

PHOTOELECTRIC BEAMS

TAKEX

The Choice of Professionals Worldwide.

DOUBLE MODULATION PATENTED TAKEX TECHNOLOGY EXPLAINED

Modulation is a term used to describe the process of projecting an infrared light beam from its source, the transmitter, to the receiver. The light beam is produced by an infrared LED that is pulsed on and off at a very high rate of speed.

This process is known as modulation.

Almost all infrared beams available on the market use this simple modulation process.

This process is called SINGLE MODULATION.

The main problem however, with a single modulated signal is that it is easily duplicated by other sources of infrared light emission. The ability to reproduce the infrared signal by other infrared emitting devices makes it possible to breach the perimeter security system undetected. This compromises the reliability of the system. One common device is an "off the shelf" remote control. (Usually used to control Televisions, Entertainment Systems or Air Conditioning units.) Quite simply,, point a transmitter at any P.E. Beams receiver other than a TAKEX unit, and walk through undetected! Now think litigation, loss of money and credibility!!

Only **TAKEX** Synchro-Quad and Twin infrared beams use a patented process of interlacing the infrared signal at two frequencies. This process is called DOUBLE MODULATION. The unique pattern created by this process cannot be duplicated by other infrared light sources. To further aid this process, the receiver contains a patented PHASE LOCK LOOP circuit that locks on to the double modulated signal, and ignores other forms of infrared light. This patented process assures you of a high integrity perimeter system that will withstand attempts to defeat it.

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The Infrared Transmission is Pulsed



Single
Modulation

500 Hz



Introduced
Frequency

20 KHz



Double Modulation Frequency