

MDE-4792D FlexPay™ Encrypting PIN Pad (EPP) and Secure Card Reader (SCR) Kit (EPK ENC3 RF) Installation Instructions for Encore® 300 August 2013

Introduction

Purpose

This manual provides instructions to install the FlexPay[™] Encrypting PIN Pad (EPP) and Secure Card Reader (SCR) Kit (EPK ENC3 RF) in Encore[®] 300 units.

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Required Tools and Materials

Following tools and materials are required for installing the EPK ENC3 RF Kit:

- 5/32-inch, 5/16-inch, and 1/4-inch Nut Driver or Ratchet and Socket *Note: Use magnetic nut drivers for convenience.*
- Flat-blade and Phillips® Screwdrivers
- Putty Knife
- Isopropyl Alcohol
- Card Reader IN Dispenser (CRIND®) Diagnostic Card (Q12534)

Parts List - EPK ENC3 RF

Following tables list the EPK ENC3 RF parts:

FlexPay EPP Kit

Following table lists the parts included in the FlexPay EPP Kit:

			Quantity		
ltem	Description	Part Number	Single-sided Kit	Dual-sided Kit	
1	Customer Interface Module (CIM™) Door EPP	M01208A5XX	1	2	
2	Keypad EPP	M08228B003	1	2	
3	Cable, EPP +5 V and Data	M08414A002 ~OR~	1	2	
	Cable, EPP +5 V and Data with SCR	M07702A008*			
4	Cable Mount, Adhesive	Q13558-04	1	2	
5	Adapter, Keypad	M08399B001	1	2	
-					

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			Quai	ntity
ltem	Description	Part Number	Single-sided Kit	Dual-sided Kit
6	Screw Self-tapping Hexagonal-head Head 6-20 X	Q11677-26	4	8
7	Keypad Miscellaneous Options	M08412B001	1	2
8	Cable, EPP Auxiliary Keypad	M08409A001	1	2
9	Clamp, Flat Cable Mount	M01102B002	1	2
10	Gasket, Card Reader	M00682B001	1	2
11	Rain Shield	M02206A002	1	2
12	Gasket, Card Reader IN Dispenser (CRIND®) Display	M02539B001	1	2
13	CRIND Basic Input Output System [BIOS (use with third-party Point of Sale (POS) Systems)]	K93744-20 ~OR~ K93744-10	1	2
14	CRIND BIOS (use with Gilbarco® POS Systems)	K93744-06	1	2
15	Keypad Blanking Labels	M09166B001	1	1
16	Gasket, Scanner Hood	M00370B002	1	2
17	Gasket, Bezel (1.5X6.4X430 mm)	M01046B004	1	2
18	Gasket, Bezel (1.5X12.7X548 mm)	M01046B005	1	2
19	Gasket, Bezel (3.2X8X548 mm)	M01046B006	1	2

*If the FlexPay EPP Kit is ordered with the SCR upgrade option, this cable is included.

SCR Option with Contactless - M07813K107 Kit

Following table lists the parts included in the M07813K107 Kit:

			Quan	ntity
ltem	Description	Part Number	Single-sided Kit	Dual-sided Kit
1	Reader, Encrypted Card	M07577B001	1	2
2	Cable, Encrypted Card	M07709A001	1	2
3	Printed Circuit Assembly (PCA), 13.5 MHz Antenna	M05170A001	1	2
4	Decal, Underwriters' Laboratories (UL®)/CA Recognition	N23951-11	1	2
5	Cable, Antenna Encrypted	M07703A001	1	2
6	Bracket, Card Reader	M07574B001	1	2
7	Screw Self-tapping Hexagonal-head 6-20 X	Q11677-24	4	8
8	Screw TF Washer Hexagonal-head CS	Q11657-290	2	4
9	Tape Adhesive Press Sen	K85492-56	0.01	0.01
10	Cable Mount, Adhesive	Q13558-04	3	6
11	Card, Card Reader Cleaning	Q11482	1	1
12	Decal, Patent and Federal Communications Commission (FCC)	M02962B009	1	1

SCR Option - M07813K108 Kit

Following table lists the parts included in the M07813K108 Kit:

			Quar	ntity
ltem	Description	Part Number	Single-sided Kit	Dual-sided Kit
1	Reader, Encrypted Card	M07577B001	1	2
2	Cable, Encrypted Card	M07709A001	1	2
3	Bracket, Card Reader	M07574B001	1	2
4	Screw Self-tapping Hexagonal-head 6-20 X	Q11677-24	4	8
5	Cable Mount, Adhesive	Q13558-04	3	6
6	Card, Card Reader Cleaning	Q11482	1	1

Call Button Option - M03059K001 Kit

Following table lists the parts included in the M03059K001 Kit:

ltem	Description	Part Number	Quantity
1	Cable, Call Interface	M02802A001	1
2	Cable-tie	Q10178-01	1
3	Cable, Call Interface	M04687A001	1
4	Cable, Keypad To Call	M02803A001	1
5	Cable, Call Button	M01233A002	1
6	PCA, Call Interface	M04528A001	1
7	Screw Self-tapping Hexagonal-head 6-20 X	Q11677-24	1
8	Support Circuit Board Locking	Q10651-02	2
9	Clamp, Flat Cable Mount	M01102B002	1
10	Bracket, Call Button	M08857B001	1

Related Documents

Document Number	Title	GOLD [®] Library
MDE-3804	Encore and Eclipse® Start-up/Service Manual	Encore and Eclipse Service Manual
MDE-3893	Encore and Eclipse Series Owner's Manual	Encore and Eclipse
MDE-4625	Graphics Panel Application for The Advantage® Series, Encore, Eclipse and Encore S	 Encore and Eclipse The Advantage and Legacy Models[®]
MDE-4784	FlexPay Encrypting PIN Pad (EPP) Start-up and Service Manual	FlexPay Encore and Eclipse
PT-1936	Encore Series Pumps and Dispensers Illustrated Parts Manual	 Encore and Eclipse Encore and Eclipse Installers Parts Manual

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Abbreviations and Acronyms

Description
Basic Input Output System
Customer Interface Module
Card Reader IN Dispenser
Distribution Box
Encrypting PIN Pad
Electrostatic Discharge
Federal Communications Commission
Gilbarco Online Documentation
Junction Box
Occupational Safety and Health Administration
Printed Circuit Assembly
Point of Sale
Radio Frequency
Secure Card Reader
Transmitter/Receiver IN Dispenser
Underwriters' Laboratories

Important Safety Information

Notes: 1) Save this Important Safety Information section in a readily accessible location.

> 2) Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining, or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock, or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.

Preliminary Precautions

You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.

Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

WARNING

The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.

You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

Total Electrical Shut-Off Before Access

Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:



- · An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

Read the Manual

Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call a Gilbarco Authorized Service Contractor or call the Gilbarco Support Center at 1-800-800-7498. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 70; National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Replacement Parts

Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury, or damage to the equipment:



DANGER: Alerts you to a hazard or unsafe practice which will result in death or serious injury.





that could result in death or serious injury. CAUTION with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.

CAUTION without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

Working With Fuels and Electrical Energy

Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

No Open Fire



Open flames from matches, lighters, welding torches, or other sources can ignite fuels and their vapors. No Sparks - No Smoking



Sparks from starting vehicles, starting, or using power tools, burning cigarettes, cigars, or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion, or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

\Lambda WARNING

The pump/dispenser contains a chemical known to the State of California to cause cancer.

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.

In an Emergency

Inform Emergency Personnel

Compile the following information and inform emergency personnel:

- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

WARNING

Gasoline/DEF ingested may cause

unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors.

If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.



Gasoline inhaled may cause unconsciousness and burns to lips, mouth, and lungs. Keep airway open. Seek medical advice immediately.



Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

WARNING



Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately. **Lockout/Tagout**

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

Before You Begin

To prepare the site and dispenser for the installation, proceed as follows:

- 1 Inform the Manager.
- **2** Barricade the unit to be worked on.
- **3** Remove power to the Encore 300 unit at the breaker panel. Follow the OSHA lockout/tagout procedures.
- **4** Read all the safety information provided in *MDE-3804 Encore and Eclipse Start-up/Service Manual.*
- **5** Isolate two-wire to the unit.

Failure to turn off the unit during the installation of the kit may cause injury or bodily harm from electrical shock. Ensure that all power to the unit is switched off before opening the door to the unit and during kit installation.

Installing FlexPay EPP Kit (EPK ENC3 RF)

IMPORTANT INFORMATION

Ensure that you have a compatible version of the CRIND Logic Board. The latest version of the CRIND Logic Board (M03651A001) was shipped as part of the original dispenser, but may have been replaced with T17764-G1 or T17764-G2. If your dispenser has a -G2 or -G1 Board, replace with the latest version.

To install the FlexPay EPP Kit in Encore 300 units, proceed as follows:

- 1 Open the main door.
- **2** Isolate the CRIND Two-wire Cable.

3 Remove the eight screws securing the CRIND Display Bracket to the door.



Figure 1: Removing CRIND Display Bracket

4 Remove the screws securing the Price/Volume Display using a 1/4-inch nut driver.

Figure 2: Removing Price/Volume Display



5 Remove the three screws securing the Speaker to the door using a 1/4-inch nut driver.



Figure 3: Removing Speaker

6 Remove the screws securing the Printer to the door.

Figure 4: Removing Printer



7 Remove the four screws securing the Card Reader and Card Reader Bracket to the door.



Figure 5: Removing Card Reader and Card Reader Bracket

8 Remove the two screws securing the Transmitter/Receiver IN Dispenser (TRIND) Board to the door, if applicable.



Figure 6: Removing TRIND Board

9 Remove the Beeper mounted on the CRIND Display Bracket, if supplied/applicable.



Figure 7: Removing Beeper

- **10** Remove any other peripherals installed on the CIM door.
- **11** Remove the Hinge Pin securing the CIM door by removing the two screws.



Figure 8: Removing Hinge Pin

- **12** Remove the CIM door.
- **13** Remove the graphics around the Scanner Hood on the existing door.

Figure 9: Removing Graphics



14 Remove the three mounting screws (two upper screws and one lower screw) securing the Scanner Assembly and retain for reassembly.

Figure 10: Removing Mounting Screws



15 Remove the Scanner Hood from the CIM door by pulling it from the front. A flat-blade screwdriver may be used to pry the hood away from the rear side of the door. Retain the Scanner Hood for reassembly.



Figure 11: Removing Scanner Hood

- **16** Remove the Scanner Hood Gasket.
- **17** Remove the three nuts on the rear side of the door securing the Scanner Blank.





18 Install the new Scanner Hood Gasket [M00370B002 (see Figure 13)].



Figure 13: Installing New Scanner Hood Gasket

19 Reinstall the Scanner Hood and Scanner Assembly using the three screws removed in step 14 on page 12.

Figure 14: Reinstalling Scanner Hood and Scanner Assembly



20 Install the new graphics provided.



Figure 15: Installing New Graphics

- **21** Remove the three old gaskets where the original CRIND door was located and install the three new gaskets (see Figure 16). Ensure the following while installing the gaskets:
 - a Place the M01046B004 Gasket on top of the M01045B005 and M01045B006 Gaskets.
 - **b** Place the ends of M01045B005 and M01045B006 Gaskets against the M01046B004 Gasket, without any gaps.

Figure 16: Installing New Bezel Gaskets



- 22 Install the new door and insert the Hinge Pin.
- 23 Reinstall the two screws removed in step 11 on page 11 using a 5/16-inch nut driver.



Figure 17: Installing CIM Door

24 Connect the FlexPay EPP 5 V Data Cable (M08408A002) to the rear side of the FlexPay EPP. Route the cable between the Card Reader and Scanner area. *Note: For the SCR option, use the M07702A008 Cable.*

Figure 18: Connecting FlexPay EPP 5 V Data Cable



25 Reinstall the TRIND Board using the screws removed in step 8 on page 10 to the door, if applicable.



Figure 19: Reinstalling TRIND Board

26 Reinstall the Speaker using the three screws removed in step 5 on page 9.





27 Reinstall the Price/Volume Display using the screws removed in step 4 on page 8.



Figure 21: Reinstalling Price/Volume Display

28 Reinstall the CRIND Display Bracket using the screws removed in step 3 on page 8, if applicable.





29 Reinstall the Printer using the screws removed in step 6 on page 9.



Figure 23: Reinstalling Printer

- **30** Reconnect the Ground Cable to the Printer.
- **31** Reinstall the Beeper on CRIND Display Bracket, if supplied/applicable.

n

Figure 24: Reinstalling Beeper

- **32** Install the new Card Reader Gasket (M00682B001).
- **33** Reinstall the Card Reader and Card Reader Bracket using the four screws removed in step 7 on page 10. Reinstall the Ground Cable.



Figure 25: Reinstalling Card Reader and Card Reader Bracket

34 Connect the other end of FlexPay EPP 5 V Data Cable to P282 on the CRIND Logic Board for Side A of the unit.

Note: When you install the FlexPay EPP on Side B, connect the FlexPay EPP Cable to P282 on the CRIND Logic Board.



Figure 26: Connecting FlexPay EPP Cable

35 Install the new firmware chips in the U7 slot on the CRIND Logic Boards.

Note: Two firmware chips are provided with the FlexPay EPP Kit. If you are using the G-SITE® POS or Passport® System, then install the K93744-06 Firmware Chip; for any other POS System, use the K93744-10 Firmware Chip. This will update the CRIND BIOS software to recognize the new keypad.



Figure 27: Installing New Firmware Chip

- **36** Ensure that all the cables are secured tightly.
- **37** Repeat steps 1 on page 7 to 36 for Side B of the unit.
- **38** Restore power to the unit.

39 Perform a coldstart on the CRIND device by installing a Jump Jack on the coldstart pin.



Figure 28: Installing Jump Jacks

- **40** Use the FlexPay EPP Mapping Tool to map keys (and their associated functions) present in the current keypad to those present on the FlexPay EPP. For detailed information on installing, configuring, and using the FlexPay EPP Mapping Tool, refer to *MDE-4784 Graphics Panel Application for The Advantage Series, Encore, Eclipse and Encore S.*
- **41** Bring the POS back on line by reconnecting the CRIND Two-wire Cable or by de-isolating at the Distribution Box (D-Box).
- 42 After the CRIND downloads from the POS, run a keypad test.
- 43 Check if debit transactions are accepted using the newly installed FlexPay EPP.



Figure 29: Encore 300 Unit with FlexPay EPP Installed

Installing the FlexPay EPP Kit in Encore 300 units is now complete.

Installing Call Button

For details on cable connections refer to "Encore 300 Cable Block Diagrams" on page 30. For system cabling, refer to *MDE-3804 Encore and Eclipse Start-up/Service Manual*.

To install the Encore 300 Electronic Call Button, proceed as follows:

- From the CIM door rear side, locate the two Circuit Board support mounting holes (see Figure 30) on the left side of the Back Display Bezel. Note: Display Bezel varies based on the display type used in the dispenser. Figure 30 illustrates where the Call Interface PCA (M04528A001) is installed.
 - Figure 30: Display Bezel Rear Side View of CIM Door



- **2** Use the following criteria to determine the type of fasteners that will be used to secure the Call Interface PCA:
 - If the dispenser contains a Monochrome Display, use the two Self-tapping Screws (Q11677-24).
 - If the dispenser contains a single-line CRIND produced before January 2003, use the two Circuit Board Supports (Q10651-02).
 - If the dispenser contains a single-line CRIND produced after January 2003, no screws or Circuit Board supports are required.
- **3** Obtain the two Circuit Board Supports and two self-tapping screws from the kit. Check the PCA mounting holes (see Figure 30) in the bezel to determine whether the supports or self-tapping screws are required to secure the PCA to the bezel.
 - If Circuit Board supports are used, insert the supports and proceed to step 4.
 - If screws are used, then proceed to step 5 on page 24.
 - If no supports or screws are required, secure the PCA to the bezel using the orientation shown in Figure 33 on page 25 and proceed to step 6 on page 24.
- **4** Position the PCA onto the supports using the top and bottom orientation shown in Figure 33 on page 25 and then go to step 6 on page 24.

- **5** Position the PCA onto the bezel using the top and bottom orientation shown in Figure 33 on page 25, and secure the PCA to the bezel using the two self-tapping screws.
- 6 Locate the LCD Main Display PCA [M01515 (see Figure 31)] and unplug Jack J2115 of the Encore 300 Main Interface Cable (M01650A001).



Figure 31: LCD Main Display PCA (M01515)

- **7** Obtain the Call Interface Cable [M02802A001 (see Figure 32)] from the kit and connect the cable as follows:
 - Insert Jack J101 (see Figure 32) into Plug P101 (see Figure 33 on page 25) on the Call Interface PCA (M04528A001).
 - Insert Jack J2115 (see Figure 32) into Plug P2115 (see Figure 31) on the LCD Main Display (M01515).
 - Insert Plug P2115A (see Figure 32) into Jack J2115 on the Encore 300 Main Interface Cable (M01650A001).



Figure 32: Call Interface Cable (M02802A001)



Figure 33: Call Interface PCA (M04528A001)

- **8** Obtain the Keypad To Call Cable [M02803A001 (see Figure 34)] from the kit and connect the cable as follows:
 - Insert Jack J902C (see Figure 34) into Plug P902C (see Figure 33) on the Call Interface PCA (M04528A001).
 - Insert Jack J902 (see Figure 34) into Plug P902B Plug (see Figure 35 on page 26) on the Options Key Pad (M01109B003).

Figure 34: Keypad To Call Cable





Figure 35: Miscellaneous Options Keypad (M01109B003)

9 Obtain the Call Button Cable (M01233A002) from the kit and insert Jack J102 (see Figure 36) into Plug P102 (see Figure 33 on page 25) on the Call Interface PCA. Run the field wiring end of the cable to the back of the dispenser. For illustration of the Call Button Cable, see Figure 37 on page 27 through Figure 40 on page 28.

Figure 36: Call Button Cable (M01233A002)





Figure 37: Rear View of Encore CIM Door with Call Button Cable

Figure 38: Rear View of Encore Main Door with Call Button Cable Run





Figure 39: Encore Top Electronics Shelf with Call Button Cable Run

Figure 40: Encore Bottom Electronics Shelf with Call Button Cable Run



Activating Encore Electronic Call Button

The Encore Electronic Call Button is activated when power is restored to the dispenser.

Completing Installation

To complete the installation of the Encore Electronic Call Button, proceed as follows:

1 Provide a conduit connection from the Auxiliary Junction Box (J-box) to a separate conduit stub (connection hardware and stub furnished by installing contractor) on the foundation. Connect to the Auxiliary J-box.

Note: Installer's procedures and materials for connection between the Auxiliary J-box and stub must comply with National Fire Protection Association (NFPA 70[®]) and The National Electrical Code (NEC[®]). Call Button wiring must not share the same conduit as the dispenser power wiring.

2 Connect external speaker wires (furnished by installer) to internal speaker wires and Call Button wires in the Auxiliary J-box based on the requirements of the third-party intercom system.

Note: Third-party intercom system must be equipped to intercept and interpret call signal through the communications (two-wire) loop. Call Button circuit is normally open.

- **3** Turn on the third-party intercom system, and test the Call Button and Speaker to ensure proper operation and installation. Pressing the Call Button should produce an audible beep or other signal.
- 4 Inform the station personnel about the operating procedures and purpose of the Call Button.
- **5** Turn on power to the unit.
- 6 Close and secure all the doors.
- 7 Install the CIM door graphics.
- 8 Clean up the work site. Remove all the tools and materials to be discarded.

Installing the Encore Electronic Call Button is now complete.

Encore 300 Cable Block Diagrams

Following are the cable block diagrams for Encore 300 units:

Figure 41: Encore 300 Cable Block Diagram (M01622) Sheet 1 of 3





Figure 42: Encore 300 Cable Block Diagram (M01622) Sheet 2 of 3



Figure 43: Encore 300 Cable Block Diagram (M01622) Sheet 3 of 3

Installing SCR Kit (M07813K107 or M07813K108)

To install the SCR Kit in Encore 300 units, proceed as follows:

Removing Existing Card Reader

To remove the existing Card Reader, proceed as follows:

Note: Read all instructions before beginning and observe all the safety precautions.

- **1** Obtain an approval from the Store Manager or responsible personnel to remove the unit from service.
- 2 Remove the AC power to the unit using the station circuit breaker. For details on removing power to the unit, refer to *MDE-3893 Encore and Eclipse Series Owner's Manual*.
- **3** Locate the main door, insert the key, and open the door.
- 4 Repeat step 3 for Side 2 of the unit.
- 5 Disconnect the cable harness or ribbon cable connection from the Card Reader (see Figure 44).
- **6** Use a 1/4-inch nut driver or 1/4-inch ratchet and socket to remove the four hexagonal-head screws that secure the Card Reader Bracket and the Card Reader to the option door (see Figure 44). Dispose of the Card Reader and Bracket, unless you want to keep the Card Reader as a used spare part.
 - Note: Note the Card Reader Gasket's orientation. This information is useful when you install the new Card Reader Gasket (M00682B001) and Bracket (M07574B001). Also, ensure that the option door has been cleaned with isopropyl alcohol and a clean cloth prior to installing the new Card Reader Gasket.
- 7 Remove the old Card Reader Gasket from the option door. Use a putty knife, if required.

Figure 44: Rear View of Encore 300 Main Door with Card Reader



Installing Encore SCR Assembly

To install the SCR Assembly, proceed as follows:

1 Remove the adhesive backing from the Card Reader Gasket (M00682B001) and place the gasket over the Card Reader opening from the inside of the open main door.



A properly grounded Electrostatic Discharge (ESD) wrist strap must be worn while servicing any electronic devices or components. Failure to use electrostatic precautions may damage electronic components and void warranty.

- **2** Obtain the SCR Assembly (M07577B001) and SCR Bracket [M07574B001 (see Figure 45)] from the kit.
- **3** Remove the Power/Data Cable from the SCR.
- 4 Install the ESD Ground Cable on the new Card Reader before securing it to the main door. Insert the connector end of the ESD Ground Cable (M07709A001) to the ESD Ground Connection on the Card Reader (see Figure 45 and Figure 46 on page 34).
- 5 From the rear of the main door, position the Card Reader and then the Card Reader Bracket on the door so that the Card Reader slot (see Figure 45) is positioned on the top. Loosely secure the SCR Bracket and the Card Reader to the main door using the four Q11677-24 Screws provided in the kit, to the four holes (looking from the back of the Card Reader). *Note: While installing the Card Reader Bracket onto the Card Reader, the lip on the bottom of the bracket should face away from you.*

Figure 45: SCR Assembly and Encore 300 Bracket



Figure 46: Encore/Eclipse ESD Ground Cable (M07709A001)



- 6 Remove the ESD Ground Connection Cable from the current Card Reader (if it has one).
- 7 Align the Card Reader and Bracket. Securely tighten the four Mounting Screws (Q11677-24).
- 8 Reconnect the 7-pin Power/Data Cable (M07702A008) to the 7-pin Power/Data Connector (see Figure 45 on page 34) on the Card Reader.
- 9 Connect the J282 end of 7-pin Power/Data Cable to the SmartPad[™] port on the CRIND Logic Board [M03651 (see Figure 47), current production] or T17764.



Figure 47: CRIND Logic Board (M03651) - Connection of J282 End to SmartPad Port

- **10** Locate the Ground Ring Terminal on the lower portion of the Monochrome Display Mounting Bracket and remove the screw that secures the ground connection. Retain the screw for reinstallation.
- **11** Connect the Ground Ring Terminal (see Figure 46) of the ESD Ground Cable (M07709A001) to the ground connection of Monochrome Display Mounting Bracket. Secure the connection with the screw and lock washer that was removed in step 10.
- **12** Ensure that all Ground Cables are secured to the unit with sufficient slack to prevent cable pulls and pinching.

Installing Antenna PCA

The Radio Frequency (RF) Antenna must be located directly behind the area where the MasterCard[®] PayPass[®], American Express[®] ExpressPay[®], and other logo graphics are attached as shown in Figure 48.



Figure 48: Encore 300 Main Door Showing Antenna PCA Location

To install the antenna, proceed as follows:

- 1 Locate the area where the antenna PCA will be mounted.
- **2** Using isopropyl alcohol, clean the mounting surface.
- **3** Locate the Antenna PCA (M05170A001) and the two 2-inch strips of Foam Tape (K85492-56) in the kit. Install the two strips of foam tape to the antenna's rear surface (non-component side of antenna PCA). These strips may already be installed on the antenna (PCB).
- 4 Peel the protective cover from the foam adhesive strips on the antenna and orient the antenna as shown in Figure 48 and attach it to the main door surface by pressing the foam tape firmly against the main door.

5 Using two Q11657-290 Screws (part of the kit), secure the antenna in place by inserting the screws in the mounting holes (see Figure 48 on page 36) and turning the self-tapping screws into the main door.

A CAUTION

When drilling on the island, always use a non-sparking manual (hand) drill or remove the door and move to a safe place to drill. A pneumatic drill can also be used as it is a non-sparking drill that uses air from an air compressor.

- Note: Since there are no pilot holes in the plastic for these antenna mounting screws, significant force is required to get the screws to penetrate the plastic. If problems are encountered, it is acceptable to drill a pilot hole of 1/8 inches diameter or less, by a maximum depth of 3/16 inches to start each screw. Do not completely drill through the plastic.
- 6 Connect one end of the Antenna Cable (M07703A001) to the Card Reader Antenna Connector on top of the SCR (see Figure 45 on page 34) and the other end of the Antenna Cable to the 2-pin connector on the PCA Antenna [M05170A001 (see Figure 48 on page 36)].
- 7 Repeat steps 1 on page 36 to 6 on the other side of the unit.

Coldstarting CRIND Devices Using M03651A001, M03651A002, and T17764 CRIND Logic Boards

To coldstart the CRIND device, proceed as follows:

- 1 Locate the CRIND Logic Board(s) on Side 1 and Side 2 main doors.
- **2** Use a chip remover to remove the current firmware chip located at U7 slot (located directly above connector P266).
- **3** On Side 1 of the unit, install the required firmware chip at U7 on the CRIND Logic Board. Repeat the procedure on the other side of the unit.
- 4 If using the M03651A001 or A002 CRIND Logic Board, install a Jump Jack on JP-19 (coldstart) on both Side 1 and Side 2. If using the T17764 CRIND Logic Board, install a Jump Jack on JP-11 (coldstart) on the CRIND Logic Boards on both sides of the unit.
- **5** Power-up the dispenser. At this point, both CRIND devices will coldstart and start a download sequence. Once the download sequence starts, you can remove the Jump Jacks from JP-19 or JP-11 (as applicable) on both the CRIND Logic Boards. If you wait too long, a message will be displayed on the CRIND display prompting you to remove the Jump Jacks.

Once the CRIND devices have completed the download process, they will automatically start communicating with the POS.

IMPORTANT INFORMATION

RF read performance will be severely affected by crimps/bends in the Antenna Cable.

Completing Installation

To complete the installation, proceed as follows:

1 Install the FCC Label (N23951-11) on the back of the Card Reader as shown in Figure 49.

Figure 49: FCC Label on Smart Card Reader (Side)



- 2 Close and secure the main doors using the main door lock.
- **3** Test the RF Readers by sliding the CRIND Diagnostic Card (Q12534) through both the readers with the magnetic strip facing upwards.
- 4 Pass the Card Reader test card in front of the RF antenna (flat side towards the antenna).
- Ensure that a valid read was made from the test card. The CRIND beeper will emit an audible beep upon performing a successful read.
 Note: The test card should be read from a minimum distance of 1 inch when presented parallel to the bezel surface.
- 6 Apply the appropriate graphic logos. For graphic application instructions, refer to *MDE*-4625 *Graphics Panel Application for The Advantage Series, Encore, Eclipse and Encore S. Note: Graphic logos are order-entry items.*

7 Obtain the FCC Decal (M02962B009) from the kit and install it under the patent label.

4 556 027-	RED OR SOLD	INDER ONE OR	MORE OF THE	FOLLOWING U.	S. PATENTS: D422 604	
4,556,504	5 546 981	6 092 410	6,427,464	6,765,949	D426.555	
4 570 686	5 557 084	6.098.879	6,431,226	D262.971	D428.424	
4 687 033	5 571 310	6 102 085	6.438.452	0265.092	D428.897:	
4 728 78A	5 602 745	6 109 477	6.460.579	0306,719:	D429.739	
4 748 846	5.626.649	6.112.134:	6.463.389:	0309,144;	D429,740:	
4 799 940	5.630.528	6,113,039;	6.466.842;	0316,471;	D431.039;	
4.805.453:	5,708,580;	6,116,505;	6.470.233:	D413,124;	D431,252;	
4,876,653;	5,719,779;	6,119,110;	6,493,440;	D413,311;	D431,573;	
4,890,210;	5,719,781;	6,123,118;	6,499,516;	D413,336;	D432,140;	
4,913,813;	5,720,325;	6,149,033;	6,505,134;	D413,337;	D432,141;	
4,930,655;	5,724,067;	6,167,923;	6,522,947;	D413,610;	D432,548;	
4,934,565;	5,734,851;	6,176,421;	6,523,744;	D413,901;	D432,552;	
4,938,054;	5,755,854;	6,184,846;	6,529,800;	D413,902;	D433,031;	Patent Label
4,938,251;	5,782,275;	6,185,307;	6,532,999;	D414,192;	D433,032;	
4,939,730;	5,794,667;	6,227,227;	6,535,726;	D414,501;	D433,033;	
4,967,366;	5,798,931;	6,250,151;	6,546,882;	D414,778;	D433,034;	
4,986,455;	5,803,136;	6,253,779;	6,571,151;	D414,779;	0433,035;	
4,040,577;	5,843,212;	6,263,319;	6,571,201;	0414,780;	0433,036;	
4,098,179;	5,857,500;	6,275,746;	6,573,884;	D414,781;	0433,037;	
1,134,548;	5,868,179;	6,296,148;	6,574,603;	0414,782;	0433,420;	
130,199;	5,871,851;	6,302,165;	6,578,145;	0415,166;	0433,421;	
5,228,084;	5,890,520;	6,313,737;	0,010,302	0415,167;	0433,422;	
209,303;	5,954,080;	6,325,112;	6,044,300;	0415,108;	0433,423,	
325,706;	5,930,239,	0,320,934;	5,001,014;	0415,109;	0433,424;	
345,979	5,909,091;	6,330,479,	6,660,089,	D415,170;	0433,065,	
,355,915,	5,971,042,	6,336,369,	6,690,275,	0415 177	0433,000,	
303,988;	5,979,703;	6,347,049;	6,097,705,	0415,172;	0423.689	
407 115	6,025,866	6 357 403	6 708 707	0415 777	D434 424	
417 256	6 052 620	6 360 137	6 710 701	0416 915	D434 780	
448 638	6 073 840	6 363 200	6 712 101	0416 016	0435 051	
450 883	6 078 888	6 364 206	6 721 669	D417 266	0440.579	
464 466	6.078.896	6 380 853	6 736 313	D418 523	D443 624	
501.246	6.082.415	6 381 514	6 741 909	D420.684	D456 820	
535,130	6.085,775;	6.386.246;	6,745,104;	D421.612;	D457.084:	
542.458	6.087,954;	6,418,983;	6,761,190;	0422.285;	RE35,238 :	
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Atd By Gilb	arco Inc. Gre	ensboro, NC	JSA A	VEEDER	-ROOT	
THIS DEVICE	COMPLIES WI	TH FCC RULE, I	ART 15. OPER	ATIONS IS SU	BJECT TO	
HE FOLLOW	ING TWO CON	DITIONS:				
(1) THIS	DEVICE MAY N	OT CAUSE HAR	MFUL INTERFI	ERENCE AND		
(Z) THIS	DEVICE MUST	ACCEPT ANY IN	TERFERENCE	THAT MAY BE	RECEIVED,	
INCLI	JDING INTERFE	RENCE THAT N	IAY CAUSE UN	DESIRED OPEI	RATION.	
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Figure 50: Installing FCC Decal

8 Turn on power to the unit.

Installing the SCR Kit to the Encore 300 unit is now complete.

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