View**, then you can show game process and results on a second monitor, independently of the main control window. Sizing of the display is automatic, but should you want to resize it for any reason than you can do so using the controls on this tab.

---

# Fault-finding

## No flashing Data LEDs on the Control Boxes

- Is the **Interface** powered up (LED on)?
- Is the 'D' lead connected to the correct comm. Port?
- Is the Com Port setting correct on the **Hardware Tab**

## No response from a particular Laser+Sensor Module pair

- Is the **Laser Active** LED lit on the **Laser Control Box**? If yes, is the **Laser** lit? If not, then check the cables to it. Also check that it *is* switched on at **PinPoint.exe**. If the laser beam is impinging on the **Sensor module** correctly, is the **Receiver Active** LED on the **Sensor Control Box** lit? If the laser beam is in place but the **Receiver Active** LED does not light, then the sensitivity of the **Receiver Module** may need adjusting (see below).

## False 'broken beam' events

- Are the CAT5 connectors in and out of the modules in place securely? Are the cables coming away from the modules without any sideways bias on them?
- Are the indicator LEDs on the modules flashing consistently?
- Is the laser lined up onto the sensor properly?
- Have you connected the return Cat5 cable to the second socket on the Interface?
- Is there too much smoke?
- Is there a lot of ambient lighting, or fluorescent lighting?
- Is the **Settle** time set too low on the **Set UP** tab? Try increasing it, a small amount at a time.
- Are you running other program(s) besides **PinPoint** on the PC? Do not do so. **PinPoint** requires full time uninterrupted access to Windows Handling.

## Adjusting Sensor Sensitivity

Adjustment is by a small control on the back of the **Sensor Module**. The default setting is midway – arrow upwards). Adjustment may need to be clockwise (increase sensitivity) or anti-clockwise (decrease sensitivity). Make a only a small adjustment (equivalent to 1 hour on a clock) at a time, checking the PC for the response. Repeat until the sensor is performing properly.

# LASERMAZE PINPOINT INSTRUCTIONS

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