

Vest (Overview)

The vest is made from lightweight, 'breathable' **Cordura**. Snap buckles allow adjustment for all ages and sizes.

Weight (Overview)

A complete pack weighs just 2.9kg. This is considerably less than most products and makes the **LaserVenture** packs suitable for all age groups.

Intelligent Target (Overview)

The versatile Intelligent Target (pictured right) is used to provide additional interest in the arena. Up to sixteen may be used and they can be stand-alone or radio-linked.

Hand Zapper (Overview)

The hand-held device has a number of functions, among which is a useful facility which allows the marshals to control the arena by sending rowdy players into quarantine, where they stay until released, either by the Intelligent target or by the Marshal.



Venue Requirements

The Arena

The density of players to floor area will depend a lot on how your arena is laid out. Using the basis of the **LaserVenture** panel maze with about a 30% barrel maze (see our Arena Design PDF), a 2000 square foot arena will accommodate 20-30 players. Arenas with more open areas and less panel-work may suit 16-24 players. Arena designs should avoid long 'rat-runs' where speed can be built up at the risk of possible injury. Consideration should also be given to local Fire Department and Health and Safety requirements.

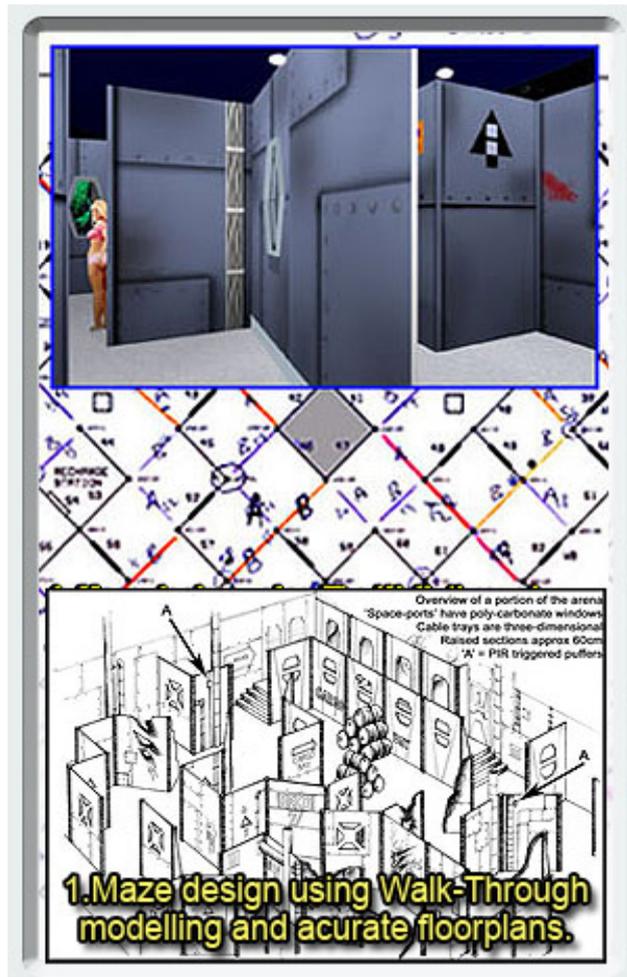
Allow a sensible area for racking and vesting and keep in mind that a successful venture may mean you need more packs at some time, and will need the storage space for them. The vesting area should be fitted with tiered seating for players to sit on during gameplay and safety briefing.

Free Design Service

For system purchasers who wish to build their own arena, we offer a free design service, based around our proven panel and barrel mazes. This method of arena construction is low cost and fast to effect. A minimum of skill is required, although some muscles will come in handy!

All we need from you is a rough sketch of the arena floor, showing dimensions, exits, and height.

We will supply you free of charge with a floor plan, a bill of materials and some simple details of how to construct the maze and decorate it.



How does it work?

LaserVenture consists of any number of Phasers, and uses a UHF radio link to pass score-data between them and the control PC.

Players fire their phasers at the other players. Multi-directional sensors on each player's phaser and vest ensure accurate registering of hits, without the frustrating need for pinpoint accuracy. Phasers can fire single shots or burst and, as mentioned above, can also launch grenades.

Players score in real time and their phaser LCD displays are constantly updated with their score, rank and other pertinent data such as remaining shots and lives.

Various game plans are available from a simple *Every-Man-For-Himself* to a series of sophisticated formats such as *Highlander* (there can be only one!) and *Tug-o-War*.

LaserTag continues to develop and refine and therefore, from time to time, software and firmware upgrades will become available. Generally, these are free of charge.

The exciting thing is that, unlike any other supplier that we are aware of, each Phaser can be re-programmed, by you, on your premises, in *less than 10 seconds*.

Ease of operation

How easy is it to operate? Very! At it's simplest, in **FastTrack** mode, one button-press issues the phasers and starts the game with an accompanying custom-recorded music track. A second button-press stops the game. Below are screen shots of our PC control program, **AtriumSL**.

Installation

Our equipment is so easy to install that you can effect an installation yourself in a few hours. No particular skills are needed. But if you wish, we are happy to install and of course, to train your staff.

Reliability is as you would expect of a business that has been around since the inception of LaserTag - maintenance is minimal, and most items are serviceable on-site.

Demo version of AtriumSL

For more info on the multitude of features of **AtriumSL** why not download a demo copy and have a look at the program itself? Or just download the help file only - <http://www.laserventure.com/downloads-page.htm>.

System Operation

There are two ways that you can run the system:

- **FastTrack** gameplay is ideal for high throughput, with minimum staffing where a standard solo or team game is always played.
- **Regular** gameplay is used where more sophisticated booking-in facilities are required so that players can be individually entered and/or where you want to assign handicaps to players.

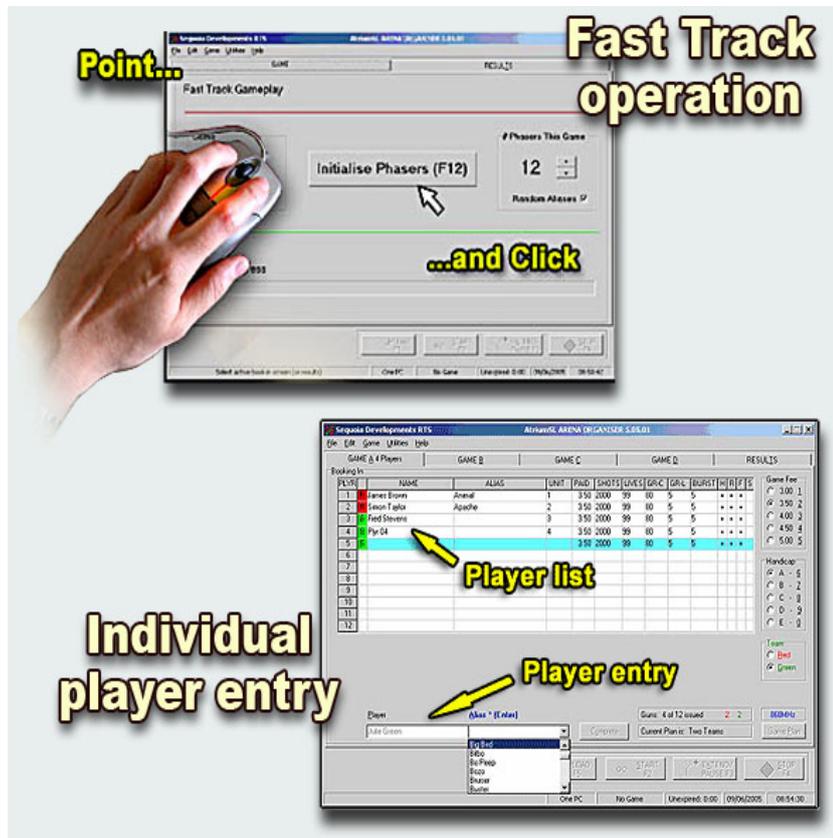
FastTrack Gameplay

There's not a lot to say about **FastTrack** mode!

No booking-in of players is required. Click the button (or press F12) and go!

AtriumSL will start the game, start the music, time the game until the end and then stop the game and print scoreforms.

The operator is free during the game to do other tasks.



Regular Gameplay (Individual Entry)

This mode of booking in offers ultimate flexibility when booking in multiple groups of players. You may set up to six different booking-in screens any or all of which can be in process of booking. As players are entered you can assign their team and, if required, change their handicaps. If you do not need the player's actual names, you can 'quick enter' or assign an 'Alias'. The player's name or alias will appear on the LCD of his/her **Phaser** during the game.

Operating the Phaser

Phaser operation is easy. There are four triggers - a rear trigger, two front triggers (to allow for ease of left-handed operation) and a grenade button.

The rear trigger and either of the front triggers need to be operated simultaneously to fire the phaser. This is a safety feature - to discourage players waving phasers around Rambo-style. Players can fire single shots or bursts. The maximum length of a burst can be set at the main control PC, as can many other features.



Players can also fire grenades by holding down the grenade button with one of the other triggers. Grenades will hit all players within range. A grenade hit will either take a pre-determined number of lives or 'kill' the players (so they have to go to a recharge station). This depends on whether the front or rear trigger was used to start the Grenade launch.

Phaser Parameters

All phaser features are set at the PC and uploaded via the radio link. There is no need for individually setting of values, they can easily be set globally at the control PC.

Remaining shots are indicated on the LCD display, cycling with other phaser information such as remaining lives, unexpired game time and so on.



IR system

We make no bones about using IR (Infra-Red) for the signal sent out when a phaser is fired (in addition to the visible laser). A very small minority of manufacturers use an IR laser or a modulated visible laser. We never will. There are several reasons:

- Unless the beam focus is reduced, opponents are very difficult to hit. If the beam focus is reduced, then the range is decreased.
- The optical system we use for the IR is tried and tested and gives a more than adequate range with a good beam angle. ***If it's not broken don't try and mend it!***
- Modulated lasers are by their very nature (more parts) less reliable
- IR lasers are viewed with some reservation by safety agencies

Upgrading Firmware

A small port in the underside of the **Phaser** allows software updates to be programmed in under 10 seconds. Whenever new features are added to the system, you will be able to update the whole system yourself. Upgrades are free of charge. So far as we are aware, no-one else offers this feature.

Vest

The vest is made of twin skins of Cordura, which is a material used for yacht sails - light and incredibly tough.

The phaser is attached to the vest by a data cable which is protected by a narrow webbing belt.

The vest has slim PETG housings, which gently glow in the dark, fixed to the front and back of the vest and the shoulders. All housings incorporate dual IR sensors and LEDs that flash to indicate that the vest is active, red or green, hit etc.

The shoulder housings also contain Mylar loudspeakers.

Shoulder mounting the loudspeakers is not a new idea. Years of experience has shown that this has many benefits. Firstly, this area is less likely to suffer physical damage. Secondly, it allows a much lower level of sound because the twin speakers are on axis with, and close to, the player's ears - so the sound is all-enveloping while battery-drain is minimised.

Charging the battery is via a lead which plugs into the top of the chest housing.



Intelligent Target

The **CRYSTAL IT** (Intelligent Target) is a one-stop ancillary solution for use with the **LaserVenture Crystal Phaser** system, both indoor and outdoor versions. The unit can be programmed to be hostile (in a number of ways, fatal and non-fatal), a recharge station, to add lives or shots, to be a jail, to make players invisible or invincible, or simply to be a target to shoot at.

Radio Linking

The **CRYSTAL IT** can be radio-linked in order to take part in scoring via the **AtriumSL** control program.

The **CRYSTAL IT** shows its current status via a large character back-lit LCD display and a block of 10mm red and green LEDs. A range of 50 different sound effects can be selected and played automatically through an on-board amplifier and 87mm speaker.

The **CRYSTAL IT** has a simple five button user interface that simplifies individual settings for multiple user in large arenas. Up to 16 units may be deployed with radio-linking, any number without the radio-link.

Features

The **CRYSTAL IT** has these important features

- **Relays** that operate when the unit is Active, Firing or Hit.
- **50+ Sound effects**, programmable for the various events
- **Built-in** 8 watt amplifier and loudspeaker
- **Laser Output** – output to drive an external laser
- **Simple** set up procedure
- **Tough** and transparent PTEG cover



0 - Recharger	-	Replenishes Lives
1 - Time Bomb	-	Players have 5 second to get clear
2 - Wildcard	-	Strips one life
3 - Grenade	-	Grenade simulator
4 - Mine	-	Fatal hit
5 - Invisible	-	Makes a player invisible for a period
6 - Quarantine	-	Player cannot continue until released
8 - Base Hit	-	Backward compatibility = 1 hit
9 - Dead By Base	-	Backward compatibility = fatal hit
A - + 50 shots	-	Shots top up
B - + 100 shots	-	Shots top up
C - + 10 lives	-	Lives top up
D - + 20 lives	-	Lives top up
E - Invincible	-	Makes player unhittable for a period
F - Target only	-	Benign – target only

For more information please see the **Crystal IT PDF**.

Other Hardware

When planning your arena, you will also need:

- **A smoke machine** - Do not make a false economy here, use a professional unit like the Martin Magnum series. If funds permit, fit two units. Smoke is a prerequisite for seeing the laser beams.
- **A Sound System** - For most venues a four speaker system will be adequate, with a power output of around 250 watts/channel. Have the system switched to mono. Stereo only works if you can always hear both channels. **AtriumSL** has its own media player to drive the sound system, handling CDs and MP files.
- **Lighting** – You will require a minimum of one 4 foot (1.2m) UV fluorescent tube per 11 sq.m. or 125 square feet of arena. Do not stint on this and ensure that tubes are positioned to give ample coverage with shadowing. You will also need regular tubes for utility lighting. So far as effects lighting is concerned, this is best kept to a limited number in key locations and the best type of effect will be the beam-emitting types. Avoid floodlights of any sort, the arena needs to be kept dark. Also avoid any fluorescents other than the UVs, as these will interfere with the operation on the phasers.

LaserVenture do not include the above items in quotations as a matter of course, because in general these parts may be obtained locally at less cost – in addition, sound and lighting depend so much on the venue.

However, we will of course be happy to supply the whole package if requested.

Maintenance

Without a doubt, the main cause of damage by far is unruly behaviour in the arena. Adequate marshalling is the simple solution.

Maintenance really takes the form of preventative care as there are no parts that need to be inspected or changed as a matter of course. Equipment should be inspected daily for signs of damage. Any damaged units should immediately be taken out of play in order to prevent the damage becoming worse.

General

When considering how many packs to use, you should always budget so that you have a couple of packs in hand. Also ensure that your spares package is fully equipped.

Upgrades

Upgrades can be downloaded from our websites download page <http://www.laserventure.com/downloads-page.htm>. If for some reason the upgrade you desire cannot be found then please contact us.

In-house Servicing

While we offer a quick turn-around for faulty/damaged items, we appreciate that our customers may want to avoid any delay whatsoever, as well as maintaining a 'hands-on' approach. All our equipment is designed to be easily serviceable in-house. Most parts can be replaced in just a few minutes. Even a gun-shell replacement can be effected in less than 15 minutes.

Warranty

LaserVenture products are warranted for 12 months from date of installation. The warranty is on a 'return-to'base' basis unless there is a service contract in place. Certain items are excluded from the warranty because their use is beyond our control:

- Batteries - life will depend on usage and experience has suggested that a life in excess of 18 months may be expected, but this is not guaranteed.
- Umbilicals – if treated with care, these will last 2 years or more
- Plastics, if failure is due to impact damage.

Service Contract

Earlier in this document we stated that a service contract is not mandatory. However, if you feel more at ease with one in place, then this can be arranged for you.

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