

# IGT Retrofit Conversion For IDX

*Overview  
Rev.4*

## **Installation and setup:**

**There are currently two models of acceptors IGT is using, X10 and X50. All coins and tokens using 1.469" x 0.100" (37.31mm x 2.59mm) will use X10 acceptors; all other coins above 1.600" x 0.090" (40.64mm x 2.29mm) will use X50 acceptors.**

- **For S+ & PE+ upright games with X10 acceptors**, using coin size 1.469" x 0.102" (37.31mm x 5.59mm). A modified kit will be needed with the following configuration.
  1. You will need to order kit #59924133, (parts listed in kit are as follows).
    - A. Small coin base #63317500.
    - B. Entry-Head #59923484 (i.e. backing plate).
    - C. Nut-Lock #42101590.
    - D. Screw Cap #41460092.
  2. In addition separate from kit you will need #57025791 X-10 acceptor.
  3. There may be alignment issues with some older S+ machines. If this becomes an issue the coin chassis assembly will need to be replaced.
    - A. Chassis small coin IDX-10 #14321800.
- The mounting of the IDX dollar acceptor to the coin in assembly will be setup and positioned the same as a small coin 25-cent configuration.
- **For S-2000 upright, VSNIB (960)**, using X10 acceptors, all hardware and setups similar, with only a few changes.
  1. Your acceptor should be #57026191.
  2. Coin head should be #59947040.
- All other setups should mirror the configuration above.
- **When installing IDX-50 on 960 U/R or S+ machines**, using coin size 1.750" x 0.125" (44.45mm x 3.17mm). You will need to use (960) acceptor # 57025391 or S+ (8032) acceptor # 57025191. You will use the same standard coin-handling configuration utilized by Coin Mech. acceptors. Velcro Electronic box to the belly panel on VSNIB/S-2000/S+ and GK 19". On GK 17" you have to install this inside belly door. Remember to keep ribbon cable away from the fluorescent lamp.
- **For S+ & PE+ slant games**, you will need kit number 57830002, configured with small coin chassis.
- **The 80960 video**, slant is plug and play for IDX-10 only! (Coins 1.475" or 37.31mm Max) depending on location will be a dollar token, and coins larger than (1.600" or 40.64mm) you need IDX-50 acceptor with new harness, IGT #60001101. Because the X50 acceptor come in two parts A and B, the new harness allows you to install the part B electronic box, behind the hopper on the side wall next to the tower. You will attach this to the wall using Velcro tape.

**Note: Also you will be unable to configure IDX-10 acceptors to take Ike dollars. IDX-50 can be configured to accept Ike dollars.**

## **Enabling IDX Acceptor, X10 & X50**

- Before programming the IDX acceptor, you first need to enable the acceptor. Below are some examples on how to enable the IDX acceptor within the IGT product line.
  1. **PE + Video:** Open door and push white self test button until you reach self test outputs, using jackpot key move arrow to coin lockout option, using deal switch activate coin lock. The LED on the IDX acceptor will be illuminated if power has been applied to the acceptor.
  2. **S + With new software version:** Open door and push white self test button located next to or behind the power switch. Continue pressing self-test switch until you see a number 2 in the coins played window and the number 10 in the winner paid window. Once you have this configuration, using a jackpot reset key, toggle-reset switch until you now see the number 34 on the winner paid display. Next hold down the spin switch and toggle reset switch to number 35. Power has now been applied to the acceptor and the LED should be illuminated.
  3. **IGT 960 S-2000 Series/With LCD:** Push (WHITE) self-test button located next to amber LED's on the front of the processor board. The menu will come up on LCD and VFD display. To move in and out of menu screens, you simply utilize the buttons that are illuminated on the switch panel. Cash out is Up, Bet one is down, Spin switch is the Enter button, and Bet max is Exit.
    - A. **Go to I/O Tests.**
    - B. **Go to Output Test.**
    - C. **Go to Door Test.**
    - D. **Go to Coin Lock out, push spin switch to enable acceptor.**
  4. **IGT S-2000 Series/Without LCD display:** Repeat steps as they were explained in #3. Use VFD to reference menu.
  5. **IGT Game King:** Push (WHITE) self-test button located next to amber LED's on the front of the processor board.
    - A. **Touch Diagnostic icon.**
    - B. **Touch Inputs & Outputs Test icon.**
    - C. **Touch Front Panel I/O Test icon.**
    - D. **Touch Next Page icon.**
    - E. **Touch Acceptor Enable icon.**

## Programming IDX Acceptor

- Once you have enabled the acceptor the LED will illuminate green, this will indicate the acceptor is enabled and ready to be programmed. To program acceptor.
  1. Slide the front cover up and identify the three controls to be used in the procedure:
    - The “test” push button near the center bottom. (Used to input the number of credit pulses)
    - 16 position rotary switch to the right of the push-button. (#0 is normal RUN position, #1 through #6 are learning each of 6 possible coin types that can be accepted)
    - LED indicator half way up on the right side. (Green in RUN mode, red in LEARN mode)
  2. Turn the rotary switch to one of the LEARN positions #1 through #6 (for example, pick #3 for learning the 3<sup>rd</sup> coin type) and observe the LED turns red to indicate it is now ready to learn.
  3. Push the test button once for optical enable.
  4. Slide the cover back on the unit to make sure outside light does not interfere with the sensors.
  5. Show the unit 6 samples of the coin by depositing them into the acceptor as usual. It is best to use 6 different coins since there are typically slight variations from coin-to-coin.
  6. After the 6<sup>th</sup> sample coin is deposited, the LED will flash red-green a few times to indicate the LEARN procedure is complete and the coin parameters are stored in memory.
  7. Slide the front cover open again and turn the rotary switch back to position #0 and observe the LED turning green. Check that you have not accidentally turned it too far to position #15, which is a field test function position, in which it will not accept coins.
  8. Slide the front cover back down and you should now be able to accept the new coin.

## Programming IDX Acceptor

- To erase a specific coin that you no longer want to accept.
  1. Slide the front cover up and turn the rotary switch to the coin # position you wish to erase.
  2. Push the test button once to initiate the LEARN sequence.
  3. Turn the rotary switch back to position #0 without depositing any coins to signal the you wish it to erase the parameters for this coin. The LED will flash red-green to indicate completion.
  4. Slide the front cover back down.
  
- You can also program the IDX acceptor to reject a specific token. This feature is to keep unwanted counter fit coins from being accepted. To program the acceptor to reject an unwanted coin, follow steps below. **Remember this option is only available in memory LEARN position #1 located on the rotary switch.**
  1. Enable acceptor using steps describe above on page #2.
  2. Turn rotary switch to position #1.
  3. Press the red button 13 times (13 is key for bad) to initiate the LEARN cycle. The software uses this as a signal to identify it as the unwanted coin.
  4. Drop 6 of the coins you want the acceptor to reject.
  5. Turn rotary switch back to position #0.
  
- **For best long term performance with the acceptor built in automatic self adjustment for component drift, it is recommended by IDX to use coin memory LEARN position #2 located on the rotary switch, when learning the valid coin, although this is not strictly required for basic operation.**
  
- **Also remember when the machine door is opened, the IDX acceptor will disable itself; this is to protect the integrity of its memory. While in this state the LED on the acceptor will be flashing red and yellow. This is normal and working properly, if the LED is flashing at a very high rate you may have a separate issue.**

## Troubleshooting & Testing

- **Field Tests & Diagnostics:** Following the steps outlined on page #2 open door and enable acceptor. A green LED shows normal operation in switch position #0. If the LED is flashing yellow or alternately red-green, it indicates a malfunction has been detected. This test does not indicate what type of malfunction exists. To identify the malfunction and to see if it can be corrected in the field. See below.
- **Gate Relay Test (rotary switch #0):** This test is most commonly used when coins are jamming. With Acceptor still enabled in diagnostics. Press the test button on the IDX acceptor to activate the gate relay. If not normal, it may be physically obstructed or its wire unplugged. If everything is normal look for misalignments between the acceptor and the coin chute.
- **Memory Test (rotary switch #7):** With acceptor enabled in diagnostics turn the rotary switch to position #7 to test the validity of memory. Normal LED color is green. A red color indicates that memory is corrupted. It may be possible to correct this by re-learning the coins. If not, the processor or EPROM chip is bad.
- **Credit Sensor Test (rotary switch #8):** **This application will only be used on IGT games that do not utilize coin in optics. At this time this application is not applicable.**
- **X-Mark Code Optic Sensor Calibration (rotary switch #9, #A):** Fold a piece of white paper twice (to 4 thicknesses) and insert it into the center of the coin chute. With acceptor enabled in diagnostics turn the rotary switch to position #9 (rear side optics) and press the test button. The unit will use information gathered to calibrate the sensitivity of its reflective sensors for reading the X-Mark optical code on tokens. The LED should be an orange color after calibration. Repeat for switch position #A (front side optics). **Because the X50 comes in two parts, the acceptor, which is part A, and the logic circuit box which is part B. This application should only need to be done when replacing one of the X50 assemblies separately. In all other cases the acceptors will come from manufacturer as one complete unit already calibrated.**
- **Diameter Optics Sensor Tests (rotary switch #B, #C, #D):** With acceptor enabled in diagnostics turn the rotary switch to positions #B, #C, and #D to test the diameter thru-beam optical sensors. Normal LED color is green. A red or orange color indicates either there is an object or dirt blocking one of these three sensors and cleaning of the coin chute is required, or the circuit is malfunctioning. If a problem with the optic sensor exists, the acceptor will reject coins.

## Troubleshooting & Testing Continued

- **Inductive Metal Sensor Tests (rotary switch #E, #F):** With acceptor enabled in diagnostics turn rotary switch to positions #E and #F to test the inductive sensor. Normal LED color is green. A red color indicates either there is metal in front of the inductive sensors or the circuit is malfunctioning. If problem with metal sensors exists, the acceptor will reject coins.
- If all tests performed above show no evidence of problems with the acceptor logic circuit and the game is still rejecting coins. A possible problem may be with a mechanical adjustment on the acceptor, which provides an adjustment to spacing when dropping coins through the acceptor. If this adjustment is off due to movement or bending of its sliding adjustment arm, the acceptor could reject or jam up when coins pass through it. To verify the sliding adjustment arm used to setup thickness, has not been compromised or bent. A measurement must be taken to of the sliding adjustment arm. This will be located on the side of the acceptor showing eight holes and a sliding adjustment with a detent that centers itself over one of the selected holes. The dimensions referring to each of the eight holes is the chute thickness achieved at each position of the sliding adjustment. If the adjustment has been compromised from it's original setting, the acceptor will reject coins. To test this setting move adjustment arm to it's lowest setting .087" for X10 and .110" for X50. To measure thickness use a tool called a feeler gauge provided by IDX, this tool will measure the thickness of the chute to see how off the thickness is from .087" or .110". If the thickness is not correct make the necessary adjustments to the sliding adjustment arm.
- If all test performed above showed no problems with the acceptor, continue running the standard machine test for coin in optics and machine configuration.

***For any problems or clarification regarding this write up refer to the IDX manual, Model X10; X-Mark Xeptor.***