COURION St. Louis, Missouri Sample Instructions

Before starting, carefully review these Installation Instructions. Double-check all measurements, and carefully adhere to the orientation of all fasteners when installing your new Courion components or interference may occur.

> We are here to help you! If you encounter problems or conditions are different than those depicted in these Instructions, please call Courion immediately.

(800) 533-5760 or (314) 533-5700



GENERAL DEMOLITION

Using the existing platform remove all of the existing Courion equipment from the hoistway. In general, it is recommended that the existing equipment be removed from the lowest floor first and proceeding upward through all the floors.

COURION EQUIPMENT PACKAGING

DOOR GUIDES. Typically, the existing Courion Door Guides will remain in place. These Door Guides will require certain modifications to accomodate the new Courion Door Operators and Sprocket Assemblies. Please consult the section entitled "Door Guide Modifications" before starting your work.

If you are installing New Door Guides, they will be packaged together in a single crate and identified by the Opening Number used in Courion's General Design Drawings.

HOISTWAY DOOR EQUIPMENT. Your Hoistway Door Equipment has been packaged "BY FLOOR". Each Hoistway Door Equipment box will contain all the necessary equipment to complete the hoistway door installation at that floor.

CAR ENCLOSURE. Your Courion Car Enclosure will be shipped fully assembled and attached to your new Car Platform. You will be required to partially disassemble the Car Enclosure in order to fit it through the hoistway opening. Care must be taken to mark which side panel and platform end is the "FRONT" and "REAR".

CAR GATE. Your Courion Car Gate equipment will be shipped in a separate box that contains all of the necessary equipment to complete the installation of your new Car Gate.

RETIRING CAM. Your Courion Retiring Cam equipment will shipped in a separate box that contains all of the necessary equipment to complete the installation of your new Retiring Cam.

CART-MATIC UNIT. Your CART-MATIC unit will be shipped in a separate box that contains all of the necessary equipment to complete the installation of your CART-MATIC unit.

HOISTWAY BARRIERS

As the existing door panels and safety equipment are removed from each floor, the contractor should install temporary full size entrance barriers to block the entire opening, and take appropriate measures to prevent physical access to each floor opening that has the existing door panels and guides removed. In addition, the contractor should post appropriate warnings at each entrance to alert personnel as to the dangers that exist.

TEMPORARY PLATFORM FLOOR

Extreme care should be taken any time the Courion Platform's center opening is NOT covered with a temporary wood floor. Install a temporary wood floor on the Platform as soon as its presence does not interfere with the installation process.

CHECK ALL MATERIALS

Verify quantity and check all items for damage immediately upon receipt. If any shortage or damage is found, please contact Courion immediately. A copy of your Job Packing List is inside the crate marked 'ERECTION IN-STRUCTIONS ENCLOSED".

PLEASE READ BEFORE **START OF INSTALLATION**

JOB SPECIFIC NOTES

Scope of Work - Upgrade the existing Cart Lifts to new COURION power hoistway doors and car gate system with automatic load and unload. Customer has advised COURION that lift is to be configured as a 2-Stop with one opening at the Ground Level (GRND), and one opening at the 2nd Level (2nd). The existing openings at the 1st and 3rd Levels will no longer be used and are to be bolted closed by Custoner

CAR ENCLOSURES

The new Car Enclosures to be standard 16 gauge, in lieu of 14 gauge.

ENTRANCE FRAMES AND GUIDE RAILS

Customer proposes to reuse the existing hoistway entrance jambs, sills, and door tracks, which must be in good working order at time of upgrade.

The existing Door Guide Rails will need to be modified for the new "TD" Style Door Operators and Interlocks. Please see the job specific instructions regarding "Interlock Bracket Mounting Location" drawing provided with these instructions.

Job Specific Drawings included with these Installation Instructions include:

Guide and Frame Assembly Drawings #200.2 that provides the following:

1. Location of the PA Interlock Mounting Brackets on the Door Guides.

2. That the existing rubber bumpers on the upper and lower spreader angles must be



removed.

If during installation you have any questions or comments, please do not hesitate to contact Courion Engineering at (800) 533-5760 or (314) 533-5700.

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General

Layout Rear View





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NEW DOOR GUIDE RAILS - Mount the Door Guide Rails to the Door Frame using the mounting hardware and anchors provided by Courion.

2 LOOSELY bolt the Door Guide Splice Plates to the Upper and Lower Door Guides.

IMPORTANT - Red Splice Plate must be between the Door Guide and the Grey Splice Plate.



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STEP

Door Frame & Guides





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Enlarge to 3/4" (minimum) \mathcal{D}

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Emergency Unlocking Devices (EUDs)

Normally, two (2) Interlocks will be equipped with safety access switches. These switches are used in conjuction with an Emergency Unlocking Device (EUD). Check Courion's General Design Drawings to determine if you have EUDs and at what openings they are installed.



INTERLOCKS - Using the Interlock Mounting Brackets, mount the PA Interlock to the Door Guide (one per Opening). See Courion's General Design Drawings to determine the correct side of the opening and proper vertical placement of the Interlock.





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STEP 4 PA Interlock

IF YOU HAVE HG-2 INTERLOCKS - Mount the HG-2 Interlock to the Upper Door Guide (one per Opening). See Courion's General Design Drawings and the next page to determine the correct side of the opening and proper vertical placement of the Interlock.





STEP 4 HG Interlock

Installation Instructions CART-MATIC - Peelle Conversion

Shop Order Reference

DOOR PANELS AND CHAINS - Install the Door Panels, Chain Rods and Door **2** Attach the LOWER DOOR Chains at each Opening. PANEL CHAIN ROD to the LOWER DOOR PANEL. **NOTE:** Hoistway Door Panels ae numbered. These numbers correspond to the opening numbers on Courion's General Design Drawings. Make sure that your Hoistwas Door Panels are installed at the proper openings. Install the LOWER DOOR PANEL into the Door Guide Rails and attach the DOOR GUIDE SHOES. Allow the LOWER DOOR PANEL to rest in the FULL OPEN position. 6 6 Door Panel Chain Rod



3 Install the UPPER DOOR PANEL in the Door Guide Rails. Attach the DOOR CHAINS to the Upper Panel Chain Hitch on boths sides of the Door Panel. Feed the DOOR CHAIN over the Dual Sprocket/Idler Sprocket and attach to the CHAIN ROD.

• Loosen the Motor mounting bolts and slide the motor towards the Door Guide. Thread the DOOR OPERATOR CHAIN over the Dual Drive Sprocket and through the 3/4" holes in the Door Guide Rails. The Door Operator Chain should run over the sprocket CLOSEST to the roomside.

STEP 5 Door Panels CRITICAL **5** Connect the two ends of the DOOR OPERATOR CHAIN with a Chain Clip (Shaftside). All chain connecting links **MUST** face toward the shaft side of the hoistway. 6 Move the Motor away from the Door Guide to tension the Door Operator Chain. DO NOT OVER TENSIION the chain. Chain is correctly tensioned when there is 1/8" to 3/16" of deflection with light finger pressure at the chain's mid-point. O Door. Chain Operator nvel Chain 0 NOTE There should be (3) brass washers per 0 side on the Door Panel Chain Rod. **Chain Clips** 0 0 on Shaftside 0 Chain Clip 0 **MUST** face o Xo Shaft Side н Chain Rod Chain Clip **MUST** face Shaft Side 0 **ADJUSTMENTS** Adjust the Door Guide Shoes to limit side-to-side play in the Door Panels to 1/8". Adjust the Door Chain Rods to ensure that the Door Panels are level. 13

LOCK BAR INSTALLATION - Install the Lock Bar Mounting Bracket and Lock Bar on the Interlock Side of each Opening.



• Bolt the Lock Bar Mounting Bracket to the Upper Door Panel in the pre-drilled tapped holes.

Slide the Lock Bar through the PA Interlock Lock Bar Guide with the chamfered end of the Lock Bar facing the Limit Switches.

Bolt the Lock Bar to the Lock Bar Bracket using the Lock Bar Bolt. The Lock Bar should pivot on the 3/8" mounting screw. The chamfered end of the Lock Bar **MUST** face the Limit Switches.

Pull the Door to the **FULL CLOSED** position and adjust the Closed Limit Switch (upper switch) so that there is 1/4" clearance between the chamfered end of the Lock Bar and the Roller Arm on the Closed Limit Switch.

6 Pull the Doors to the **FULL OPEN** position and adjust the Open Limit Switch (lower switch) so that there is 1/4" clearance between the chamfered end of the Lock Bar and the Roller Arm on the Open Limit Switch.

- CRITICAL Make sure the Lock Bar moves freely when the Door Panels move up and down.
- Make sure the gap between the Lock Bar Notch and Locking Dog is no more than 1/16" when the Doors are in the FULL CLOSE position.
- Adjust the Door Open and Door Closed Limit Switches so that there is a 1/4" clearance between the chamfered end of the Lock Bar and the Limit Switch Roller Arm.







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• Mount the Lock-Out Rod Holder and Switch Cam to the Interlock Side of the Upper Door Panel.

2 Slide the Lock-Out Rod down through the Lock-Out Rod Guide on the Interlock Mounting Plate and then up through the Lock-Out Rod Holder on the Interlock. Secure the Lock-Out Rod.

3 With the Door Panels in the **FULL CLOSED** position, align the Lock-Out Rod so that the Interlock Lever rests within the indentation of the Lock-Out Rod. Adjust the position of the Lock-Out Rod as needed.

CRITICAL

Make sure to align the Switch Cam so that it enters the Interlock without binding when the doors are in the FULL CLOSED position.

Using the set screw on the Interlock Lever, adjust the Interlock Lever so that the contacts within the Interlock make-up ONLY when the Door Panels are in the FULL CLOSED position.





HG-2 INTERLOCKS - Install the Lock-Out Rod Bracket, Switch Cam, and Lock-Out Rod on the Interlock Side of each Opening.







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Lock-Out Rod

Lock-Out

Rod Holder

Switch Cam

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CAR ENCLOSURE - Your COURION Car Enclosure was shipped to you fully assembled. When you dismantel the Car Enclosure for installation, leave each Side Wall (**2** & **3**) intact.

• Attach the two (2) side panels to the Platform (Items • & •). NOTE: Refer to Courion's General Design Drawings to identify the correct side for the COP cutout(s).

- **2** Attach the Canopy (**4**) and Canopy Frame (**5**) to the side panels.
- Attach the Car Top Brackets to the Stiles at the top of the Car Enclosure and secure.
- If applicable, attach the Back Panel to the side panels and canopy.
- **6** If applicable, attach the Caster Guides to the Platform.





RETIRING CAM - Install the Retiring Cam on the Interlock Side of the Car Enclosure.

CRITICAL

Installation of the Retiring Cam(s) is a two (2) person job. Attempting to install the Retiring Cam(s) by one person is dangerous.

• Park the Car at the lowest level with one man in the pit. CAUTION - IT IS ALWAYS DAN-GEROUS TO HAVE A PERSON IN THE PIT WHEN WORKING ON THE LIFT EQUIPMENT. TAKE ALL NECESSARY PRECAUTIONS TO AVOID INJURY.

Slide the Retiring Cam Assembly down from the top of the Car Enclosure on the Interlock Side.

Using the fasteners found in the Retiring Cam Hardware Kit, bolt the top and bottom of the Retiring Cam Assembly to the pre-drilled holes in the Car Enclosure.

Brace the top of the Retiring Cam Unit to the Car Enclosure if required.







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STEP 9 Gate Guides





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STEP 10 Gate Frame

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GATE DRIVE - Install the Gate Drive and Gate Idler to the Gate Frame. Consult Courion's General Design Drawings to determine which side to mount both items.







NOTE: Two (2) of the Motor Mounting Bolts are used in conjunction with the fasteners found in the Gate Drive Hardware Kit to attach the Gate Drive to the Gate Guides

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STEP 11 Gate Operator

Shop Order Reference





Installation Instructions CART-MATIC - Peelle Conversion

STEP Gate Cha



GATE CONTACT - Attach the Gate Contact and Gate Contact Cam to the Car





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CART-MATIC - Install the CART-MATIC Unit and Transfer Unit Encoder PLC.



• Using the Courion Lifting Handles, maneuver the CART-MATIC Unit into the recess in the Car Platform. Bolt the CART-MATIC Unit to the Car Platform.

- Drill two (2) 13/32" holes in the Car Platform's lower Cross Angle.
- Mount the CART-MATIC Encoder PLC Box to the Car Platform's lower cross angle.

IMPORTANT

Make sure the PLC Box is free and clear from all hoistway obstructions and that the lid can be opened with ease. Also make sure that the PLC Box is close enough to the CART-MATIC Unit to allow the Encoder Cable to reach the cable connection on the side of the PLC Box.



Drill two (2) 13/32" holes 1/2" down from the top of the cross angle and 15-1/2" apart.



Shop Order Reference

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CRITICAL

Do NOT install the Stop Bolt for the Hinged Sill Plate at this time. While the car is running manually, there is a strong possibility to get the Hinged Sill Plates trapped or broken off while running the car in the Up direction. Courion recommends that the Hinged Sill Plates be flipped into the Car and left there until the job is checked and ready to run on automatic.

SILL PLATE - Install the Hinged Sill Plates to the Car Enclosure and CART-MATIC Unit.











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Shop Order Reference

Each pair of JAMB ROLLER GUIDES contains a CART-READY SENSOR, and each pair of CAR ROLLER GUIDES contains a CART-ON SENSOR. The CART-READY SENSOR and CART-ON SENSOR are made up of proximity sensors located in the upper enclosure of the roller guide assembly.

ADJUSTMENT: To adjust the Proximity Sensor, remove the Roller Guide Cover on the proximity switch side of the Roller Guide. Position the Proximity Sensor to the Proximity Target using the Retainer Hex Nuts holding the Proximity Sensor to the Proximity Sensor Bracket. For best results, the face of the Proximity Sensor should be no more than 1/16" from the Proximity Target's radius surface when the Proximity Roller is actuated (rotated 90 degrees from neutral position).



ALTERNATIVE CART-ON SENSOR: Some Jobs do not have CART-ON Sensors in the CAR ROLLER GUIDES. On these Jobs, a CART-ON Sensor that mounts to the Car Top will be provided by COURION. Using the fasteners provided, mount the CART-ON Sensor Bracket to Car Top as shown below.

ADJUSTMENT: Adjust the CART-ON Sensor per the instructions provided with the sensor.





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STEP 18 Roller Guides



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STEP

EUD - When applicable, install the Emergency Unlocking Devices (EUD) at each Opening. Please consult Courion's General Design Drawings for the floors that receive EUDs.



Drill a 9/16" hole through the wall approximately opposite the chain attachment point in Α. the switch arm on the Interlock Roller.

- Β. Slide the EUD Pipe through the hole and cut to length.
- On the hoistway side, thread on a nut behind the 3" plate washer.

On the room side, insert the EUD Pipe through the hole in the back of the EUD box. Use

Anchor the EUD box to the wall.

Slide the EUD Chain through the EUD Pipe, leaving approximately 2" with the ring loose

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Cut the EUD Chain to length on the hoistway side.

Attach the EUD Chain to the Interlock Roller using the S hook provided.

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-EUD Chain

"S" Hook

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STEP EUDs

CART COUPLERS - When applicable, install the Courion Cart Couplers to the Carts. For additional JOB SPECIFIC information, see the GENERAL DESIGN DRAW-INGS located at the front of these Installation Instructions.



If you have a CART-MATIC Unit, it is important that your Carts meet the requirements set forth in the Cart Coordination Drawing attached to these instructions. If there is a descrepancy between the Cart Coordination Drawing and your carts, please contact Courion immediately.



STEP 21 Cart Couplers

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CRITICAL Checking each of the Safety Devices and the System Operation is a crucial step - DO NOT OMIT THESE STEPS . It is important to establish that the Courion equip- ment operates properly BEFORE it is connected to the Lift Controller.		 ✓ Using the Wiring Diagrams supplied by Courion and your Elevator Control Manufacturer, cross connect the Courion Door Control to the Lift Controller
Once you have completed the installa- tion of the Courion CART-MATIC Sys- tem, please check to make sure all of the following CRITICAL items are cor- rect: ✓ Your Doors and Car Gate should move freely up and down in their guides. If not, check your Guides to make sure they are true and plumb. Make sure your Door Shoes are in posi- tion to prevent side-to-side play in the Door and Gate Panels.	not positioned properly on the bottom of the Cart.√Using a Cart, check the Transfer Device for proper pickup and unload. Adjust the Encoder in the Transfer De- vice to insure the proper stroke of the Transfer Device Arm.√Check all motors for proper phase and rotation.√Check Hoistway Doors and Car	
✓ Make sure that your Lock Bar and Lock-Out Rod run freely through the guides when the Door Panels move up and down.	Gates at each landing. Check CART-MATIC Unit at each landing.	
✓ Using the setscrew on the Inter- lock Lever, adjust the Interlock Lever so that the contacts within the Interlock make-up ONLY when the Door Panels are in the FULL CLOSED position.	√ Check each Interlock and Safety Device. √ Re-install all device covers	
✓ Check all Carts against the Courion Cart Coordination Drawings. The Courion Cart-Matic System will not work properly if the Carts are not the correct size and if the Cart Coupling Fixture is		





Installation Instructions CART-MATIC - Peelle Conversion

Shop Order Reference