

Commercial Laser Tag Systems

There are many different manufacturers of lasertag systems. They are generally divided into Arena, Consumer, and Military systems and Outdoor. There are broad similarities between all laser tag systems, but each designer's implementation also has differences, which lead to differences in play.

Overview

Indoor Systems

Indoor Systems are designed for play indoors in specifically constructed commercial facilities. The typical indoor commercial laser tag system does not function very well in bright lighting such as sunlight; this is more due to lack of a need to retain sensitivity in light than a real limitation, as for effect most laser tag mazes are dark, and lit by black lights. A maze can feature fog machines as well, to help illuminate the laser beams, which would be otherwise invisible when passing through clear air. This fog is often invisible to the participants, but it is noticeable when looking into the maze from a room with normal lighting. In North America and Europe, the indoor laser tag industry has grown and matured during the past ten years away from the "member" based business, and moved towards other markets. The more successful laser tag facilities no longer cater to the club player and instead focus on four core markets, which are often birthday parties, groups (church groups, youth organizations, day camps, etc.), corporate outings and casual walk-in traffic.

Consumer Systems

Consumer systems are quite a bit different from commercial systems. Most have a more toy-like appearance to avoid being mistaken for a real firearm, and lack any kind of muzzle flash or realistic sound effects for the same reason. Sensor placement varies amongst systems. Some have a single sensor on the tagging device or worn on the head, chest, or back, while other systems have a combination of several or even all of these. Range varies from ultra-toylike systems that are only good for 10 to 20 feet, to systems that can hit at more than 300 feet in full sunlight. Usually, there are no score cards and no central server. Rather, each tagging device has a stand-alone computer in it and missions are scored by team results. Some laser tag systems are more complex than others, running the gamut from simple systems that only keep track of how many times the sensor was hit, to systems that keep track of who hit the sensor and even when it was hit.

Military Systems

Military systems such as MILES focus on tactical training, and must first and foremost be realistic enough that experience with those systems will improve tactics and surviveability on the battlefield. Military systems integrate with or replace actual military hardware and equipment. Capabilities range from the most basic of "anonymous" electronic "bullets" that register as kills, to advanced systems which track each participant in detail and actually try to simulate the capabilities of each piece of equipment. As the focus is on practicing and improving combat skills, advanced data-collection capabilities may be employed, including GPS tracking, communication logs, video recording, and detailed "scoring". These exercises are usually reviewed in detail as part of a debriefing exercise.

Outdoor Systems

Outdoor commercial systems are not too different on the surface from their indoor cousins, but are quite a bit different under the surface. Real lasers are not usually used due to the hazards to players and anyone within blinding range, partly because of the increased laser power required when playing outdoors and because there are no walls to block the laser from traveling long distances. Range is required to be much greater so better lensing is used, and full sunlight requires improvements in both sensor and IR emitters. Sensor placement is similar to indoor commercial systems. The outdoor industry caters strongly to birthday parties as well as enthusiasts..

Indoor Systems

Actual Reality
aka Laser Extreme

Arena-based

2 Teams

Red And Green

see VEQTOR below (new owners)

Adventure Sports HQ

*www.adventuresportslasertag.com

Adventure Sports provides fully digital systems with a wide variety of features. Unique wireless administrative features allow high throughput and a high degree of administrative control. Full compatibility with legacy systems such as

Battlefield Sports.

Battlefield Sports

*www.battlefieldsports.com

Rather than relying on a computer to run the games, the Battlefield Sports arena systems run similarly to indoor paintball, using human referees and team scoring based on achieving mission objectives. Specializes in creating flexible arenas using their patent pending inflatables barricades of modular doorways, windows, and walls.

DarkLight

DarkLight Developments Ltd

Founded in 1991.

www.darklight.info

Arena-based High end durable equipment

Radio based system allowing real-time Scoring

Arena targets (GEMs) can be set to give power-ups

Real time Arena announcements

Bodysuits made from leather and polycarbonate

Variations:

* V3 (Linux)

* V5 (Windows XP Pro)

Sensors:

* Phaser

* Chest

* Back

* Front shoulders x2

* Rear shoulders x2

Deltastrike

* Rugged vest and gun design

* Independent hit zones: back, chest, shoulders and gun sensors

* Real time scoring using continuous radio link

* Real time sound effects in the arena

* LED Lighting effects controller

* Speech/sound effects in gun

* Special buttons on gun to access extra features

* Membership software allows game upgrade purchases

* Game control and POS/booking software suite

LaserBlast

* Rugged shockmounted construction

* 4 independent hit zones: gun, shoulders, back, chest

* 13 vest and phaser sensors

* Digital speech/sound effects in the vest

* Real time scoring using continuous radio link

* Real time sound effects in the arena

* Special button on vest to access special options (photons, shields)

Laser Chaser

In 2007 Laserchaser is bought (taken over) by LaserMaxx Lasergames from the Netherlands

Laser Dual

Laserforce

- * Reverse IR - the guns receive a signal constantly transmitted from the pack.
- * 4 independent hit zones: gun, shoulders, back, chest
- * Hit zones flash white when hit
- * Digital speech/sound effects in the vest
- * Real time scoring using continuous radio link
- * Real time sound effects in the arena
- * Special button on gun to access special options (missiles, nukes, shield)
- * Gen6 Equipment
- * Multicolor LEDs that can change color at any time
- * Anti-abuse sensor
- * Up to 7 teams

LaserMaxx

LaserMaxx lasergame systems are designed by Multimax Electronics B.V. from The Netherlands since 1995. Over the years LaserMaxx systems evolved into a modern, flexible and professional lasertag system.

- * No License fees
- * No Annual fees
- * Mobile system
- * Very rugged
- * Digital Speech and Sound
- * Software selectable 2 hand shooting for safety
- * Shoulder sensors
- * Battery life > 15 hours
- * Green and Red laser
- * Windows XP software

LaserMaxx

Laser Game (Laser Game Evolution)

Laser Game ORIGINAL older equipment

Laser Game Evolution newer equipment

French developed system.

Using a modulated laser to transmit its signal.

Sensors :

- *front(4)/back(4)/shoulders(2)/gun(1)
- *up to 3 teams
- *more than 4 customs senarios

LASER MANIA

Arena-based

2 Versions

- * System 1
- * System 2

LASER MANIA

Continuous Fiberoptics Sensors

- * LEFT
- * RIGHT

Up to 4 Teams

Laser Quest

Laser Quest:

Arena-based

Many variants as number of lives, shots, teams and bases can be toggled. The most common variants for standard play are Solo and Team. Members often play at special events and these can include many other types of games (too many

to list) since, as mentioned above, so many settings can be toggled.

Sensors:

- * Both Shoulders (LQX)
 - * Both sides of Laser and front of Laser.
 - * Front
 - * Back
- Up to 3 teams

Laser Runner
Arena-based

Laser Runner is notable for using a modulated laser to transmit its signal.

LaserStar
Gun only.
Laser Storm
Looks like a dustbuster or Grocery store price scanner.

Founded in 1990, Laser Storm was one of the earlier players on the laser tag scene. It was the first company to introduce theming into laser tag arenas, with homespun games called Galactic Marauders and Circuit Commandos. Laser Storm then introduced the first laser game based on Hollywood I.P. Stargate Laser Tag won Best New Product at the International Association of Amusement Parks and Attractions exhibition in 1995. The company followed up with the Marvel Comics licensed X-Men Danger Room laser tag game in 1997, but that product was priced out of their market and never got traction.

At its peak, Laser Storm had 230 locations in more than 30 countries. After a NASDAQ IPO in 2006, the company failed in its transition to open its own laser tag arenas, and shut down operations in 2008.

br/> Many individual operators are still using this equipment, as Laser Wars purchased the maintenance business from the corporate office before they went under.

Sensors:

- * Phaser
 - * Headset
 - * Shoulders (optional vest upgrade purchased by some operators)
- Most Laser Storm arenas feature a low dividing wall which separates the arena into two teams, red and green.

Laser Trek
LASERTRON
11 Versions (LT-1 through LT-11.5)
LASERTRON

Sensors

- * Front
 - * Back
 - * Shoulders
 - * Phaser
- Teams Up to 4

Photon

Photon was an early arena-based system that was most active during the mid 1980s. Conceived in 1982, and debuting in Dallas, Texas in 1984, it has the distinction of being not only the first arena based lasertag system, but also the original form of lasertag (although it was preceded by the aforementioned Star Trek game).

- * Helmet
- * Reverse IR - the guns receive a signal constantly transmitted from the pack.

2 Teams

Q-Zar

Q-Zar - Also known in some regions as Quasar.

2 Teams.

Equipment versions:

- * Version 1 (no longer in existence)
- * Version 2 (no longer in use)
- * Versions 3 through 7 (these versions are all very similar)
- * iQ
- * Q-Kidz

Note that the Quasar and Q-Zar names have changed hands several times, so various versions are designed and manufactured by entirely separate companies.

Quasar Elite

- * Quasar Elite - Developer and manufacturer of Quasar Elite equipment.
- * Quasar Elite Softplay (Gun Only)
- * Quasar Elite Spain - Developer and distributor of the Spanish and Portuguese version.

Q-2000

RealSportGames

*www.realsportgames.com

Makers of MilSim lasertag systems suitable for indoor and outdoor use.

VEQTOR

- * Consumer
- * Commercial (Arena & Portable)
- * Police & Military

- * X-Blaster (Indoor)
- * X30 (Outdoor)
- * X70 (Indoor)
- * X70 TFS (Outdoor)
- * Classic Laser Tag
- * Max Radio

- * VEQTORIAN Limited
- * VEQTOR UK under license

Sensors

- * Gun (gun only units)
- * Gun & Chest & Back & Shoulders on newer vest based systems
- * Chest, Back, and shoulders on some older versions prior to purchase of Actual Reality

2 to 8 teams depending on site configuration

Zone

Zone Laser Tag is known in various parts of the world as Darkzone, Megazone, Ultrazone, Zone 3, and Zone 4.

Parent Corporation: P & C Micros, in Melbourne, Australia. Manufacturers in Australia, England, and the USA for the appropriate regions.

2-3 teams.

Equipment versions (Newest to Oldest):

- * Nexus Generation - version NexusFEC
- * Begeara System (portable)
- * Phaser Strike
- * Zone Skirmish (outdoor)
- * [<http://www.zonelasertag.com/modules/tinycontent0/index.php?id=1> Infusion (T2) - Plug in upgrade for System T]
- * System T (no longer marketed but still in use)
- * System Q2 (no longer marketed but still in use)
- * System Q (no longer in use)

- * System Z Version 5 (no longer marketed but still in use)
- * System Z Version 4 (no longer marketed but still in use)
- * System Z Version 3 (no longer in use)

Sensors:

- * Laser
- * Chest
- * Back
- * Shoulders (2)

Consumer Systems

Laser Challenge

This form of lasertag was manufactured first by Toymax, and later by Jakks Pacific. It normally features a separate sensor to the gun which is sometimes tethered but not always. Sensors have been located on the chest, back, gun and waist. There is officially no limit to the number of players. Some sets feature team a and team b settings. Also the Laser Challenge V2 system features an arena style computer for advanced scoring of teams or individuals.

Lazer Tag

The "Lazer Tag" brand (with this particular spelling) was originally invented, manufactured, and sold by Worlds of Wonder in the mid-1980s, and has been reincarnated in two other forms: Tiger Electronics Lazer Tag in the late 1990s, and Hasbro's "Lazer Tag: Team Ops" products beginning in mid-2004 and continuing to this day. In each case, the technology behind the brand has also changed, from a separate tagger and sensor with 6 hits as in the original Lazer Tag from Worlds of Wonder (WoW), to a tagger with an integrated sensor and 10 hits from Tiger Electronics, to the latest variation which integrates the sensor into the tagger, but enhances the game considerably with built-in scoring, multiple game types, and features like lock-ons and hit-confirmations. While products from each incarnation of the brand have worked together with themselves, the changes in technology result in the different versions being incompatible with each other. For example, it is not possible for a set of Tiger Lazer Tag taggers to enjoy a game with Hasbro's Lazer Tag Team Ops. The Lazer Tag brand has survived these iterations because the brand name is owned by Shoot the Moon Products, a toy invention company, since some of the original Worlds of Wonder executives founded the company after the failure of Worlds of Wonder in the late 1980s. The toys have been invented by Shoot the Moon Products, and licensed to toy makers such as Tiger Electronics, and now Hasbro which now owns Tiger Electronics.

Ironically, the original Lazer Tag IR signal was not protected by patents, and so has become a standard for hobbyist and even some professional grade outdoor laser tag products. For example, the Battlefield Sports products use the same signal, and several other products include WoW compatibility modes, such as Steradian Technologies, Zone Systems with their Zone Skirmish range and MilesTAG. Even some products in the Lazer Tag Team Ops line feature a hidden WoW compatibility mode.

Military Systems

Outdoor Systems

Adventure Sports HQ

*www.adventuresportslasertag.com

Adventure Sports provides fully digital systems with a wide variety of features, including several unique administrative options which allow an operator to efficiently control a large number of guns simultaneously. Games are controlled without a central computer. Features full compatibility with legacy systems such as Battlefield Sports. Adventure Sports has full service distributors in USA, Australia, UK and Europe.

Battlefield Sports

*www.battlefieldsports.com

The Battlefield Sports outdoor systems run similarly to woodsball paintball, using human referees and team scoring based on achieving mission objectives. Also specializes in creating portable arenas using their patent pending inflatables barricades of modular doorways, windows, and walls.

Steradian

Steradian Technologies

Eclipse

S-7

Headband (3 locations)

Gun

FragTag

Australian-based OEM supplier of advanced Laser Tag electronics. Fully digital systems using MilesTag system, with advanced individual scoring, variable damage, and weapon modeling. Features limited backwards compatibility mode for use with Battlefield Sports guns.

www.fragtag.com.au

MilesTag

Open format for IR communications between weapons/sensors, and supplier of components for do-it-yourself weapon projects. Compatible with FragTag. [<http://lasertagparts.com/mtdesign.htm>
lasertagparts.com/mtdesign.htm]

RealSportGames

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Makers of MilSim lasertag systems suitable for indoor and outdoor use.