

HAMILTON SAFE®

Entrance Control System (ECS)

Field Installation / Service Manual



Document Number : 08-348 (Revised 4-19-12)

Document Number : 08-348 (Revised 6-12-12)

This guide provides procedures and cautions for field installing and servicing the Hamilton ECS at customer locations. A flowchart at the end of this document provides a summary of the installation process. Drawing numbers are also referenced for detailed information. Please note that the photos in this document were staged so the backgrounds may not look like an actual job site.

Technical Support

For technical support issues please contact Hamilton Safe directly at 513-874-3733.

Recommended Tools

Step ladder

6 Foot Level

Pry bar

Hammer drill

3/16" Masonry bits

1/4" Masonry bits (for tile only)

Cordless drill/driver w/ #2 & #3 phillips bits

#2 & #3 hand phillips screwdrivers

Small pocket flat blade screwdriver

3/8" Ratchet driver w/ 9/16" deep well socket

9/16" Box end wrench

10-32 & 1/4-20 taps w/driver

Glass suction cups

RJ45 crimp tool w/connectors & tester

Wood box shims

Glass cleaner

Stainless steel cleaner

Rags

Safety equipment as required for job site conditions (e.g. hardhat, safety glasses, safety shoes)

General Site Information – Overall Dimensions

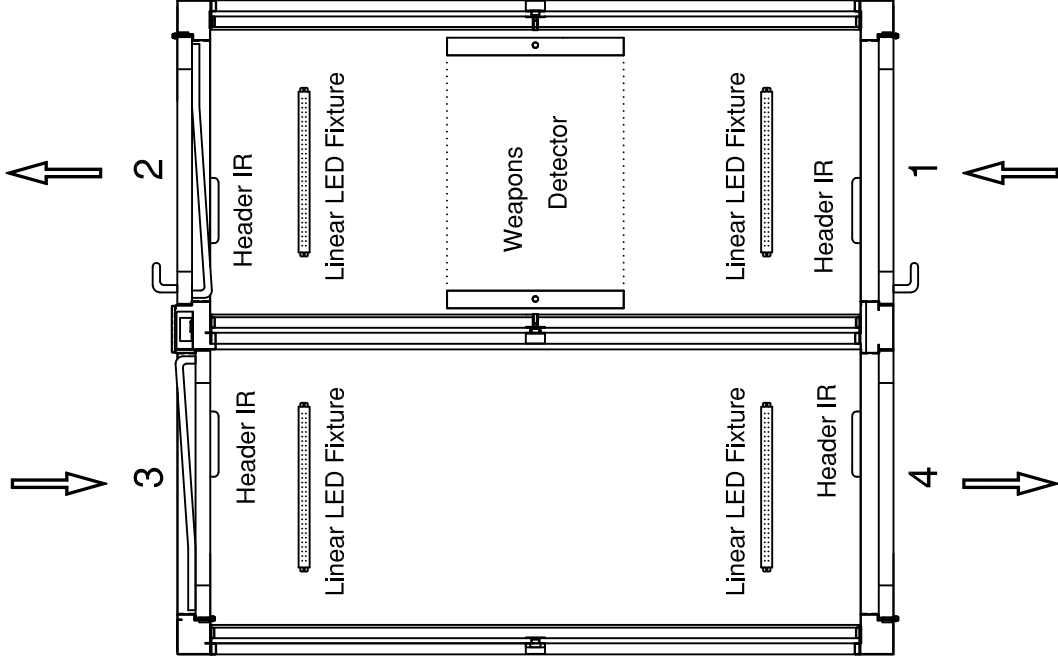
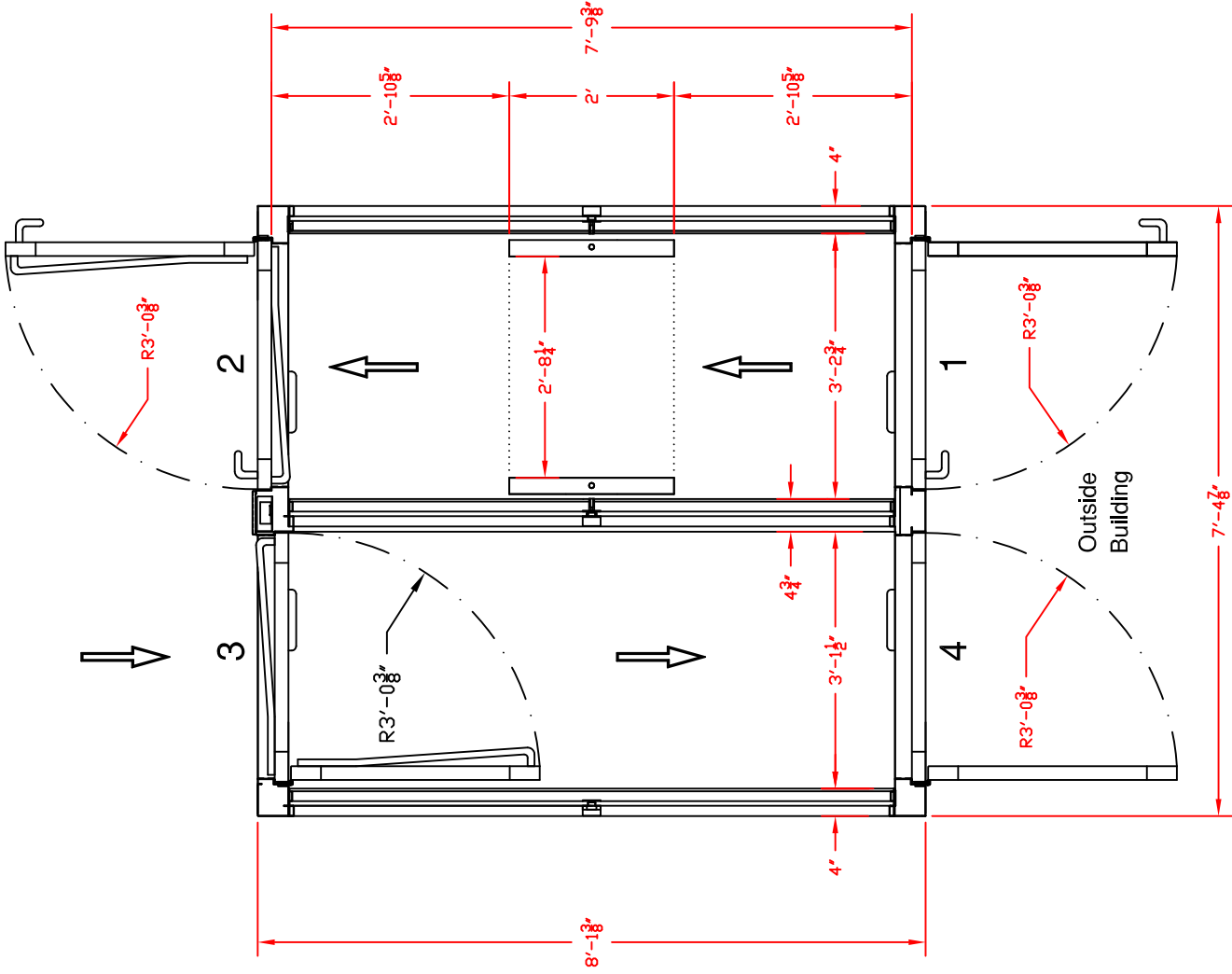
General Site Information

A quality installation begins by verifying that the building has been properly prepared.

- Drawing 96-277 provides overall dimensions of the ECS for reference.
- Drawing 96-296 provides details about the rough opening. This 7'-6" wide x 7'-6" high opening must be square and plumb with a maximum deviation of 1/8". The exterior face must also be in a single plane with no more than 1/8" twist from corner to corner.
- Drawing 96-297 provides details about the slab requirements. The 7'-8" wide x 8'-6" deep slab must be level with no more than 1/8" deviation.
- Drawing 96-298 provides details about the electrical requirements. A 110 VAC 15 Amp dedicated unswitched circuit outlet must be provided. Verify that no electrical wiring will be in the vicinity of the weapons detector as shown on the drawing.

REV-1	.
REV-2	.

Inside Building



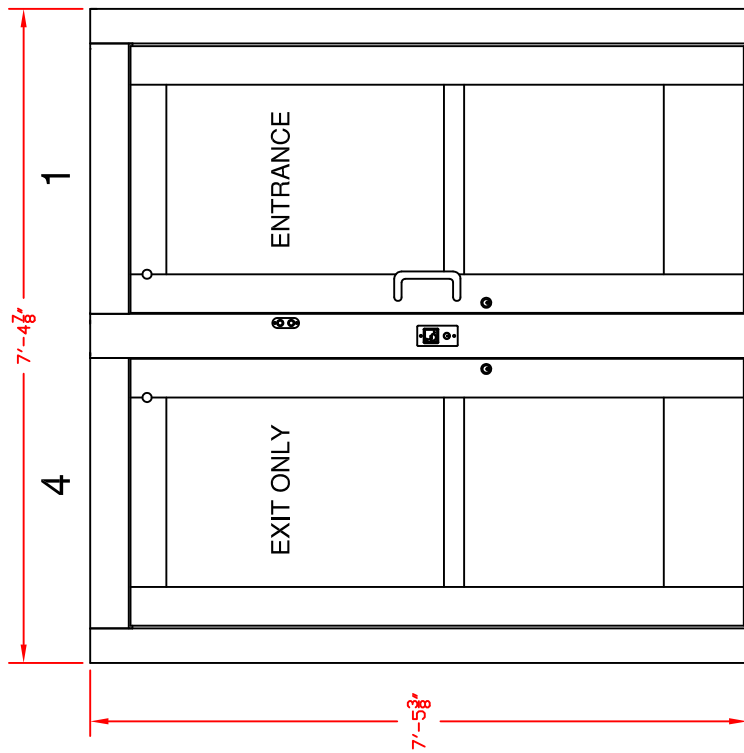
HAMILTON SAFE

2010 Entrance Control System 2 Lane
 Stainless Steel Doors and Frame
 HP White Level 1 System
 O.A. Dimensions and Important Notes

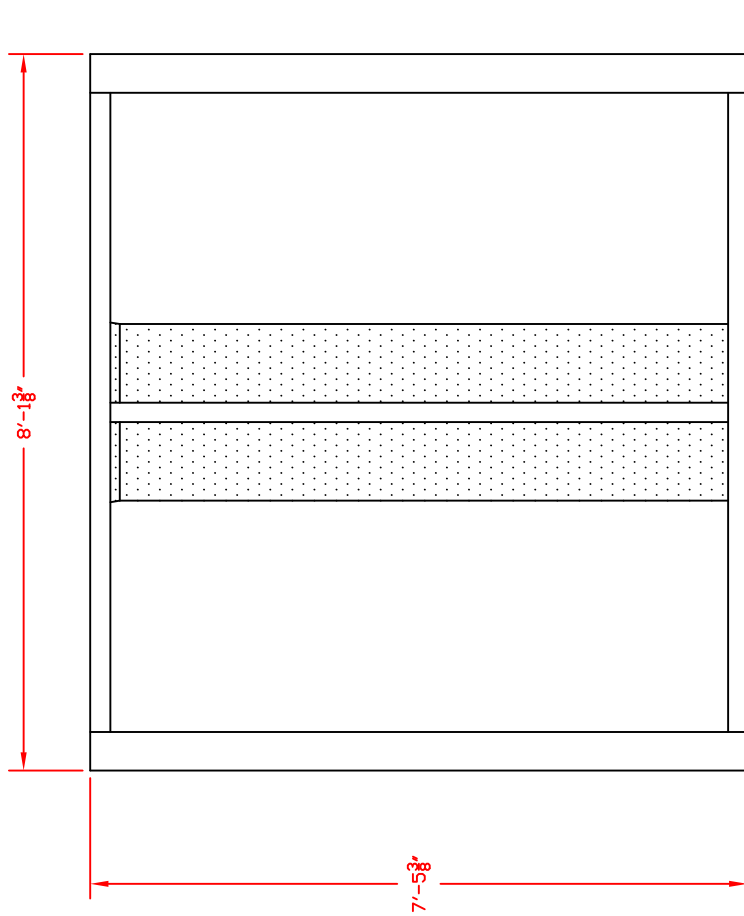
PLAN VIEW

(CEILING REMOVED FOR CLARITY)

REV.1	.
REV.2	.



FRONT ELEVATION



RIDE SIDE VIEW

Power Requirement:
 Altronix Power supply is provided with a NEMA 5-15P plug.
 Electrical Note:
 110 VAC, 15 Amp dedicated unswitched circuit outlet

HAMILTON SAFE

2010 Entrance Control System 2 Lane
 Stainless Steel Doors and Frame
 HP White Level 1 System
 O.A. Dimensions and Important Notes

REV-1	.
REV-2	.

Power Requirement:

Altronix Power supply is provided with a NEMA 5-15P plug.

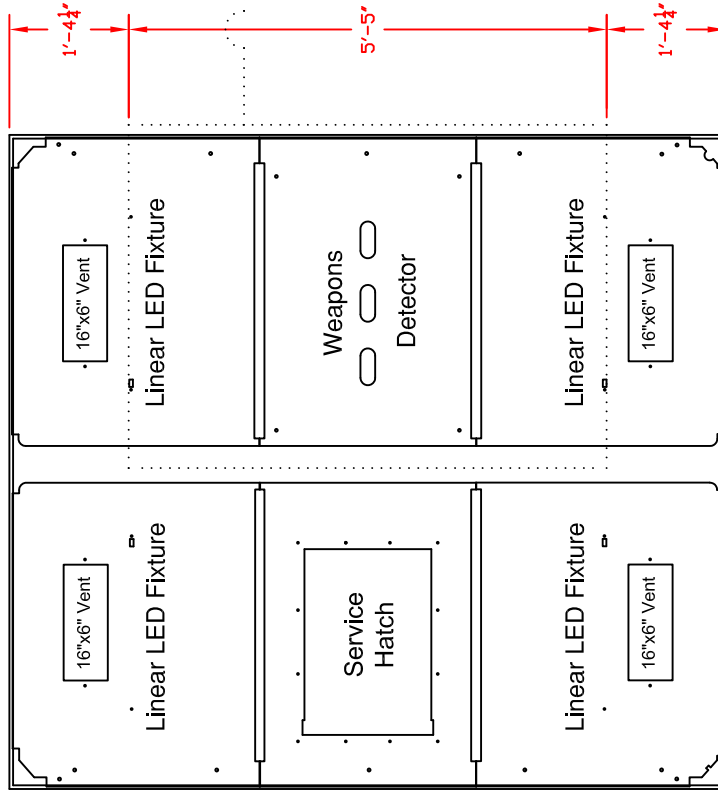
Electrical Note:

110 VAC, 15 Amp dedicated unswitched circuit outlet

Notes:

Reference Drawing Number: 96-296 for Recommended Rough Opening Details

Reference Drawing Number: 96-297 for Recommended Slab Details



IMPORTANT NOTE:
 AVOID RUNNING ELECTRICAL OR HVAC OVER THE WEAPONS DETECTOR. THE DOTTED LINE REPRESENTS THE AREA TO AVOID.

HAMILTON SAFE	
2010 Entrance Control System 2 Lane	
Stainless Steel Doors and Frame	
HP White Level 1 System	
O.A. Dimensions and Important Notes	
Page: 3of3	Date : 11/2/09

PLAN OF MODULAR CEILING

Verify the rough opening is square. The (A) and (B) measurements should be the same. Maximum allowable deviation from square is 1/8".

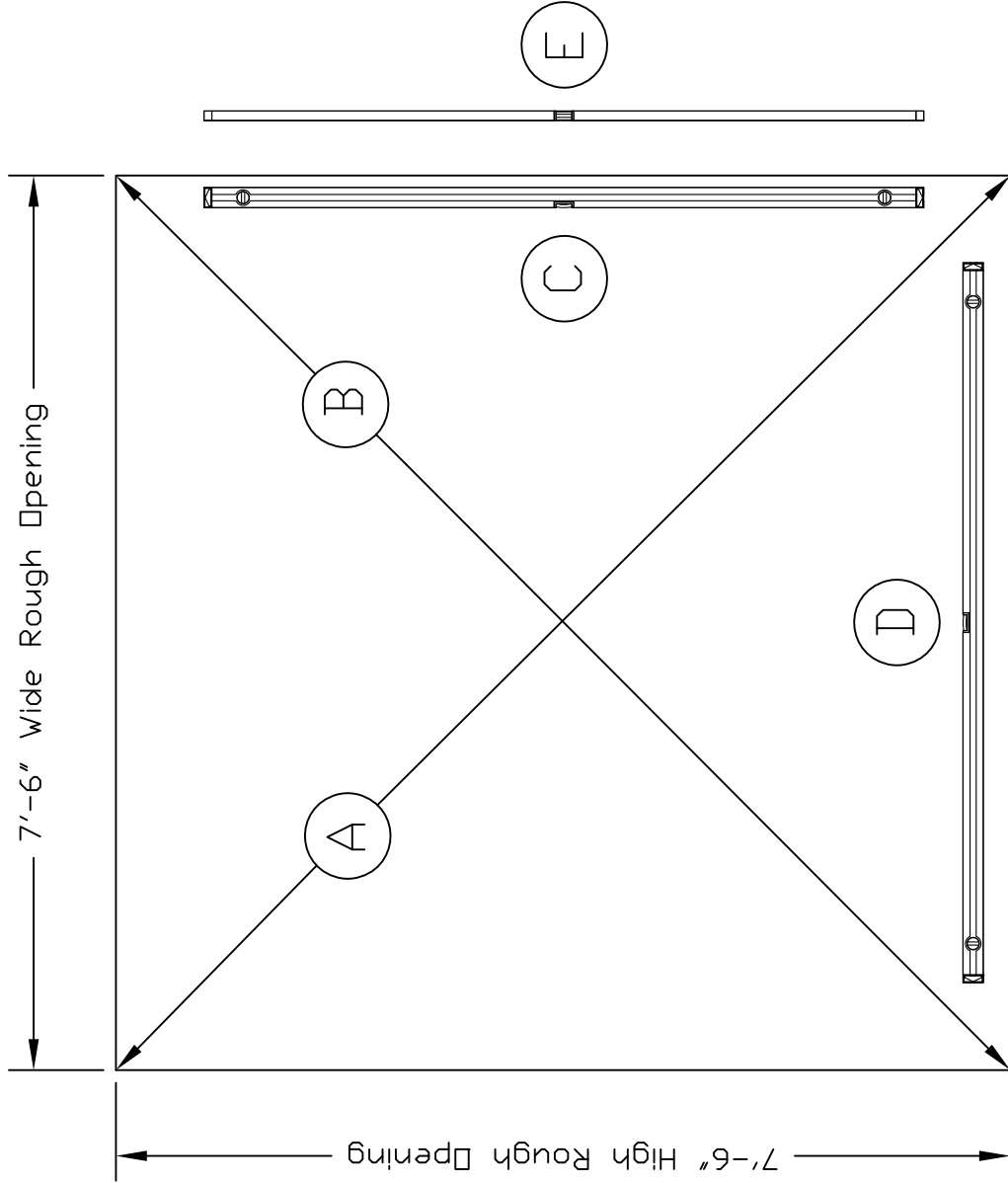
Verify the rough opening is plumb and level (C) and (D). The maximum allowable deviation is 1/8".

The rough opening sill must not be crowned or sagged (E).

The exterior face of the rough opening must be in a single plane (E) with less than 1/8" twist from corner to corner.

Minimum double studs should be used at all wood framed rough opening. Metal studs should be avoided and if present they need to be minimum of 40" from the unit. Steel structural members create Eddy Fields that can cause constant or false alarms in the weapons detector system. Normally the fields are created by a small movement in the wall structure from a change in air pressure or door closing creating a vacuum in the entrance control cabin. The system comes standard with vents above each door to prevent this from happening. So do not cover or restrict the air flow above the unit.

The header must be supported by trimmer studs.



Rough Opening Detail (Verify Square, Level, & Plumb)

HAMILTON SAFE	
2010 Entrance Control System 2 Lane Stainless Steel Doors and Frame HP White Level 1 System Recommended Rough Opening Details	
Page: 1 of 1	Drawing Number : 96-296 Date : 12/1/09

REV-1	.
REV-2	.

Floor Inspection

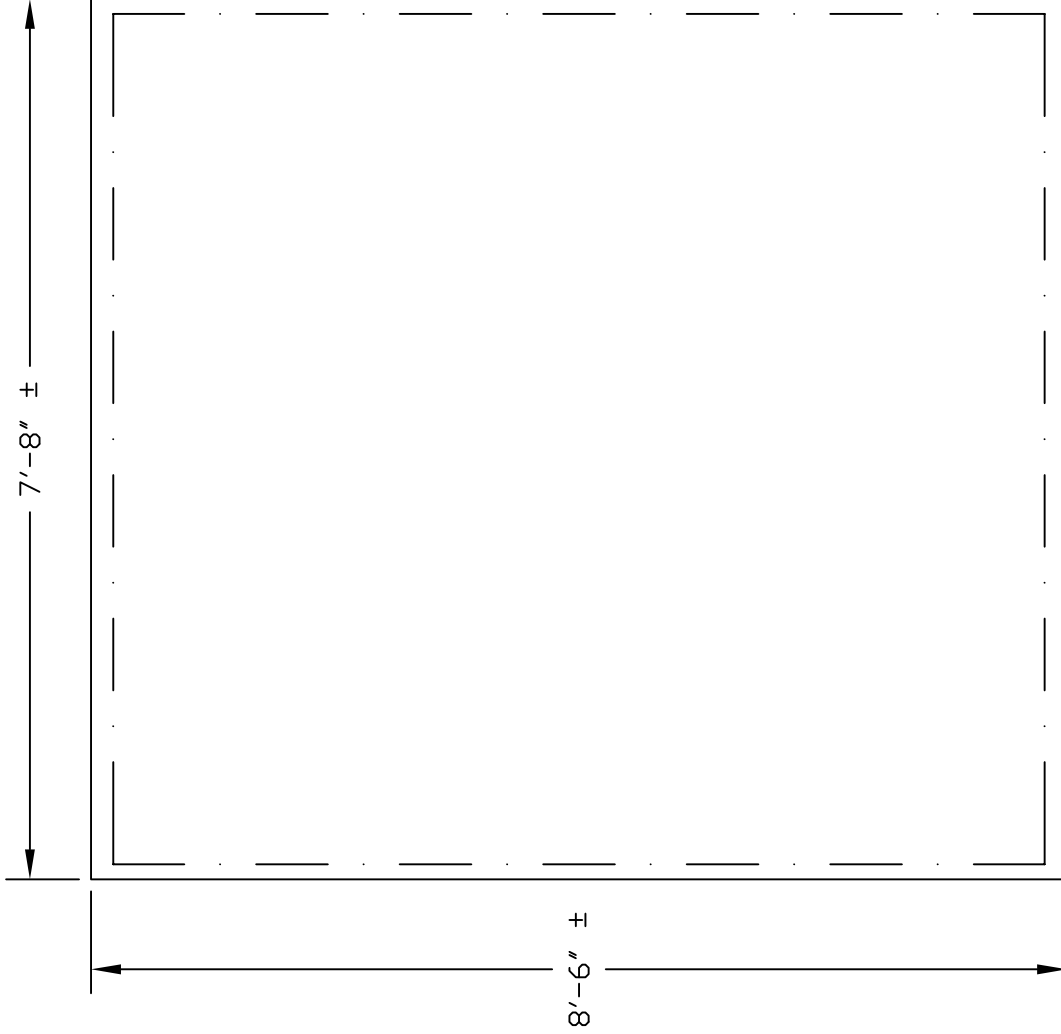
Many commercial buildings have concrete floors. Concrete floor is recommended to ensure a solid base for the Entrance Control System to attach to for a successful installation. The floor must be stable to avoid any shocks or movements. Verify the existing slab is level. The maximum allowable deviation is 1/8".

Uneven floors may have to be removed and poured flat and level. The use of self leveling concrete or compound is a good solution to bring the slab within tolerance prior to installation.

Possible Interference

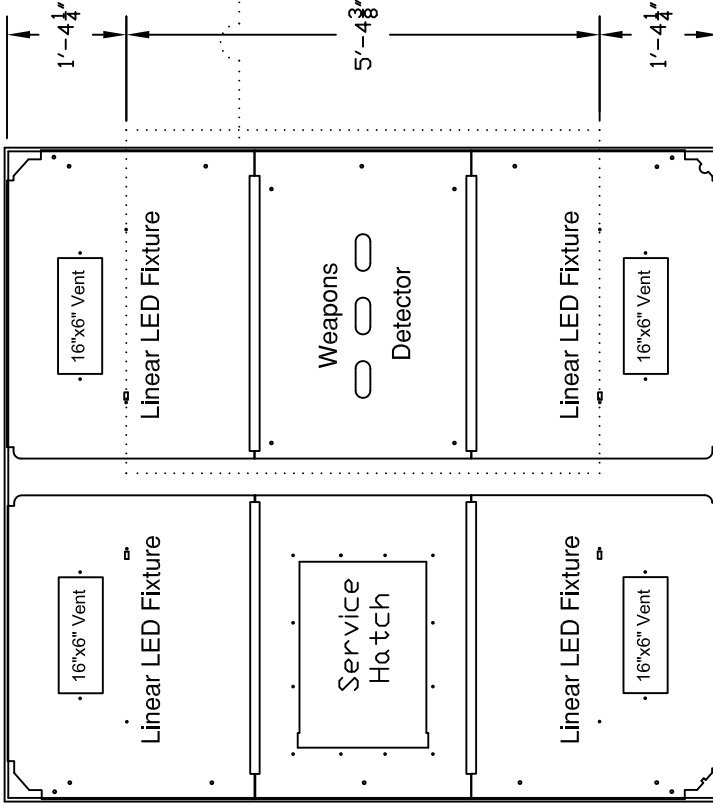
Electrical conduit containing switching power, gas, or water pipes should be relocated.

If a electrical transformer is in close proximity to the weapons detector it could cause interference. Verify the location of main power box of the facility and make sure the entrance control is not in close proximity.



PLAN OF EXISTING SLAB

HAMILTON SAFE
2010 Entrance Control System 2 Lane Stainless Steel Doors and Frame HP White Level 1 System Recommended Slab Details



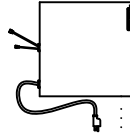
PLAN OF MODULAR CEILING

Power Supply:

Unit Is Powered By UL Listed Altronix Power Supply.

Model Number : AL600ULM Class 2 Rated

Normally mounted on wall above the ECS ceiling. Can be remote mounted must provide distance away from cabin with order.



IMPORTANT NOTE:

AVOID RUNNING ELECTRICAL OR HVAC OVER THE WEAPONS DETECTOR. THE DOTTED LINE REPRESENTS THE AREA TO AVOID.

Power Requirement:

Altronix Power supply is provided with a NEMA 5-15P plug. Plug may be removed for areas that require the unit be hard wired to a junction box.

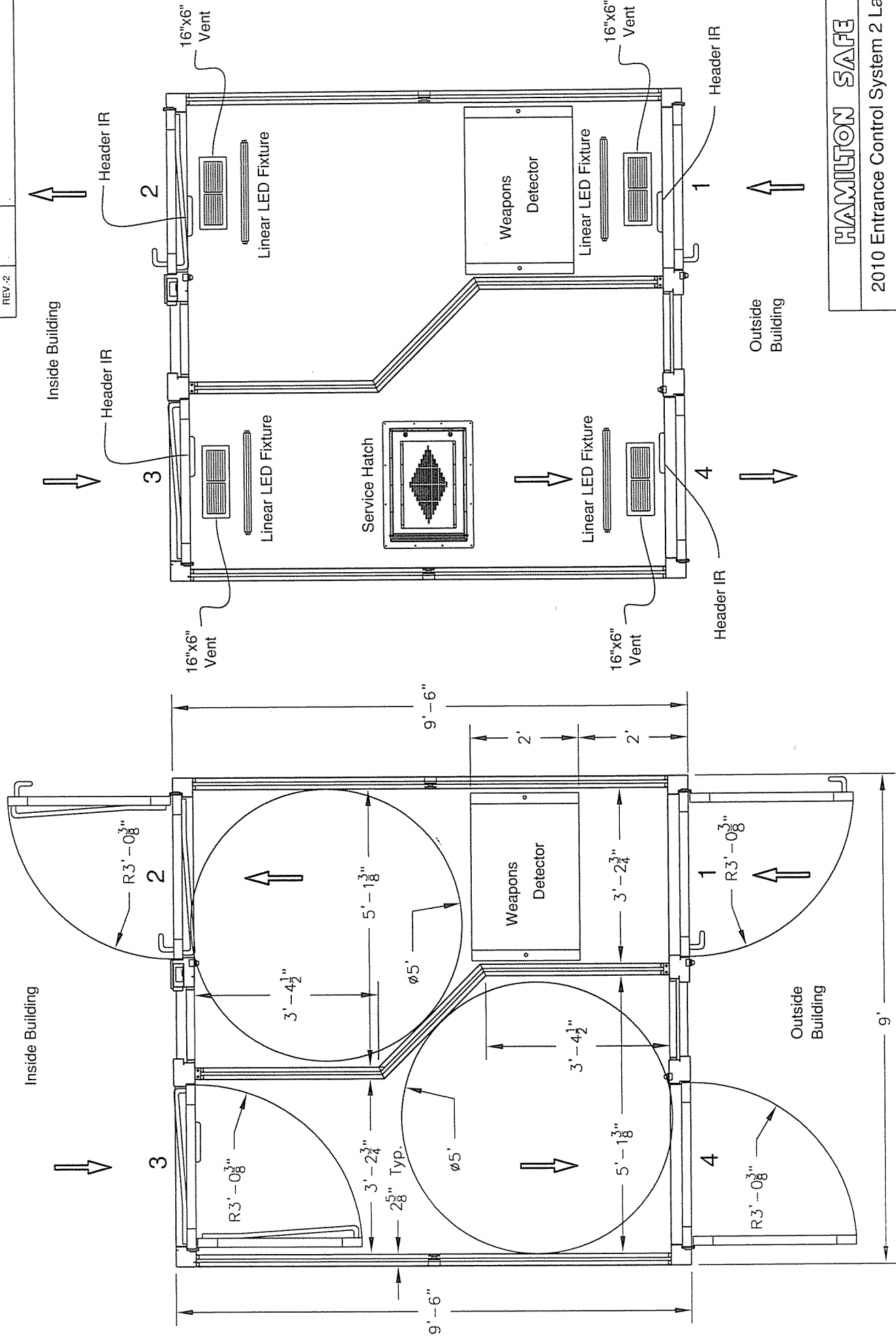
Electrical Note:

110 VAC, 15 Amp dedicated unswitched circuit outlet

HAMILTON SAFE

2010 Entrance Control System 2 Lane
Stainless Steel Doors and Frame
HP White Level 1 System
Recommended Electrical Requirements

REV:1
REV:2

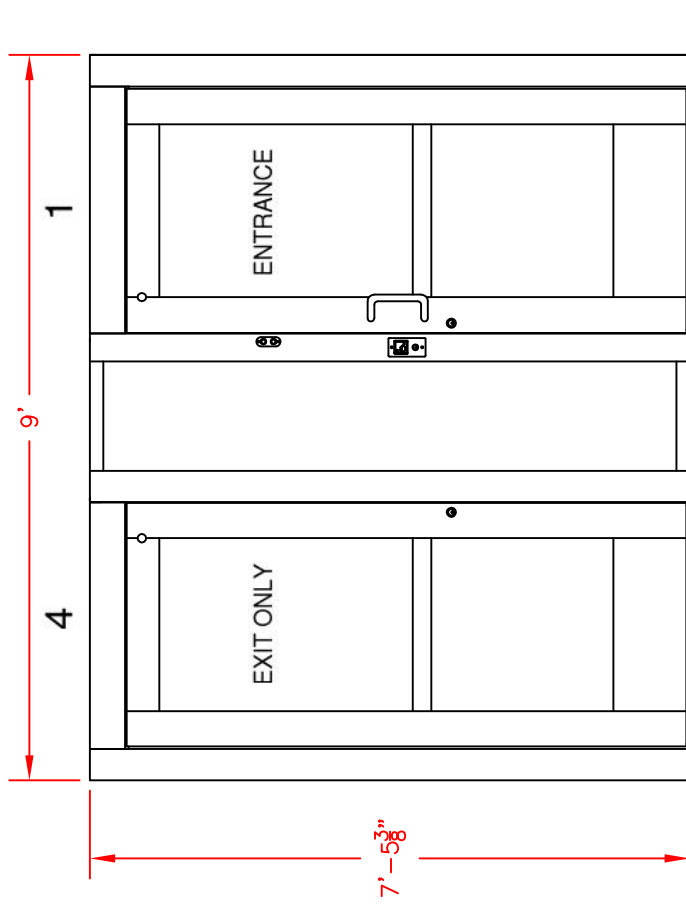


PLAN VIEW

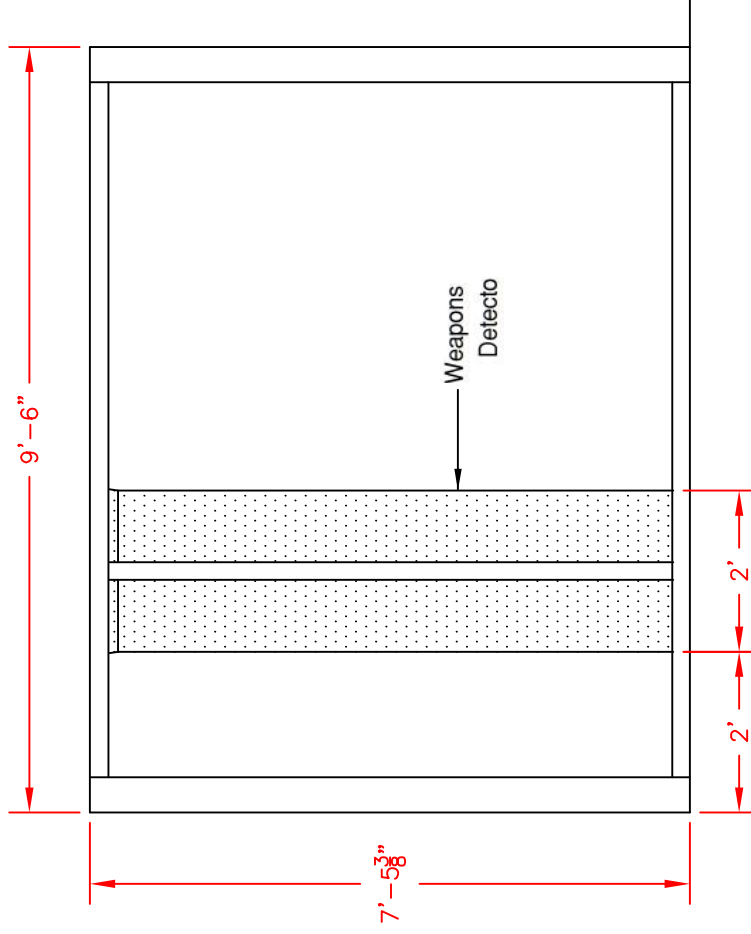
(CEILING REMOVED FOR CLARITY)

HAMILTON SAFE

2010 Entrance Control System 2 Lane
Per 2009 IBC - ICC/ANSI A117.1-2003
HP White Level 1 System
O.A. Dimensions and Important Notes



FRONT ELEVATION



RIDE SIDE VIEW

Power Requirement:

Altronix Power supply is provided with a NEMA 5-15P plug.

Electrical Note:

110 VAC, 15 Amp dedicated unswitched circuit outlet

HAMILTON SAFE

2010 Entrance Control System 2 Lane
Per 2009 IBC - ICC/ANSI A117.1-2003
HP White Level 1 System

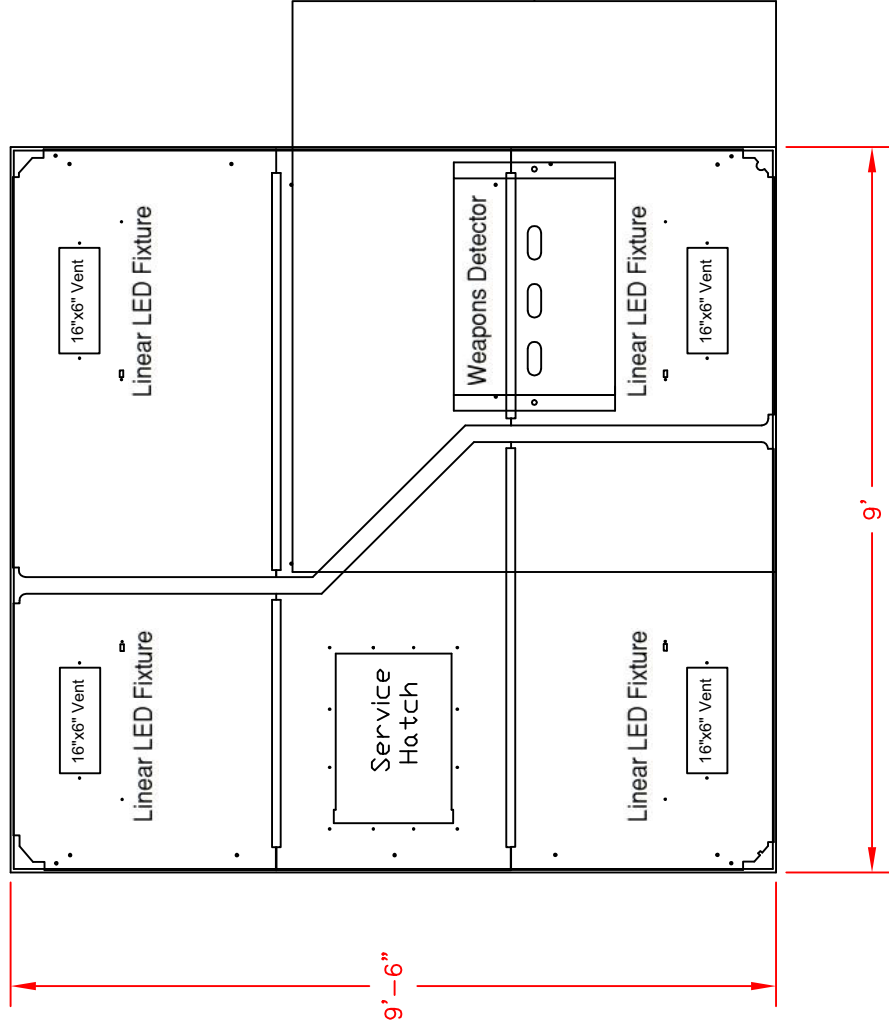
O.A. Dimensions and Important Notes

Power Requirement:

Altronix Power supply is provided with a NEMA 5-15P plug.

Electrical Note:

110 VAC, 15 Amp dedicated unswitched circuit outlet (Duplex outlet or two separate outlets required when optional camera power supply is added)



IMPORTANT NOTE:
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HAMILTON SAFE

2010 Entrance Control System 2 Lane
Per 2009 IBC - ICC/ANSI A117.1-2003
HP White Level 1 System
O.A. Dimensions and Important Notes

REV. 2	.
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Verify the rough opening is square. The (A) and (B) measurements should be the same. Maximum allowable deviation from square is 1/8".

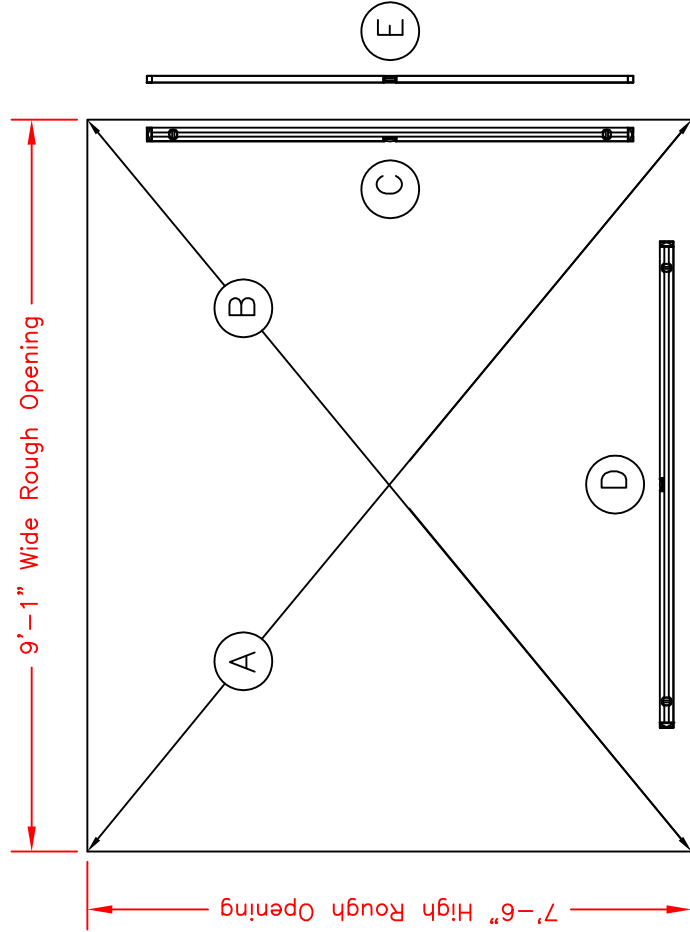
Verify the rough opening is plumb and level (C) and (D). The maximum allowable deviation is 1/8".

The rough opening sill must not be crowned or sagged (D).

The exterior face of the rough opening must be in a single plane (E) with less than 1/8" twist from corner to corner.

Minimum double studs should be used at all wood framed rough opening. Metal studs should be avoided and if present they need to be minimum of 40" from the unit. Steel structural members create Eddy Fields that can cause constant or false alarms in the weapons detector system. Normally the fields are created by a small movement in the wall structure from a change in air pressure or door closing creating a vacuum in the entrance control cabin. The system comes standard with vents above each door to prevent this from happening. So do not cover or restrict the air flow above the unit.

The header must be supported by trimmer studs.



Rough Opening Detail
(Verify Square, Level, & Plumb)

HAMILTON SAFE	
2010 Entrance Control System 2 Lane	
Per 2009 IBC - ICC/ANSI A117.1-2003	
HP White Level 1 System	
O.A. Dimensions and Important Notes	

REV. 2	.
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Floor Inspection

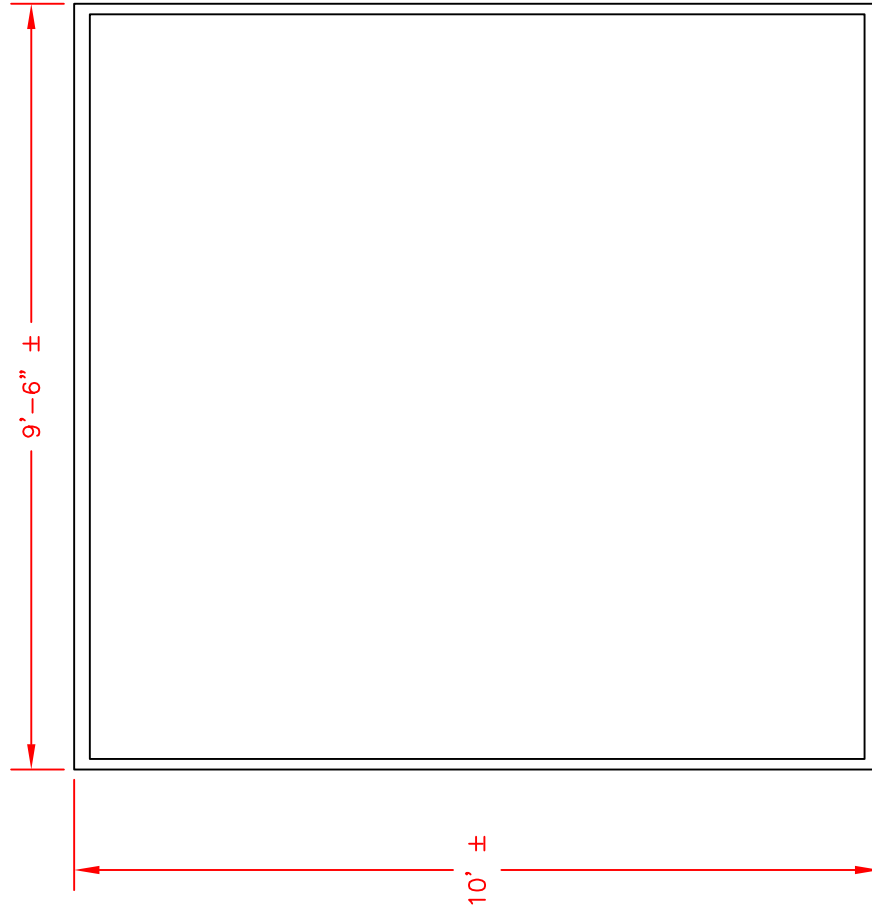
Many commercial buildings have concrete floors. Concrete floor is recommended to ensure a solid base for the Entrance Control System to attach to for a successful installation. The floor must be stable to avoid any shocks or movements. Verify the existing slab is level. The maximum allowable deviation is 1/8".

Uneven floors may have to be removed and poured flat and level. The use of self leveling concrete or compound is a good solution to bring the slab within tolerance prior to installation.

Possible Interference

Electrical conduit containing switching power, gas, or water pipes should be relocated.

If a electrical transformer is in close proximity to the weapons detector it could cause interference. Verify the location of main power box of the facility and make sure the entrance control is not in close proximity.



PLAN OF EXISTING SLAB

HAMILTON SAFE

2010 Entrance Control System 2 Lane
 Per 2009 IBC - ICC/ANSI A117.1-2003
 HP White Level 1 System
 O.A. Dimensions and Important Notes

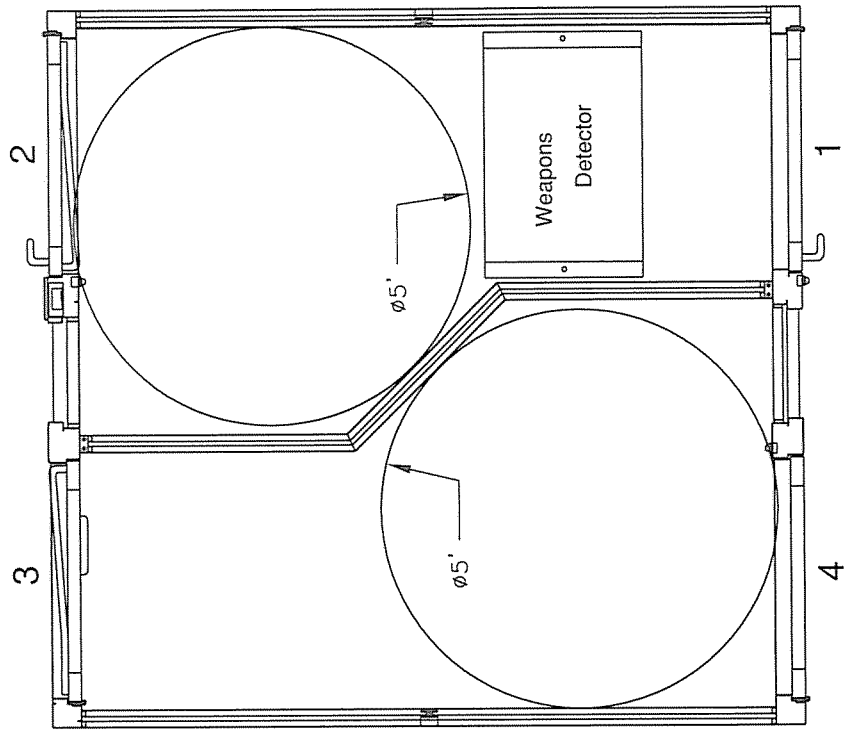


Fig.404.2.5 Two Doors in a Series
(Accessibility Pocket Book)
(2009 IBC | ICC/ANSI A117.1-2003)

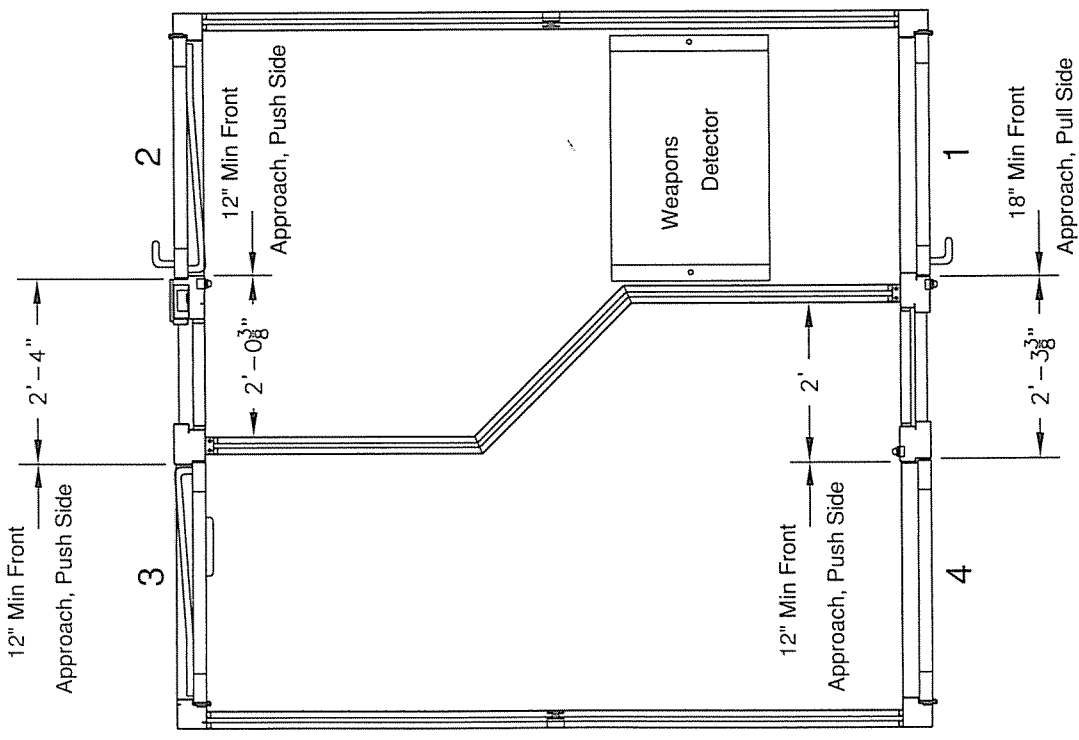


Fig.404.2.3.1 Maneuvering Clearance
at Manual Swinging Doors
(Accessibility Pocket Book)
(2009 IBC | ICC/ANSI A117.1-2003)

HAMILTON SAFE

2010 Entrance Control System 2 Lane
Per 2009 IBC - ICC/ANSI A117.1-2003
HP White Level 1 System
O.A. Dimensions and Important Notes

Minimum Clear Width For Single Wheel Chair

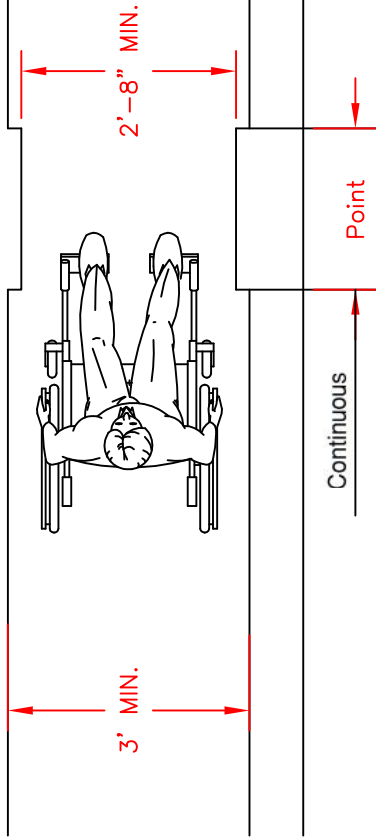


Fig.403.5 Clear Width of an Accessible Route

(Accessibility Pocket Book)

(2009 IBC | ICC/ANSI A117.1-2003)

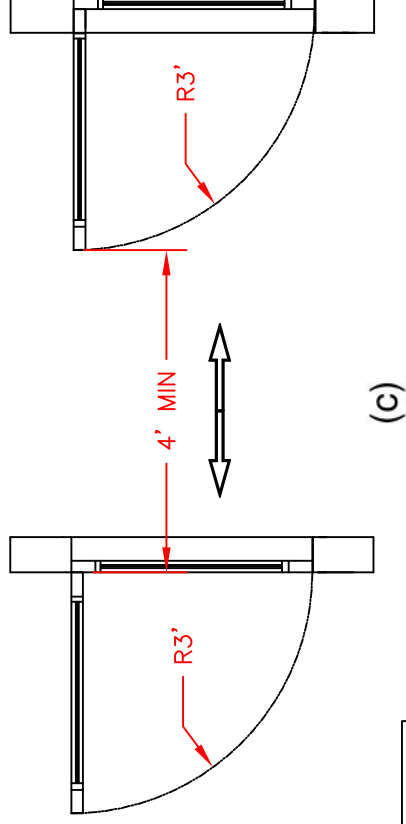


Fig.404.2.5 Two Doors in a Series
(Accessibility Pocket Book)
(2009 IBC | ICC/ANSI A117.1-2003)

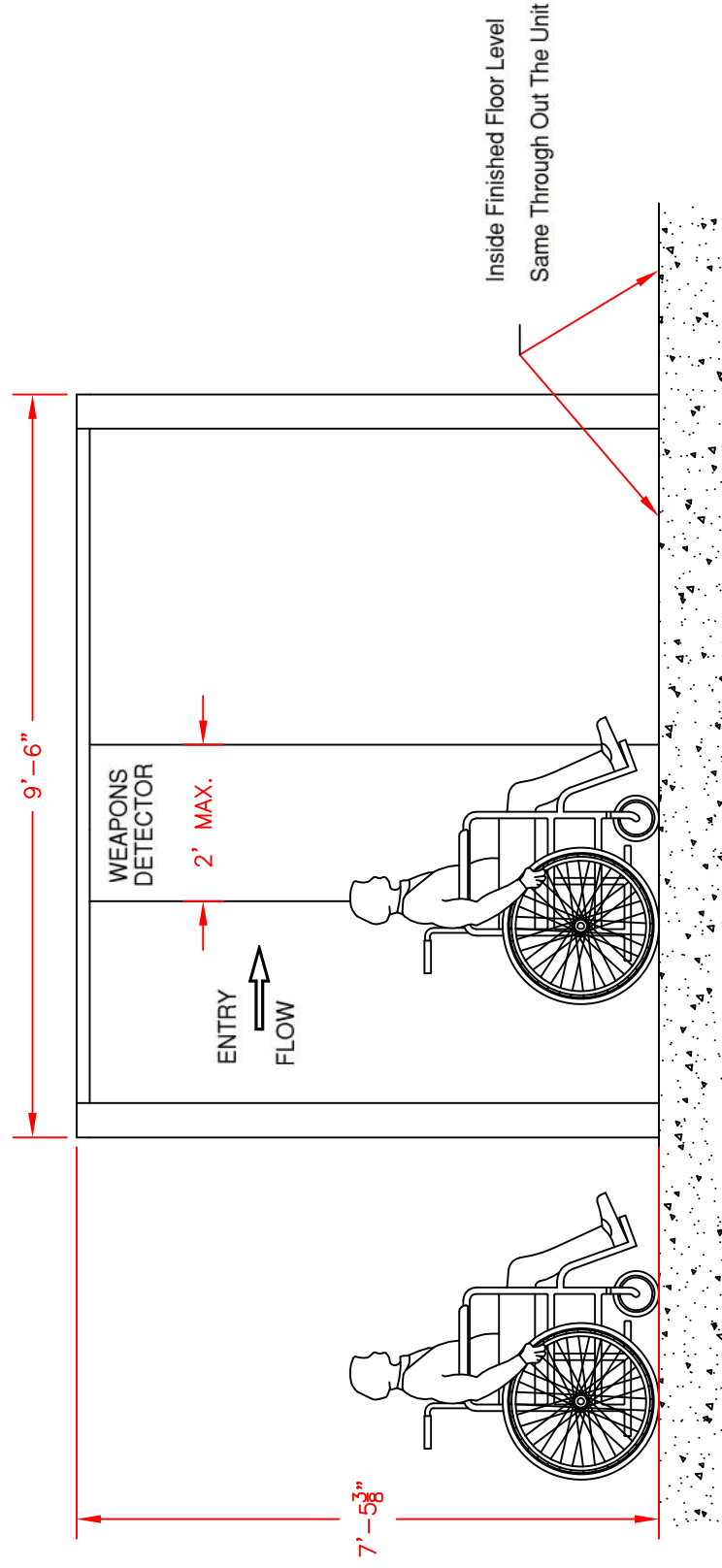


Fig.303.2 Vertical Changes in Level
(Accessibility Pocket Book)
(2009 IBC | ICC/ANSI A117.1-2003)

General Site Information

A quality installation begins by verifying that the building has been properly prepared.

- Drawing 96-277 provides overall dimensions of the ECS for reference.
- Drawing 96-296 provides details about the rough opening. This 7'-6" wide x 7'-6" high opening must be square and plumb with a maximum deviation of 1/8". The exterior face must also be in a single plane with no more than 1/8" twist from corner to corner.
- Drawing 96-297 provides details about the slab requirements. The 7'-8" wide x 8'-6" deep slab must be level with no more than 1/8" deviation.
- Drawing 96-298 provides details about the electrical requirements. A 110 VAC 15 Amp dedicated unswitched circuit outlet must be provided. Verify that no electrical wiring will be in the vicinity of the weapons detector as shown on the drawing.

Assemble the Vestibule Halves

- Uncrate both halves and position them in front of the rough opening.
- Remove the ceiling channel that will hold up the exit side ceiling. The channel is located on the top center rail on the entrance side of the cabin.
- Feed the wiring harness connectors from the front and rear top rails of the exit vestibule through openings in the front and rear center posts of the entrance vestibule. Reference drawing 96-305.
- Attach the wiring harness connectors.
- Bolt the vestibule halves together to form one assembly using a 3/8" drive ratchet with a 1/2" deep well socket. Reference drawing 96-305.

Tip: Though not necessary, you can remove the access cover and top cover from the rear center post to have clear access to the bolts for the two halves.



Vestibule halves as viewed through the rough opening



Front wiring harness connectors



Rear wiring harness connectors



Front side bolts



Rear side bolts

REV-1	.
REV-2	.

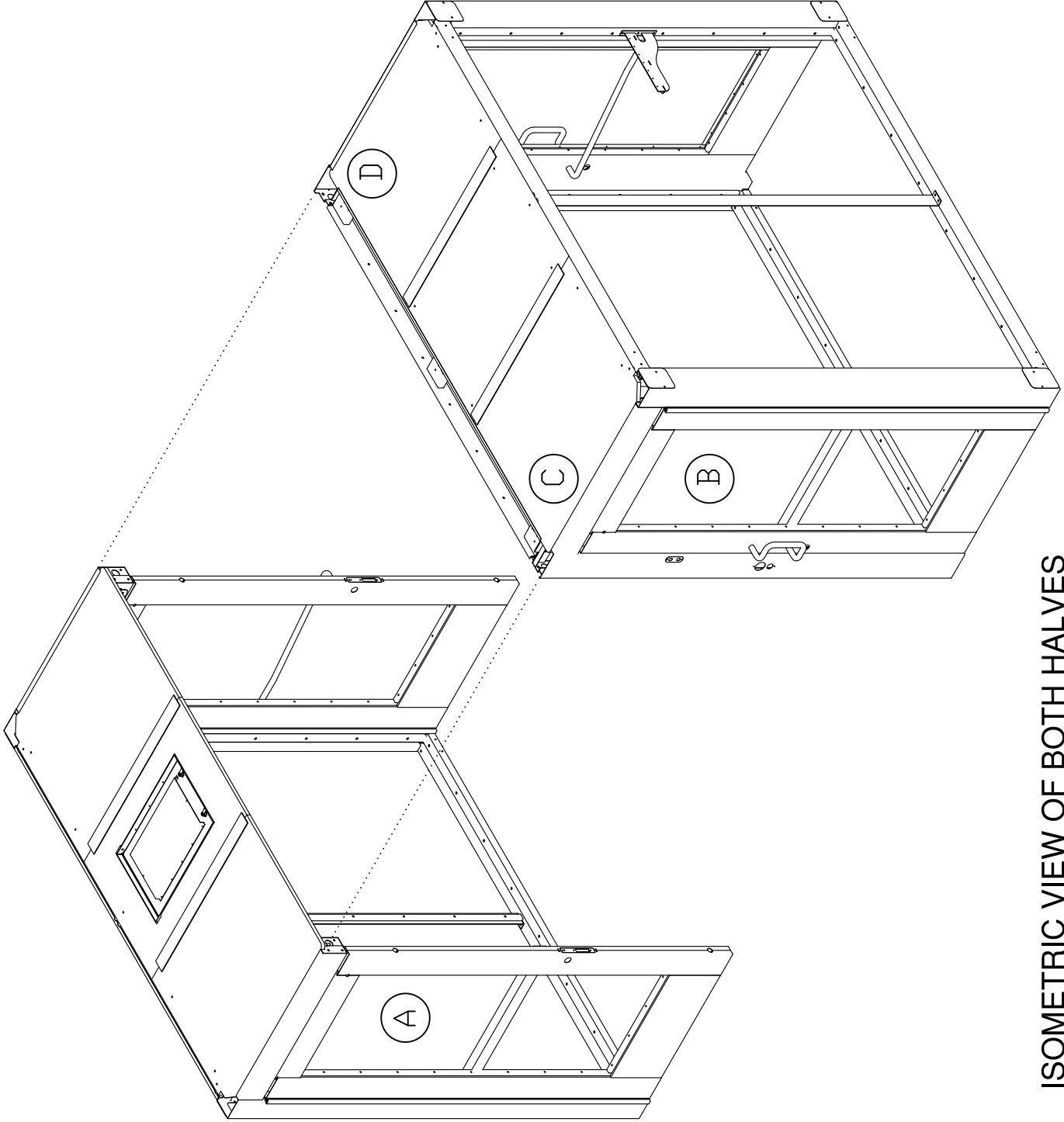
Section B is the Entrance side of the complete assembly.

Section A is the Exit side of the complete assembly.

The two halves should be uncrated and moved into position in front of the rough opening.

Wiring harness located at points C and D. Connectors from the exit side are fed through openings in the front and rear center posts in the entrance vestibule.

Vestibule halves are bolted together at point C and D to form one assembly.



ISOMETRIC VIEW OF BOTH HALVES

HAMILTON SAFE

2010 Entrance Control System 2 Lane
Stainless Steel Doors and Frame
Detail of Wiring Harness Connection &
Bolting Together To Form One Assembly

Install the Vestibule Assembly

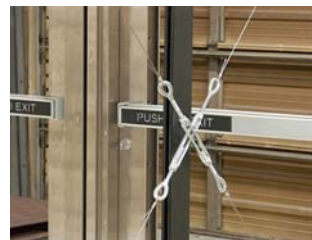
- Move the vestibule assembly into the rough opening. This is best done by having a person at each corner. Verify if the customer requirements are for the front face of the assembly to be flush or recessed with the rough opening.
- Reference drawing 96-299 to level, square and plumb the vestibule assembly. This process will involve tightening or loosening the cross tie cables and installing non-metallic shims where necessary. (A supply of shims is included with the shipment.) Use a 6 foot level and observe that all door gaps are even. **Important: To avoid damaging the unit do not pry on the doors. Only pry at the corner or center posts.**



Positioning the assembly



Leveling the assembly



Cross tie cables



Installing non-metallic shims



Poor door gap

- Double check the door gaps as referenced on drawing 96-299. If necessary repeat the previous step. This is the most important part of the installation and cannot be over stressed.



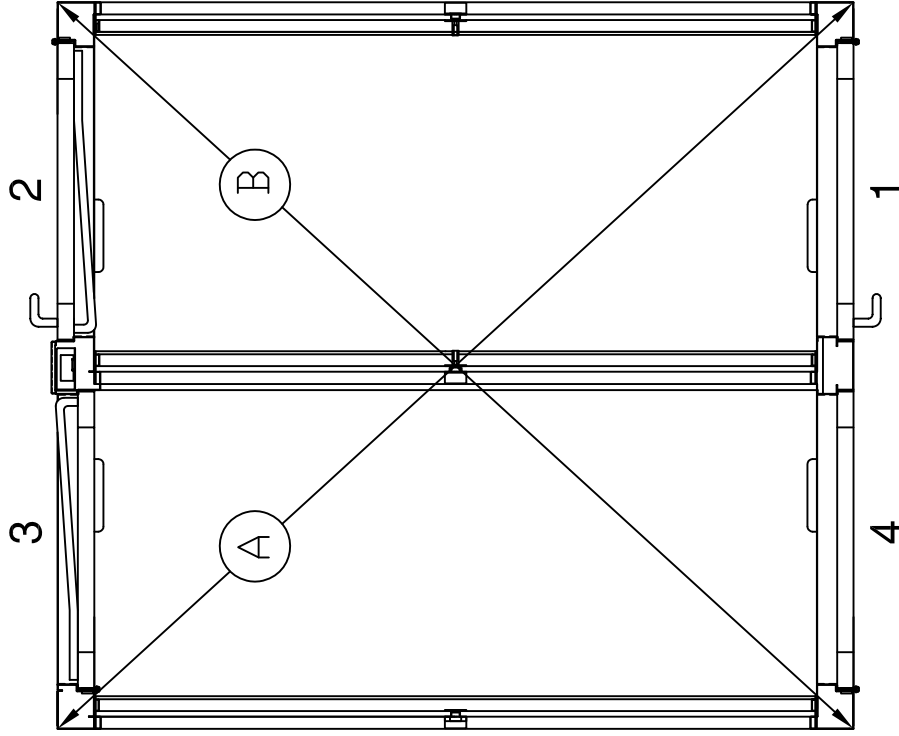
Good door gap



Anchoring bottom rail

- Use a Tapcon screw at each end of each bottom rail to anchor the vestibule assembly to the floor. The six counter sunk holes are visible without removing the glass channels. If the floor is covered with tile you will need to drill a 1/4" hole through the tile first or the tile will damage the threads on the Tapcon. Make sure the head of each Tapcon is installed flush since the glass will eventually sit over them but do not over tighten which can shear the Tapcon. Reference drawing 96-300.

REV-1	.
REV-2	.



PLAN VIEW

(CEILING REMOVED FOR CLARITY)

Verify the Entrance Control frame is square. The (A) and (B) measurements should be the same. Maximum allowable deviation from square is 1/8".

Verify the Entrance Control frame is plumb and level (C) and (D). The maximum allowable deviation is 1/8".

The exterior face of the Entrance Control frame must be in a single plane (E) with less than 1/8" twist from corner to corner.

HAMILTON SAFE

2010 Entrance Control System 2 Lane
 Stainless Steel Doors and Frame
 HP White Level 1 System
 Details Required Door Gaps

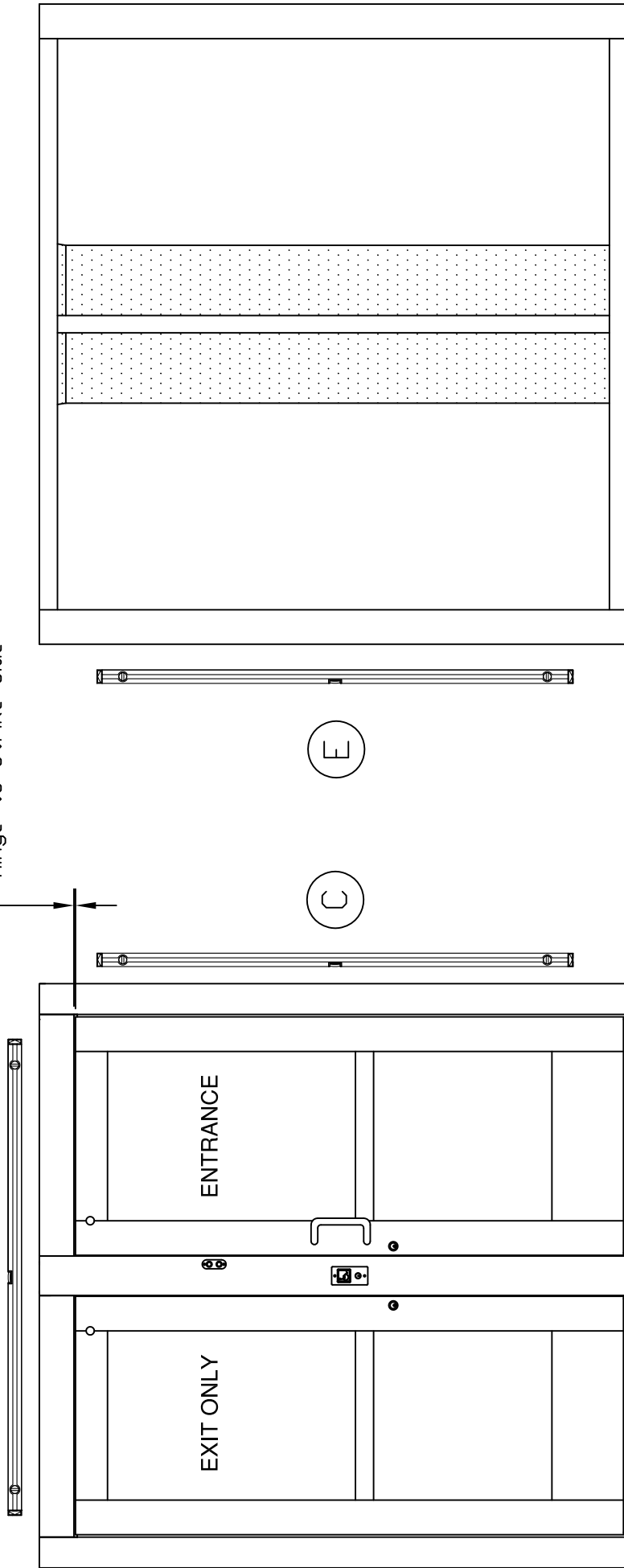
REV-1	.
REV-2	.

1/8" Horizontal Door Gap
Typical All Doors
Hinge to Strike Side

1

D

4



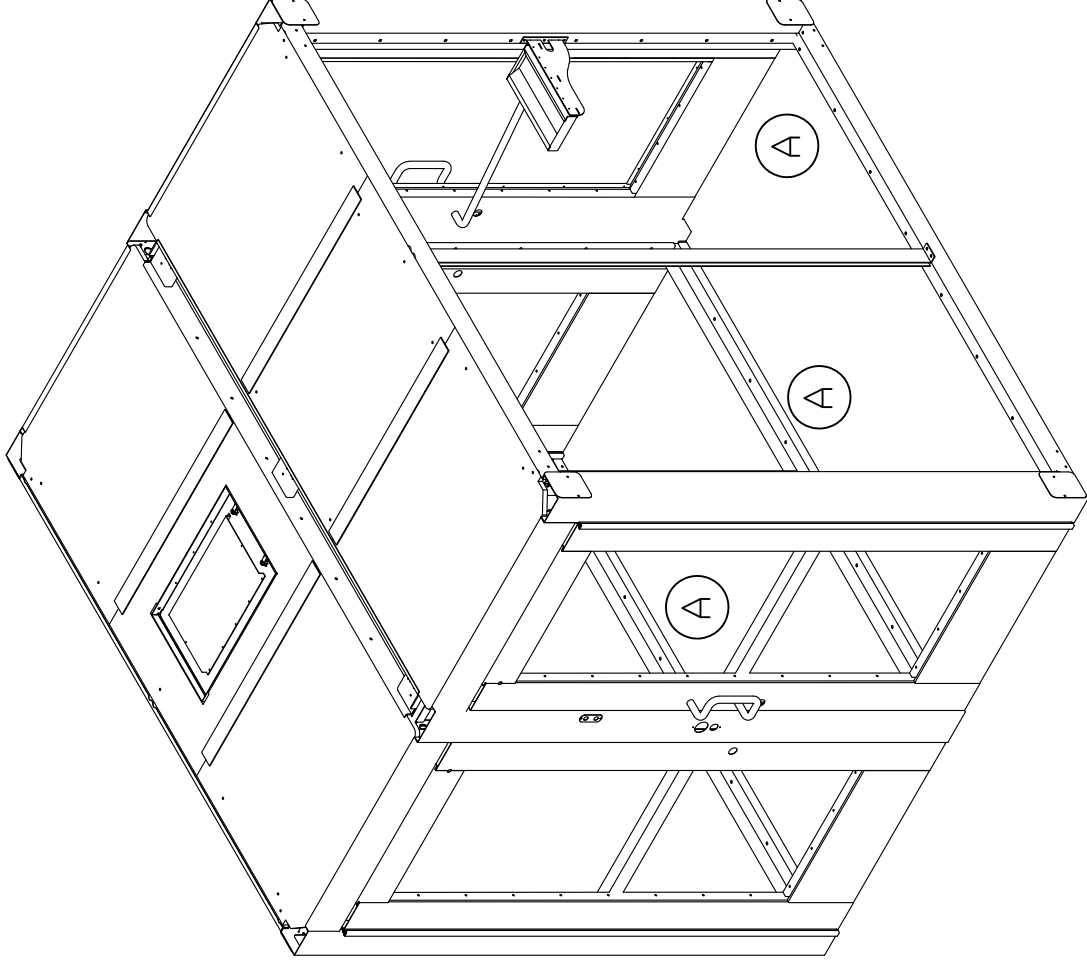
RIDE SIDE VIEW

FRONT ELEVATION

HAMILTON SAFE

2010 Entrance Control System 2 Lane
Stainless Steel Doors and Frame
HP White Level 1 System
Details Required Door Gaps

Anchoring: We now should consider anchoring the unit. We of course need to confirm we have it positioned in the opening as the customer wants it. Many times they want it recessed under the rough opening but they may also want it flush mounted. This is important to know before we anchor to the floor. Take extra care to plumb the unit using the cables on the sides and the Lexan shims provided with the unit. The unit comes with 1/4" x 2 1/2" Long Tapcons and one 3/16" Masonry bit. All bottom rails have counter sunk holes for the tapcon at location "A".
(Note if you are anchoring through tile you need a 1/4" diameter bit to drill through tile only. If you do not the tile can eat the threads off the Tapcons.) In the event one of the Tapcons shears in the tightening process you can re drill a hole (With countersink) about 1" from that hole. We highly recommend you have the cordless drill torque turned down as not shear the bolts for this just adds time to the install.



ISOMETRIC VIEW OF ECS COMPLETE ASSEMBLY

HAMILTON SAFE

2010 Entrance Control System 2 Lane
Stainless Steel Doors and Frame
HP White Level 1 System
Anchoring to Floor Details

- Anchor the rear center post to the floor with two more Tapcons.
- Remove the glass channels on all three bottom rails to expose 15 additional mounting holes (3 on each rail). Install Tapcons at these additional locations. Reference drawing 96-300.



Anchoring rear center post



Wooden ceiling support

- Remove the wooden ceiling support from the exit side which was required during shipping. This will require someone to hold the ceiling in place. Install the exit side ceiling channel which had been removed during assembly.
- Install the ceiling support angles on top of the vestibule. This helps to stabilize the assembly during glass installation. It will likely be necessary to gain access through the service door in the ceiling of the exit vestibule.



Ceiling support angle

Install the Cabin Glass

- Remove the cross tie cables to prepare for installing the glass. Make sure to remove the nuts from the 1/4-20 screws holding the cross tie cables and re-install the screws back into the holes.
- Remove the vertical glass channels, horizontal glass channels and center mullions from all 3 walls. Reference drawing 96-303.
- Place 4 red glass blocks (supplied) in the bottom of the frame of one wall where the glass will sit. Each block should be positioned approximately 4 to 6 inches from each end of each glass panel as shown on drawing 96-303.
- Using glass suction cups carefully place one piece of glass in the frame making sure the glass blocks do not get wrinkled or slide out. *Tip:* It is easier to get the glass through the doorway if the door closer arm is temporarily separated.
- While someone holds the glass in place, re-install the outside end vertical glass channel.
- Repeat the previous two steps with the second piece of glass and then re-install the center mullion along with the top and bottom horizontal glass channels.
- Repeat the above steps to install glass in the other two walls.



Separating door closer arm



Positioning glass blocks



Installing center mullion



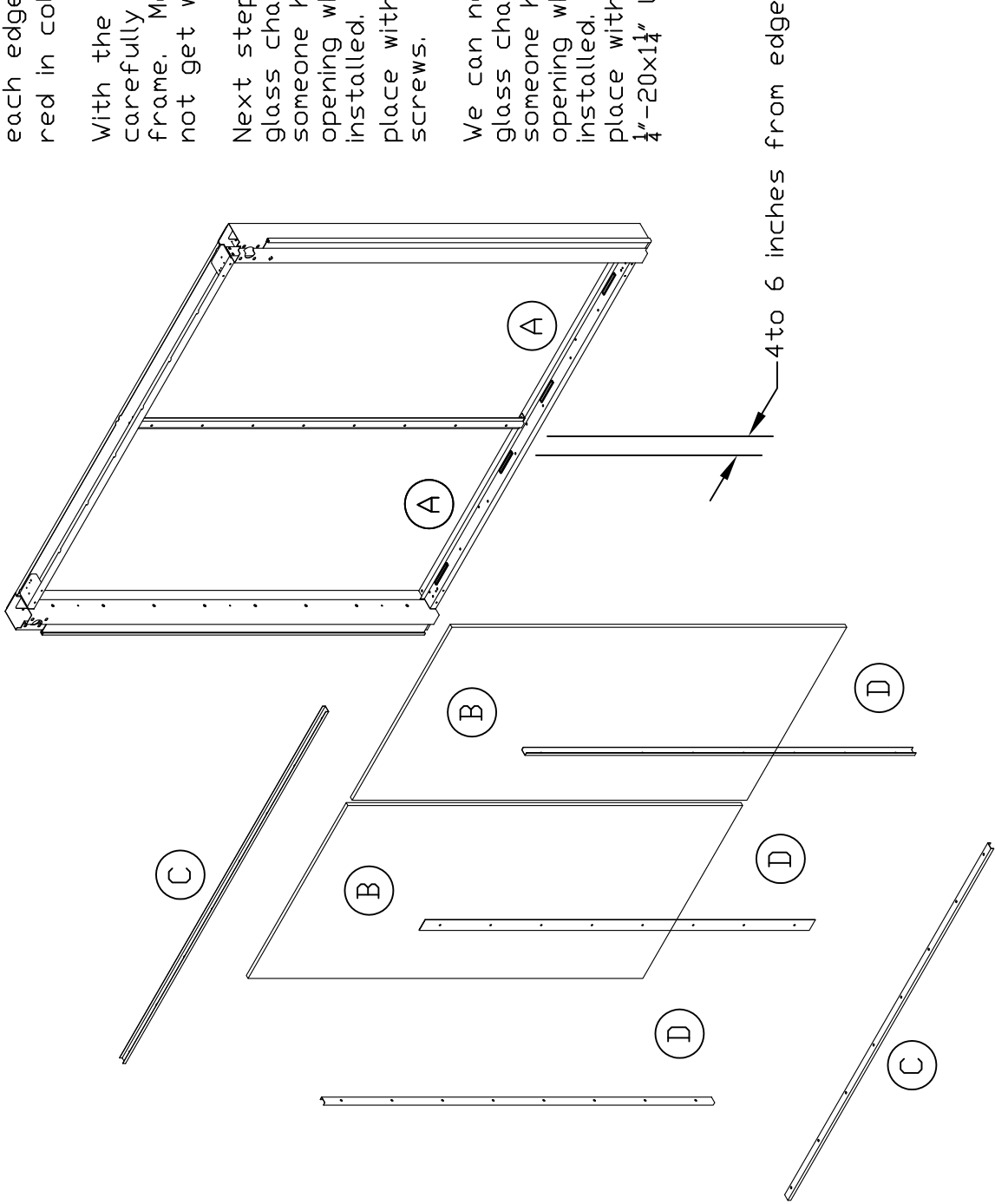
Installing top horizontal glass channel

At point "A" install glass blocks approximately 4 to 6 inches over from each edge as show. The glass blocks are red in color and $\frac{1}{8}$ "Thk x $\frac{7}{16}$ " Wd x 4" Lg.

With the aid of glass suction cups carefully place the glass "B" in the frame. Make sure the glass blocks do not get wrinkled or slide out.

Next step is to install the vertical glass channels "D". Make sure to have someone holding glass secure in the opening while the glass channels are installed. Glass channels are held in place with $\frac{1}{4}$ "-20x $1\frac{1}{4}$ " lg Phillips Oval Head screws.

We can now install the top horizontal glass channel "C". Make sure to have someone holding glass secure in the opening while the glass channels are installed. Glass channels are held in place with $\frac{1}{4}$ "-20x $1\frac{1}{4}$ " lg Phillips Oval Head screws.



ISOMETRIC VIEW OF TYPICAL DOOR

HAMILTON SAFE

2010 Entrance Control System 2 Lane
Stainless Steel Doors and Frame
HP White Level 1 System
Cabin Glass Installation Details

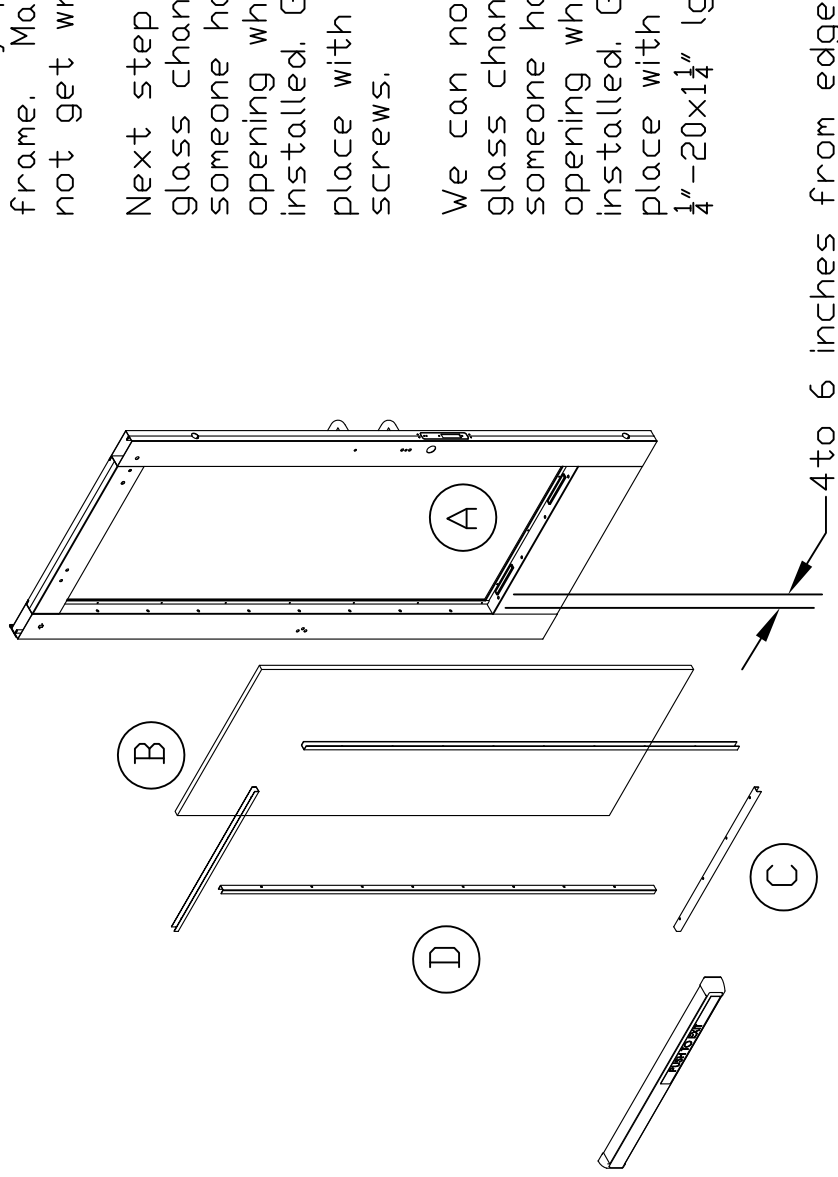
REV-1	.
REV-2	.

At point "A" install glass blocks approximately 4 to 6 inches over from each edge as show. The glass blocks are red in color and $\frac{7}{16}$ "Thk x $\frac{1}{8}$ "Wd x 4" Lg.

With the aid of glass suction cups carefully place the glass "B" in the frame. Make sure the glass blocks do not get wrinkled or slide out.

Next step is to install the vertical glass channels "D". Make sure to have someone holding glass secure in the opening while the glass channels are installed. Glass channels are held in place with $\frac{1}{4}$ "-20x $1\frac{1}{4}$ " lg Phillips Oval Head screws.

We can now install the top horizontal glass channel "C". Make sure to have someone holding glass secure in the opening while the glass channels are installed. Glass channels are held in place with $\frac{1}{4}$ "-20x $1\frac{1}{4}$ " lg Phillips Oval Head screws.



ISOMETRIC VIEW OF TYPICAL DOOR

HAMILTON SAFE	
2010 Entrance Control System 2 Lane Stainless Steel Doors and Frame HP White Level 1 System Door Glass Installation Details	
Page: 1 of 1	Drawing Number : 96-302 Date : 1/12/10

Install the Door Glass

- Remove the electronic touch bar from the door by first removing the end caps and then remove the allen head screws. Unplug the wire harness.
- If the door closer arm was not already separated while installing the cabin glass, do so now.
- Remove the top, bottom and vertical glass channels. Reference drawing 96-302.
- Place 2 red glass blocks (supplied) in the bottom of the door frame where the glass will sit. Each block should be positioned approximately 4 to 6 inches from each end.
- Using glass suction cups carefully place the glass in the door frame making sure the glass blocks do not get wrinkled or slide out.
- While someone holds the glass in place, re-install the vertical glass channels followed by the top and bottom glass channels. It is recommended to start the screws by hand to prevent cross threading.
- Re-install the electronic touch bar and don't forget to plug in the wire harness. Also double check the alignment pin to make sure it is in place before installing the end cap.
- Re-connect the door closer arm and make sure it is properly adjusted following instructions later in this document.
- Repeat the above steps for the other three doors.

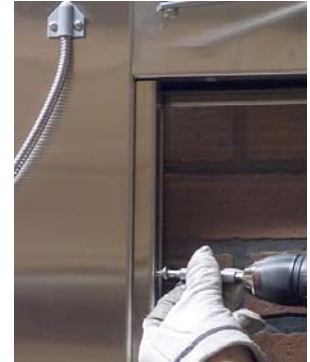
Alignment pin



Removing the touch bar



Positioning glass blocks



Installing glass channels

Install the Weapons Detector

- Remove the protective tape from the metal detector bridge and attach it to the ceiling of the entrance vestibule. *The tape is not removed in the photo.* The ceiling has predrilled holes with threaded inserts. Make sure the bridge access panel faces door 2. Reference drawing 96-301.
- Position the transmitter and receiver panels in the vestibule. The receiver panel has a red (RX) dot and must be near the outside wall. The transmitter panel has a green (TX) dot and must be near the inner dividing wall. Position the panels so the dots face each other. You will be able to see both dots if you stand between the panels. Reference drawing 96-301.
- Feed the cable from each panel through the end of the bridge and then loosely attach the panels to the ceiling using the predrilled holes with threaded inserts. The screws will pass through foam spacers and the bridge. Do not tighten the screws at this time.
- Move the base of each panel as needed so they are parallel and plumb. When properly aligned there should be 32-1/4" between the panels when measured near both the floor and ceiling. This is required for proper calibration of the detector.



Installing the metal detector bridge



Attaching panels to ceiling

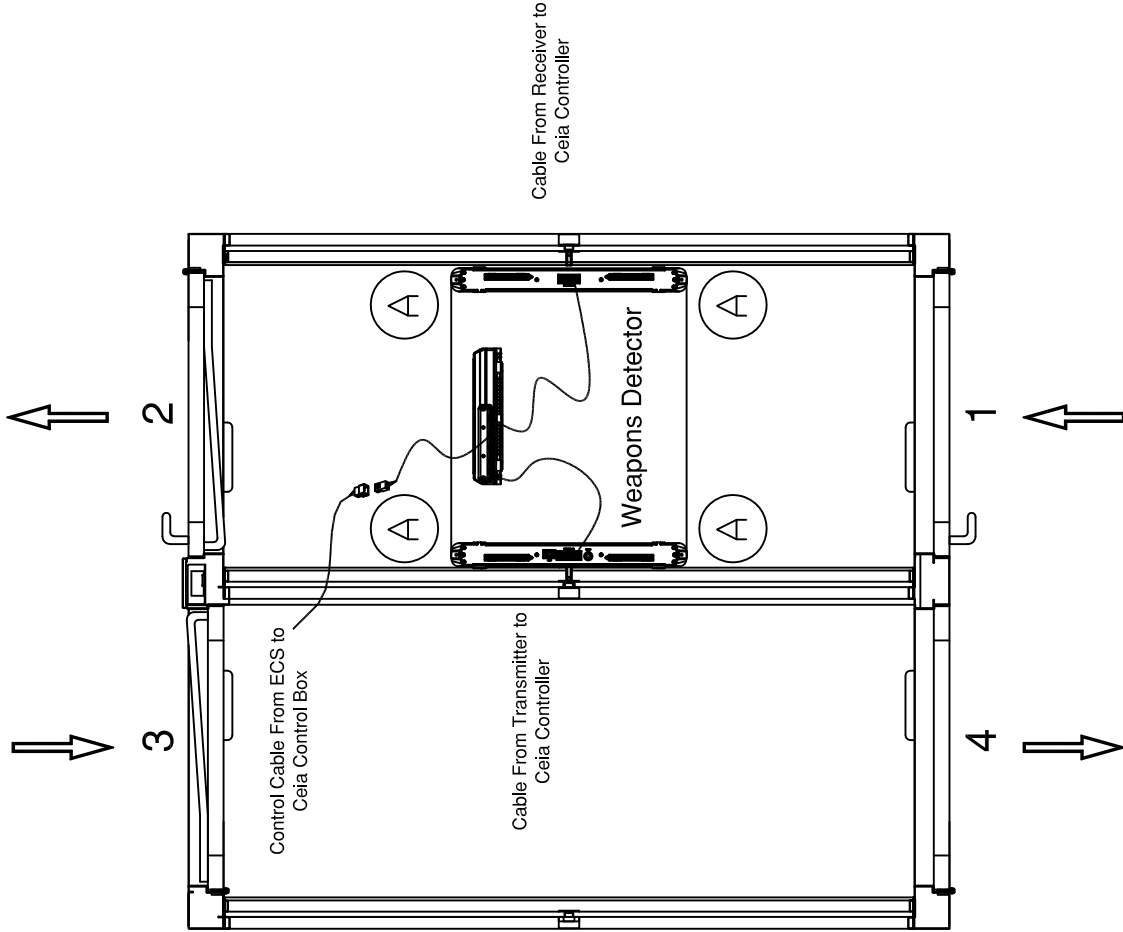


Spacing the panels

REV-1	.
REV-2	.

Weapons Detector:

The entrance side has predrilled holes with inserts in ceiling to mount the weapons detector. Make sure the bridge access panel faces door 2. Note the receiver side with the red dot needs to be on the outside wall and transmitter with green side to the cabin dividing wall. Note the dots are to face each other so when you walk thru the detector you will see them on your left and right. We also use Tapcons to anchor the weapons detector to the existing floor. Anchoring: We now should consider anchoring the weapons detector. The unit comes with ¼" x 2 ½" Long Tapcons and one 3/16" Masonry bit. We need to drill four 3/16" diameter holes to mount the detector (one each corner). (Note if you are anchoring through tile you need a 1/4" diameter bit to drill through tile only. If you do not the tile can eat the threads off the Tapcons.) We highly recommend you have the cordless drill torque turned down as not shear the bolts for this just adds time to the install.



PLAN VIEW

(CEILING REMOVED FOR CLARITY)

HAMILTON SAFE

2010 Entrance Control System 2 Lane
 Stainless Steel Doors and Frame
 Metal Detector Anchoring to Floor and
 Electrical Connection To System

- Attach the panels to the floor. The weapons detector is shipped with a 3/16" masonry bit and (4) 1/4" x 2-1/2" Tapcons. If you are anchoring through tile it will be necessary to drill a 1/4" hole through the tile to prevent damaging the threads on the Tapcons. Also do not overtighten to prevent shearing.



Attaching panels to floor



Attaching cables to control panel

- Snug the top screws to hold the panels firmly in place.
- Feed the cables from the transmitter and receiver panels along with the control cable from the ECS wiring harness out the access panel of the bridge.
- Plug the cables into the metal detector control panel and then lay it inside the bridge. All cables have been terminated into the appropriate connectors at the Hamilton factory.

Install the Power Supply

- Open the service door in the ceiling of the exit vestibule to gain access to the top of the ceiling.
- Place the power supply on top of the ceiling near the dedicated 110 VAC outlet. Reference drawing 96-298 for areas to avoid so the weapons detector is not affected. In many locations the power supply is mounted to the wall of the building.
- Plug the 2 conductor and 6 conductor cables from the power supply into the ECS wiring harness. Reference drawing 96-283.

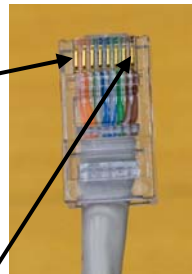


Installing the power supply

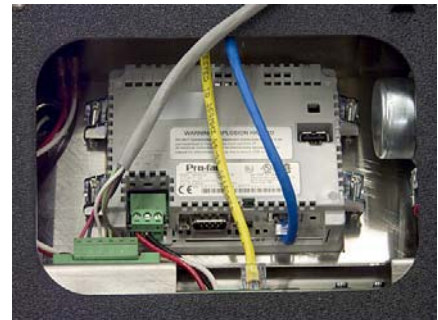
Install the Control Console

- Place the control console in the desired location as determined by the customer.
- Route the yellow and blue category 5 cables and the grey 6 conductor cable from the console to the rear (inside) center post of the ECS. 100 feet of cable is shipped with each unit unless longer lengths were specified in the order.
- Terminate the category 5 cables with RJ-45 connectors. Refer to drawing 96-269.
- Connect the yellow audio cable to the audio matrix, the blue touch screen cable to the Crouzet controller and the grey control cable to the control box. Refer to drawing 96-269.

<u>Pin</u>	<u>Color</u>
1	Or/W
2	Or
3	Gn/W
4	Bl
5	Bl/W
6	Gn
7	Bn/W
8	Bn



RJ45 connector



Cable connections at bottom of control console

Complete the Installation

- Clean all portions of the ECS including the glass. Make sure no finger prints or other unsightly smudges are visible.
- Install all decals. Reference drawing ???? for proper placement.

6 CONDUCTOR TO MAIN HARNESS

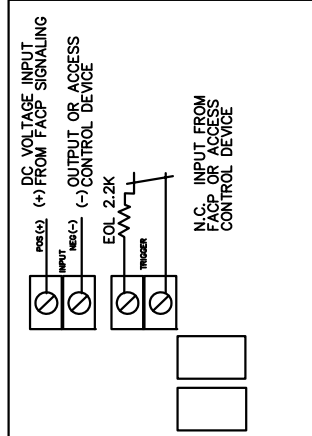
RED = +24VDC
BLACK = -24VDC
WHITE = TRIGGER
GREEN = SHUNT
BROWN = SHUNT
BLUE = SHUNT

2 CONDUCTOR TO CABIN LIGHTING

RED = +24VDC
BLACK = -24VDC

Typical Application Diagrams:

MOM5 module shown with wet and/or dry normally closed trigger inputs (Non-Latching)



MOM5 module shown with wet and/or dry normally open trigger inputs (Non-Latching)

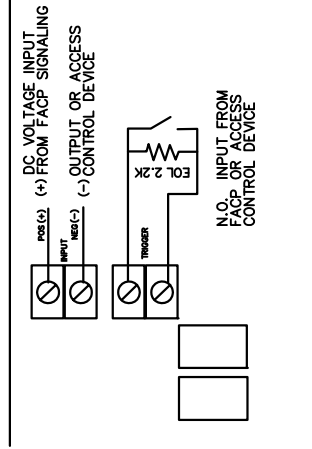
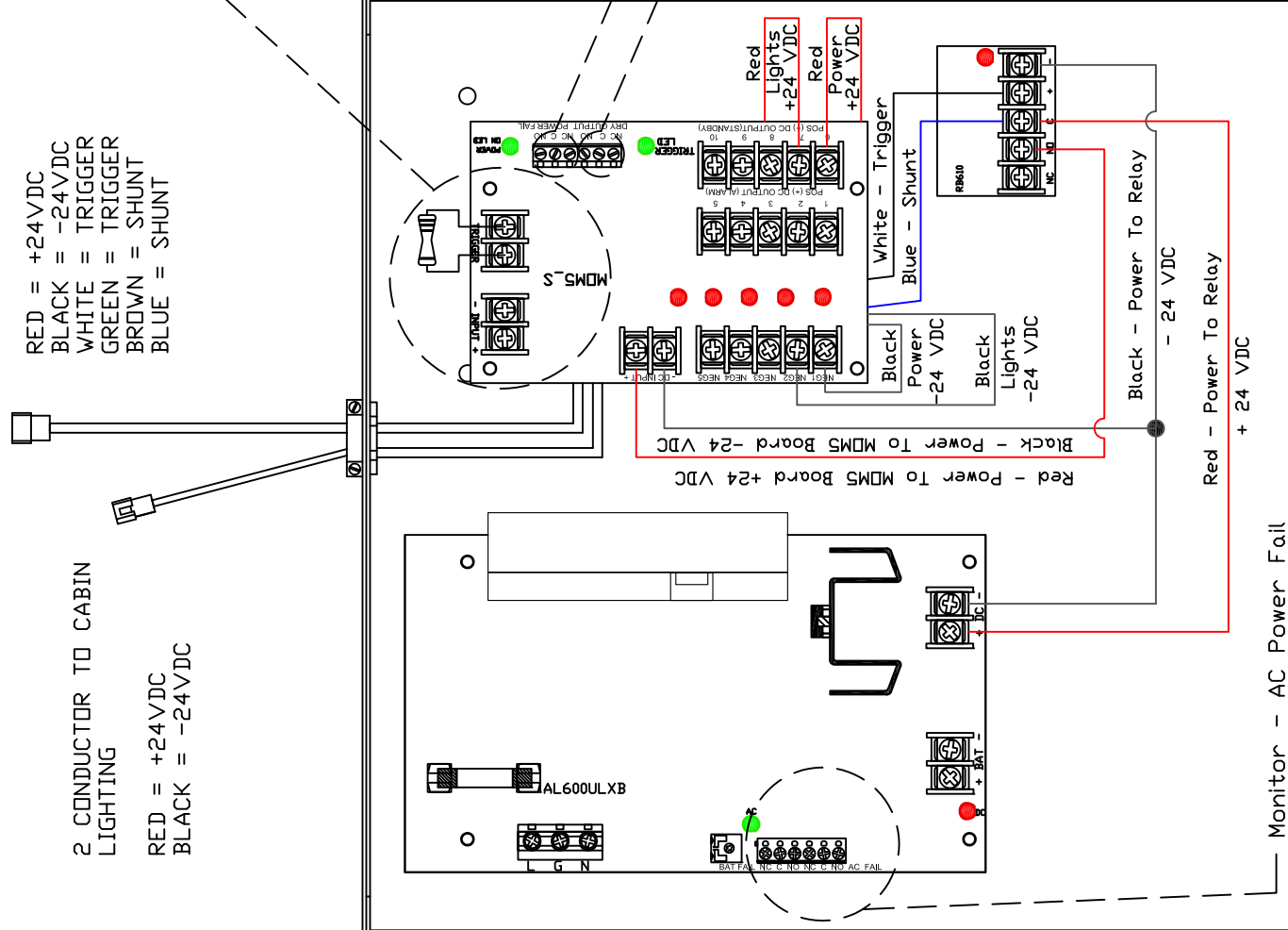


Figure 5 from Page 11 in the Altronix AL600ULM Installation Guide

Monitor - DC Power Fail
Monitor - Powered On or Off



HAMILTON SAFE
2010 Entrance Control System
New Touch Screen Console
Standard Wiring Detail For
The Altronix AL600ULM Supply

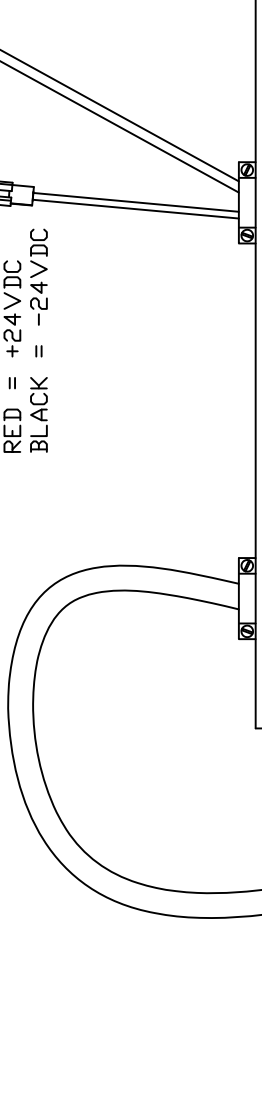
8 FT, 18 Gauge, 3
 Conductor, 10 Amp, 120 Volt,
 Tube SJT, PVC Jacket, NEMA
 Plug 5-15p, Folded Brass
 Blades, Black, UL Listed

6 Conductor to Main
 Harness

RED = +24VDC
 BLACK = -24VDC
 WHITE = TRIGGER
 GREEN = TRIGGER
 BROWN = SHUNT
 BLUE = SHUNT

2 Conductor to Cabin
 Lighting

RED = +24VDC
 BLACK = -24VDC



AL600ULM Multi-Output Access Control Power Supply/Charger

Specifications

- 12VDC or 24VDC selectable output.
- 6 amp supply current.
- Five (5) individual Class 2 Rated power limited outputs rated @ 2.5 amp.
- Current limit is 12VDC or 24VDC @ 2 amp per output.
- Input 115VAC / 60Hz, 1.45 amp.
- Input fuse rated @ 3.5 amp/250V.
- Fire Alarm Panel or Access Control System trigger inputs. N.O. or N.C. supervised trigger input and polarity reversal trigger input.
- Output relay energizes when unit is triggered (form "C" contact rated 1 amp @ 28VDC).
- Power fail supervision relay (form "C" contact rated 1 amp @ 28VDC).
- Filtered and electronically regulated output.
- Short circuit and thermal overload protection
- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current . 7 amp.
- Automatic switch over to stand-by battery when AC fails (zero voltage drop).
- AC fail supervision (form "C" contacts).
- Low battery supervision (form "C" contacts).
- Battery presence supervision (form "C" contacts).
- AC input and DC output LED indicators (power supply board).
- Red LEDs indicate condition of power outputs (multi-output board).
- Power & input trigger LEDs (multi-output board)
- Enclosure:
 - Combination knockouts re 1/2" and 3/4"
 - Accommodates up to two (2) 12VDC/7AH batteries.
 - Product weight: -AL600ULM: 8.0 lbs.
 - Shipping weight: -AL600ULM: 8.9 lbs.



REV.-1

REV.-2

Power Requirement:

Altronix Power supply is provided with a NEMA 5-15P plug.

Electrical Note:

110 VAC, 15 Amp dedicated unswitched circuit outlet

HAMILTON SAFE

2010 Entrance Control System
 New Touch Screen Console
 Standard Wiring Detail For
 The Altronix AL600ULM Supply

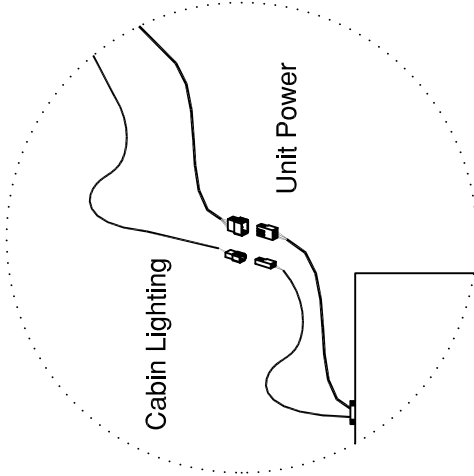
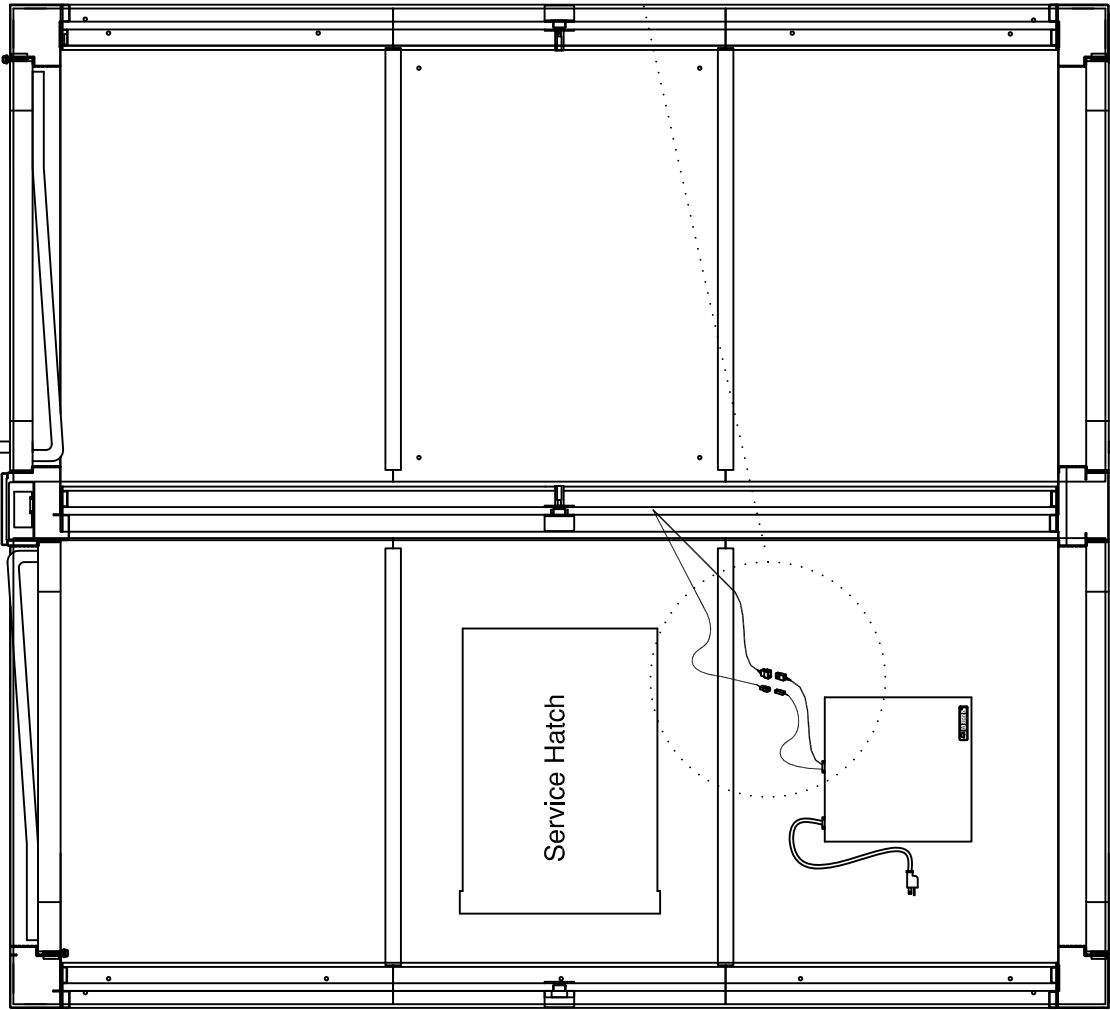
REV-1	.
REV-2	.



2



3



HAMILTON SAFE
 2010 Entrance Control System
 New Touch Screen Console
 Standard Wiring Detail For
 The Altronix AL600ULM Supply

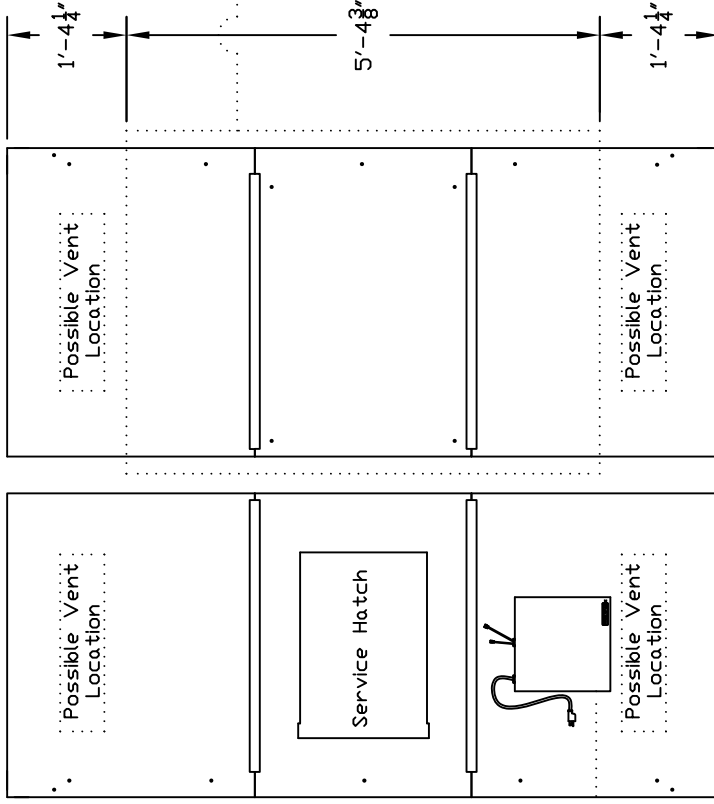
REV-1	.
REV-2	.

Power Supply:

Unit Is Powered By UL Listed Altronix Power Supply.

Model Number : AL600ULM Class 2 Rated

General location shown laying on ECS ceiling above door 4. Normally mounted on wall above the ECS ceiling.



IMPORTANT NOTE:

AVOID RUNNING ELECTRICAL OR HVAC OVER THE WEAPONS DETECTOR. THE DOTTED LINE REPRESENTS THE AREA TO AVOID.

Power Requirement:

Altronix Power supply is provided with a NEMA 5-15P plug. Plug may be removed for areas that require the unit be hard wired to a junction box.

Electrical Note:

110 VAC, 15 Amp dedicated unswitched circuit outlet

PLAN OF MODULAR CEILING

HAMILTON SAFE

2010 Entrance Control System 2 Lane
 Stainless Steel Doors and Frame
 HP White Level 1 System
 Recommended Electrical Requirements

Crouzet Controller Input Details

I1	Push bar door 1 allows exit - overrides manual lock
I2	Door contact door 1 - verifies open or closed
I3	Bond sensor door 1 maglock - verifies locked or unlocked
I4	Door contact door 2 - verifies open or closed
I5	Bond sensor door 2 maglock - verifies locked or unlocked
I6	Door contact door 3 - verifies open or closed
I7	Bond sensor door 3 maglock - verifies locked or unlocked
I8	Push bar door 4 allows exit - overrides manual lock
I9	Door contact door 4 - verifies open or closed
IA	Bond sensor door 4 maglock - verifies locked or unlocked
IB	IR door 1 - detects person between door 1 and weapon detector
IC	IR door 2 - detects person between weapons detector and door 2
ID	IR door 3 and 4 - detects person on exit side
IE	Weapon detector alarm - reset via admit switch
IF	Wireless admit - function same as admit switch
IG	Capture on exit input

Crouzet Controller Output Details

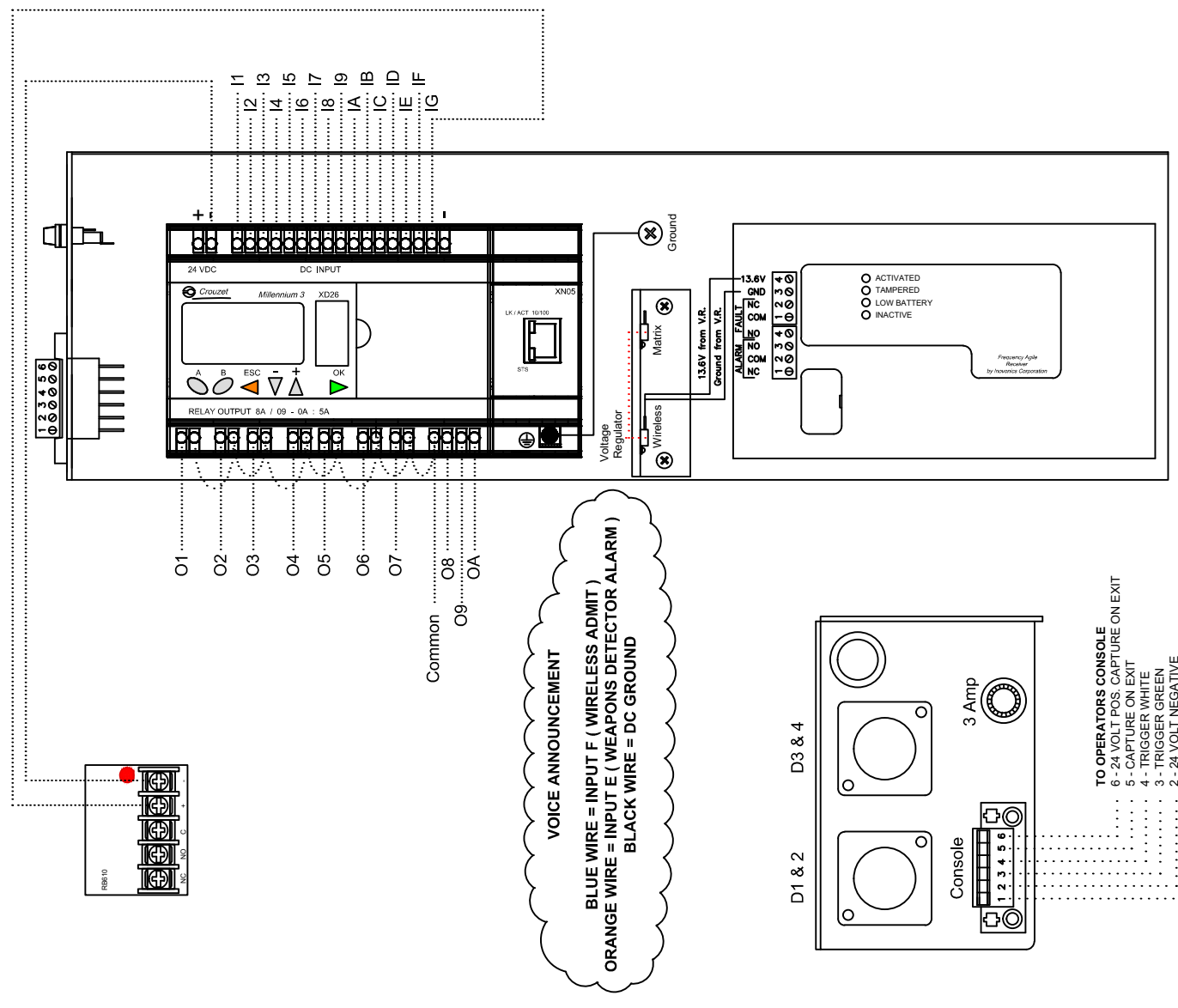
O1	Voice announcement on alarm
O2	Green light - OK to exit door 4
O3	Green light - OK to enter door 1
O4	Green light - OK to enter door 2
O5	Red light - Do not enter door 2
O6	Maglock power door 1
O7	Maglock power door 2
COMMON	For outputs O8, O9, & OA
O8	Maglock power door 3
O9	Maglock power door 4
OA	Cabin Lights

IP Addressed Crouzet Controller and Consoles

Master Console	IP Address is 192.168.0.10
Slave Console	IP Address is 192.168.0.11
Crouzet Controller	IP Address is 192.168.0.210
Subnet Mask All	Subnet Mask is 255.255.255.0

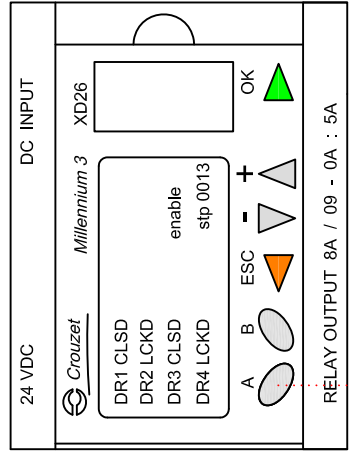
HAMILTON SAFE

2010 Entrance Control System
 New Touch Screen Wiring Details
 With Crouzet Controller and Inovonics
 Wireless Receiver Installed

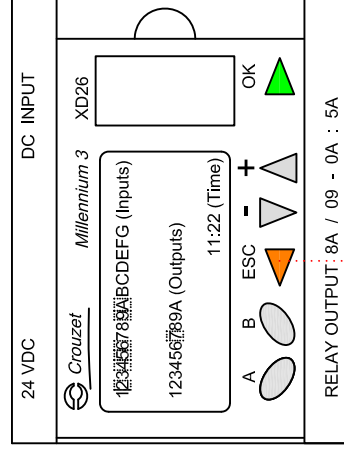


D 1 & 4 (28) Pin Plug Number		Exterior Door 1 and Door 4 Harness				Interior Door 2 and Door 3 Harness			
Device ID	Device Description	Harness Cable Color	Control Panel Connection	Device Plug Number (P)	Device Wire Color	Device ID	Device Description	Harness Cable Color	Control Panel Connection
1	IR Over Door 1	Black	24 - VDC	P2	Grey	Door 3 Maglock	Door 3 Maglock	Black	24 - VDC (2ND)
1	Door 1 Maglock	Black	24 - VDC	P3	Black	IR Over Door 3	IR Over Door 3	Black	24 - VDC (2ND)
1	Door 4 Maglock	Black	24 - VDC	P17	Black	IR Over Door 2	IR Over Door 2	Black	24 - VDC (2ND)
1	Door 1 Red Light	Black	24 - VDC	P5	Black	Door 2 Red Light	Door 2 Red Light	Black	24 - VDC (2ND)
1	Door 1 Green Light	Black	24 - VDC	P5	Black	Door 2 Green Light	Door 2 Green Light	Black	24 - VDC (2ND)
1	Door 4 Green Light	Black	24 - VDC	P15	Black	Door 2 Maglock	Door 2 Maglock	Black	24 - VDC (2ND)
1	IR Over Door 4	Black	24 - VDC	P22	Grey	Fuse To 24 + VDC (Red Jumper)	Fuse To 24 + VDC (Red Jumper)	White	24 + VDC
2	Push Bar Door 1	White	Input - 1	P1	Black	Voice Announcement	Voice Announcement	Red	Output - 1
3	IR Over Door 1	Red	24 + VDC	P2	WHT/GRY	Door Contact Door 2	Door Contact Door 2	Red	24 + VDC
3	Push Bar Door 1	Red	24 + VDC	P1	Red	IR Over Door 3	IR Over Door 3	Red	24 + VDC
3	Door Contact Door 1	Red	24 + VDC	P4	Brown	IR Over Door 2	IR Over Door 2	Red	24 + VDC
3	Door Contact Door 4	Red	24 + VDC	P14	Brown	Door Contact Door 3	Door Contact Door 3	Red	24 + VDC
3	Door Contact Door 4	Red	24 + VDC	P22	WHT/GRY	Speaker -	Speaker -	Light Green	24 - VDC
4	IR Over Door 1	Light Green	Input - B	P2	Yellow	Weapon Detector Alarm	Weapon Detector Alarm	Orange	Input - E
5	Door Contact Door 1	Orange	Input - 2	P4	Brown	Weapon Detector Alarm	Weapon Detector Alarm	Light Blue	24 - VDC (2ND)
6	Bond Sensor Door 1 Maglock	Light Blue	Input - 3	P3	Green	Microphone +	Microphone +	WHT/BLK	24 + VDC
7	Door Contact Door 4	WHT/BLK	Input - 9	P14	Brown	Bond Sensor Door 3 Maglock	Bond Sensor Door 3 Maglock	Light GRN/BLK	Input - 7
8	Door 1 Maglock	RED/BLK	With 15 ohm Resistor	P17	WHT/RED	Door Contact Door 3	Door Contact Door 3	ORG/BLK	Input - 6
9	Trigger	Light GRN/BLK	Input - A	P17	Green	Door 3 Maglock	Door 3 Maglock	Light BLU/BLK	ohm Resistor
10	Bond Sensor Door 4 Maglock	ORG/BLK	Output - 6	P17	WHT/RED	Speaker +	Speaker +	BLK/WHT	24 + VDC
11	Door 1 Maglock	Light BLUE/BLK	With 15 ohm Resistor	P3	WHT/RED	Door Contact Door 2	Door Contact Door 2	RED/WHT	Input - 4
12	Red Light - Door 1	BLK/WHT	Output - 6	P5	Red	IR Over Door 3	IR Over Door 3	Light GRN/WHT	Input - D
13	Green Light - OK To Enter Door 1	RED/WHT	With Diode	P5	Red	IR Over Door 2	IR Over Door 2	Light BLU/WHT	Input - C
14	IR Over Door 4	Light GRN/WHT	Input - 3	P22	Yellow	Green Light Door 2	Green Light Door 2	BLK/RED	Input - 4
15	IR Over Door 4	Light BLUE/WHT	Input - D	P22	Yellow	Door 2 Maglock	Door 2 Maglock	WHT/READ	ohm Resistor
16	From Power Supply To Fuse	BLK/RED	24 + VDC	Power Supply	Red	Bond Sensor Door 2 Maglock	Bond Sensor Door 2 Maglock	Light BLU/RED	Input - 5
17	Green Light - OK To Exit Door 4	WHT/RED	Output - 2	P15	Black	Computer (SO)	Computer (SO)	RED/GRN	Output - 5
18	Push Bar Door 4	ORG/RED	Input - 8	P13	Black	Computer (SI)	Computer (SI)	ORG/GRN	Output - 5
19	From Power Supply To Handicap / Teller Call +	Light BLU/RED	24 - VDC	Power Supply	2	Not Used	Not Used	BLK/WHT/RED	Not Used
20	Handicap / Teller Call +	RED/GRN	N.O.	P16	Common	Not Used	Not Used	WHT/BLK/RED	Not Used
21	Handicap / Teller Call -	BLK/WHT/RED	Common	P16	Common	Not Used	Not Used	RED/BLK/WHT	Not Used
22	Not Used	WHT/BLK/RED	Common	P16	Common	Not Available	Not Available	Light GRN/BLK/WHT	Not Available
23	Not Used	WHT/BLK/RED	Common	P16	Common	Not Available	Not Available	Ground	Ground
24	Not Used	RED/BLK/WHT	Common	P16	Common				
25	Not Used	RED/BLK/WHT	Common	P16	Common				
26	Not Available	Light GRN/BLK/WHT	Common	P16	Common				
27	Not Available	Light GRN/BLK/WHT	Common	P16	Common				
28	Ground	Ground	24 - VDC	Ground	24 - VDC				

Push A button to enable or disable delayed egress. The p0013 should be flashing with a black box around them. Push green OK button allow you change the time. The black box should be gone now allowing you to use the up or down buttons to set the desired time minimum of 6 seconds. To return to normal status push green OK button then the A button. Note: ships from factory disabled



To View the Input and Outputs hold ESC button in (Orange button) (Note: Input/Output have a box around them when activated)



HAMILTON SAFE
2010 Entrance Control System
New Touch Screen Wiring Details
With Crouzet Controller and Inovonics
Wireless Receiver Installed

Normally located above ECS
(Can be remote mounted)

AL300ULM
POWER
SUPPLY

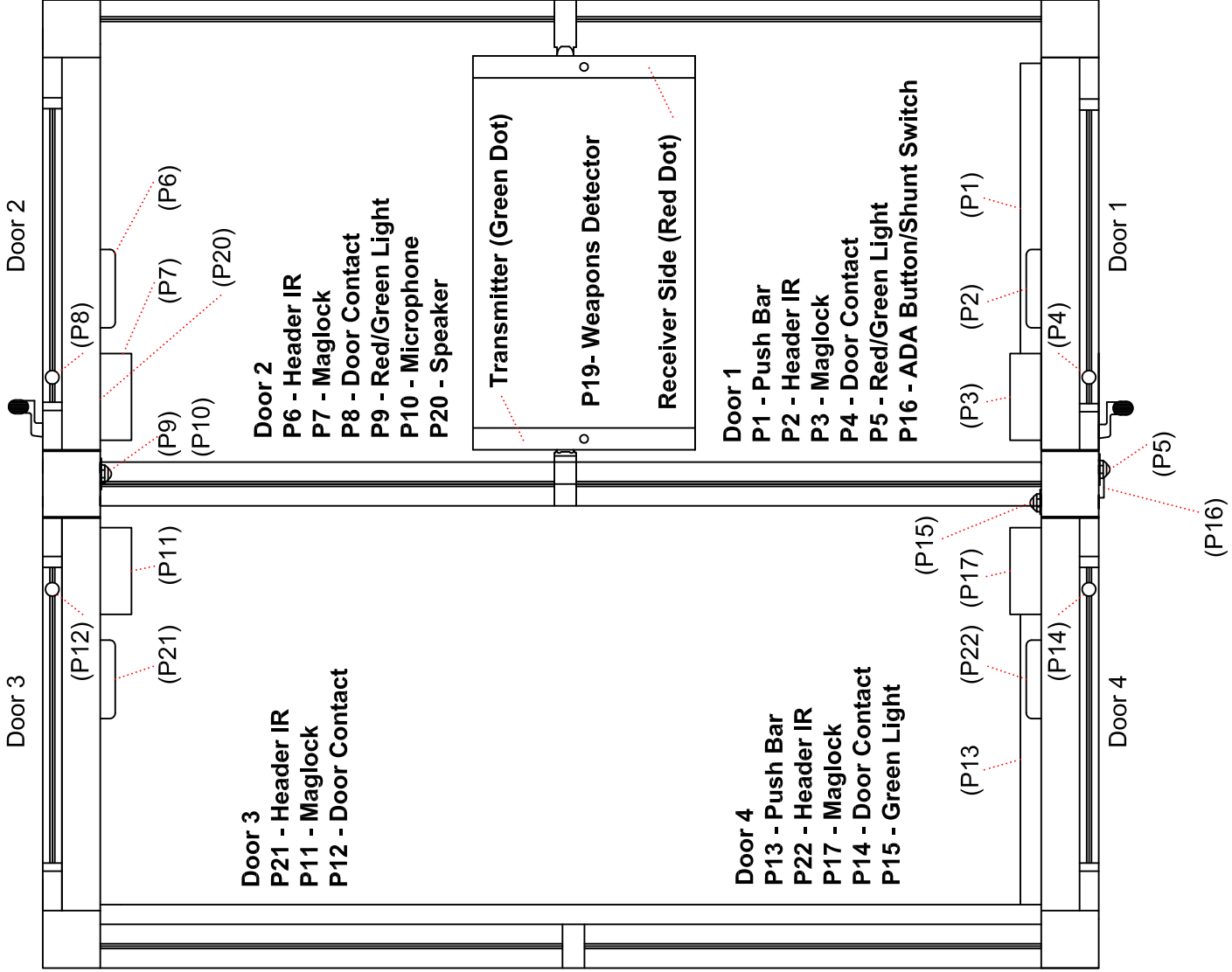
Power Supply - One 6 position plug
Shunt Switch
Power to Crouzet Controller
Trigger (On & Off)

ECS Controller to Weapons Detector Control
7-Brown Wire to Weapons Detector Control
9-Blue Wire to Weapons Detector Control
11-Orange Wire to Weapons Detector Control
12- Red Wire to Weapons Detector Control

Weapons Detector Panels to W.D. Control
Receiver (Red Dot-Outside Wall ECS)
B-Yellow Receiver Panel to WD Control
C-Black Receiver Panel to WD Control
K-Red Receiver Panel to WD Control
H-White Receiver Panel to WD Control
A-Green Receiver Panel to WD Control
Transmitter (Green Dot-Dividing Wall ECS)
D-Gray Transmitter Panel to WD Control
E-Blue Transmitter Panel to WD Control
F-Red Transmitter Panel to WD Control
Y-Brown Transmitter Panel to WD Control
9-Green Transmitter Panel to WD Control
7-White Transmitter Panel to WD Control
5-Yellow Transmitter Panel to WD Control
10-Black Transmitter Panel to WD Control

HAMILTON SAFE

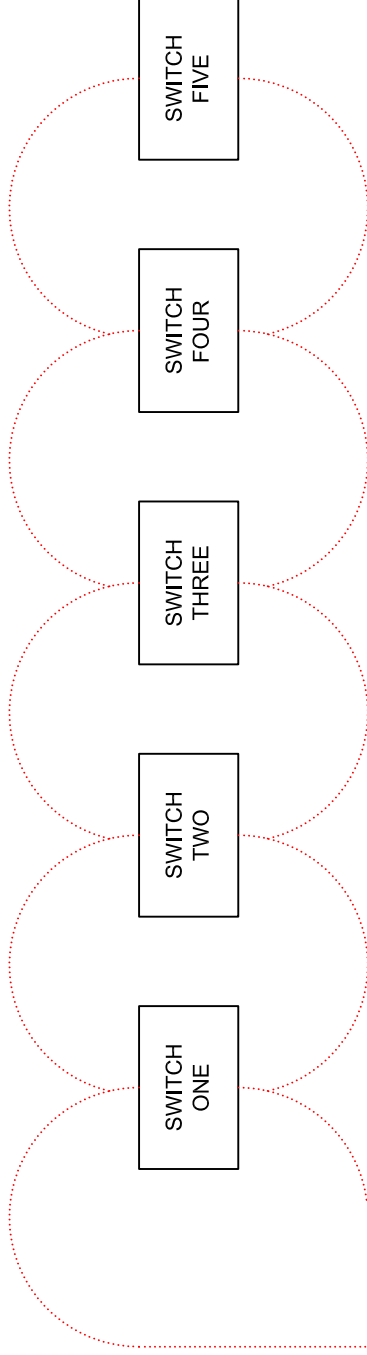
2010 Entrance Control System
New Touch Screen Wiring Details
With Crouzet Controller and Inovonics
Wireless Receiver Installed



OPTIONAL FEATURE "CAPTURE ON EXIT" WIRING SCHEMATIC

REV-1
REV-2

SWITCHES WIRED IN PARALLEL
(NORMALLY OPEN)



CAPTURE ON EXIT (TRIGGER "IG" INPUT)

24 VOLT + CAPTURE ON EXIT

TO OPERATORS CONSOLE

6-CONDUCTOR CONTROL WIRE
FROM ECS CONTROLLER TO
OPERATORS CONSOLE
(BY OTHERS)

- 6 - 24 VOLT POS. CAPTURE ON EXIT
- 5 - CAPTURE ON EXIT (INPUT "IG" ON CONTROLLER)
- 4 - TRIGGER WHITE
- 3 - TRIGGER GREEN
- 2 - 24 VOLT NEGATIVE
- 1 - 24 VOLT POSITIVE

HAMILTON SAFE

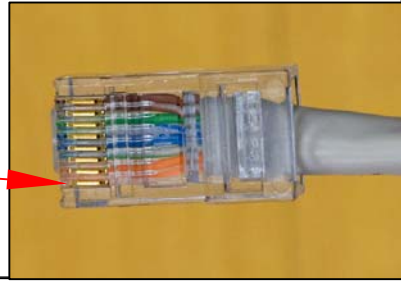
2010 Entrance Control System
New Touch Screen Wiring Details
With Crouzet Controller and Inovonics
Wireless Receiver Installed

RJ-45 Color Chart

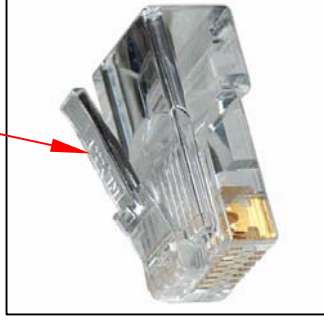
Straight-Through

Wire	Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown

Pin 1



Spring clip



To determine which wire is wire number 1, hold the cable so that the end of the plastic RJ-45 tip (the part that goes into a wall jack first) is facing away from you. Face the clip down so the copper side faces up (the springy clip will now be parallel to the floor). When looking down on the copper side, wire 1 will be on the far left.

REV-1
REV-2

HAMILTON SAFE

2010 Entrance Control System
New Touch Screen Wiring Details
With Crouzet Controller and Inovonics
Wireless Receiver Installed

100' LG AUDIO YELLOW CAT 5 FROM MATRIX TO AUDIO BOARD ON THE OPERATOR'S CONSOLE SUPPLIED WITH UNIT

OPERATOR'S CONSOLE



100' LG 6-CONDUCTOR TO OPERATOR'S CONSOLE (SUPPLIED BY OTHERS)

- 6 - 24 VOLT POS. CAPTURE ON EXIT
- 5 - CAPTURE ON EXIT (INPUT "IG")
- 4 - TRIGGER WHITE
- 3 - TRIGGER GREEN
- 2 - 24 VOLT NEGATIVE
- 1 - 24 VOLT POSITIVE

100' LG CONTROL BLUE CAT 5 FROM CONTROLLER TO OPERATOR'S CONSOLE (WHEN ADDING MULTIPLE) (CONSOLES 100' CAT 5) (GOES FROM THE CONSOLE) (TO WORKGROUP SWITCH)

OPTIONAL MULTIPLE CONSOLES

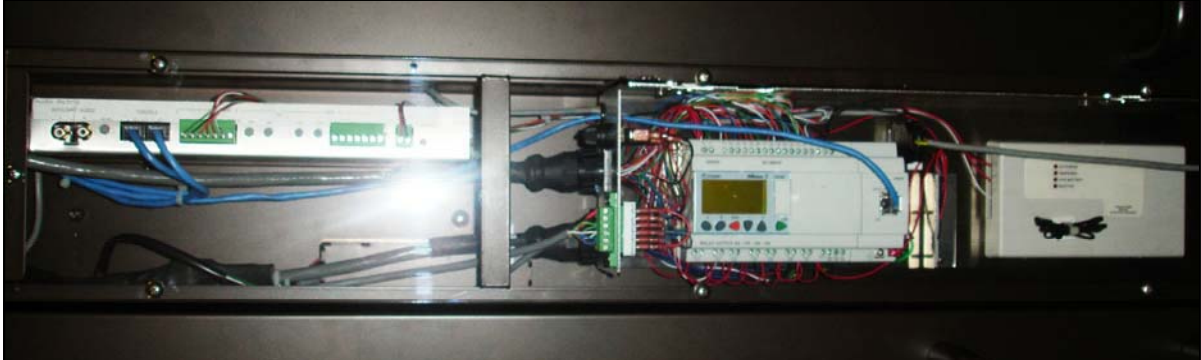
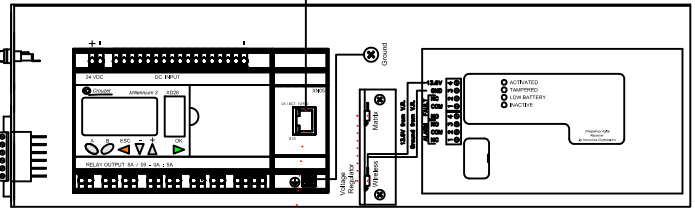
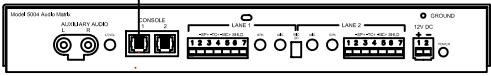
WHEN USING MULTIPLE CONSOLES A WORKGROUP SWITCH MUST BE ADDED TO ALLOW THE CROUZET CONTROLLER TO COMMUNICATE WITH EACH OPERATOR'S CONSOLE

NORMALLY THE SWITCH WILL BE LOCATED ON TOP OF UNIT. THE SWITCH WILL SHIP WITH A SHORT CAT 5 CABLE TO CONNECT THE CROUZET CONTROLLER TO THE SWITCH



HAMILTON SAFE

2010 Entrance Control System
New Touch Screen Wiring Details
With Crouzet Controller and Inovonics Wireless Receiver Installed

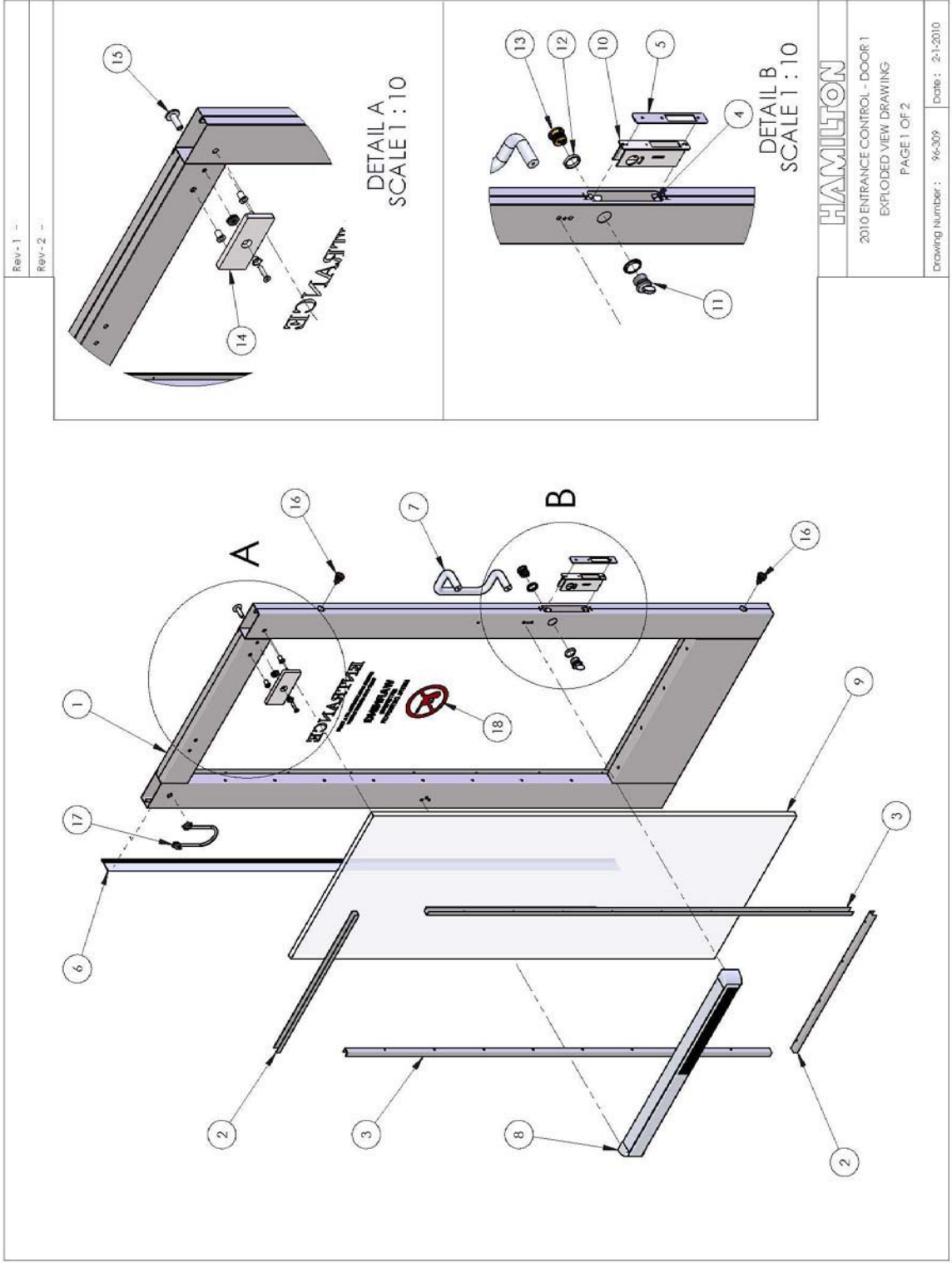


Completing the Installation

Completing the Installation

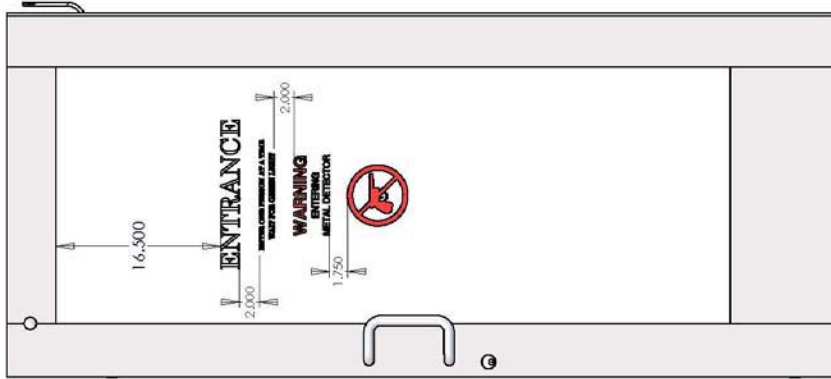
- Clean all portions of the ECS including the glass. Make sure no finger prints or other unsightly smudges are visible.
- Install all decals. Reference drawings 96-309, 96-310, 96-311 & 96-312 for proper placement.
- Verify operation of the doors. The door closers have been adjusted at the Hamilton factory and may not need additional adjustments. Instructions for adjusting the door closers can be found later in this document if necessary.
- Plug in the power supply and then close the service door in the exit vestibule ceiling.
- Follow the instructions later in this document for programming the Ceia metal detector. Recommended and optional settings are listed.
- Follow the instructions later in this document for programming the wireless transmitters.
- The infrared motion sensors are programmed at the Hamilton factory and no further adjustments should be necessary unless a sensor is replaced. Instructions can be found later in this document.
- Completely test the ECS using the Field Functional Test Checklist (document 08-307) which is included with the ECS shipment. This form must be completely filled out, signed, dated and returned to Hamilton Safe via the email addresses found at the bottom of the form. Warranty will not be honored until the form is received.
- Train the customer in the complete operation of the ECS.

Decals – Door 1



Decals – Door 1

Rev-1 --
Rev-2 --



2010 ECS DOOR 1 EXPLODED VIEW PARTS LIST

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1	ECSTN-W-012 (D1)	B10135	DOOR 1 WELDED SUB-ASSEMBLY	1
2	ECSTND-009	B10130	DOOR TOP & BOTTOM GLASS CHANNEL (7/16" GLASS)	2
3	ECSTND-010	B10131	DOOR SIDE GLASS CHANNEL (7/16" GLASS)	2
4	ECSTND-007	B10132	DOOR LATCH MOUNTING CLIP	2
5	ECSTND-008	B10133	DOOR LATCH COVER	1
6	*****	H0742	ROTON HINGE	1
7	*****	H0734	PULL HANDLE	1
8	*****	E10085	TOUCHBAR 672-REX RH	1
9	*****	B5985	DOOR GLASS - HP WHITE LEVEL 1	1
10	*****	H10064	ECS DOOR LOCK DT-1850 1-1/2	1
11	*****	H10065	THUMB LATCH 7181TK2-26D	1
12	*****	H10067	MORTISE CYLINDER SPACER 861F-28-10	1
13	*****	H10066	MORTISE CYLINDER 7185SC2-26D-42642	1
14	*****	H10069	ARMATURE PLATE KIT	1
15	*****	H10068	ARMATURE PLATE MOUNTING CAP	1
16	*****	E0779	DOOR CONTACT - DOOR SIDE	2
17	*****	H10171	TSB-C DOOR CORD - ASSA ABLOY	1
18	*****	H10097	DOOR DECAL KIT - COMPLETE 4 DOORS - ENGLISH	1
19	*****	H10098	OPTIONAL DOOR DECAL KIT - COMPLETE 4 DOORS - SPANISH (NOT SHOWN)	1

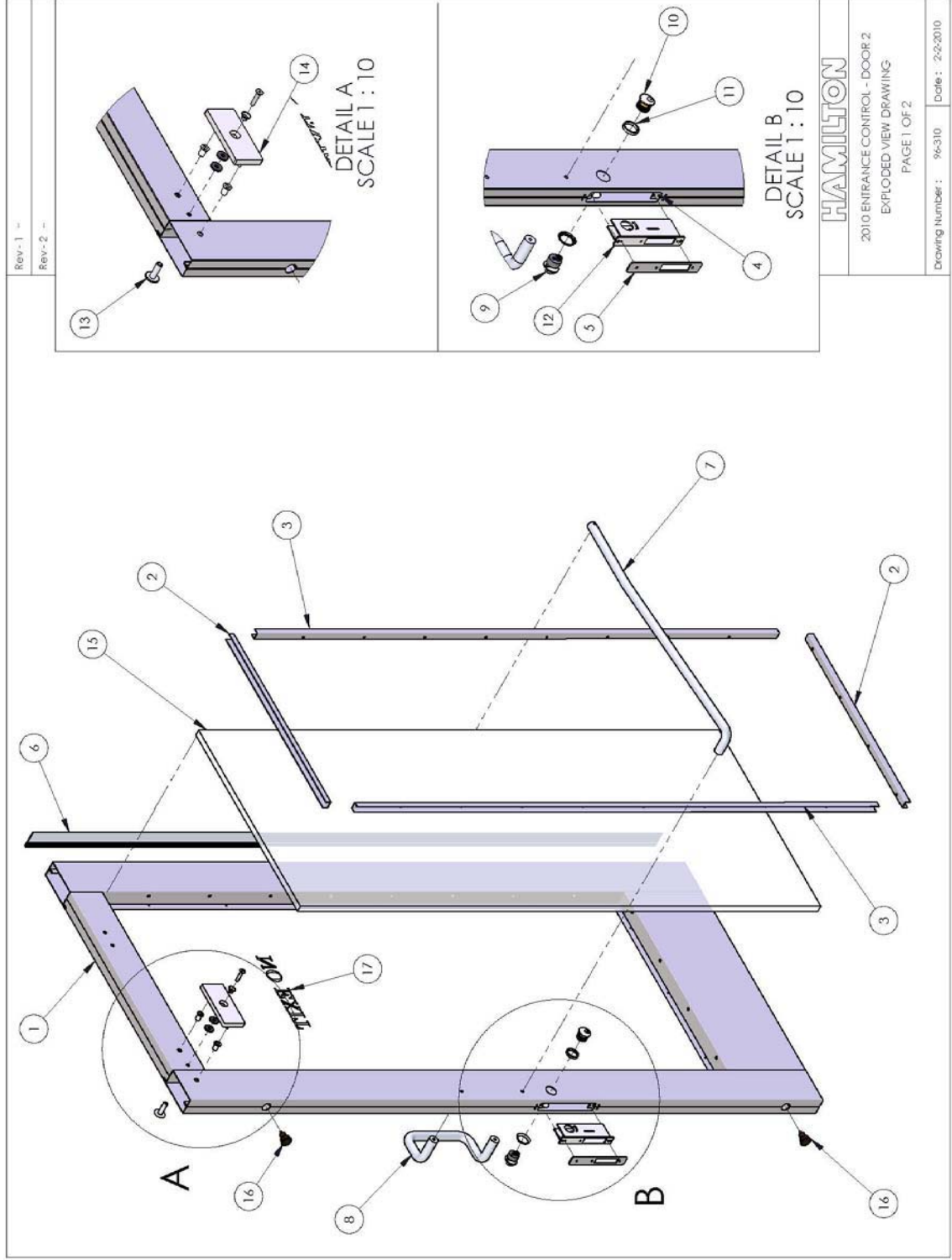
OUTSIDE DOOR 1
DECAL APPROX 16-1/2" FROM TOP
OF GLASS AND CENTERED LEFT TO RIGHT

HAMILTON

2010 ENTRANCE CONTROL - DOOR 1
EXPLODED VIEW DRAWING
PAGE 2 OF 2

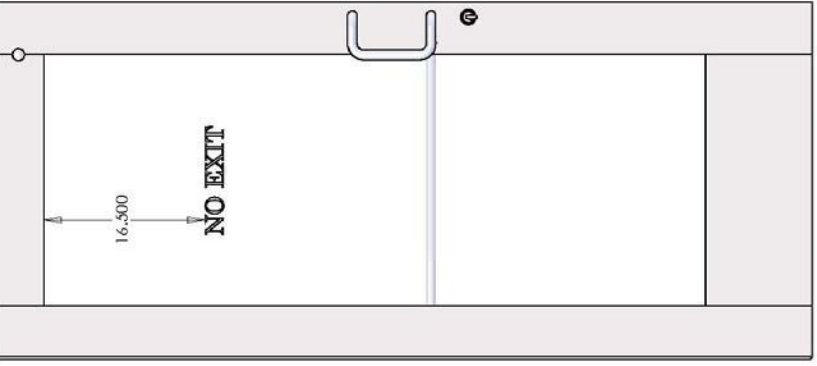
Drawing Number: 96-309 Date: 2-1-2010

Decals – Door 2



Decals – Door 2

Rev-1 -
Rev-2 -



2010 ECS DOOR 2 EXPLODED VIEW PARTS LIST

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1	ECSIN-W-012 (D2)	B10136	DOOR 2 WELDED SUB-ASSEMBLY	1
2	ECSIND-009	B10130	DOOR TOP & BOTTOM GLASS CHANNEL (7/16" GLASS)	2
3	ECSIND-010	B10131	DOOR SIDE GLASS CHANNEL (7/16" GLASS)	2
4	ECSIND-007	B10132	DOOR LATCH MOUNTING CLIP	2
5	ECSIND-008	B10133	DOOR LATCH COVER	1
6	*****	H0742	ROTON HINGE	1
7	*****	H0736	PUSH HANDLE - CLEAR	1
8	*****	H0734	PULL HANDLE	1
9	*****	H10065	THUMB LATCH 718TK2-26D	1
10	*****	H10066	MORTISE CYLINDER 718SSC2-26D-42642	1
11	*****	H10067	MORTISE CYLINDER SPACER 861F-28-10	1
12	*****	H10064	ECS DOOR LOCK DT-1850 1-1/2	1
13	*****	H10068	ARMATURE PLATE MOUNTING CAP	1
14	*****	H10069	ARMATURE PLATE KIT	1
15	*****	B5985	DOOR GLASS - HP WHITE LEVEL 1	1
16	*****	E0779	DOOR CONTACT - DOOR SIDE	2
17	*****	H10097	DOOR DECAL KIT - COMPLETE 4 DOORS - ENGLISH	1
18	*****	H10098	DOOR DECAL KIT - COMPLETE 4 DOORS - SPANISH (NOT SHOWN)	1

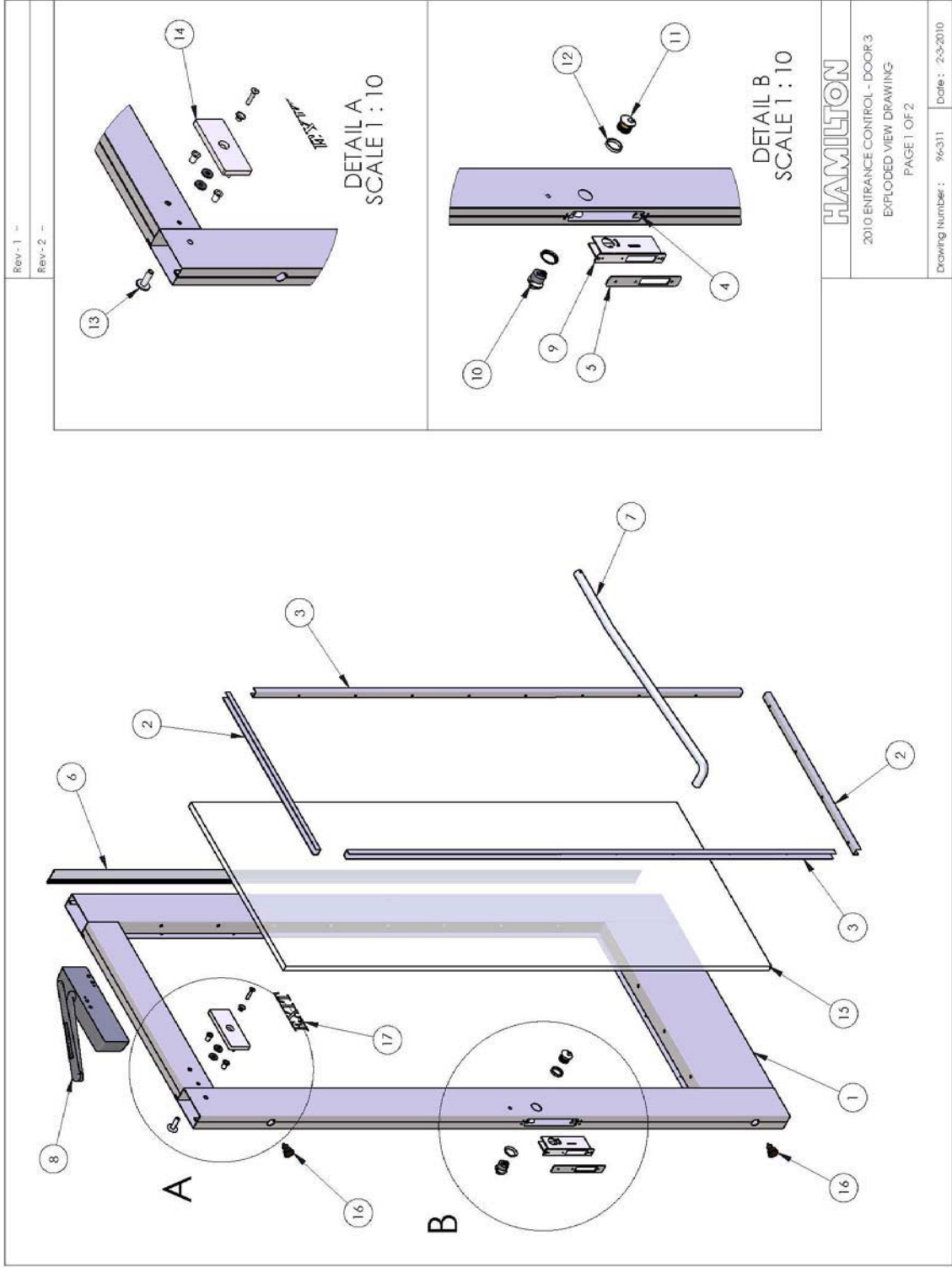
LOBBY SIDE DOOR 2
DECAL APPROX 16-1/2" FROM TOP
OF GLASS AND CENTERED LEFT TO RIGHT

HAMILTON

2010 ENTRANCE CONTROL - DOOR 2
EXPLODED VIEW DRAWING
PAGE 2 OF 2

Drawing Number: 96-310 Date: 2-2-2010

Decals – Door 3

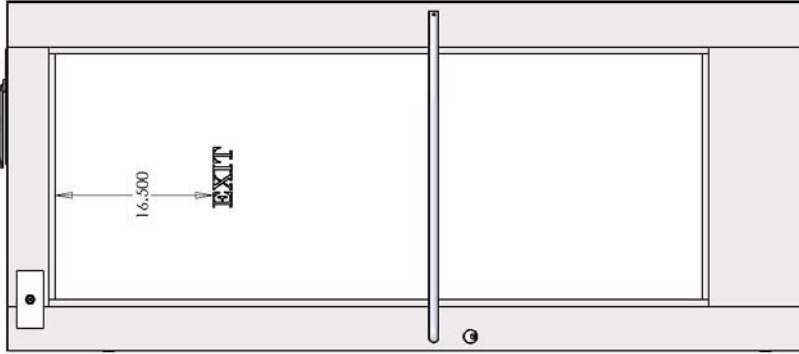


Decals – Door 3

Rev-1 -
Rev-2 -

2010 ECS DOOR 3 EXPLODED VIEW PARTS LIST

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1	ECSIN-W012 (D3)	B10129	DOOR 3 WELDED SUB-ASSEMBLY	1
2	ECSTND-009	B10130	DOOR TOP & BOTTOM GLASS CHANNEL (7/16" GLASS)	2
3	ECSTND-010	B10131	DOOR SIDE GLASS CHANNEL (7/16" GLASS)	2
4	ECSTND-007	B10132	DOOR LATCH MOUNTING CLIP	2
5	ECSTND-008	B10133	DOOR LATCH COVER	1
6	*****	H0742	ROTON HINGE	1
7	*****	H0736	PUSH HANDLE - CLEAR	1
8	*****	H10063	DOOR CLOSER - LCN SUPER SMOOTHIE #4041	1
9	*****	H10064	ECS DOOR LOCK DT-1850 1-1/2	1
10	*****	H10065	THUMB LATCH 7181TK2-26D	1
11	*****	H10066	MORTISE CYLINDER 718SSC2-26D-42642	1
12	*****	H10067	MORTISE CYLINDER SPACER 861F-28-10	1
13	*****	H10068	ARMATURE PLATE MOUNTING CAP	1
14	*****	H10069	ARMATURE PLATE KIT	1
15	*****	B5985	DOOR GLASS - HP WHITE LEVEL 1	1
16	*****	E0779	DOOR CONTACT - DOOR SIDE	2
17	*****	H10097	DOOR DECAL KIT - COMPLETE 4 DOORS - ENGLISH	1
18	*****	H10098	DOOR DECAL KIT - COMPLETE 4 DOORS - SPANISH (NOT SHOWN)	1



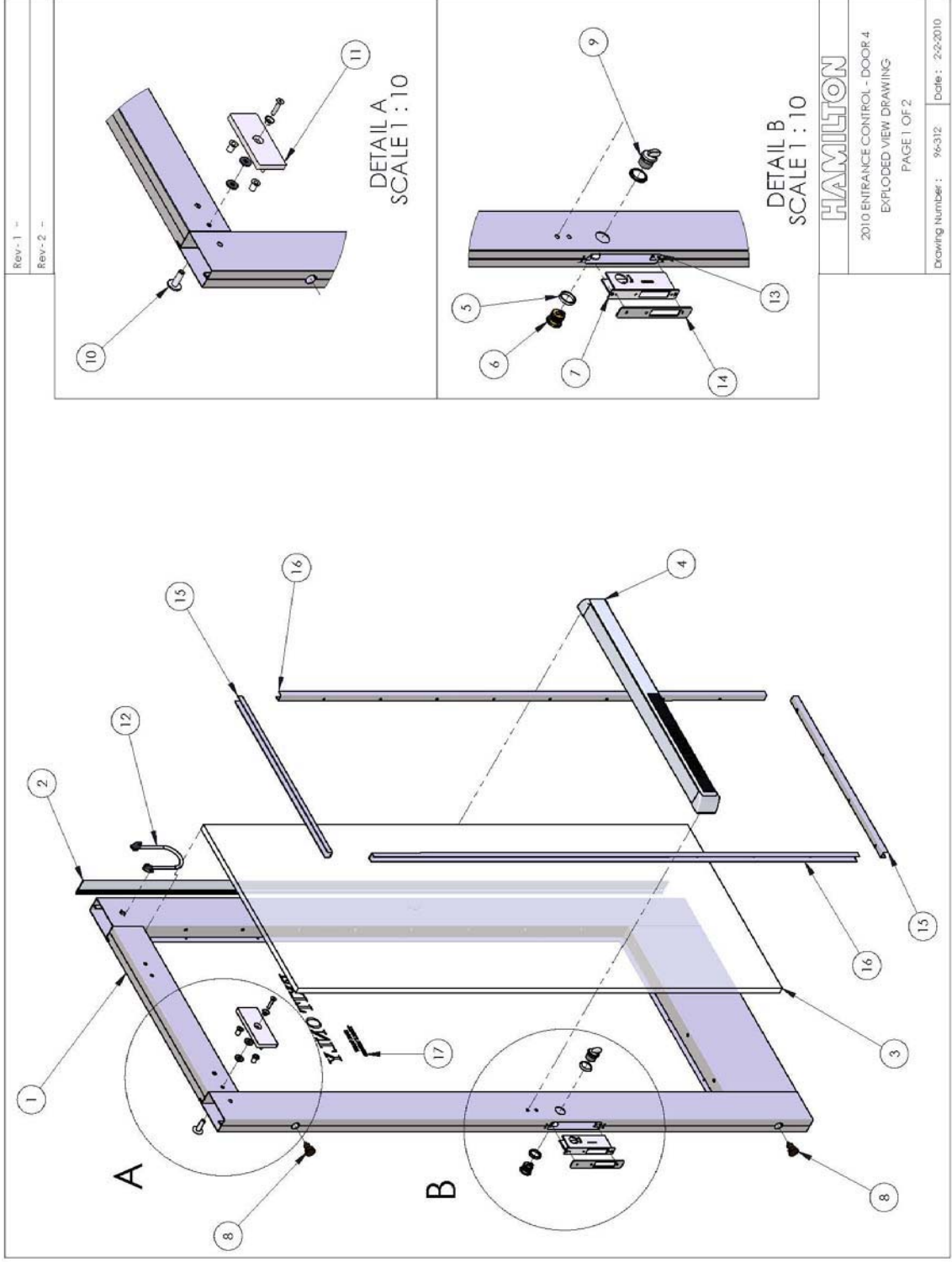
LOBBY SIDE DOOR 3
DECAL APPROX. 16-1/2" FROM TOP
OF GLASS AND CENTERED LEFT TO RIGHT

HAMILTON

2010 ENTRANCE CONTROL - DOOR 3
EXPLODED VIEW DRAWING
PAGE 2 OF 2

Drawing Number : 96-311 Date : 2-3-2010

Decals – Door 4

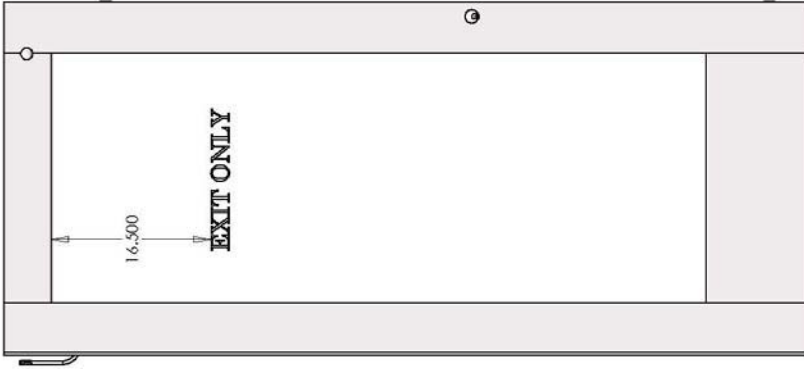


Decals – Door 4

Rev. 1 -
Rev. 2 -

2010 ECS DOOR 4 EXPLODED VIEW PARTS LIST

DRAWING NO.	ITEM NO.	PART NO.	DESCRIPTION	QTY.
ECSTN-W012 (D4)	1	B10134	DOOR 4 WELDED SUB-ASSEMBLY	1
ECSTND-009	15	B10130	DOOR TOP & BOTTOM GLASS CHANNEL (7/16" GLASS)	2
ECSTND-010	16	B10131	DOOR SIDE GLASS CHANNEL (7/16" GLASS)	2
ECSTND-007	13	B10132	DOOR LATCH MOUNTING CLIP	2
ECSTND-008	14	B10133	DOOR LATCH COVER	1
*****	3	B5985	DOOR GLASS - HP WHITE LEVEL 1	1
*****	2	H0742	ROTON HINGE	1
*****	4	F10086	TOUCHBAR 672-REX IH	1
*****	5	H10067	MORTISE CYLINDER SPACER 861F-28-10	1
*****	6	H10066	MORTISE CYLINDER 71855C2-26D-42642	1
*****	7	H10064	ECS DOOR LOCK DF-1850 1-1/2	1
*****	8	E0779	DOOR CONTACT - DOOR SIDE	2
*****	9	H10065	THUMB LATCH 7181TK2-26D	1
*****	10	H10068	ARMATURE PLATE MOUNTING CAP	1
*****	11	H10069	ARMATURE PLATE KIT	1
*****	12	H10171	TSB-C DOOR CORD - ASSA ABL0Y	1
*****	17	H10097	DOOR DECAL KIT - COMPLETE 4 DOORS - ENGLISH	1
*****	18	H10098	DOOR DECAL KIT - COMPLETE 4 DOORS - SPANISH (NOT SHOWN)	1



OUTSIDE DOOR 4

"EXIT ONLY" DECAL APPROX. 16-1/2" FROM TOP OF GLASS AND CENTERED LEFT TO RIGHT.
 "WAIT FOR GREEN LIGHT" DECAL IS ON OTHER SIDE 2" BELOW "EXIT ONLY" AND APPROX. 5-3/4" FROM INSIDE EDGE OF DOOR (LOCK SIDE)

HAMILTON

2010 ENTRANCE CONTROL - DOOR 4
 EXPLODED VIEW DRAWING
 PAGE 2 OF 2

Drawing Number: 96-312 Date: 2-2-2010

- Verify operation of the doors. The door closers have been adjusted at the Hamilton factory and may not need additional adjustments. Instructions for adjusting the door closers can be found later in this document if necessary.
- Plug in the power supply and then close the service door in the exit vestibule ceiling.
- Follow the instructions later in this document for programming the Ceia metal detector. Recommended and optional settings are listed.
- Follow the instructions later in this document for programming the wireless transmitters.
- The infrared motion sensors are programmed at the Hamilton factory and no further adjustments should be necessary unless a sensor is replaced. Instructions can be found later in this document.
- Completely test the ECS using the Field Functional Test Checklist (document 08-307) which is included with the ECS shipment. This form must be completely filled out, signed, dated and returned to Hamilton Safe via the email addresses found at the bottom of the form. Warranty will not be honored until the form is received.
- Train the customer in the complete operation of the ECS.





Programming the Metal Detector

The following chart shows the user adjustable settings on the metal detector. Ceia factory values are shown along with the recommended values for use in the ECS. Adjust these settings as needed.

Adjustable Setting	Ceia Factory Value	Recommended Value for ECS
Sensitivity	SE = 19	SE = 25
Max. Detection Speed	DS = 5	DS = 5
Baud Rate	BR = 9600	BR = 9600
TX Channel	CH = 50	CH = 50
Alarm Duration	AD = 1C	AD = 1C
Alarm Volume	AV = 3	As desired by customer
Alarm Tone	AT = 2	As desired by customer
Reset Mode	RM = A	RM = A



Follow these steps to program the recommended values:

- 1) To begin there should be four dashes on the left side of the split screen. This is normal operation mode with no metal detector activation and no alarms.
 
- 2) Press the **PROG** key. Four dashes should appear on the right side of the split screen indicating program mode.
 
- 3) Press the **ENTER** key and then use the **↑** & **↓** arrow keys to scroll through the available program items.
- 4) While the item you wish to change is displayed (such as SE for Sensitivity) press the **ENTER** key and the current value will start flashing. Use the **↑** or **↓** arrow key to change the value as appropriate and then press the **ENTER** key again.
 

- 5) Use the **↑** & **↓** arrow keys to locate other settings and repeat step 4 as necessary to change their values. While programming the Alarm Volume and Alarm Tone you will hear the new sound as the value is changed with the arrow keys.
- 6) Once all items are programmed properly press the **PROG** key to exit program mode. Four dashes will once again appear on the left side of the split screen.

Programming the Wireless Transmitters

Up to (4) FA203S transmitters can be programmed to activate the FA404R receiver. Use the following procedure to program each transmitter used.

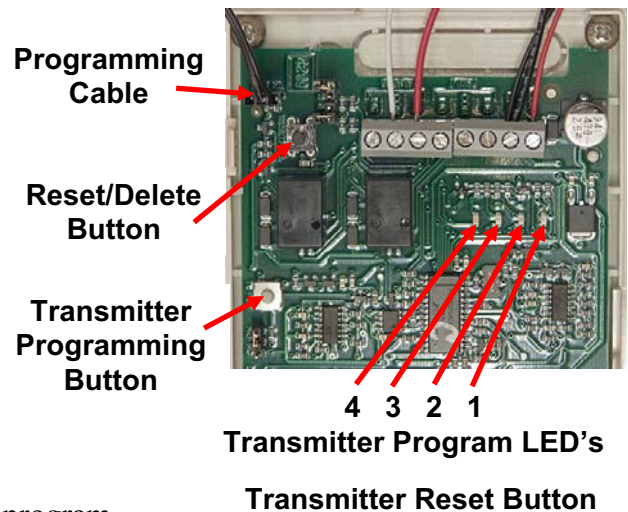
- 1) Pry off the cover from the receiver using a flat blade screwdriver at the slots on the sides. Also pry open each transmitter case the same way.
- 2) Attach one end of the programming cable to the receiver. Polarity is not important.
- 3) Place the receiver in programming mode by holding the Transmitter Programming Button for at least 1 second. The LED for transmitter 1 will either come on solid meaning that input is already programmed or the LED will blink meaning that input is not programmed. Pressing and holding the Transmitter Programming Button again selects transmitter 2. Repeat this step as necessary to view the programming status of each transmitter input.
- 4) With the LED blinking for the transmitter input you wish to program, connect the other end of the programming cable to a transmitter. Press the Transmitter Reset Button on the transmitter for at least 2 seconds. If successful, the LED on the receiver will change from blinking to steady when the button is released. After a short time period programming mode will exit automatically. Programming mode will also exit after approximately 30 seconds of inactivity.
- 5) Re-enter programming mode and repeat step 4 for each additional FA203S transmitter you wish to program.
- 6) Make sure that only one transmitter is programmed for each input. To delete a programmed input, press the Reset/Delete Button on the receiver while that input LED is lit in programming mode.

If a battery is removed or replaced in a transmitter it is not necessary to reprogram it. Simply press the Transmitter Reset Button after installing the battery.



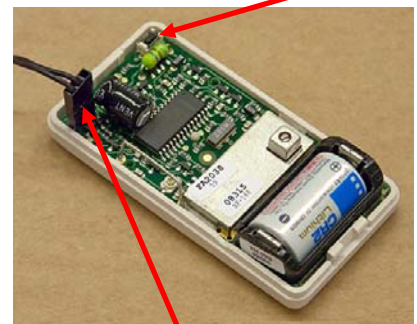
Removing the Transmitter Cover

FA404R Receiver



Transmitter Program LED's

Transmitter Reset Button



Programming Cable

Programming Wireless Admit Switches

Document Number: 08-338

Date: 10/17/11

Hold "B" button until
you see:

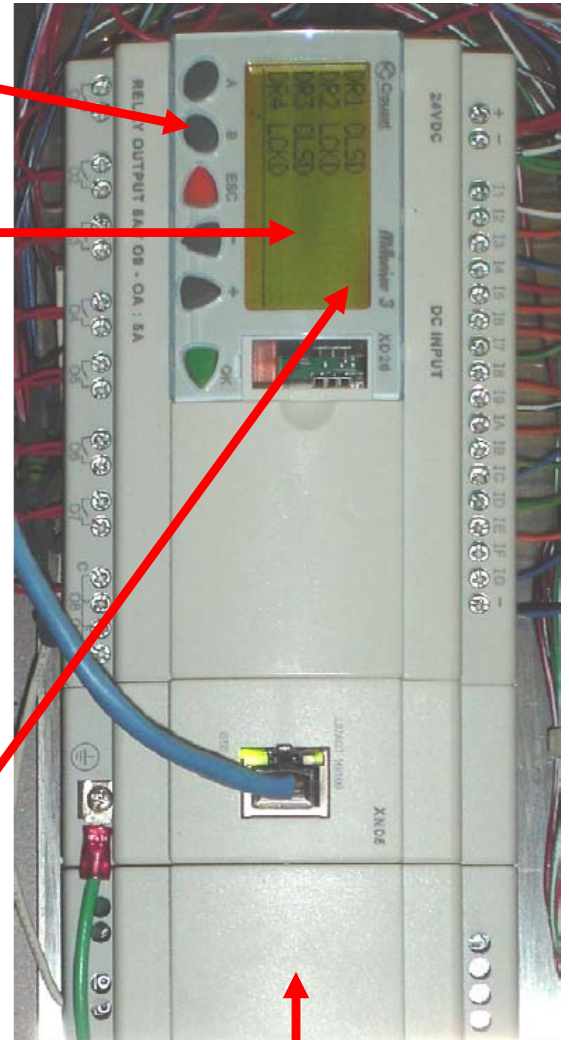
"REMOTE ON NOW"

Push the grey button on the
key-fob remote until the
"REMOTE ON NOW" goes off
then the remote should be
programmed.

Test the remote to see if it is
resetting the system you
should see a "C-1" pop up in
the lower right hand corner of
the controller display when it
is pushed.



KeyFob



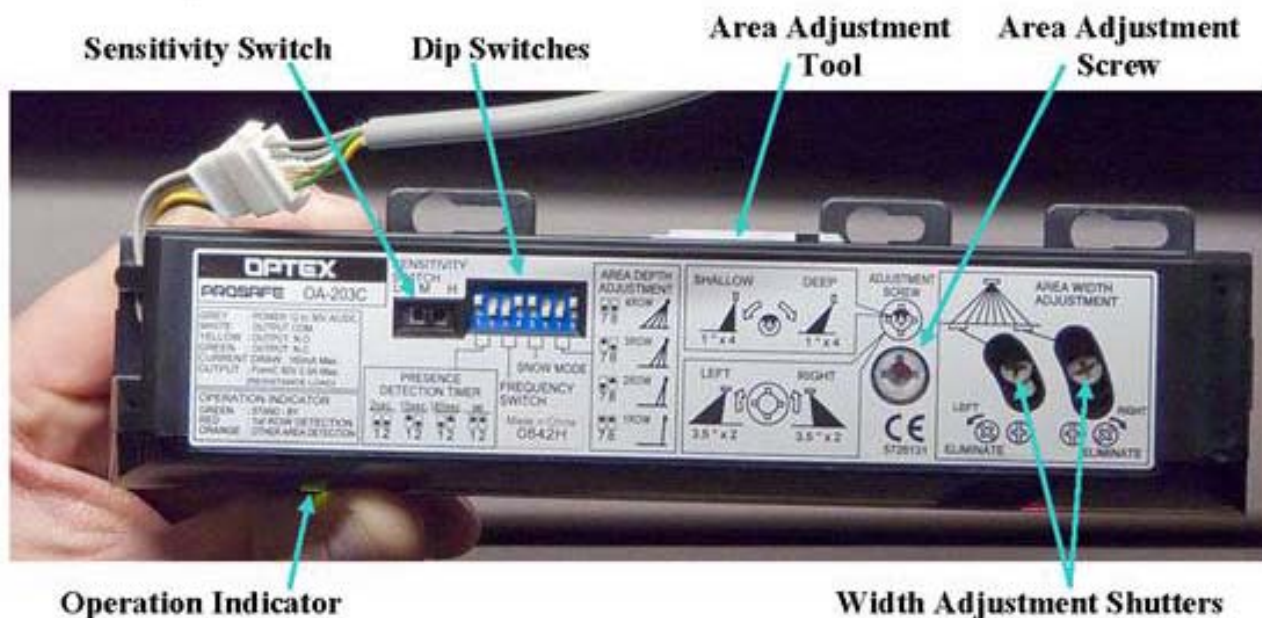
Wireless Receiver

Note:

If more than one remote is
desire repeat as needed there
is no limit to the number of
remotes that can be set up.

OA-203C Infrared Motion Sensor Adjustments

The OA-203C sensor for each door is adjusted at the Hamilton factory for each door and should not need additional adjustment. If adjustment becomes necessary, or the sensor is replaced, follow the instructions below. Refer to the photo for each adjustment location. The sensor is shown removed from the wall for clarity.



Sensitivity Switch – All doors should be set to “M” for medium sensitivity in most cases but some sites may require high sensitivity.

Dip Switches – Set the 8 switches for each door according to the following chart:

	Door 1	Door 2	Door 3	Door 4
1	UP	UP	UP	UP
2	DOWN	DOWN	DOWN	DOWN
3	UP	UP	DOWN	DOWN
4	DOWN	UP	UP	DOWN
5	UP	UP	UP	UP
6	DOWN	DOWN	DOWN	DOWN
7	UP	DOWN	UP	UP
8	DOWN	UP	DOWN	DOWN

Area Adjustment Screw – This screw has outer and inner adjustment as follows:

Using the snub end of the area adjustment tool, adjust the width angle left or right between 0° and 7° (3.5° per click). Set all doors to the middle setting.

Using the phillips end of the area adjustment tool, adjust the depth angle between -4° and +4° (1° per click). Set all doors 2 clicks to the right from center.

Width Adjustment Shutters – With the long slots in the screw heads facing vertical, the full pattern width will be obtained. Turning the left screw counter-clockwise reduces the left side of the pattern by 3.5° per click. Turning the right screw clockwise reduces the right side of the pattern by 3.5° per click.

Door 1 – Eliminate the right side only.

Door 2 – Eliminate the left side only.

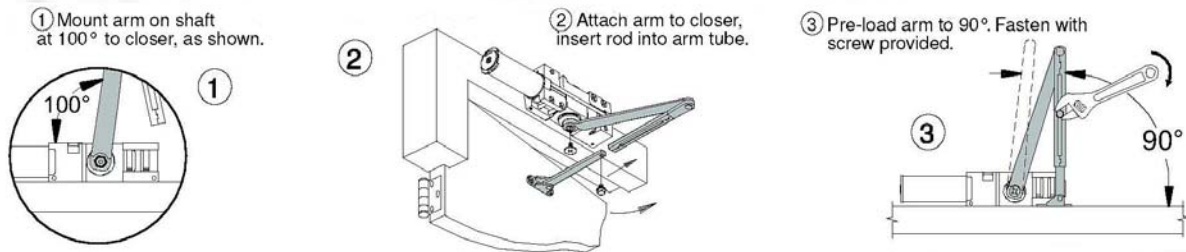
Door 3 – Eliminate the right side only.

Door 4 – Eliminate the left side only.

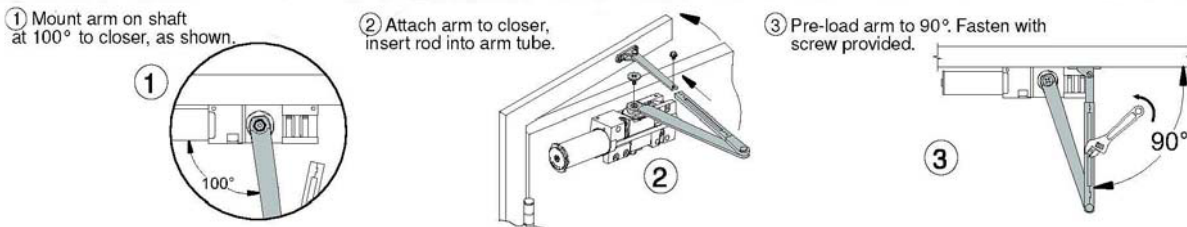
LCN 4041 Door Closer Adjustments

The door closer assemblies for all four doors of the ECS are installed and adjusted at the factory. In most cases the factory adjustments are satisfactory and do not need to change. Use the following guides if and when further adjustments are required.

When installing glass in a door it will be necessary to separate the door closer arm. The following procedures show how to properly adjust the arm after it is reconnected.



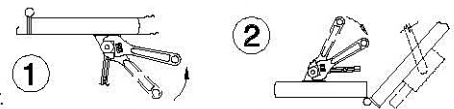
Closer Arm Adjustment for Doors 1, 2 & 4 (Push)



Closer Arm Adjustment for Door 3 (Pull)

Use the procedure to the right if it ever becomes necessary to lock the closer arm in the open position. Be sure to readjust the closer arm using the previous instructions when returning the door to normal operation.

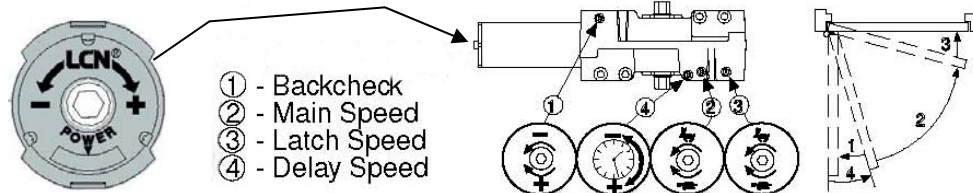
To adjust Optional Hold-open arm:
Loosen hold open nut.
Open door to desired position and tighten hold open nut securely.



Hold Open Arm Adjustment

The speed that a door closes is an important consideration. If it closes too fast it can hinder a handicapped person or someone with children; if it closes too slow it causes a delay during entrance or exit because of the “man-trap” operation. Refer to the drawing below for the location of the closer speed adjustments.

Closer Speed Adjustments



Power – Adjusts the spring power for the size of the door. Leave on the factory setting of “3”.

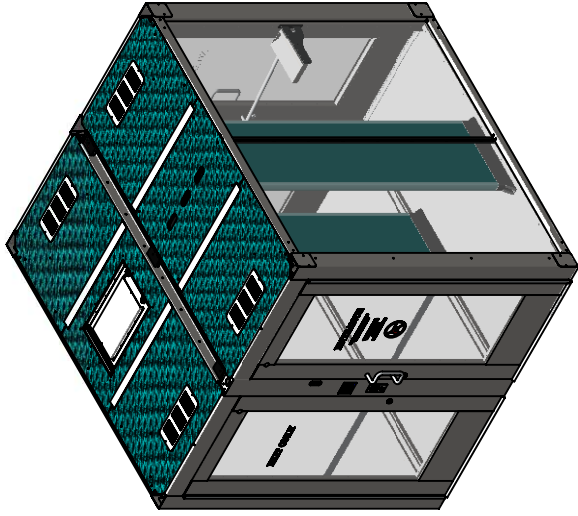
Backcheck – Controls the amount of resistance to opening the door past a selectable point to prevent the door from being slammed into an adjacent wall.

Main Speed – Controls how fast the door closes from fully open to within about 5 degrees of closed. The main speed and latch speed should be adjusted to equal times.

Latch Speed – Controls how fast the door closes for those last few inches. The main speed and latch speed should be adjusted to equal times.

Rev - 1 --

Rev - 2 --

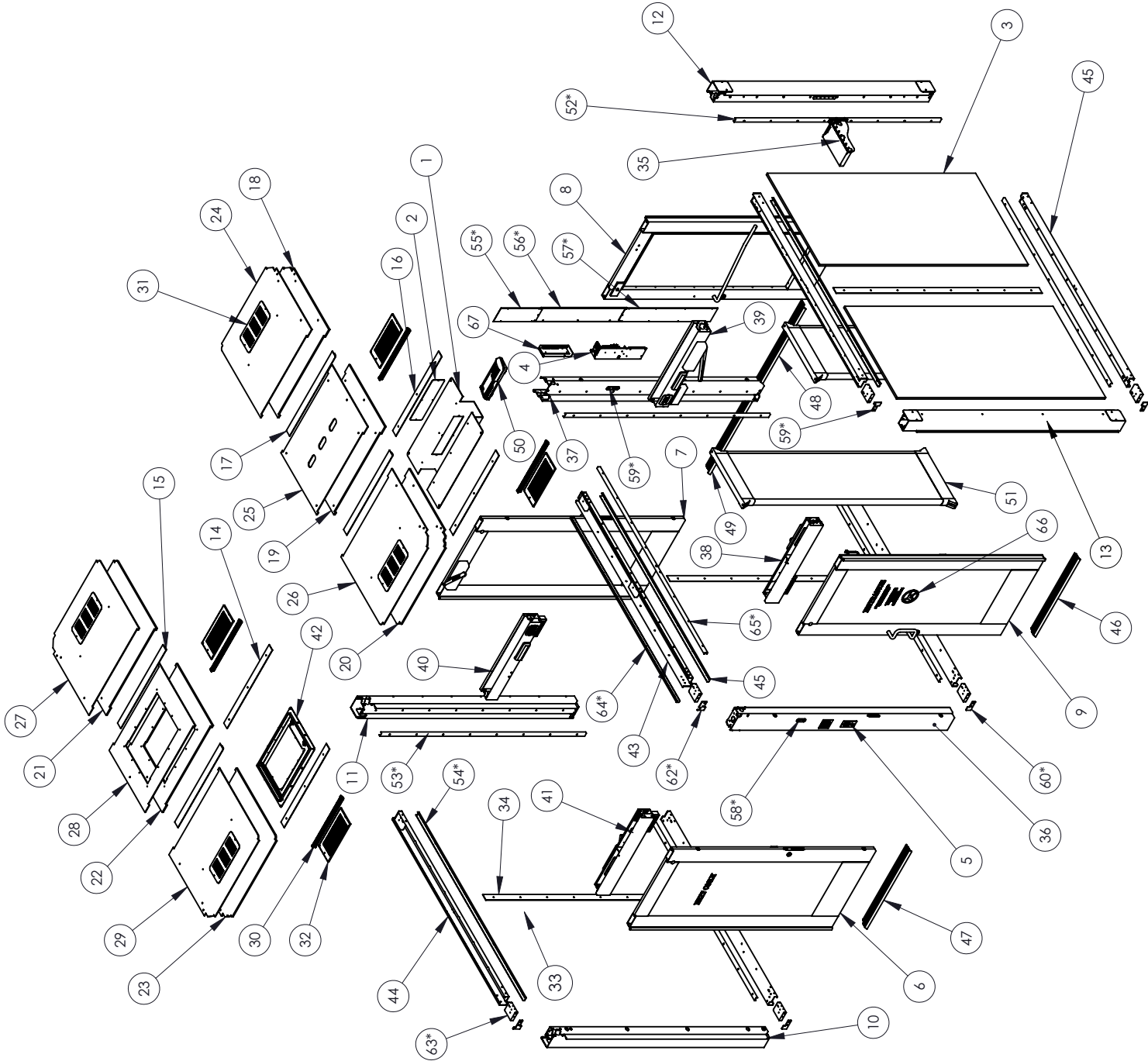


HAMILTON

2010 STANDARD ENTRANCE CONTROL UNIT
EXPLODED VIEW DRAWING
PAGE 1 OF 2

Drawing Number: 96-320

Date: 1-21-2010



2010 STANDARD ENTRANCE CONTROL UNIT EXPLODED VIEW DRAWING PARTS LIST

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1	ECSTN-001	B10220	METAL DETECTOR BRIDGE	1
2	ECSTN-002	B10221	METAL DETECTOR BRIDGE COVER	1
3	*****	B10222	CABIN GLASS - HP WHITE LEVEL 1	6
4	96-293	B10175	2010 ECS TOUCH SCREEN ELECTRICAL BOX	1
5	*****	E10080	HANDICAP BUTTON KIT	1
6	96-312	96-312	DOOR 4 COMPLETE ASSEMBLY	1
7	96-311	96-311	DOOR 3 COMPLETE ASSEMBLY	1
8	96-310	96-310	DOOR 2 COMPLETE ASSEMBLY	1
9	96-309	96-309	DOOR 1 COMPLETE ASSEMBLY	1
10	ECSTN-SA-004	B10223	2010 ECS DOOR 4 CORNER POST	1
11	ECSTN-SA-003	B10224	2010 ECS DOOR 3 CORNER POST	1
12	ECSTN-SA-002	B10225	2010 ECS DOOR 2 CORNER POST	1
13	ECSTN-SA-001	B10226	2010 ECS DOOR 1 CORNER POST	1
14	ECSTN-077	B10227	ROOF MULLION MOUNTING STRIP - EXIT SIDE	2
15	ECSTN-SA-018	B10228	ROOF MULLION - EXIT SIDE	2
16	ECSTN-080	B10229	ROOF MULLION MOUNTING STRIP - ENTRANCE SIDE	2
17	ECSTN-SA-017	B10230	ROOF MULLION - ENTRANCE SIDE	2
18	ECSTN-073	B10231	ROOF - ENTRANCE SIDE DOOR 2	1
19	ECSTN-072	B10232	ROOF - ENTRANCE SIDE CENTER	1
20	ECSTN-071	B10233	ROOF - ENTRANCE SIDE DOOR 1	1
21	ECSTN-074	B10234	ROOF - EXIT SIDE DOOR 3	1
22	ECSTN-075	B10235	ROOF - EXIT SIDE CENTER	1
23	ECSTN-076	B10236	ROOF - EXIT SIDE DOOR 4	1
24	ECSTN-067	B10254	BR PANEL - ENTRANCE SIDE DOOR 2	1
25	ECSTN-066	B10255	BR PANEL - ENTRANCE SIDE CENTER	1
26	ECSTN-065	B10256	BR PANEL ENTRANCE SIDE DOOR 1	1
27	ECSTN-068	B10257	BR PANEL - EXIT SIDE DOOR 3	1
28	ECSTN-069	B10258	BR PANEL - EXIT SIDE CENTER	1
29	ECSTN-070	B10259	BR PANEL - EXIT SIDE DOOR 4	1
30	*****	E10107	INTERIOR LIGHTING - LED FLAT RETAIL DISPLAY #FLD10058	4
31	ECSTN-083	B10260	UPPER CEILING VENT	4
32	*****	B10261	LOWER CEILING VENT	4
33	ECSTN-SA-016	B10237	GLASS MULLION	3
34	ECSTN-061	B10238	GLASS MULLION RETAINING STRIP	3
35		B10239	2010 ECS SHELF	1
36	96-307	96-307	FRONT CENTER POST COMPLETE ASSEMBLY	1
37	96-306	96-306	REAR CENTER POST COMPLETE ASSEMBLY	1
38	96-316	96-316	HEADER - DOOR 1 COMPLETE ASSEMBLY	1
39	96-317	96-317	HEADER - DOOR 2 COMPLETE ASSEMBLY	1
40	96-318	96-318	HEADER - DOOR 3 COMPLETE ASSEMBLY	1
41	96-319	96-319	HEADER - DOOR 4 COMPLETE ASSEMBLY	1
42	ECSTN-SA-014	B10240	SERVICE HATCH	1
43	ECSTN-033	B10241	TOP CENTER RAIL	1
44	ECSTN-032	B10242	TOP OUTER RAIL	2
45	ECSTN-031	B10243	BOTTOM RAIL	3
46		B10250	TREAD PLATE - DOOR 1	1
47		B10251	TREAD PLATE - DOOR 4	1
48		B10252	TREAD PLATE - DOOR 2 **OPTIONAL**	1
49		B10253	TREAD PLATE - DOOR 3 **OPTIONAL**	1
50	*****	E10090	CEIA HI-PE/CF METAL DETECTOR CONTROL BOX	1
51	*****	E10091	WEAPONS DETECTOR SIDE PANEL	2

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
52	ECSTN-011	B10244	UPRIGHT GLASS CHANNEL - DOOR 2	1
53	ECSTN-023	B10245	UPRIGHT GLASS CHANNEL	5
54	ECSTN-034	B10262	GLASS CHANNEL - TOP & BOTTOM RAIL	6
55	ECSTN-026	B10208	REAR CENTER POST COVER - TOP PANEL	1
56	ECSTN-027	B10209	REAR CENTER POST COVER - CENTER PANEL	1
57	ECSTN-028	B10207	REAR CENTER POST COVER - BOTTOM PANEL	1
58	*****	E10082	FRONT CENTER POST RED-GREEN LIGHT ASSEMBLY	1
59	*****	E10084	REAR CENTER POST RED-GREEN LIGHT W/ MIC ASSEMBLY	1
60	ECSTN-058	B10246	LEXAN SPACER - BOTTOM RAIL	6
61	ECSTN-059	B10247	LEXAN SPACER - TOP OUTER RAIL	4
62	ECSTN-060	B10248	LEXAN SPACER - TOP CENTER RAIL	2
63	ECSTN-XXX	B10249	TAP BLOCK	13
64	ECSTN-035	B10263	CEILING RETAINER - EXIT SIDE	1
65	ECSTN-036	B10264	CEILING RETAINER - ENTRANCE SIDE	1
66	*****	H10097	DOOR DECAL KIT - COMPLETE - ENGLISH	1
67		-	AUDIO MATRIX COMPLETE ASSEMBLY	1

ITEMS NOT SHOWN

*****	E10097	DOOR 1 & 4 MAIN WIRING HARNESS	1
*****	E10098	DOOR 2 & 3 MAIN WIRING HARNESS	1
*****	E10099	BLUE CAT-5 CABLE FOR CONTROL HARNESS - 100 FT	1
*****	E10100	YELLOW CAT-5 CABLE FOR AUDIO HARNESS - 100FT	1
*****	E10101	6 CONDUCTOR WIRE FOR CONTROL HARNESS - 100 FT	1
*****	E10102	CABIN LED HARNESS	1
*****	E10103	AL600ULM POWER SUPPLY	1
*****	E10104	SECURITY LEVEL 1 TEST SAMPLE NILECJLSTD 0601.00	1
*****	E10106	MD SCOPE SOFTWARE COD 26894	1
*****	E10129	5 PORT DIGITAL SWITCH ***OPTIONAL***	1
*****	H10098	DOOR DECAL KIT - COMPLETE - SPANISH ***OPTIONAL***	1

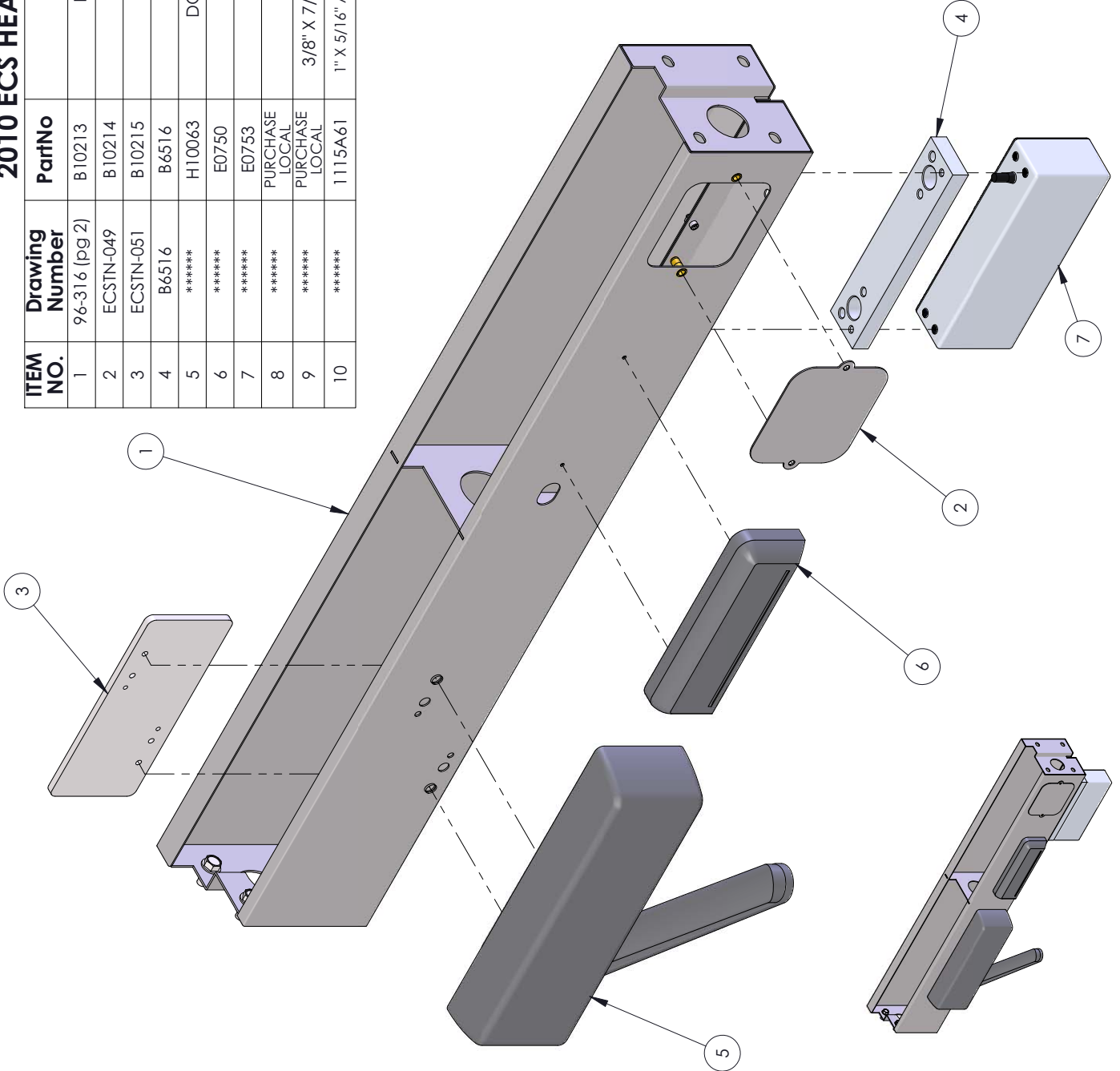
HAMILTON

2010 STANDARD ENTRANCE CONTROL UNIT
EXPLODED VIEW DRAWING
PAGE 2 OF 2

AS KIT #E10092
CAN BE ORDERED TOGETHER

2010 ECS HEADER - DOOR 1 EXPLODED VIEW

ITEM NO.	Drawing Number	PartNo	Description	QTY.
1	96-316 (pg 2)	B10213	HEADER - DOOR 1 WELDED SUB ASSEMBLY	1
2	ECSTN-049	B10214	ACCESS COVER - HEADERS 1,3, & 4	1
3	ECSTN-051	B10215	DOOR CLOSER BACK-UP PLATE	1
4	B6516	B6516	MAG LOCK SPACER	1
5	*****	H10063	DOOR CLOSER - LCN SUPER SMOOTHIE #4041	1
6	*****	E0750	IR DETECTOR - OPTEX OA 203CS	1
7	*****	E0753	MAG LOCK -SECURITRON M62SC	1
8	*****	PURCHASE LOCAL	0.500 X 0.110 FOAM WEATHERSTRIPPING	1
9	*****	PURCHASE LOCAL	3/8" X 7/32" P PROFILE ALL CLIMATE RUBBER WEATHERSEAL	1
10	*****	1115A61	1" X 5/16" ADHESIVE BACKED WEATHERSTRIPPING - McMASTER CARR	1



HAMILTON

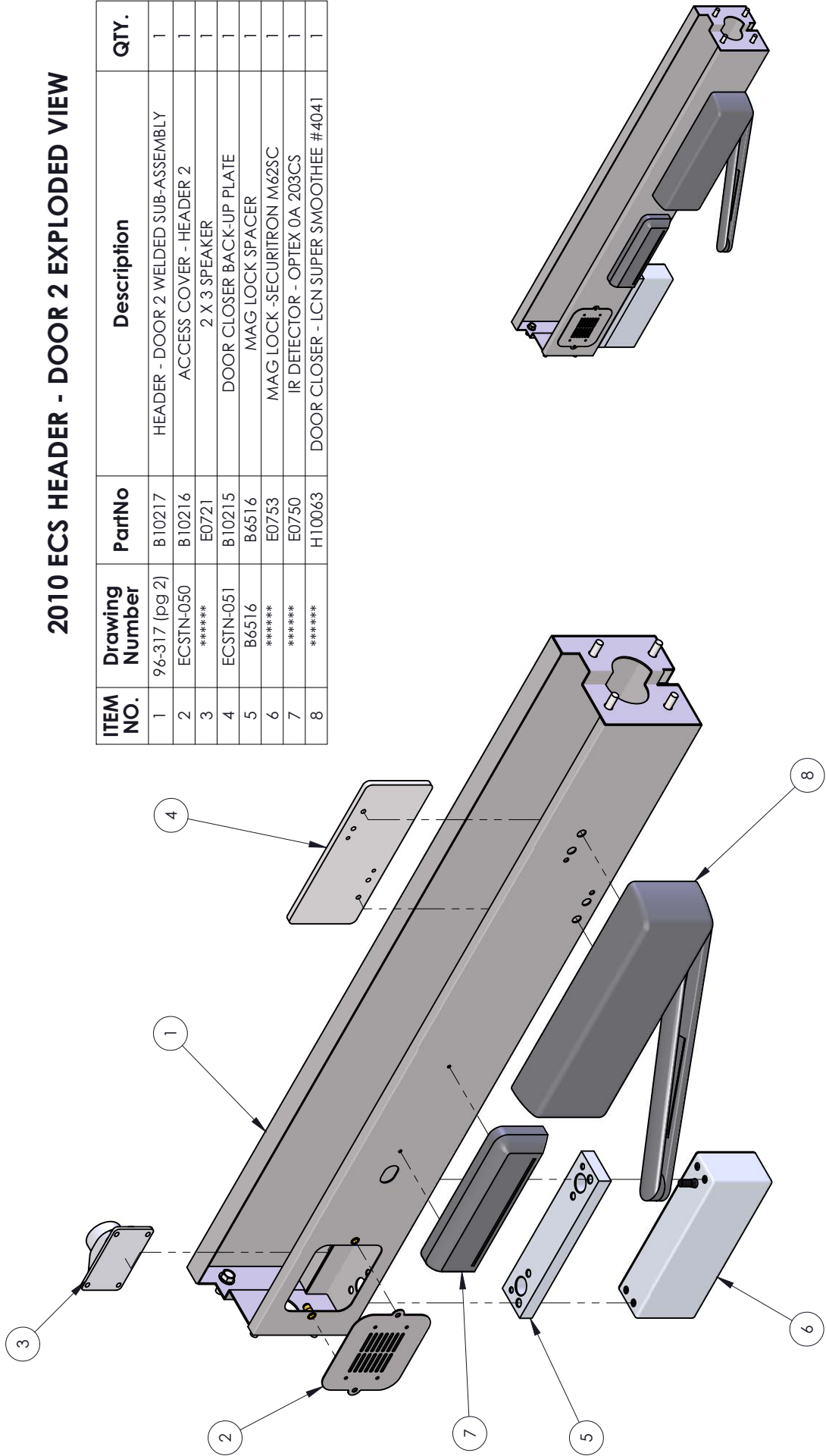
2010 ENTRANCE CONTROL HEADER - DOOR 1
EXPLODED VIEW DRAWING
PAGE 1 OF 2

Rev - 1 --

Rev - 2 --

2010 ECS HEADER - DOOR 2 EXPLODED VIEW

ITEM NO.	Drawing Number	PartNo	Description	QTY.
1	96-317 (pg 2)	B10217	HEADER - DOOR 2 WELDED SUB-ASSEMBLY	1
2	ECSTN-050	B10216	ACCESS COVER - HEADER 2	1
3	*****	E0721	2 X 3 SPEAKER	1
4	ECSTN-051	B10215	DOOR CLOSER BACK-UP PLATE	1
5	B6516	B6516	MAG LOCK SPACER	1
6	*****	E0753	MAG LOCK -SECURITRON M62SC	1
7	*****	E0750	IR DETECTOR - OPTEX OA 203CS	1
8	*****	H10063	DOOR CLOSER - LCN SUPER SMOOTHIE #4041	1



HAMILTON

2010 ENTRANCE CONTROL HEADER - DOOR 2
EXPLODED VIEW DRAWING

Drawing Number: 96-317

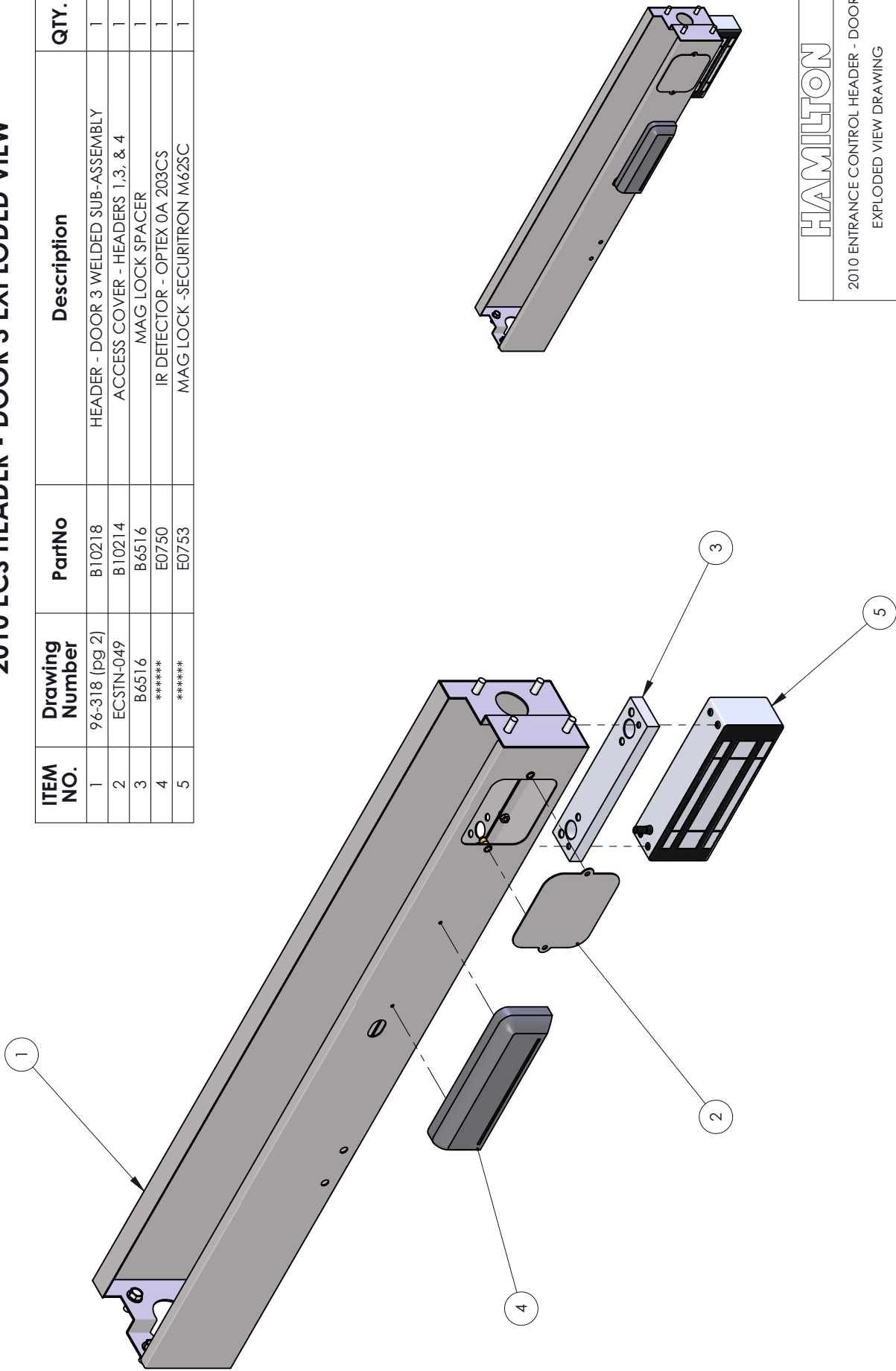
Date: 2-10-2010

Rev - 1 --

Rev - 2 --

2010 ECS HEADER - DOOR 3 EXPLODED VIEW

ITEM NO.	Drawing Number	PartNo	Description	QTY.
1	96-318 (pg 2)	B10218	HEADER - DOOR 3 WELDED SUB-ASSEMBLY	1
2	ECSTN-049	B10214	ACCESS COVER - HEADERS 1,3, & 4	1
3	B6516	B6516	MAG LOCK SPACER	1
4	*****	E0750	IR DETECTOR - OPTEX OA 203CS	1
5	*****	E0753	MAG LOCK -SECURITRON M62SC	1

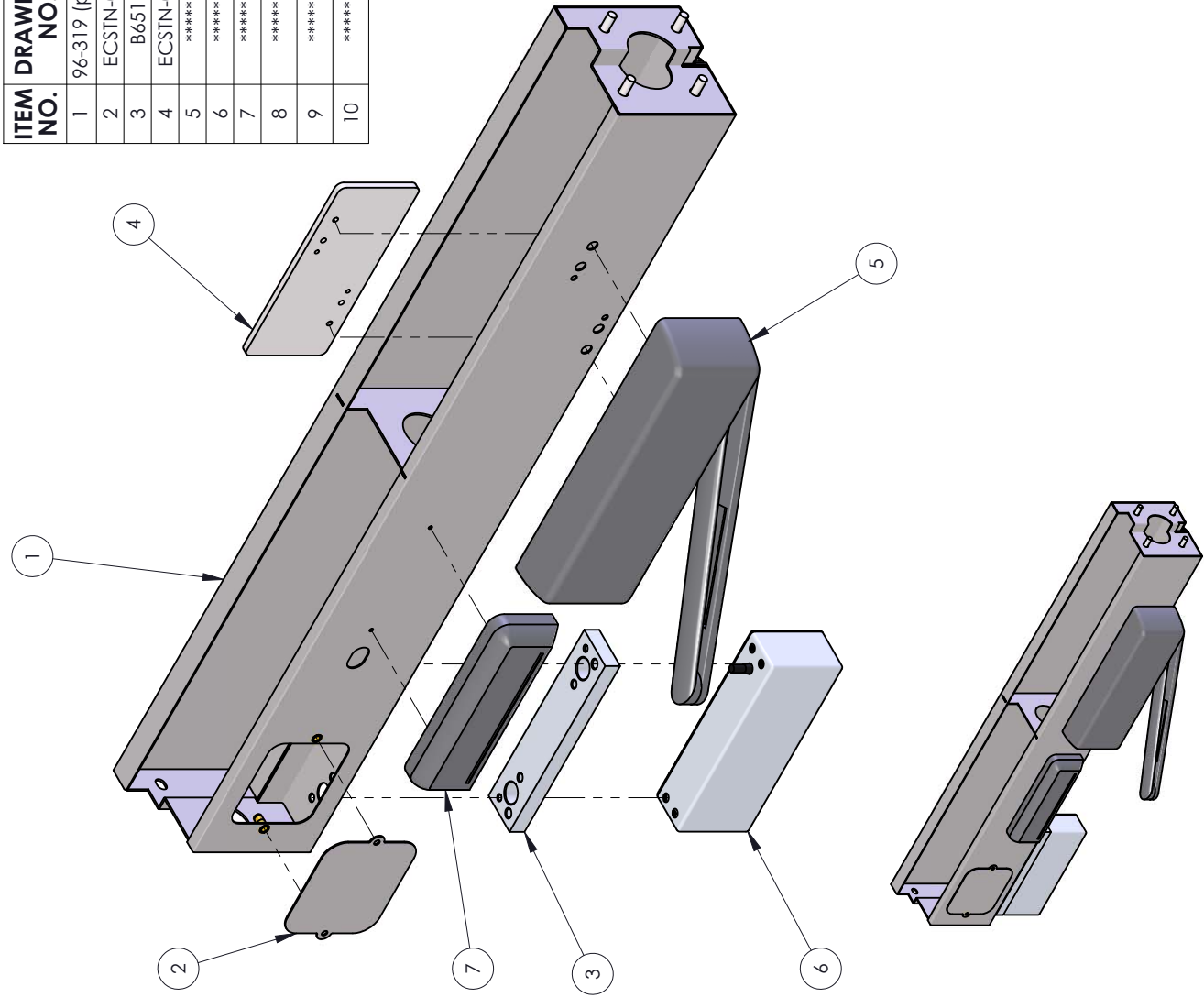


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2010 ENTRANCE CONTROL HEADER - DOOR 3
EXPLODED VIEW DRAWING
PAGE 1 OF 2

Drawing Number: 96-318 Date: 2-10-2010

2010 ECS HEADER - DOOR 4 EXPLODED VIEW



ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1	96-319 (pg 2)	B10209	HEADER - DOOR 4 WELDED SUB-ASSEMBLY	1
2	ECSTN-049	B10214	ACCESS COVER - HEADERS 1,3, & 4	1
3	B6516	B6516	MAG LOCK SPACER	1
4	ECSTN-051	B10215	DOOR CLOSER BACK-UP PLATE	1
5	*****	H10063	DOOR CLOSER - LCN SUPER SMOOTHIE #4041	1
6	*****	E0753	MAG LOCK - SECURITRON M62SC	1
7	*****	E0750	IR DETECTOR - OPTEX OA 203CS	1
8	*****	PURCHASE LOCAL	0.500 X 0.110 FOAM WEATHERSTRIPPING	1
9	*****	PURCHASE LOCAL	3/8" X 7/32" P PROFILE ALL CLIMATE RUBBER WEATHERSEAL	1
10	*****	1115A61	1" X 5/16" ADHESIVE BACKED WEATHERSTRIPPING - McMASTER CARR	1

WEATHERSTRIPPING DETAIL "A"

RUN WEATHERSTRIPPING AS SHOWN DOWN ENTIRE LENGTH OF PART #8 - STANDARD UNITS ADD #9 & #10 FOR HURRICANE RATING



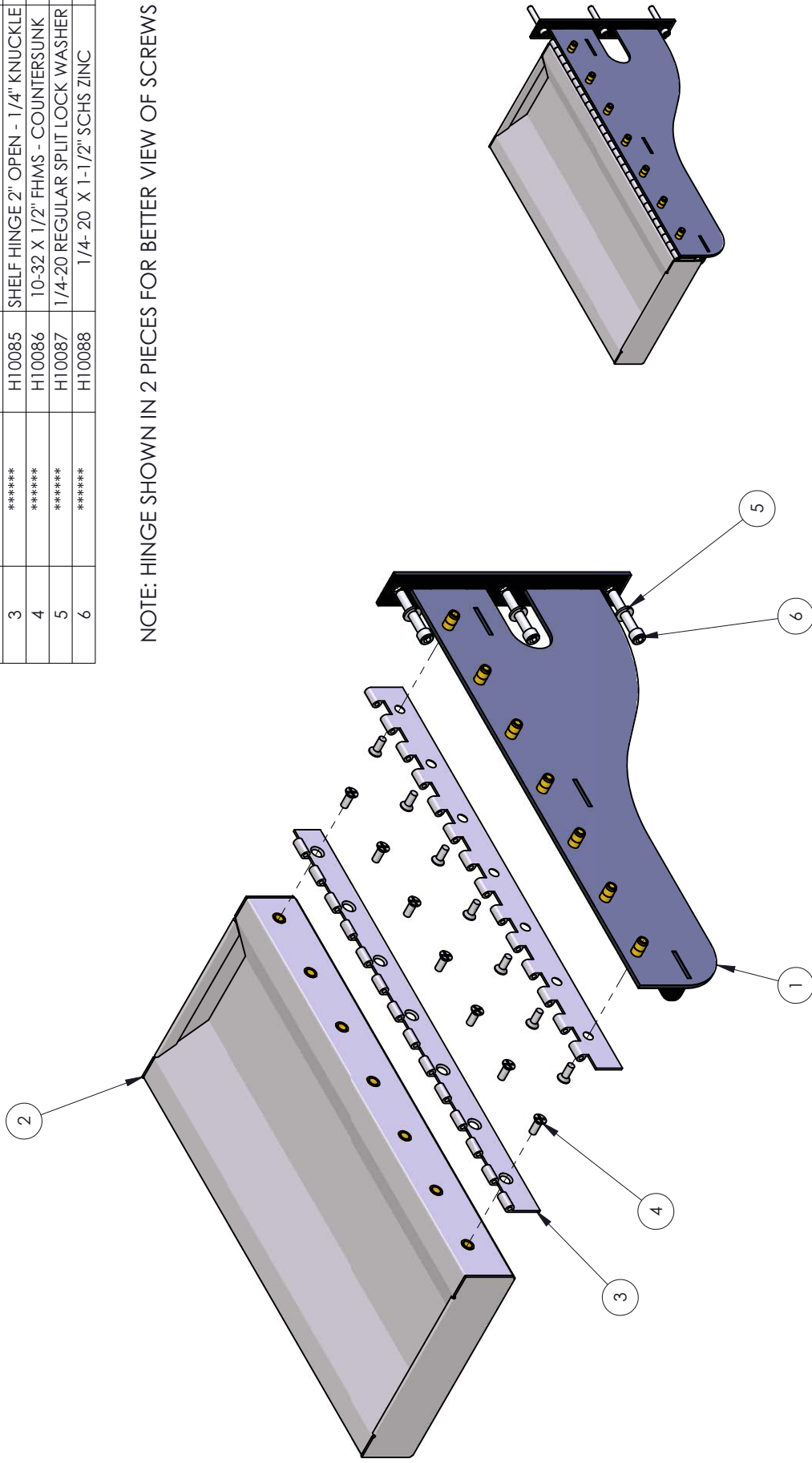
Rev - 1 --

Rev - 2 --

2010 ENTRANCE CONTROL SHELF - EXPLODED VIEW

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1	ECSTN-SA-019	B10265	SHELF BRACKET SUB-ASSEMBLY	1
2	ECSTN-SA-015	B10266	SHELF SUB-ASSEMBLY	1
3	*****	H10085	SHELF HINGE 2" OPEN - 1/4" KNUCKLE	1
4	*****	H10086	10-32 X 1/2" FHMS - COUNTERSUNK	14
5	*****	H10087	1/4-20 REGULAR SPLIT LOCK WASHER	3
6	*****	H10088	1/4- 20 X 1-1/2" SCSHS ZINC	3

NOTE: HINGE SHOWN IN 2 PIECES FOR BETTER VIEW OF SCREWS

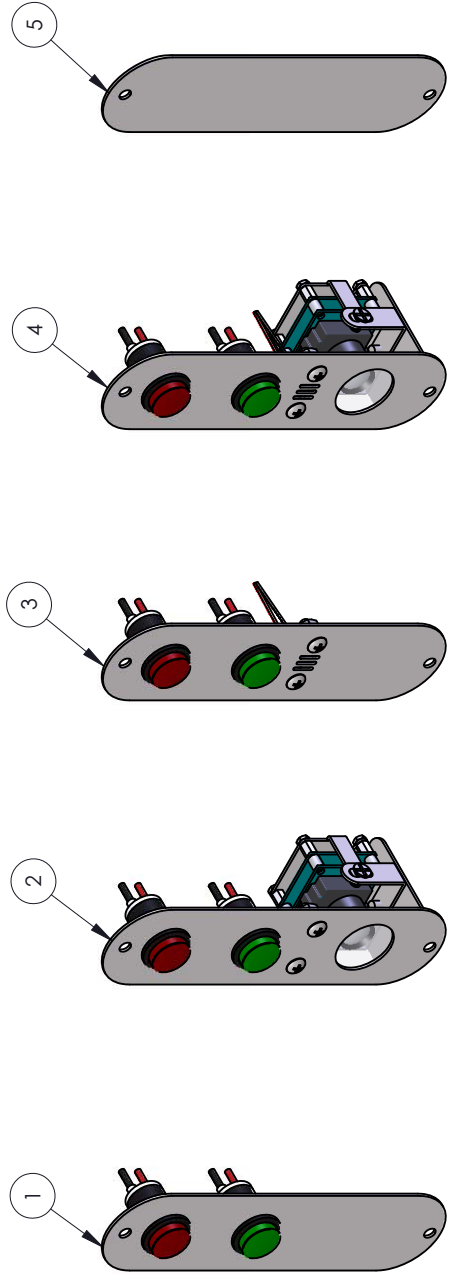
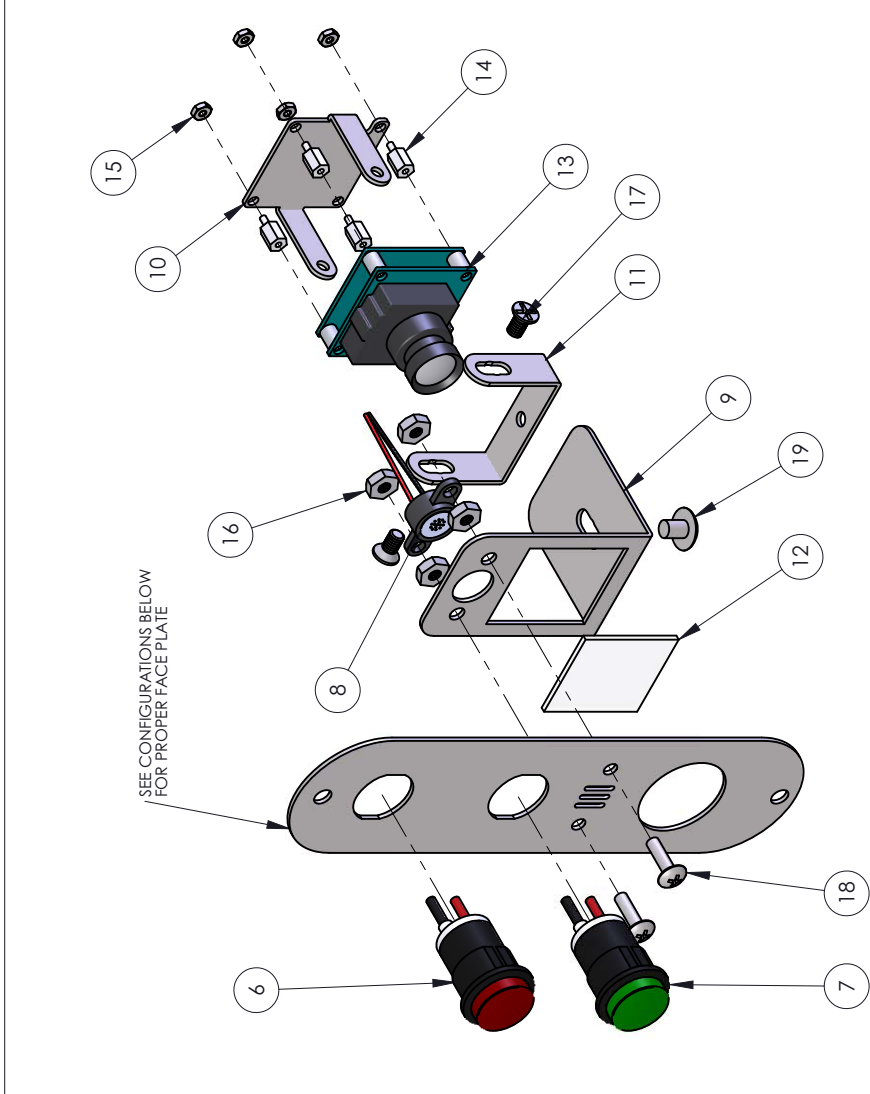


HAMILTON

2010 STANDARD ENTRANCE CONTROL UNIT
SHELF COMPLETE ASSEMBLY
EXPLODED VIEW DRAWING
PART # 10239

Drawing Number: 96-577 Date: 3-23-2010

ITEM NO.	DRAWING NUMBER	PART NUMBER	DESCRIPTION	QTY.
1	ECSTN-052-1	*****	TRAFFIC LIGHT BEZEL	1
2	ECSTN-052-3	*****	TRAFFIC LIGHT AND CAMERA BEZEL	1
3	ECSTN-054-1	*****	TRAFFIC LIGHT & MICROPHONE BEZEL	1
4	ECSTN-054	*****	TRAFFIC LIGHT, MICROPHONE, & CAMERA BEZEL	1
5	ECSTN-052-2	*****	BLANK BEZEL	1
6	*****	E10180	RED LIGHT	1
7	*****	E10181	GREEN LIGHT	1
8	*****	E0154	MICROPHONE ASSEMBLY	1
9	ECSTN-106	*****	TRAFFIC CAMERA MOUNTING BRACKET	1
10	ECSTN-107	*****	TRAFFIC CAMERA BOARD MOUNT	1
11	ECSTN-108	*****	TRAFFIC CAMERA PIVOT BRACKET	1
12	BC-001	*****	TRAFFIC CAMERA GLASS	1
13	*****	E10199	IKEGAMI 1SD-A12-29 INTERNAL ASSEMBLY	1
14	*****	H10202	3/8 X 1/4" LONG X 2-26 HEX STANDOFF	4
15	*****	H10203	2-56 HEX NUT	4
16	*****	H0157	6-32 HEX NUT	4
17	*****	H0482	#8-32 X 1/4" PHILLIPS FHMS WITH # 6 HEAD	2
18	*****	H0142	6-32 X 1/2" LONG PHIL THMS	2
19	*****	H0425	10-32 X 1/4" PHILLIPS THMS	1



ASSEMBLY # B10468
DOOR 1 - STANDARD
WITH TRAFFIC LIGHTS

ASSEMBLY # B10469
DOOR 1 *OPTIONAL*
WITH TRAFFIC LIGHTS
AND CAMERA

ASSEMBLY # B10470
DOOR 2 - STANDARD
WITH TRAFFIC LIGHTS
AND MICROPHONE

ASSEMBLY # B10471
DOOR 2 *OPTIONAL*
WITH TRAFFIC LIGHTS, CAMERA
AND MICROPHONE

BLANK PLATE

Rev - 1 --
Rev - 2

HAMILTON

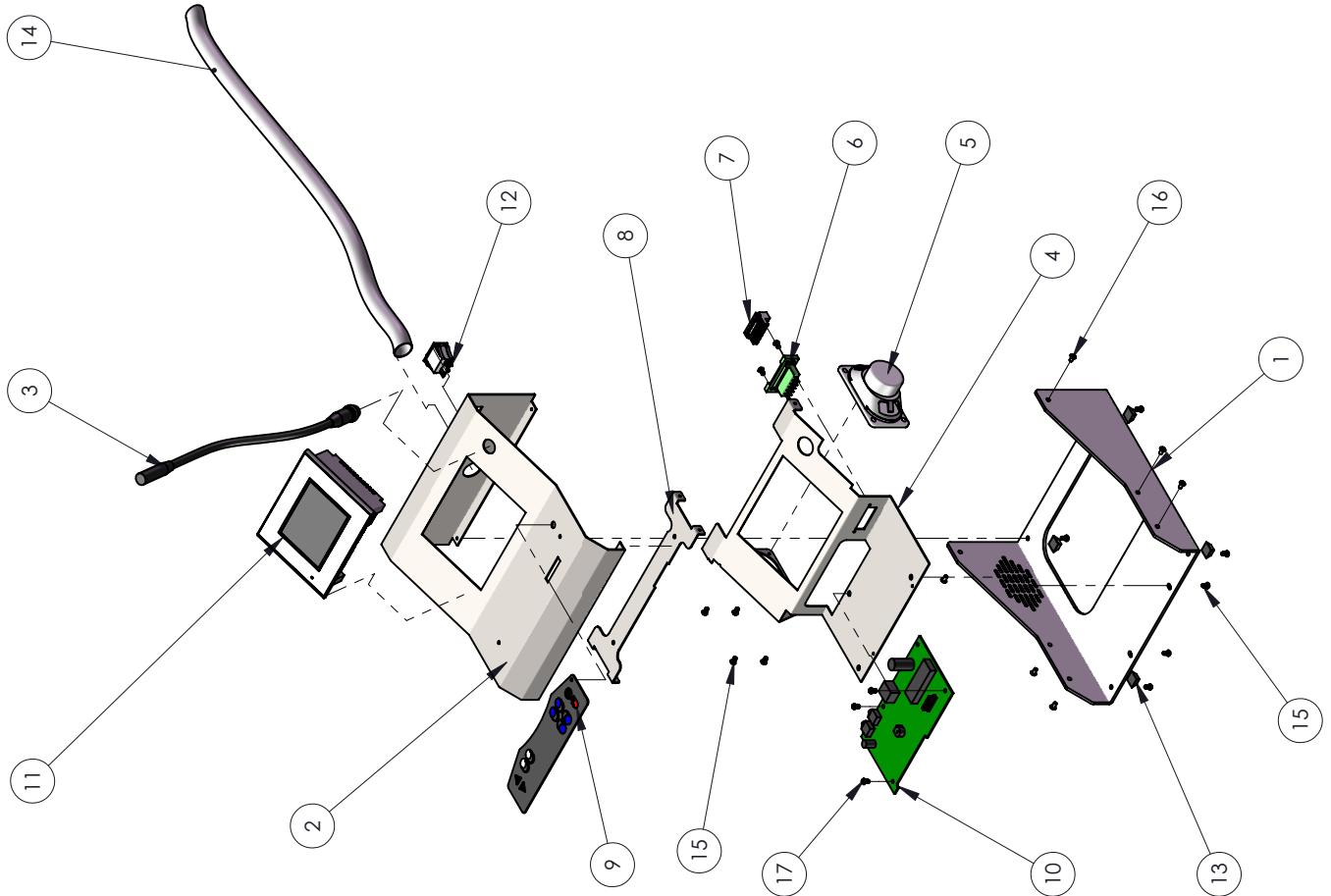
2010 ENTRANCE CONTROL

TRAFFIC LIGHT, MICROPHONE, & CAMERA ASSEMBLIES FOR REAR CENTER POST AND OUTER FRONT CENTER POST

Drawing Number: 96-537 Date: 2-8-2012

Entrance Control Touch Screen Console

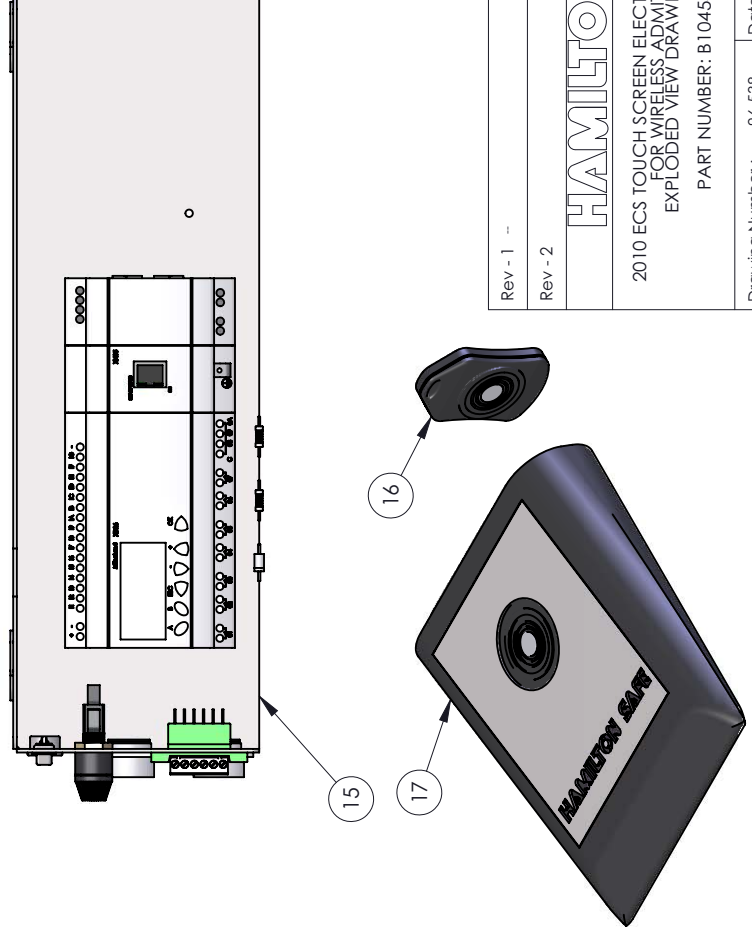
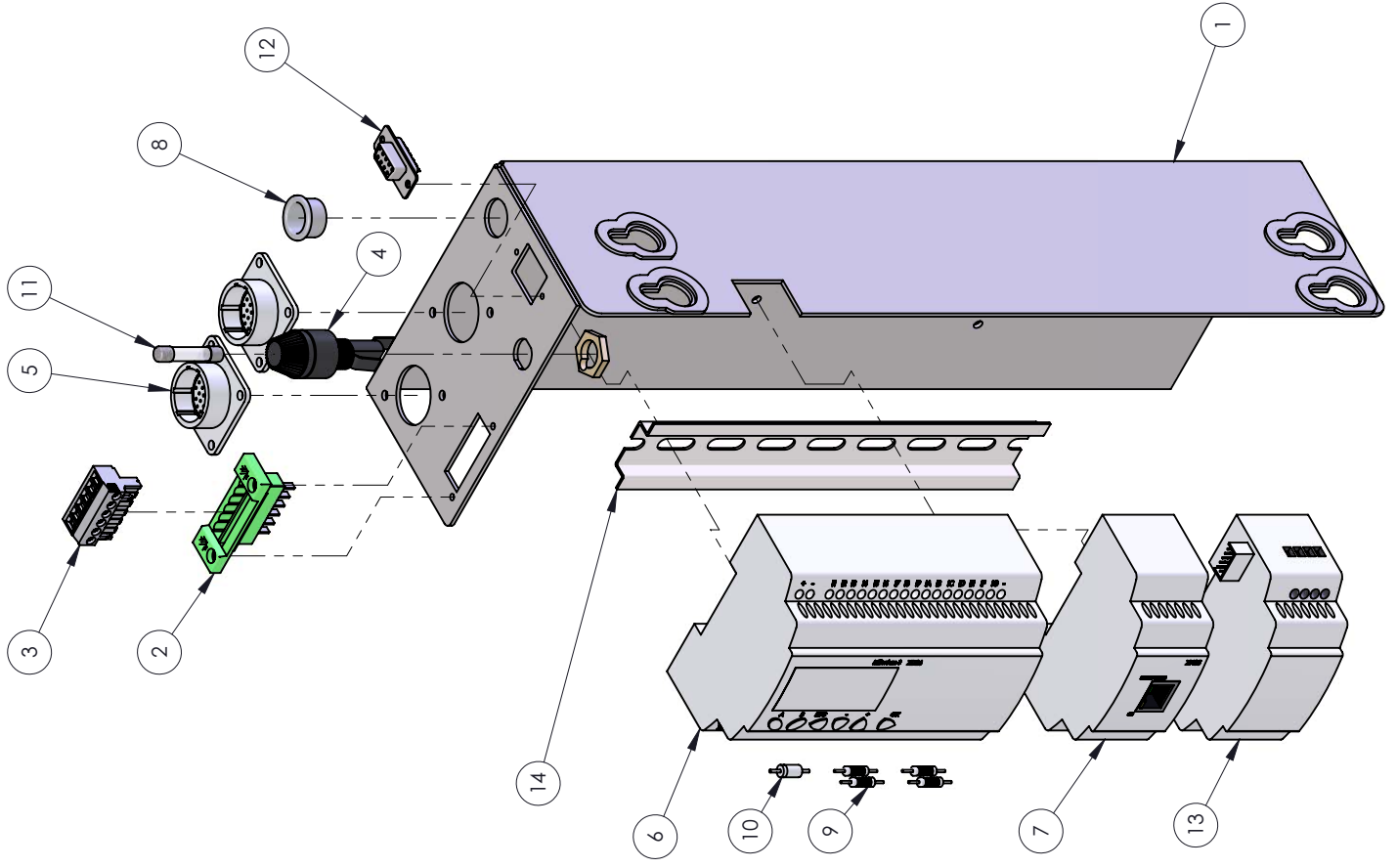
Reference	Part Number	Drawing Number	Description	Qty
1	B10167	TSC-002	Touch Screen Operator's Console Base	1
2	B10168	TSC-001	Touch Screen Operator's Console Top Stainless Steel	1
3	E0605	*****	Gooseneck Microphone	1
4	B10169	TSC-003	Touch Screen Inside Mounting Plate	1
5	E0721	*****	2 x 3 Speaker	1
6	E6032	*****	Panel Mount Female, 6 Position (Phoenix # 707280)	1
7	E6033	*****	Male Plug, 6 Position (Phoenix # 1781027)	1
8	B10170	TSC-004	Touch Screen Keypad Bracket	1
9	E0895	*****	Keypad 5501 Membrane (same As 701-20006-5000)	1
10	5001-CB	*****	Audio Console Board	1
11	E1002	*****	3.8" Touch Screen AGP 3200T	1
12	E10071	*****	Red Rocker Power Switch (NKK-1WM11RC1A/UCV)	1
13	B10171	*****	Rubber Base Feet (McMaster-Carr #9723K89)	4
14	E10072	*****	3/4" Split Convuluted Sleeveing or Wire Loom (7840K35)	1
15	Purchase Local	*****	6-32 X 1/4" SST Phillips Truss Head Screw	12
16	Purchase Local	*****	6-32 X 1/4" Black Button Socket Cap Screw	6
17	Purchase Local	*****	6-32 X 1/4" R.H. Screw	3
18	B10016	96-289	Complete Touch Screen Console	1
Optional Items for Multiple Consoles (Not Shown)				
19	B10450	*****	Complete Touch Screen Console - Slave	AS REQ'D
20	E10211	*****	5 Port Digital Switch	AS REQ'D
Other Options				
21	E10212	*****	Voice Alarm	1



HAMILTON SAFE
 2010 ECS Touch Screen Console
 Exploded View Drawing

Touch Screen Control Box with Wireless Admit Exploded View Drawing & Bill Of Material

Reference	Drawing Number	Part Number	Description	Qty
1	TCS-005-1	B10452	Main Control Box for Wireless Admit	1
2	*****	E6032	Panel Mount Female, 6 Position (Phoenix #707280)	1
3	*****	E6033	Male Plug, 6 Position (phoenix #1781027)	1
4	*****	E0088	Fuse Holder - Little Fuse #345-613	1
5	*****	E00177	AMP 28 Pin CPC Connector Receptacle Assembly	2
6	*****	E1000	Crouzet Controller - Milenium 3 XD26 (specify program when ordering)	1
7	*****	E1001	Crouzet Ethernet Module XNO5	1
8	*****	H10172	Heyco SB-625-8 Snap Bushing	1
9	*****	E10075	Resistors - Maglocks	4
10	*****	E10076	NTE569 Rectifier Diode - Maglock Door 1	1
11	*****	E0268	3 Amp Fuse #MDA3	1
12	*****	E10074	MD Scope Serial Port	1
13	*****	E10198	Crouzet Wireless Admit Module XT01	1
14	TCS-006-1	B10453	Din Rail @ 7-3/4" Long	1
15	*****	B10454	Complete Assembly of Control Box	1
16	*****	E10210	Remote Keychain Access for Wireless Admit	1
17	*****	E10213	Remote Desktop Access for Wireless Admit	1



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 Rev - 2

HAMILTON

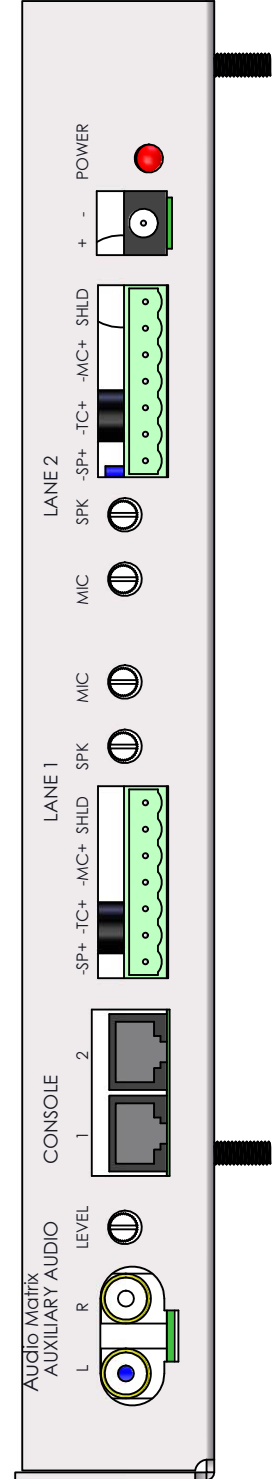
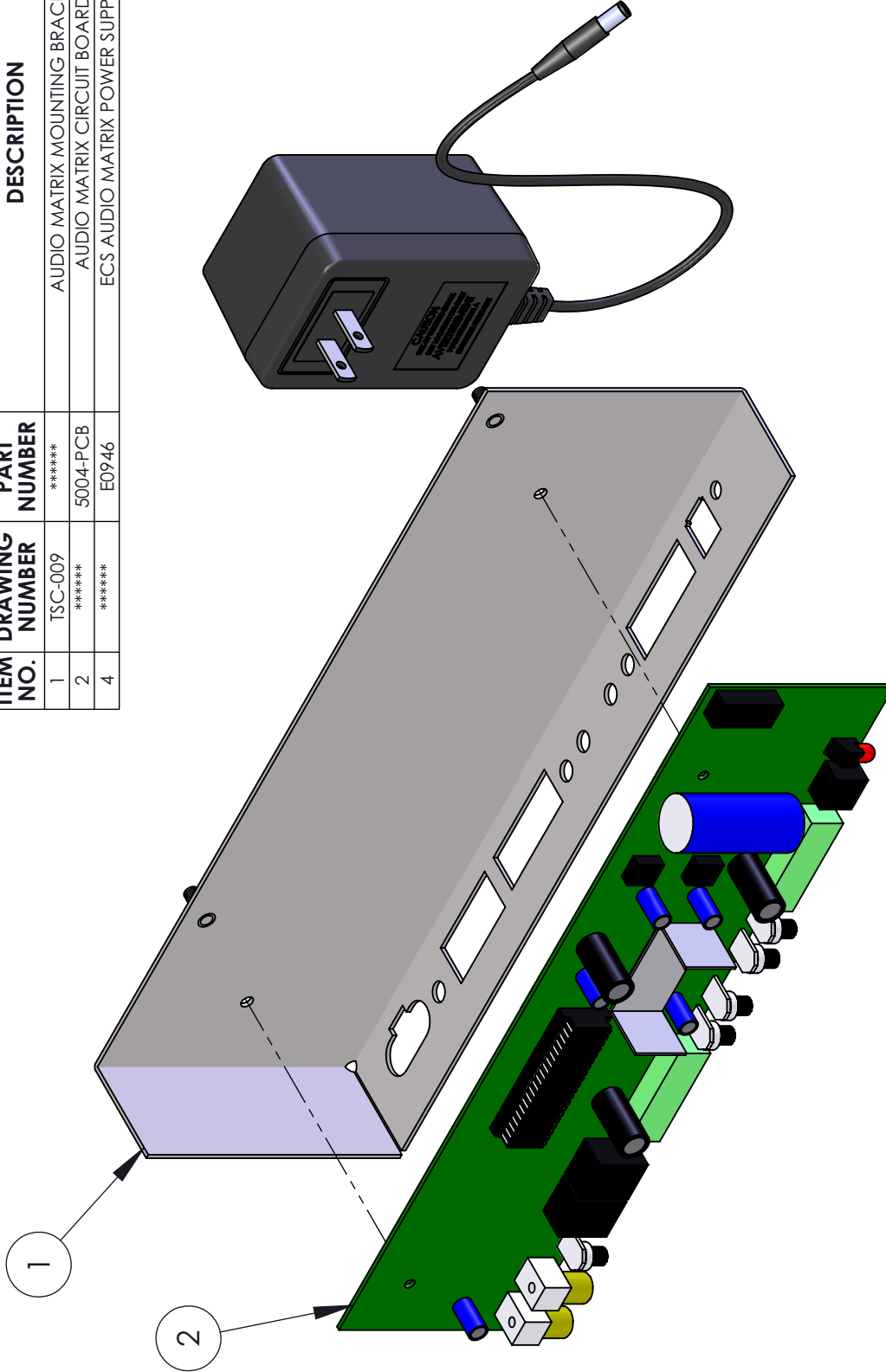
2010 ECS TOUCH SCREEN ELECTRICAL BOX
 FOR WIRELESS ADMIT
 EXPLODED VIEW DRAWING
 PART NUMBER: B10454

Drawing Number : 96-538 Date : 1-3-2012

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ITEM NO.	DRAWING NUMBER	PART NUMBER	DESCRIPTION	QTY.
1	TSC-009	*****	AUDIO MATRIX MOUNTING BRACKET	1
2	*****	5004-PCB	AUDIO MATRIX CIRCUIT BOARD	1
4	*****	E0946	ECS AUDIO MATRIX POWER SUPPLY	1



HAMILTON

2010 ENTRANCE CONTROL
AUDIO MATRIX

EXPLODED VIEW DRAWING

Drawing Number: 96-576

Date: 7-20-2010

Delay Speed – Holds the door open for a longer period of time to allow persons with disabilities more time to get through the door.

CAUTION – Do not completely unscrew door closer hydraulic adjustment screws or you will ruin the closer and void the warranty.

WE NEED FACTORY SETTINGS WHERE POSSIBLE

Crouzet Controller

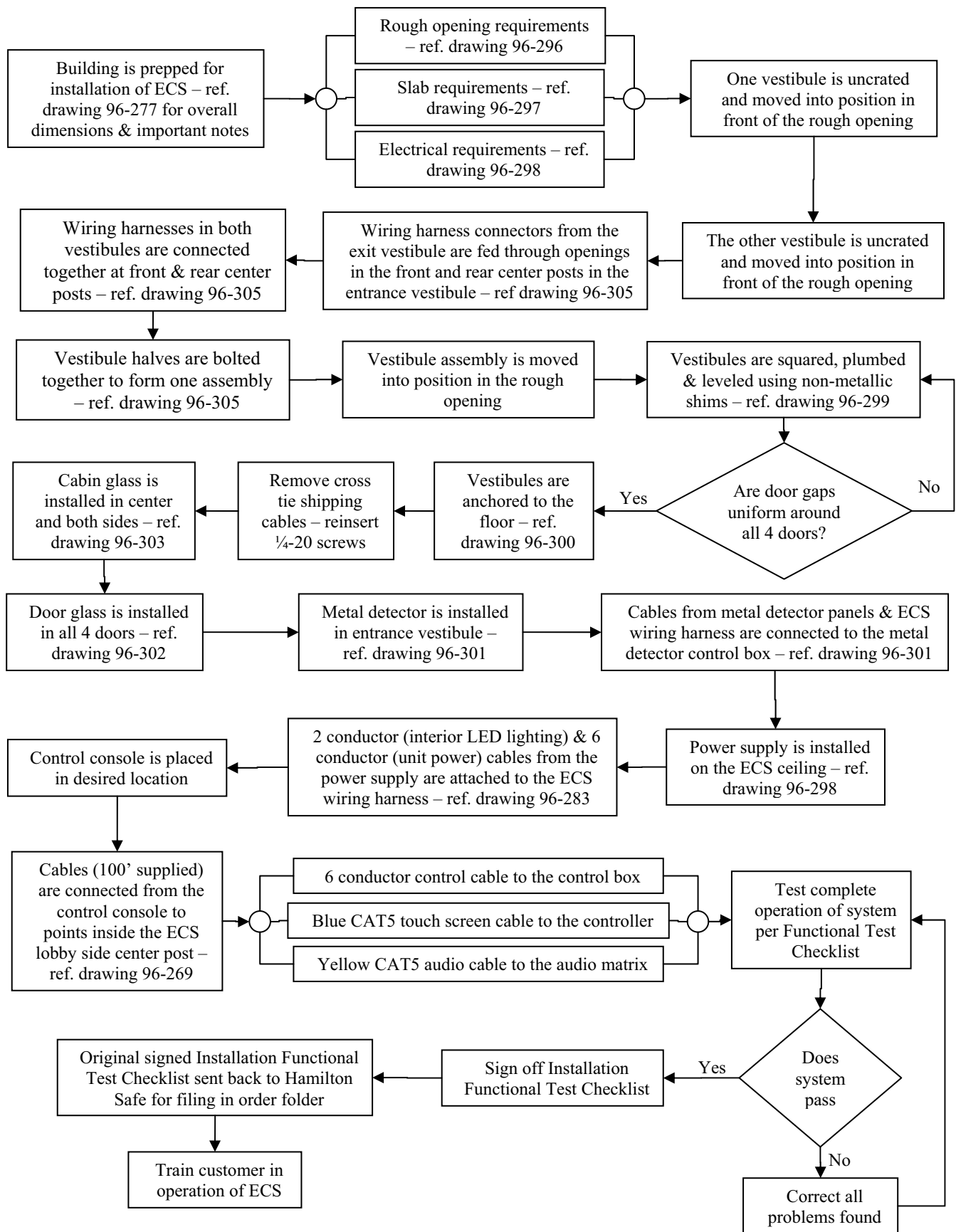
The controller is completely wired and programmed at the Hamilton factory. Inputs and outputs along with IP addresses are listed below for troubleshooting purposes. See drawing 96-269 for more information.

Input Details	
I1	Push bar door 1 allows exit – overrides manual lock
I2	Door contact door 1 – verifies open or closed
I3	Bond sensor door 1 maglock – verifies locked or unlocked
I4	Door contact door 2 – verifies open or closed
I5	Bond sensor door 2 maglock – verifies locked or unlocked
I6	Door contact door 3 – verifies open or closed
I7	Bond sensor door 3 maglock – verifies locked or unlocked
I8	Push bar door 4 allows exit – overrides manual lock
I9	Door contact door 4 – verifies open or closed
IA	Bond sensor door 4 maglock – verifies locked or unlocked
IB	IR door 1 – detects person between door 1 and weapon detector
IC	IR door 2 – detects person between weapons detector and door 2
ID	IR door 3 and 4 – detects person on exit side
IE	Weapon detector alarm – reset via admit switch
IF	Wireless admit – function same as admit switch
IG	Capture on exit input

Output Details	
O1	Voice announcement on alarm
O2	Green light – OK to exit door 4
O3	Green light – OK to enter door 1
O4	Green light – OK to enter door 3
O5	Red light – Do not enter door 2
O6	Maglock power door 1
O7	Maglock power door 2
COMMON	For outputs O8, O9 & OA
O8	Maglock power door 3
O9	Maglock power door 4
OA	Cabin Lights

IP Addresses	
Master Console	192.168.0.10
Slave Console	192.168.0.11
Crouzet Controller	192.168.0.210
Subnet Mask All	255.255.255.0

Installation Flowchart





Entrance Control Service Record

Model:		Install Date:	Bank Name:	Address:			Order Number:
Weekly Operation Test	Date:						
	Result:						
Quarterly Preventative Maintenance							
Maglocks	Date:						
	Result:						
IR Sensors	Date:						
	Result:						
Weapons Detector Verification	Date:						
	Result:						
Door Closers	Date:						
	Result:						
Inspect Door Sweeps	Date:						
	Result:						

HAMILTON SAFE®

Entrance Control System – Assembly Inspection Checklist

Description	Inspector	Supervisor	Comments
All stainless inspected for dings and proper assembly			
All screws and nuts in place and tight (Loctite applied where applicable)			Verify no open holes exist where there should be screws – spot check tightness of screws in each section of frame
All door glazing and foam tape is installed properly			
Door closures are installed and adjusted correctly			
All door components in place and mounted correctly			See list of door components on rear
All frame components in place and mounted correctly			See list of frame components on rear
The Hamilton Safe name plates and handicap button installed correctly			
All Molex plugs and wire harnesses are properly connected and pinned correctly			Plug & unplug the Molex connections and wiggle all connects to insure no loose pins or shorts
No sharp edges – completely deburred			
Overall appearance of unit is clean and free from metal chips			

Confirm crating is complete and correct for shipping			
Customer name, sales order number and unit serial number is written on each crated skid			

Dealer Name: _____

Order Number: _____

Customer Name: _____

Serial Number: _____

Tested By: _____

Date: _____

Supervisor _____

Date: _____

Door Components

- Lock cylinder & thumb latch on each door
- Dead bolt latch on each door
- Maglock for each door
- 2 door contacts & magnets for each door
- Pull handle & REX bar on door 1
- Push bar & pull handle on door 2
- Push bar on door 3
- REX bar on door 4

Frame Components

- 4 header IR detectors
- Control box in lobby center post
- Audio matrix in lobby center post
- Observation pan & bracket on hinge side of door 2
- Red & green indicator lights, shunt switch & ADA button on outside of entrance center post
- Red & green indicator lights and microphone on inside of lobby center post

HAMILTON SAFE®

Entrance Control System – Manufacturing Functional Test Checklist

Description	Inspector	Supervisor
At outside entrance press handicap button. Console should sound and red audio light should flash.		
At outside entrance check that the green entrance light is on.		
Enter entrance door. Check that door is locked and the red entrance light comes on. (Check door by pushing on door frame and not the push bar.)		
Check entrance door for exit by touching push bar.		
Check for multiple persons by activating both sensors. Console light should come on. Inside door should be locked with red light at door on. Outside door should open. (Reset Console Button)		
Re-enter entrance door. Pass thru metal detector. Light should turn green and inside door should unlock.		
When inside of building check that the inside entrance door locks behind you.		
Open inside exit door. Enter exit chamber. Make sure door locks behind you.		
Green light should come on when inside exit door is closed.		
Push on glass of exit door to make sure it is locked.		
Touch push bar and exit.		
Hold outside exit door open and make sure inside exit door is locked.		
Enter entrance door with metal. Weapons detector should sound and red light on console should light.		
Inside door should be locked and outside door should be unlocked.		
Check reset button on console to allow entrance.		
Confirm all wireless remotes are programmed and working correctly.		
Check switches on console to make sure all doors lock.		
Check audio system for clarity and volume at console and entrance section.		

Dealer Name: _____

Order Number: _____

Customer Name: _____

Serial Number: _____

Tested By: _____

Date: _____

Supervisor _____

Date: _____

HAMILTON SAFE®

Entrance Control System – Field Functional Test Checklist

Description	Inspector	Supervisor
Confirm ¼-20 screws were replaced where cross tie shipping cables were attached.		
At outside entrance press handicap button. Console should sound and red audio light should flash.		
At outside entrance check that the green entrance light is on.		
Enter entrance door. Check that door is locked and the red entrance light comes on. (Check door by pushing on door frame and not the push bar.)		
Check entrance door for exit by touching push bar.		
Check for multiple persons by activating both sensors. Console light should come on. Inside door should be locked with red light at door on. Outside door should open. (Reset Console Button)		
Re-enter entrance door. Pass thru metal detector. Light should turn green and inside door should unlock.		
When inside of building check that the inside entrance door locks behind you.		
Open inside exit door. Enter exit chamber. Make sure door locks behind you.		
Green light should come on when inside exit door is closed.		
Push on glass of exit door to make sure it is locked.		
Touch push bar and exit.		
Hold outside exit door open and make sure inside exit door is locked.		
Enter entrance door with metal. Weapons detector should sound and red light on console should light.		
Inside door should be locked and outside door should be unlocked.		
Check reset button on console to allow entrance.		
Confirm all wireless remotes are programmed and working correctly.		
Check switches on console to make sure all doors lock.		
Check audio system for clarity and volume at console and entrance section.		
Check shunt switch operation to insure it does power the unit down.		
Check metal detector panels are 32” apart and transmitter panel is on the left (Green Dot) and receiver is on the right (Red Dot) – dots must face each other.		
Confirm metal detector operation by using Ceia level 1 test device.		
Confirm proper door gaps on all doors.		

Dealer Name: _____

Order Number: _____

Customer Name: _____

Serial Number: _____

Tested By: _____

Date: _____

Supervisor: _____

Date: _____

**Scan completed form and email to tlefevers@hamiltonsafe.com and sborke@hamiltonsafe.com.
Warranty will not be honored until this signed & dated form is received by Hamilton Safe.**

2010 TOUCH SCREEN E.C.S. PACKING LIST					
	DEALER:	JOB NO:			
	BANK NAME:	DATE:			
NO.	ITEM		REQ'D.	SHIPPED	B/O
1	ALTRONIX POWER SUPPLY AL600ULM		1		
2	WIRING HARNESS Door 1 and 4 (INSTALLED)		1		
3	WIRING HARNESS Door 2 and 3 (INSTALLED)		1		
4	100' BLUE CAT 5 CABLE (CONTROL)		1		
5	100' YELLOW CAT 5 CABLE (AUDIO)		1		
6	OPERATORS CONSOLE W/ AUDIO		1		
7	3" SPEAKER (INSTALLED)		1		
8	HEADER IR'S (INSTALLED)		4		
9	WIRELESS TRANSMITTER		1		
10	WIRELESS RECEIVER (INSTALLED)		1		
11	REX TOUCH BARS FOR DOORS 1 & 4 (INSTALLED)		2		
12	METAL DETECTOR S/N _____		1		
13	SIGN SET		1		
14	INSTRUCTION SHEETS & CONSOLE/OPERATOR MANUAL		1		
15	INSTRUCTIONAL DVD FOR IN LOBBY VIEWING		1		
16	HARDWARE (WEAPONS DETECTOR MOUNTING)		1		
17	HARDWARE (HINGE SCREWS 10-32 X 3/4)		140		
18	HARDWARE (TAPCON SCREWS 1/4 X 3)		30		
19	HARDWARE (EXTRA MISC. HARDWARE)		1		
20	CENTER FRAME SECTION (INSTALLED)		1		
21	DOOR 1 & 2 FRAME SECTION (INSTALLED)		1		
22	DOOR 3 & 4 FRAME SECTION (INSTALLED)		1		
23	DOOR CLOSERS ALL DOORS (INSTALLED)		4		
24	COMPOSITE GLASS MULLION (EXIT) (INSTALLED)		1		
25	COMPOSITE GLASS MULLION (W/ DETECTOR SPACER) (INSTALLED)		2		
26	STAINLESS DOOR 1, 2, 3, 4 (INSTALLED)		4		
27	DOOR HEADER 1, 2, 3, 4 (INSTALLED)		4		
28	DOOR GLASS STOPS W/GLAZING (INSTALLED)		4 SET		
29	DOOR HINGE TAP BAR (INSTALLED)		4		
30	THRESHOLD PLATE		2		
31	INSPECTION SHELF W/ MOUNT		1		
32	UL LEVEL 1 ROOF PANELS (INSTALLED)		6		
33	CEILING VENTS W/ SCREWS (INSTALLED)		4		
34	SERVICE HATCH WITH VENT EXIT SIDE (INSTALLED)		1		
35	BRIDGE WITH ACCESS COVER FOR DETECTOR TOP		1		
36	GLASS SET BLOCKS		25		
37	CABIN GLASS (43 3/16 X 85 1/2) GLASS TYPE _____		6		
38	DOOR GLASS (29 9/16 X 68 3/16) GLASS TYPE _____		4		
39	GLAZING TAPE (1/8 X 1/2) (INSTALLED)		50'		
40	GLAZING TAPE (1/16 X 1/2) (INSTALLED)		50'		
41	DOOR SWEEPS (DOOR 1 & DOOR 4)		2		
42	1/8" LEXAN CABIN SHIMS		2	BUNDLES	

43	AMEDICO ELECTRIC SHUNT SWITCH AND TWO KEYS (INSTALLED)		1		
44	LEVEL 1 TEST DEVICE (E0781)		1		
45	LED LIGHT PACKAGE (INSTALLED)		4		
	OPTIONAL EQUIPMENT		REQ'D.	SHIPPED	B/O
1	PHOTOCELL OPTION FOR WEAPONS DETECTOR (HEC1138)				
2	EXTRA WIRELESS ADMIT SWITCH (HEC1133)				
3	UL LEVEL 2 CEILING (HEC 1193)				
4	VOICE ANNOUNCEMENT ON ALARM (HECVOICE)				
5	POWDER COAT UNIT STANDARD COLOR (HECSTDPAINT)				
6	((SPECIFY COLOR - SUPPLY SAMPLE))				
7	EXTRA STANDARD MASTER CONSOLE				
8	SPANISH DECALS (HEC-SPANISH)				
9	ELECTRIC STRIKE & CARD READER W/WIRE LEADS TO TOP OF UNIT (INSTALLED)				
10	BATTERY BACKUP FOR POWER SUPPLY (HECBATTERY)				
11	HEC COLOR CAMERA PACKAGE INCLUDES				
	1 = ALTRONIX POWER SUPPLY (ALTV248UL)				
	4 = DOME CAMERAS				
	1 = AMERICAN DYNAMICS SWITCHER (ADAQUAD77)				
	1 = IKEGAMI 15" TFT COLOR LCD MONITOR (LCM-1501)				
12	PROFILE CAMERA IN STAINLESS HOUSING				