

Coin Selector

Xeptor Coin Programming Tool

Compatible With Xeptor Firmware Versions 4.0 Or Higher



Coin Programming: It Just Got Simpler!

How Simple?

1. Plug the Coin Selector into an IDX Xeptor.
2. Press the button for the coin to accept.
3. Unplug the Coin Selector and off you go!

How Flexible?

We have standard configurations for all of the major gaming markets (see table of available models). If you have a special coin or combination of coins to accept, use one of the "Copy & Clone" functions replicate it in other Xeptors - with one button.

How Secure?

1. Signatures data for standard coins is controlled by IDX.
2. Secured Xeptors may not be hand programmed without a connected Coin Selector.
3. Button-programming any coin automatically deletes all coin signatures previously in the Xeptor Coin Memory to ensure it accepts only what is defined by the pressed button.
4. When a Coin Selector is connected to an Xeptor, the Xeptor receives and saves in Xeptor memory the Coin Selector ID No., the ID of the authorized person/company and Time and Date the Coin Selector was enabled for later possible examination.
5. An encrypted handshake is required to enable an Xeptor for coin signature download.
6. For additional security, the Copy & Clone functions may be individually disabled.

General Description

The IDX Coin Selectors are designed to simplify the programming of large quantities of coin acceptors by replacing the more cumbersome hand programming procedure with the simple push of a button. Additionally, the Coin Selector is designed to address issues of security by providing a means to restrict access, a means to control access, a means to track access, a means to control coin signature integrity, and a means to eliminate hand programming errors and pranks. This document describes the whole set of Coin Selector features, some of which not apply to specific Coin Selectors depending on the feature set it has been configured to have.



Pre-Programmed Coin Buttons

The Coin Selector holds standardized coin signature data for specific coins which can be downloaded to an Xeptor at the touch of the corresponding button. For some coins, such as the Canadian nickel which has been minted in three different alloys, more than one coin signature is required to be able to accept all of the Canadian nickels now in circulation. When you press the **Can 5¢** button on a Coin Selector, all three of these coin signatures are downloaded to the Xeptor, of course following complete erasure of any coin signatures previously held in the Xeptor Coin Memory (except in some multi-denomination applications). IDX coin signatures are created from a statistical analysis of a large sample of coins in order to provide the best center values and tolerances for each of the multiple metal and diameter readings, which in turn then ensure the highest possible acceptance rate in field operation.

Copy & Clone Buttons

Copy & Clone buttons provide a dual function and are easily identified by their green graphics. The Copy function is accessed by holding the button down for greater than two seconds. When you first press the button, the LED will turn red, but after two seconds will turn orange to indicate the Copy function is activated and will execute upon release of the key. The Copy function will upload specified information from the Xeptor to be saved in the Coin Selector. If the same key is pressed only for less than two seconds, the corresponding Clone function will be executed. The Clone function will download the specified information to the Xeptor. The Copy & Clone functions allow you to setup an Xeptor for special coins, combinations of coins, or other operational parameters (such as credit pulse length, self inhibit security etc), Copy them into the Coin Selector, and then Clone them into other Xeptors requiring the same setup. The Copy & Clone individual coin or token buttons are general purpose in nature, may be used for any coin or token you please, and are saved and referenced separately in the Coin Selector from the 6 Coin and Xeptor coin signature data. A description of some specific Copy & Clone button labels is as follows:

- XEPTOR: All 6 Xeptor Coin Memories and all other timing and configuration parameters.
- CONFIG: Only the timing and configuration parameters.
- 6 COINS: Only All 6 Xeptor Coin Memories.
- 1 COIN: Copy from and Clone to Xeptor Coin Memory #1.
- TOKEN #N: Copy from and Clone to Xeptor Coin Memory #1.
- \$x TOKEN: Copy from and Clone to Xeptor Coin Memory #1.

LED Indicator Meaning

LED Color	Functional Meaning
OFF	Press any button to turn on, or connect battery charger to recharge.
Yellow Blink	Indicates no communication response from Xeptor. Check Xeptor power and plug. Also may indicate that a pressed button function is disabled or unable to execute.
Green	Indicates communications established with compatible Xeptor model and version.
Red	Indicates a button has been pushed for less then 2 seconds.
Orange	Indicates a button has been pushed for more than 2 seconds.
Red Blink	Indicates data is being transmitted between Coin Selector and Xeptor.
Red Green	Indicates communications established with an <i>incompatible</i> Xeptor.

Operational Instructions

1. Battery Operation

The Coin Selector has NiCd rechargeable batteries for portable operation. If the Coin Selector no longer powers up or doesn't stay powered up, that is a sign that it is time to recharge the batteries. Plug the line-powered 9VDC power supply connector into the mating receptacle at the bottom of the Coin Selector. A green LED near the connector will illuminate when the unit is charging. To charge the batteries fully will normally take about 8 hours, however a partial charge will still allow quite a bit of work to be done.

2. Turn On

Press any button on the Coin Selector to turn on its circuits. The LED turns on when it powers up and indicates current status by its color. The LED will flash yellow if the communication cable is not connected to anything. If it is connected to an Xeptor that is compatible, the LED will turn green. If it is connected to an Xeptor but the model or the version is incompatible, the LED will alternately flash Red/Green.

3. Auto Shut Off

The Coin Selector is designed to conserve its battery charge by turning off automatically if no button has been pressed or no communication has occurred for a period of two minutes.

4. Connection To An IDX Xeptor

A cable is provided with the Coin Selector to connect with the three pin connector J4 in the Xeptor as shown in the figure above. Some versions of the slide-on Xeptor covers have a little rubber plug which allows access to this connector without removing the cover. It is important to know that you must use a Coin Selector model that corresponds to the Xeptor model for compatibility of the coin signature data. For example, use an X-20 Coin Selector with an X-20 Xeptor. If you connect to the wrong model, the LED will warn you by flashing alternately Red/Green. Coin Selectors are compatible only with Xeptors with firmware version 4.0 or higher. Connecting to an older Xeptor will also result in the LED flashing alternately Red/Green.

5. Programming Factory Defined Coin Types

Once you have connected the cable from the Coin Selector to the Xeptor, turned on the Coin Selector by pressing any button, and observed that the Coin Selector LED is green, you may now press any of the pre-defined buttons to instantly configure the Xeptor for a new coin type. If the coin type has been minted with more than one alloy in recent years, (as has, for example, the Canadian penny, nickel, dime, quarter, and half dollar) then the Coin Selector will download to the Xeptor all valid coin signatures currently in circulation. When you press the button the LED will turn red, and when you release the button the LED will flash red while data is transmitting.



For example, pressing the Canadian Nickel button on a Coin Selector downloads coin signatures for the three Canadian nickel varieties. If one then connected the Xeptor serial port to the HyperTerminal utility and used the "R" (report all) and "L" (list active coins) commands, the output listed to the right would be produced. The report shows that indeed there are coin signatures in the Xeptor Coin Memory #1, #2, and #3, and the list of active coins shows all three of them to be identified specifically as Canadian nickels (CAD is the ISO-4217 currency symbol for Canadian Dollar) of revisions 0, 1, and 2.

```
Xeptor X-20 V4.0 ID#:55B8
Coin Memory: 01 02 03 04 05 06
Coin Value : 01 01 01 00 00 00
Metal-ESL: 1C 1A 15 00 00 00
Metal-EAL: 20 35 18 00 00 00
Metal-EAH: 24 2C 22 00 00 00
Metal-CSL: 1D 1C 15 00 00 00
Metal-CSH: 22 29 1D 00 00 00
Metal-CAL: 20 35 18 00 00 00
Diameter: 2C 2C 2C 00 00 00
Tolerances: 3E 44 16 80 80 80
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DiaOp: 04 05 02 04 CrOp: 00 00
Tank Cal: 43 Now: 42 4E 46 47
Sys Cnfg: 88 Tilt 1/3 Sec: 04
Cred ms: 20 Dvt D/P ms: 10 81

Index Of Active Coins:
1) Output-1 CAD 0.05 Rev-0 Thick-B
2) Output-1 CAD 0.05 Rev-1 Thick-B
3) Output-1 CAD 0.05 Rev-2 Thick-B
4) Memory Empty
5) Memory Empty
6) Memory Empty
```

5. Manually Programming Coins

An Xeptor may be "Secured" from manual programming of coins for security reason by a number of means. If the normally green LED of the Xeptor displays very short red pulses about three times per second, that is a sign that it is secured from manual programming of coins unless a Coin Selector or X-Key is attached. Without one of these attached, the Xeptor will flash its LED yellow in rotary switch SW2 positions 1-6 to indicate that manual programming is unavailable. After connection of the Coin Selector to the Xeptor, the LED will turn red to indicate manual programming is now available as it normally is in an un-Secured Xeptor. With manual programming enabled, you may manually program coins into the Xeptor per the Coin Learn procedure documented in the Xeptor manuals.

Note that if at any time you manually program coins into an un-Secured Xeptor with any Coin Selector or X-Key attached, it will convert the Xeptor to a Secured unit. In addition, note that your Coin Selector has an "S" or "U" in the Coin Selector Model number, (see notes on last page) which determines if it will or will not Secure any and all Xeptors upon first establishing communication. A Secured Coin Selector will convert an Xeptor from un-Secured to Secured mode simply by the act of using the Coin Selector with that Xeptor. If the Coin Selector is un-Secured, then it will not convert Xeptors to the Secured mode during push button programming, but will do so if you hand program the Xeptor while the un-Secured Coin Selector is attached.

6. Copy & Clone Programming

The only real difference between the green labeled Copy & Clone buttons and the other coin-specific buttons is that you must first acquire the data content to be later downloaded to other Xeptors by uploading the data from a "master Xeptor" that you have specially configured for your purposes. To copy data from an Xeptor into the Coin Selector, you must press and hold the button for more than 2 seconds, then the LED goes from red to orange to indicate it is now ready to Copy. When you release the button, the contents specified by the button label will be copied into the Coin Selector and thereafter may then be used to program other Xeptors by simply pushing the same button for less than 2 seconds. Note that data transmission, evidenced by a flashing red LED and is much shorter in duration for Copy than for Clone.

7. Troubleshooting Notes

- a) **Maintain Coin Chute Calibration:** At the factory each Xeptor is calibrated for its specific coin chute thickness configuration. If the coin chute thickness is changed either by purposeful adjustment or by accidental bending of the Xeptor metal frame, then it loses its calibration and downloaded coin signatures no longer produce the expected results. The detailed model number on the sticker contains information about the original factory setting for coin chute thickness when calibration was done. Check the Xeptor manual for deciphering the model number.
- b) **Maintain Charged Batteries:** Your Coin Selector was provided with a battery charger. Although the Coin Selector automatically turns itself off to conserve battery power, NiCad batteries will self discharge over a few month period. If your Coin Selector only stays on for a few seconds or does not turn on at all when you press any button, it is a good bet that your batteries need charging.
- c) **Use The Coin Selector Indicator Light:** The Coin Selector indicator light was designed to tell you just about anything you want to know about the status of its operation. If you are not getting the results you expect, carefully observe the indicator light as you do things and refer to the diagnostic chart for interpretation. Of special note, a flashing yellow LED immediately following a pressed button may indicate the Xeptor has no reference coins programmed in it, and you should consult the factory. Also, if your coin selector allows adding more coins by pressing more buttons (such as the CS20U-CAN2, a yellow flashing LED following a red flashing LED after pushing a button may mean the Xeptor coin memory already has 6 coin signatures and more cannot be added.
- d) **The Copy Part of Copy&Clone Can Be Tricky:** When you are trying to Copy something to the Coin Selector, there are two common pitfalls; 1) after having perfectly configured your master Xeptor and are ready to Copy it into the Coin Selector, be very careful not to accidentally hit one of the buttons that programs the Xeptor for something else before you execute the Copy function, and 2) when you are holding the Copy&Clone button for > 2 seconds, make sure you wait for the LED to go from red to orange as the signal that it is actually ready to Copy... if you release too soon, it will Clone the Xeptor with whatever data was previously stored in that Copy&Clone button... then you must start all over.

8. Notes For The Model Number Tables On Next Page:

- a) The "x" in the Model Number may be either an "S" for Secured, or a "U" for Unsecured. A Secured Coin Selector will always put an Xeptor in the "Secured" mode after it has been connected. An Unsecured Coin Selector will not change the Secured status of an Xeptor, but will operate with both Secured and Unsecured Xeptors. A Secured Xeptor may not be hand programmed for new coins unless the Coin Selector or X-Key is attached.
- b) When coin signature data of choice is transferred to the Xeptor, Coin Memory is first cleared so that only the new coin signatures will be present in the active Coin Memory of the Xeptor... except for model CS20x-CAN2 which adds coins to the Xeptor for each button pushed or clears all coins.
- c) Certain denominations of currency have more than one coin signature type because the country has changed the alloy composition. For example, there are three separate coin signatures required to handle the Canadian nickel, all three of which are downloaded when the Can 5¢ button is pressed.
- d) Green shaded cells represent "Copy&Clone" functions where one may Copy or Clone a) the entire Xeptor, b) only the non-coin system configuration parameters of the Xeptor, c) only the 6 Coin Memory of the Xeptor, or d) any particular coin or token of choice (which is always Copied from and Cloned to Coin Memory #1 of the Xeptor).
- e) The references with a dimension and NS, T6 or T2 refer to tokens of the specified diameter having alloys of Nickel Silver 752, TSA-6 or TSA-2 respectively.
- f) Other standard versions of Coin Selectors will be documented on the Web Site as they become available. We can also custom configure the button definitions of a Coin Selector to meet your specific needs. Please contact the factory to discuss details of ordering a custom Coin Selector.

Machine OEM Coin Selector Models					
Button Number	CS20x-OEM1	CS20x-OEM2	CS20x-OEM3	CS20x-OEM4	CS22x-OEM1
1	1 Coin	1 Coin	1 Coins	Can 25¢, \$1, \$2	Coin #1
2	6 Coins	6 Coins	6 Coins	US 25¢, \$1	6 Coins
3	Xeptor	Xeptor	Xeptor	Xeptor	Xeptor
4	US \$1	US 25¢	Token #1	Clear Coin Mem	US 50¢
5	US 25¢	US 10¢	Token #2	Note: This will produce multi-denomination Xeptors with 3 outputs requiring Personality Plug PPNRI-3, PP46 or PP62 for proper output interface.	1.340" NS
6	US 10¢	US 5¢	Token #3		1.465" NS
7	US 5¢	Can \$2	Eur €2		1.240" T6
8	Can \$2	Can \$1	Eur €1		1.340" T6
9	Can \$1	Can 50¢	Eur 50¢		1.465" T6
10	Can 25¢	Can 25¢	Eur 20¢		1.240" T2
11	Can 10¢	Can 10¢	Eur 10¢		1.340" T2
12	Can 5¢	Can 5¢	Eur 5¢		1.465" T2

End User Coin Selector Models						
Button Number	CS20x-USA1	CS20x-CAN1	CS20x-CAN2	CS20x-EUR1	CS22x-USA1	CS22x-CAN1
1	6 Coins	6 Coins	Add \$2 Can, #3	6 Coins	6 Coins	6 Coins
2	Config	Config	Add \$1 Can, #2	Config	Config	Config
3	Xeptor	Xeptor	Add 25¢ Can, #1	Xeptor	Xeptor	Xeptor
4	Token #1	Token #1	Clear Coin Mem	Token #1	\$2 Token	\$5 Token
5	Token #2	Token #2	Note: This will produce multi-denomination Xeptors with 3 outputs requiring Personality Plug PPNRI-3, PP46 or PP62 for proper output interface.	Token #2	\$1 Token	\$2 Token
6	Token #3	Can \$2		Token #3	50¢ Token	\$1 Token
7	Clear Coin Mem	Can \$1		Eur €2	US 50¢	50¢ Token
8	US \$1	Can 50¢		Eur €1	1.340" T6	1.340" T6
9	US 25¢	Can 25¢		Eur 50¢	1.340" T2	1.340" T2
10	US 10¢	Can 10¢		Eur 20¢	1.465" NS	1.465" NS
11	US 5¢	Can 5¢		Eur 10¢	1.465" T6	1.465" T6
12	US 1¢	Can 1¢		Eur 5¢	1.465" T2	1.465" T2

9. Coin Selector Setup

The Coin Selector Setup Button Configuration Utility lets you update the coin signatures for your coins in case your favorite government decides to change the metallurgical structure of its coins. It allows you to independently enable or disable the Copy and Clone features of a coin selector for security purposes. Any configuration you create may be saved and recalled and reports of all logon activity and changes made to Coin Selectors are recorded for both management and security purposes. This utility can be freely downloaded from the Coin Selector Web page, but will require you to properly identify yourself to IDX to obtain a security password to enable the program.



IDX Inc. El Dorado AR USA, 800-643-1109, www.idxinc.com, The Copy & Clone Feature Is Patent Pending.

Coin Selector

Operating Instructions Summary



Make The Connection

1. Choose a Coin Selector model that matches the Xeptor model number (for compatible coin signatures).
2. Press any button (short and quick) on the Coin Selector to turn it on. If the LED does not come on or stays on for only a few seconds, the Coin Selector's batteries need charging.
3. Connect the cable from the Coin Selector to an operating Xeptor (with rotary switch SW2 in position 0).
4. The Coin Selector's flashing yellow LED will turn green when it establishes communication with a compatible Xeptor (or alternate red/green if it is incompatible).
5. When the LED of both devices is green, they are ready for you to perform any of the coin programming functions below.



Program A Specific Coin

1. Momentarily press one of the Coin Selector buttons labeled with the designation of a specific coin, token, or Xeptor configuration that you desire.
2. The Coin Selector LED will then flash red while downloading the coin signature data to the Xeptor and then turn green again when it is done.
3. Remove the cable from the Xeptor. The Coin Selector will automatically turn off later.
4. The Xeptor will now accept the coin designated by the button that was pressed.

Copy And Clone

1. To COPY a coin signature from an Xeptor to the Coin Selector, press and hold the desired "Copy And Clone" button for > 2 seconds (until the LED changes from red to orange) then release the button. The LED will flash red during data upload.
2. When the LED turns green it is done capturing the data from the Xeptor and the cable may now be unplugged from the Xeptor.
3. To CLONE other Xeptors, connect the cable to them and press this same button with a short press. The coin signatures are downloaded as the LED flashes red.

Clear All Coin Memory

1. Press the "Clear" button (if available) to erase all coin signatures in Xeptor memory.
2. The Coin Selector LED will then flash red while erasing the Xeptor's coin memory.
3. Remove the cable from the Xeptor. The Coin selector will automatically turn off later.
4. The Xeptor will no longer accept any coins until someone later programs it to do so.

Notes:

- There are many versions of the Coin Selector, each for different market segments or for different Xeptor models. Specific buttons may or may not be present on any particular model.
- The Copy and/or Clone function may be disabled by your management for security purposes. If the function is disabled, the indicator LED will flash yellow when the button is pressed for that function.
- The Xeptor must have its coin chute thickness set as originally configured and calibrated by the factory.