**• Cheat sensor troubleshooting. What does 7L17 mean?**

The Gold fishing game uses an infrared cheat system. It is designed to react if a player reaches across the foul line and breaks the beam for approximately 2 to 3 seconds. This delay can be programmed in the software under option 19. The system works by having two boards at the rear of the game called transmitters. There function is to send a signal or beam across the games' playfield. This beam is seen by 3 receiver boards which are located below the foul line and inside of the game. These receiver boards see the beam and report to a small circuit board which interprets the three sensors and reports the status back to the games main circuit board.

Programming option 19 allows you to adjust the duration that the cheat sensor must be activated to trigger a cheat, the range for this value is 0 -100. Setting the value to 0 will disable the cheat sensor, values of 1 -100 effect how long the sensor must be blocked before a cheat is triggered in the software. A setting of 1 is the most sensitive and a setting of 100 is the least sensitive.

**• Checking the cheat sensor transmitters:**

The transmitters located at the back of the game are 5VDC devices. They are pulsed off and on by the cheat sensor board. On the sensor's 2 pin connector you will see +5vdc with minor fluctuations. You can also use an IR detector or low res digital camera to see that the transmitter LEDS are on and operational. You can check the connections for the transmitters to J4 on the cheat sensor board.

**• Checking the cheat sensor receivers:**

Each receiver board has a 3 pin connector. Pin 1 is 12vdc power, pin 2 is DC ground, and pin 3 is the cheat signal line. The sensor signal for the left and right receivers will be +2.5vdc when inactive and go to +5vdc when the receiver is blocked. The center sensor will have at pin 3 0vdc when inactive and go to +5vdc when blocked. You can check these signals on the J2 connector on the cheat main board.

**• Cheat sensor board (MJ2040X):**

The cheat sensor board interprets the incoming signals and then outputs all three signal as one to the main board. The connector at J1 is the input power, you should have +12vdc between the orange and black wire. The signal line from the cheat board to the main board is located on connector J4 pin 2, you should see 0vdc when the receivers are inactive and +5vdc when the receivers are blocked. The signal from the cheat sensor board connects to the main board at connector J27 pin 3. The cheat main board has a LED indicator at location D1. Normal operation for the LED is constantly flashing.