Model MA850 SERIES
HAWK XEPTOR®
2 YEAR WARRANTY

IDX's MA850 SERIES of Hawk Xeptors will accept a mixture of 6 different coins and/or tokens types making it an international Xeptor. Standard features include higher security anti-stringing credit sense optics added, electronic size detection within 0.015" and patented electronic metal sensors to better distinguish between similar metals. The complete line of IDX multi-coin Xeptorsâ are field programable for new coin types as well as changing the number of coin pulses per coin. Other high security features include IDX's own processor circuit, a shielded relay with the universal relay wiring, power wires Yellow & Black and relay wires 2 Red w/Green tracer output signals for greater reliability and easy field connections. This "smart" Xeptorâ continues to update its memory on each coin as the Xeptorâ ages.

The newest standard feature in this series is the 2 YEAR WARRANTY that includes advanced replacement in the first year.

MA850 XEPTORâ SERIES FEATURES:

· Standard Pre-programmed with U.S. Quarter and U.S. Dollar coins can be field changed.
· Standard 4 wire hookup – Power wires –Yellow 24VAC Hot / Black 24VAC Common
                                    – Coin wires (2) Red Green.
· Power sources 24 VAC/VDC standard optional voltages – 12VDC
· Distinguishes and accepts any of up to (6) six different coins or tokens of different sizes and/or electronic signatures.
· Standard 2" faceplate footprint 2" wide x 7.75" high x 3.8" deep.
· Snap in Stainless Steel faceplate MA19 standard.
· Optional old style MA20 - 2" faceplate - Modle MA850CR0C34C
· Coin Diameter range examples: 0.832"- 1.126" Standard and other ranges available.
· Coin Thickness range settings: 0.059 to 0.085" Standard and other ranges available.
· Slide on water resistant access covers.
· Built-in "Credit Test" push button.
· New coin types can be learned or programmed in the field.
· Unwanted shadow coin feature eliminates false acceptance of undesired coins.
· Multi-color indicator LED for operational status.
· Patent Coverage: U.S.#5,046,841 U.S.#6,021,882 U.K.#2,227,347 U.K.#8,929,131 U.K.#9,905,044 U.K.#2,335,207 Aus.#619,639 Aus.#1,952,499 Aus.#4,788,290 Can.#1,313,806 Jap. #9471,1990

Coin Learn Procedure for Models
MA850 / MA85CC / X12
for different version consult factory

1. Slide the front cover up and identify the three controls to be used in this procedure:
   - Black push-button near center bottom. (used to input the number of credit pulses)
   - Gray 16 position rotary switch to the right of the push-button. (#0 is normal RUN position, #1-#6 are for learning each of 6 possible coin types that can be accepted) **MA85CC 12 COIN (**#0 is normal RUN position, #1-#9 and #A, #B,#C are for learning each of 12 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 Gray rotary switch to one of the LEARN positions #1-#6 (for example, pick #3 for learning the 3rd coin type) and observe the LED turns Red to indicate it is now ready to learn.
3. Push the Black button once for each credit pulse you wish to have issued for this coin. For example, a $1 coin would require 4 credit pulses if you are also accepting $0.25 coins, one credit pulse per quarter.
4. **Slide the cover back on the unit to make sure outside light does not interfere with the sensors**.
5. Show the unit **6 different 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 6th 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, the LED will be Green however it will not accept coins.
8. Slide the front cover back down and you should now be able to accept the new coin.

UNWANTED COIN FEATURE
1. Use the same coin learn procedures as above.
2. THE COIN YOU DO NOT WANT TO ACCEPT MUST BE LEARNED IN COIN POSITION #1. Turn to position #1 and press the Black button 13 times, **drop the same sample coin through that you do not want to accept 6 times**. NEXT LEARN THE COIN YOU WANT TO ACCEPT IN COIN POISITION #2. Turn to position #2 and press the Black button for the number of times for the value of your coin to be accepted, **drop the same sample coin through that you do want to accept 6 times.** Now turn back to "0" the operating position.

COIN DE-LEARN PROCEDURE
1. Slide the front cover up and turn the rotary switch to the coin # position you wish to DE-LEARN.
2. Push the Black button once to initiate the LEARN sequence.
3. Turn the rotary switch back to position #0 without depositing any coins to signal the unit that 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.

FACTORY SETTINGS
1. Position # 6 has a U.S. quarter learned with 1 pulse
2. Position # 5 has a U.S. dollar coin learned with 4 pulses

TROUBLE SHOOTING
1. If LED is flashing RED to GREEN in the "0" position, turn off power for 30 to 45 seconds then turn back on. This should reboot the acceptor. Check to make sure that the 2 halves of the acceptor are closed together, open the acceptor and let the spring slam it shoot. Also, check to see if the White ribbon cable located on the back side of the acceptor is pluged in just under the 2 Red wires. If this does not correct your problem call your distributor.
2. If coin returns and No coin pulse to the timer check to see if the LED is blank, Green, Red, or flashing. If blank check for voltage between the "Yellow" 24vac and "Black" common wires. If power is present call your distributor for to get acceptor repaired. If Red or Green check to see if Gray switch is in the "O" position, if not in "0" it will not accept coins.

WIRING INFORMATION – MA850-MA85CC-X12
FOR MA853 AND X12DM CHECK WITH FACTORY

XEPTOR® CONNECTIONS TO DISPLAYS & TIMERS

LTT800 / LTT802 CONNECTIONS

MA800 or X10	LTT802
YELLOW	PIN #1
BLACK	PIN #2
RED/GREEN	PIN #3
RED/GREEN	PIN #2

BT800/BT802/BT902/BT912/BT922-CONNECTIONS

MA800 or X10	BT800-BT922
YELLOW	PIN #1
BLACK	PIN #2
RED/GREEN	PIN #3
RED/GREEN	PIN #2

MONORAIL DISPLAY CONNECTIONS

MA800 or X10	MDC
YELLOW	BLK-24V
BLACK	WH-COM
RED/GREEN	WH/GRN
RED/GREEN	WH-COM

DIXMOR LED 3 CONNECTIONS

MA800 or X10	LED 3
YELLOW	#7 RED
BLACK	#6 GREEN
RED/GREEN	#2 BROWN
RED/GREEN	#1 GRAY/#6 GREEN

DIXMOR DX2000 CONNECTIONS

MA800 or X10	DX2000
YELLOW	#9
BLACK	#10
RED/GREEN	#10
RED/GREEN	#5

DIXMOR DX300 CONNECTIONS

MA800 or X10	DX300
YELLOW	#7
BLACK	#6
RED/GREEN	#6
RED/GREEN	#1

TIME MASTER TM5/TM5J/LED5/CT2000 CONNECTIONS

MA800 or X10	TIME MASTER
YELLOW	#9 ORANGE
BLACK	#10 GREEN
RED/GREEN	#10 GREEN
RED/GREEN	#2 ORANGE/BLK

XEPTOR® CONNECTIONS TO DISPLAYS & TIMERS

D & S DISPLAY TIMER CONNECTIONS

MA800 or X10	202/203/204
YELLOW	BLK/YEL#7
BLACK	WHITE #6
RED/GREEN	BLUE #2
RED/GREEN	WHITE #6

GINSAN DISPLAY CONNECTIONS

MA800 or X10	GS31/GS31B
YELLOW	RED
BLACK	PURPLE
RED/GREEN	RED/GRN
RED/GREEN	PURPLE
CALL FOR TIMER CONNECTIONS	

DILLING & HARRIS CONNECTIONS

MA800 or X10	
YELLOW	
BLACK	
RED/GREEN	
RED/GREEN	

SPECIALTY MFG CONNECTIONS

MA800 or X10	TIME MACHINE
YELLOW	BLK-24V
BLACK	WHT-COM
RED/GREEN	BLK-24V
RED/GREEN	YEL- COIN SWITCH

SECURECOIN TIMER 24 VOLT CONNECTIONS

MA800 or X10	#ET SAME AS IDX AT411
YELLOW	#2
BLACK	#3
RED/GREEN	#7
RED/GREEN	# 8 or #3

D & S CONNECTIONS

MA800 or X10	NON- DISPLAY
YELLOW	24V HOT (L1)
BLACK	24V COMMON (L2)
RED/GRN	COIN
RED/GRN	24V COMMON (L2)

MAGIC WAND & JIM COLMEN TM5/TM5J/ CT2000 CONNECTIONS

MA800 or X10	TIME MASTER
YELLOW	#9 ORANGE
BLACK	#10 GREEN
RED/GREEN	#10 GREEN
RED/GREEN	#2 ORANGE/BLK

XEPTOR® CONNECTIONS TO DISPLAYS & TIMERS

IDX FLAT PACK 24 VAC CONNECTIONS

MA800 or X10	AT411/AT422 AT412
YELLOW	PIN #2
BLACK	PIN #3
RED/GREEN	PIN #7
RED/GREEN	PIN #8 or #3

IDX FLAT PACK 115 VAC CONNECTIONS

MA800 or X10	AT413
115V HOT	PIN #1
115V COMMON	PIN #3
YELLOW	PIN #2
BLACK	PIN #8 or #3
RED/GREEN	PIN #7
RED/GREEN	PIN #8 or #3

IDX PLUG IN TIMERS 24 VOLT CONNECTIONS

MA800 or X10	AT401/402/403
YELLOW	#2
BLACK	#1
RED/GREEN	#3
RED/GREEN	#1

MONORAIL PLUG IN TIMER 24 VOLT CONNECTIONS

MA800 or X10	FOR G2
YELLOW	#2
BLACK	#1
RED/GREEN	#3
RED/GREEN	#1

MONORAIL TIMER 24 VOLT CONNECTIONS

MA800 or X10	MDC
YELLOW	BLK-24V
BLACK	WH-COM
RED/GREEN	WH/GRN
RED/GREEN	WH-COM

PARAPLATE CONNECTIONS

MA800 or X10	T24120
YELLOW	#2
BLACK	#3
RED/GREEN	#7
RED/GREEN	#8 or #3

PARAPLATE -NEW 24VAC CONNECTIONS

MA800 or X10	T24200
YELLOW	#1
BLACK	#2
RED/GREEN	#5
RED/GREEN	#6 or #2

XEPTOR® CONNECTIONS TO DISPLAYS & TIMERS

GINSAN 24 VOLT CONNECTIONS

MA800 or X10	GS-7/8/75 GS-87/255
YELLOW	#3
BLACK	#1
RED/GREEN	#4
RED/GREEN	#1
TOKEN INPUT	#5 (GS87)

GINSAN GS9 115 VOLT CONNECTIONS

MA800 or X10	GS-9
YELLOW	#7
BLACK	#5
RED/GREEN	#4
RED/GREEN	#5

GINSAN GS11 115 VOLT CONNECTIONS

MA800 or X10	GS-11
YELLOW	#1
BLACK	#4
RED/GREEN	#3
RED/GREEN	#4

KELTNER CONNECTIONS

MA800 or X10	D9
YELLOW	#1
BLACK	#2
RED/GREEN	#4
RED/GREEN	# 5 or #2

KELTNER CONNECTIONS

MA800 or X10	LC-1
YELLOW	#2
BLACK	#1
RED/GREEN	#4
RED/GREEN	# 3 or #1

PARKER CONNECTIONS

MA800 or X10	
YELLOW	#3
BLACK	#1
RED/GREEN	#4
RED/GREEN	#1

MARK VII CONNECTIONS

MA800 or X10	ACCUTIME
YELLOW	#2
BLACK	#1
RED/GREEN	#4
RED/GREEN	#1