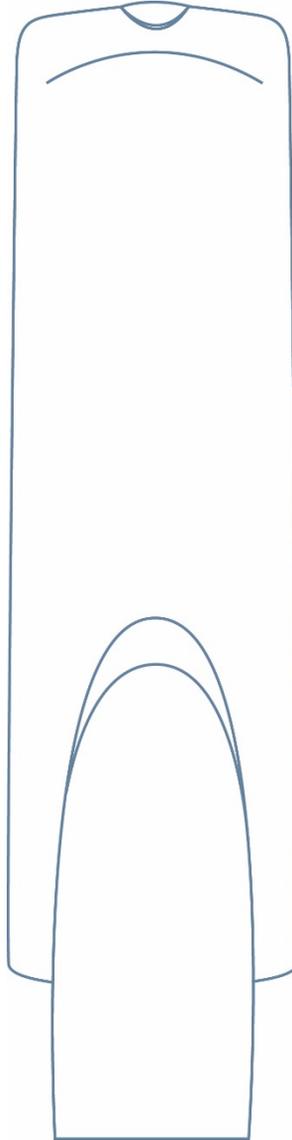


Ultra 1.5 meter ABS Pedestal System®

Installation Guide



ZS1146-P, ZS1146-S, ZA1146-D

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About this guide

This installation guide explains how to install the Ultra 1.5 meter ABS Pedestal System. You must install the Ultra 1.5 meter ABS Pedestal System as outlined in this guide. Other related documents that can help you with this installation, include the following:

- *CBC-4055 Local Device Manager Installation Guide, 8200-0858-01*
- *CBC-4020 UltraLink Indoor Installation and Service Guide, 8200-0172-01*
- *AMC-1060 Digital Remote Alarm Installation Guide, 8200-0505-01*

Customer requirements dictate the placement of system components. Your Sensormatic representative supplies this information separately.



Regulatory restriction: For indoor use only.

Intended use: Only install this device as described in this guide.

If this product was installed in a European Union or European Free Trade Association member state, give the Declaration of Conformity included with this product to the manager or user. By law, you must provide this information to the user.

Technical support

For product bulletins, and the most recent updates to this document, visit <https://sensormaticsecurelogin.com>.

About the Ultra 1.5 meter ABS Pedestal System

The Ultra 1.5 meter ABS Pedestal System described in this document activates an alarm when it detects the unique response of an active Ultra•Max® hard tag or disposable label.

The Ultra 1.5 meter ABS Pedestal System consists of two pedestal antennas, a primary and a secondary, connected by an interconnect cable. The primary pedestal connects to a power source and has an alarm board and the main controller board. The secondary pedestal does not have a LED alarm indicator; it has the lens cover and contains a receiver board.

Product features

The Ultra 1.5 meter ABS Pedestal System is similar to the Ultra•Shield systems, but the system has the following additional features:

- An aesthetic look that meets and exceeds competitive offerings.
- Supports single and dual configurations.
- Integrated audio and visual alarming in the primary pedestal.
- Jammer detection.
- Tags-too-close.
- Network connectivity through the use of a Local Device Manager (LDM).
- The system has a single door coverage capability of 0.9 meters or 3 feet, and a double door coverage capability of 1.5 meters, or 5 feet.

Kit parts

This section outlines the components you require to install the Ultra 1.5 meter ABS Pedestal System.

Ultra 1.5 meter ABS Pedestal System

Table 1 lists the kit parts you require to install the Ultra 1.5m ABS Single Pedestal System, ZS1146-P.

Table 2 lists the kit parts you require to install the Ultra 1.5m ABS Secondary Pedestal System, ZS1146-S.

Table 3 lists the kit parts you require to mount the Ultra 1.5 meter ABS Pedestal System.

Table 1. Ultra 1.5m ABS Single Pedestal System, ZS1146-P

Kit	Product code	Quantity required
Primary pedestal assembly with cover	0304-3039-01	1
Pedestal mounting installation kit	0352-0781-01	1

Table 2. Ultra 1.5m ABS Secondary Pedestal System, ZS1146-S

Kit	Product code	Quantity required
Secondary pedestal assembly with cover	0304-3040-01	1
Pedestal mounting installation kit	0352-0781-01	1

Table 3. Pedestal Mounting Installation Kit, 0352-0781-01

Part	Part number	Quantity required
Washer flat	2848-0025-01	4
Anchors expansion, 5/16" x 1-3/4"	2880-0105-01	4
Bolt, lag, 5/16" x 2.5", 1/2" Hex	2880-0106-01	4
Screws, Hex, M6 x 60	5801-4174-520	2
Washer, flat, M8	5840-0700-020	2

Interconnect cable options for the Ultra 1.5 meter ABS Pedestal System

Interconnect cables connect the primary and the secondary pedestal.

Table 4 lists the kit parts you require to install the 4 meter interconnect cable.

Table 5 lists the kit parts you require to install the 12 meter interconnect cable.

Table 6 lists the kit parts you require to install the 15 meter interconnect cable.

Table 4. AMS-1146 4M TX Interconnect Cable Installation Kit, 0352-0792-01

Item	Part number	Quantity required
Cable Assembly, transceiver	0652-0789-01	1

Table 5. AMS-1146 12M TX Interconnect Cable Installation Kit, 0352-0793-01

Item	Part number	Quantity required
Cable Assembly, transceiver	0652-0789-02	1

Table 6. AMS-1146 15M TX Interconnect Cable Installation Kit, 0352-0794-01

Item	Part number	Quantity
Cable Assembly, transceiver	0652-0789-03	1

Supported configurations

The Ultra 1.5 meter ABS Pedestal System supports single and dual configurations.

Coverage distances

Table 7 lists the exit coverage capabilities of the Ultra 1.5 meter ABS Pedestal System.

Table 7. Ultra 1.5 meter ABS Pedestal System exit coverage capabilities

Ultra 1.5 meter ABS Pedestal System configuration	Exit coverage distance
Single	0.9 meters, or 3 feet
Dual alternating	1.5 meters, or 5 feet

Compatibility

The Ultra 1.5 meter ABS Pedestal System is compatible with the following products:

- Ranger Antennas
- Satellite Antennas
- Amorphous Core Receiver
 - Note:** Compatible with one Amorphous Core Receiver only, not a pair of receivers.
- Digital Remote Alarm (DRA)
- Ultra Link
- Local Device Manager (LDM)
- Wireless Device Manager (BIM1000) and the Wireless Device Module (BIX1000)

Safety

Installation requirements



Intended use: Only install this device as described in this guide.

The installer or contractor must adhere to the following criteria:

- Have electrical work comply with the latest national electrical code, national fire code, and all applicable local codes and ordinances. National or local wiring codes or rules can differ between regions. Adherence to these codes supersedes instructions in this document.
- Coordinate all work with other trades to avoid interference.
- Verify existing site conditions and coordinate with the owner's representative and appropriate utilities as required.
- Obtain copies of all related plans, specifications, shop drawings and addenda to schedule and coordinate related work.
- Thoroughly review the project to ensure that all work meets or exceeds the above requirements. The installer or contractor must bring any alleged discrepancies to the attention of Sensormatic Electronics.

Chemical interaction



WARNING: Do not install this product in hazardous areas where highly combustible or explosive products are stored or used.

Cabling



WARNING: Risk of electric shock

During installation, if the antenna must be left unattended, turn off power or cover high voltage components to prevent unauthorized access to hazardous voltages.

WARNING: Risk of electric shock

The AC power could be carrying 120Vac or 240Vac.

WARNING: Risk of electric shock

The transmit pedestal contains hazardous voltages. If the pedestal must be left unattended with its high voltage components exposed, turn off power or cover these components to avoid unauthorized persons access to hazardous voltages.



WARNING: Do not run the power and comm cables in the same conduit or raceway. Building codes require that power wiring be separated from other types of wiring.



WARNING: In accordance with the USA National Electric Code and applicable US local codes, a 15A or 20A, 2 pole, ganged disconnect device, which also provides short circuit and overload protection and has a minimum 3 millimeter open circuit clearance, must be installed by a licensed electrician at a location readily accessible to the equipment.

For installations in other countries, an electrical outlet, suitable for the voltage and current used in the primary electrical supply input of the equipment, must be already provided or installed by a qualified electrician. The National Electric Codes, regulations, cable, and fusing requirements applicable for the equipment and type of installation must be followed at all times.



CAUTION: The AC source must be a two-wire plus ground, 24-hour, unswitched outlet with less than 0.5Vac between neutral and ground.

CAUTION: For permanently connected equipment, a 15A or 20A, two-pole, ganged disconnect device, which also provides short circuit and overload protection, and has a minimum 3 millimeter open circuit clearance, in accordance with the National Electric Code and applicable local codes must be installed by a licensed electrician at a location readily accessible to the equipment.

CAUTION: For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.

Important:

- Do not share the AC source with neon signs, motors, computers, cash registers, terminals, or data communications equipment.
- Do not use orange-colored outlets dedicated for computer equipment.



CAUTION: For continued protection against risk of fire, replace fuse only with same type and rating.

Implanted medical devices

This anti-theft system complies with all applicable safety standards. However, people with implanted electronic medical devices can ask if the store has an anti-theft system, and its location. Although most anti-theft systems are easily seen, some can be concealed. To help individuals with implanted medical devices, consider the following health and safety guidelines:

Health and safety

Place the anti-theft system antennas to ensure customers behave in the following ways:

- Do not linger near, or lean on them while making their purchase.
- Are only near the front of them while exiting the checkout area.

For exit systems, place anti-theft system antennas:

- Close to exit and entrance doors, encouraging the customer to pass through them. Do not use antennas intended for exits in an aisle configuration.
- Away from fixtures, equipment, amusements, and other signage that can attract customers to them.

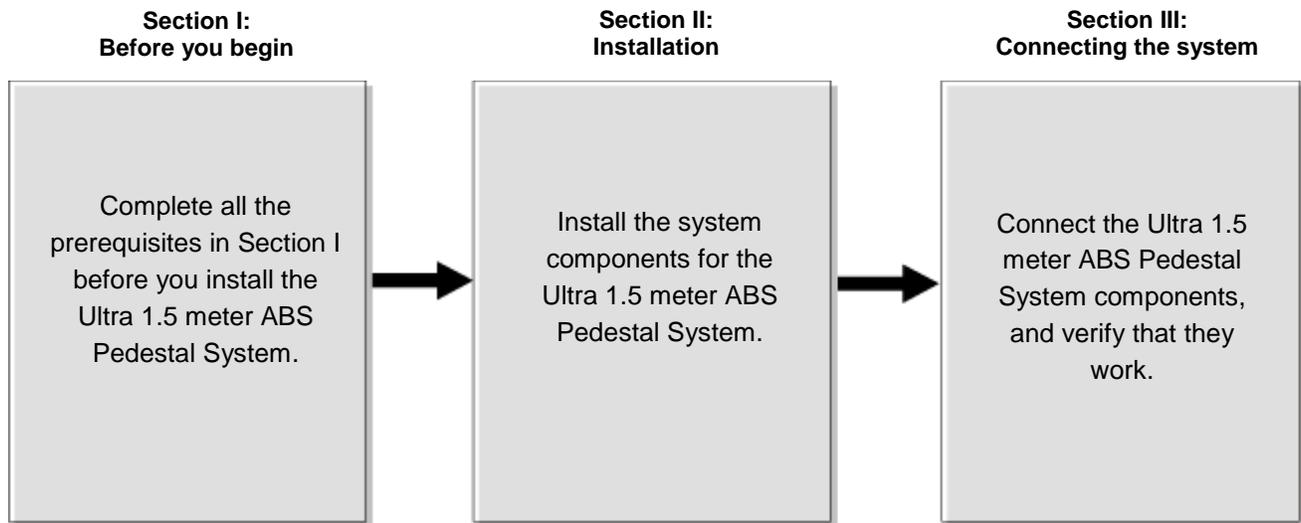
Apply 'Anti-theft' signage

- 'Anti-theft' labels are placed on each antenna, including those hidden behind door frames and other structures. Do not cover these labels with other signage.
- In non-English speaking countries, apply 'Anti-theft' labels in the local language to the antennas. For hidden antennas, apply an 'Anti-theft' label in the local language to each side of the door frame facing the doorway about 1.2 meters or 4 feet above the floor. You can order local language labels, 2412-0170-XX, from your distribution center.
- To improve customer awareness of the anti-theft system, encourage the store to display signs that state it has an anti-theft system. You can order awareness materials through your sales representative.

Installation overview

Figure 1 gives an overview of the installation sequence you must follow when installing the Ultra 1.5 meter ABS Pedestal System.

Figure 1. Ultra 1.5 meter ABS Pedestal System installation overview



Section I: Before you begin

This section outlines the criteria you must adhere to when you install the Ultra 1.5 meter ABS Pedestal System.

Training

Do not attempt to install the Ultra 1.5 meter ABS Pedestal System unless you have completed the Ultra 1.5 meter ABS Pedestal System Training webinar. To schedule a webinar or in class training, contact your regional training representatives.

Planning the location of system components

This section outlines how to determine the location for the components of the Ultra 1.5 meter ABS Pedestal System.

Pedestal location

Consider the following criteria when you select the location of the Ultra 1.5 meter ABS Pedestal System:

- Whenever possible, keep the antennas at least 2.4 meters, or 8 feet away from noise sources such as computer monitors, TVs, switching power supplies, and neon displays.
- Maximum exit coverage of one primary pedestal is 0.9 meters, or 3 feet.
- The pedestals can protect a space 1.5 meters, or 5 feet wide between them, the primary pedestal also detects 90 centimeters, or 3 feet behind for total exit coverage of 2.4 meters, or 8 feet.
- The maximum distance between the primary and the secondary pedestals is 1.5 meters or 5 feet, measured from pedestal center to pedestal center. The minimum distance between two pedestals is 0.6 meters or 2 feet, measured center to center.
- If you must route the interconnect cable over the top of the doors, the maximum cable distance between the pedestals is either 15 meters, or 50 feet, or 12 meters, or 40 feet, depending on which cable option the pedestal has. You usually route the supplied 4 meter or 13 feet cable in the floor.
- A transmit field is emitted from both sides of the primary pedestal. Unless you are using backfield reduction configuration, keep displays that are tagged at least 1.5 meters or 5 feet, from the pedestal, especially when using the tag-too-close function.
- You mount the pedestal to the floor using the four anchors in the AMS-1146 Pedestal Mounting Installation Kit, 0352-0781-01.
- Cable openings in the pedestal base allow for cable entry from underneath the pedestal or from either end of the pedestal through a cutaway in the base covers.
- Cable access can be through conduit or Wiremold®.

AMC-1060 Digital Remote Alarm

If you are using an AMC-1060 Digital Remote Alarm with the Ultra 1.5 meter ABS Pedestal System, consider the following criteria:

- The Ultra 1.5 meter ABS Pedestal System does not provide power for the AMC-1060 Digital Remote Alarm, because the system does not provide power, you need a nearby power outlet. If installing an AMC-1060, confirm the location of the power outlet before you run the wires.
- Plug the 12V DC transformer used to power the alarm, into a 24-hour unswitched outlet.
- The maximum cable distance from the primary pedestal to each remote alarm is about 12.2 meters, or 40 feet.

Installation requirements

This section outlines the installation requirements you require to install the Ultra 1.5 meter ABS Pedestal System.

Tool requirements

You require the following tools and equipment to install the Ultra 1.5 meter ABS Pedestal System:

- 0.15 millimeters or 6 mils minimum plastic sheeting to protect nearby items from dust
- A permanent marker or pencil
- A power drill with 1 cm, or 3/8 inch masonry drill bit
- A hammer
- Phillips and slotted screwdrivers
- A wire stripper
- Pancake conduit or floor saw and floor-fill material
- A ratchet and socket set
- A utility knife
- A level
- A hand vacuum and broom

Equipment requirements

You require the following equipment to install the Ultra 1.5 meter ABS Pedestal System:

- The Ultra 1.5 meter ABS Pedestal System, ZS1146-P or, ZS1146-S
- The Ultra 1.5 meter ABS Pedestal System Mounting Installation Kit, 0352-0781-01
- One of the following TX Interconnect Cable Interconnect Kits:
 - The 4 meter TX Interconnect Cable Interconnect Kit, 0352-0792-01
 - The 12 meter TX Interconnect Cable Interconnect Kit, 0352-0793-01
 - The 15 meter TX Interconnect Cable Interconnect Kit, 0352-0794-01
- A hard tag, non-deactivatable Ultra•Max tag, or Ultra•Max low energy labels.
- A laptop computer with Windows® 7 operating system, Internet Explorer 11, or Mozilla Firefox
- A RS-232 Ultra•Max programming cable
- A USB to RS-232 converter, if required

Note: For more information on the USB to RS232 converter cable for EAS configurator communication, see the *TB150807 USB to RS232 Converter for EAS* PDF, available online at <https://sensormaticsecurelogin.com>.

Unpacking and checking equipment

Complete the following checks when unpacking and verifying the equipment:

- Verify that all equipment is included. Ensure the Ultra 1.5m ABS Pedestal configuration is the correct one for the installation site.
- Unpack the major components in a space where you are not obstructing or causing nuisance to customers. At the install site, lay out the parts in the order you require them. Do not clutter the aisle, or cause a trip hazard.

System requirements

This section outlines the system requirements you require to install the Ultra 1.5 meter ABS Pedestal System.

Laptop requirements

You require the following items for your laptop:

- A laptop computer with Windows® 7 operating system and the latest Internet Explorer, or Mozilla Firefox browser installed.
- A USB to RS-232 converter, if required.
- An RS-232 Ultra•Max programming cable.

Firmware requirements

In order to support the installation of the Ultra 1.5 meter ABS Pedestal System, you must download the latest firmware bundle from <https://sensormaticsecurelogin.com/>.

Table 8 lists the firmware you require to install the Ultra 1.5 meter ABS Pedestal System.

Table 8. Firmware you require to install the Ultra 1.5 meter ABS Pedestal System

Compatible firmware	Version
Ultra 1.5 meter ABS Pedestal System firmware	Version 1.0014 or higher
CE ADS4 Platform Configurator	Version 9.20 Build 16 or higher

To download the latest configurator, complete the following steps:

1. Open a web browser and launch the <https://sensormaticsecurelogin.com/> webpage.
2. Enter your valid log-in details, and click **Login**.
3. From the **Tech Support** menu, select **EAS**.
4. Select **Software Download**.
5. From the **Technology** list, select **Detectors**.
6. Download the latest bundle.

Section II: Installation

This section outlines how to install the Ultra 1.5 meter ABS Pedestal System.

Overview of installation steps

The following list outlines the steps you must complete to install the Ultra 1.5 meter ABS Pedestal System.

- Step 1: Remove the pedestal covers
 - Step 2: Position the pedestals
 - Step 3: Route the cables
 - Step 4: Secure the pedestal to the floor
-

Step 1: Removing the pedestal covers

To remove the pedestal covers from the Ultra 1.5 meter ABS Pedestal System, complete the following procedure:

1. At the top of the pedestal, squeeze the area below the alarm lens, and gently pull on the lens to remove it from the cover.



CAUTION: You must remove the alarm lens gently. Using force to remove the lens from the pedestal cover can cause the lens to break, or damage to the alarm board LED.

2. Loosen the two captive screws securing the pedestal base covers.
 3. Gently prize the pedestal covers apart.
 4. Remove the pedestal cover and set it aside.
-

Step 2: Positioning the pedestals

To mark the locations for the Ultra 1.5 meter ABS Pedestal System and position the pedestals, complete the following steps:

1. Lift the pedestal from the pedestal base, and set it aside.
2. Determine the location of the Ultra 1.5 meter ABS Pedestal System, as described in **Pedestal location** on page 9.
3. Note the location of the power source or the conduit stub where you will place the primary pedestal.



WARNING: In accordance with the USA National Electric Code and applicable US local codes, a 15A or 20A, 2 pole, ganged disconnect device, which also provides short circuit and overload protection and has a minimum 3 millimeter open circuit clearance, must be installed by a licensed electrician at a location readily accessible to the equipment.

For installations in other countries, an electrical outlet, suitable for the voltage and current used in the primary electrical supply input of the equipment, must be already provided or installed by a qualified electrician. The National Electric Codes, regulations, cable, and fusing requirements applicable for the equipment and type of installation must be followed at all times.

4. Position the primary pedestal in its exact mounting location.

5. Position the secondary pedestal no more than 1.5 meters, or 5 feet from the primary pedestal.



CAUTION: Do not space Ultra 1.5 meter pedestals more than 1.5 meters, or 5 feet apart.

6. Use the pedestal base as a template, and mark the locations for the four mounting holes. For the pedestal's footprint dimensions, see **Appendix A: Dimensions**, on page 34.
7. Optional: If you are burying the interconnect cable in the ground, mark the location of the interconnect cable entry hole.
8. Remove the pedestals, and using a drill with a 1.25 centimeter or 1/2-inch masonry bit, drill four 7.6 centimeters or 3-inch deep mounting holes in the floor for each base.

Note: If drilling through carpet, to prevent carpet runs, first mark the holes then cut out the carpet plugs where the holes will be.

Step 3: Routing the cables

To route the cables for the Ultra 1.5 meter ABS Pedestal System, complete the following steps:



WARNING: Risk of electric shock

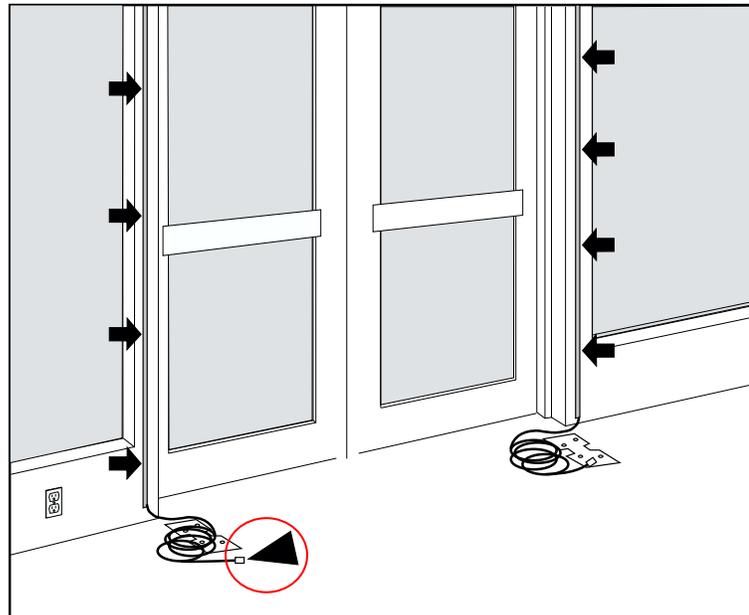
Disconnect power from the primary pedestal before you proceed.
The AC power line could be carrying 120Vac or 240Vac.



Route cables underneath and around the controller board on the primary pedestal, and the receiver board on the second pedestal, using the cabling guide on the pedestal chassis to keep them away from high voltage.

1. Route the cables using the appropriate length of cable: 4 meters or 13.1 feet, 12 meters or 39.3 feet, or 15 meters or 49.2 feet, and then select one of the following options:
 - If you are routing the cable over the doorway, route the cable as shown in **Figure 2**.

Figure 2. Routing the cable over a doorway



- If you are trenching the floor between the pedestals, ensure the proposed trench extends under the pedestal location so cables can enter the pedestal from its base underneath. Then, using a floor saw, trench the floor from pedestal to pedestal. The depth of the trench is 1 centimeter, or 3/8 inches. The width of the trench is 1 centimeter, or 3/8 inches.

Important: Direct burial without conduit is not permitted in European Union (EU) countries.

2. **Note:** Skip this step, if you are installing only a single primary pedestal.

Run the interconnect cable between the primary and secondary pedestal and up through the base. The interconnect cable can enter the base either through the strain-relief on the bottom of the base or from the center of the side.

3. Route the AC cable to the primary pedestal through the conduit access hole in the base.



WARNING: Do not run the power and interconnect cable in the same conduit or raceway. Building codes require that power wiring be separated from other types of wiring.

4. If you are installing an optional device, for example, a digital remote alarm or auxiliary receivers, run the device cable or cables up through the base of the primary pedestal, and along the side of the pedestal using the cabling guide on the pedestal chassis.

Important: The Ultra 1.5 meter ABS Pedestal System does not provide power for the AMC-1060 Digital Remote Alarm. Because the system does not provide power, you need a nearby power outlet to support the required AC adapter. Confirm the location of the power outlet before you run the wires.

Important: The maximum cable distance from the primary pedestal to each remote alarm is about 12.2 meters, or 40 feet.



If you are connecting a digital remote alarm to the system, the wire you use to connect the digital remote alarm to the pedestal must be shielded, and you must connect the shield wire at both ends.

Step 4: Securing the pedestal to the floor

To secure the Ultra 1.5 meter pedestal to a floor, complete the following steps:

1. Level the pedestal base, or bases.
2. Locate the anchor wedges, 2880-0105-01, from the Pedestal Mounting Installation Kit, 0352-0781-01. Insert the anchor wedges into the holes in the floor, and tap the anchors into the holes.
3. Place the pedestal over the four protruding anchors in the floor.
4. Secure each pedestal base to the floor using the four screws, 5801-4174-520, and the four anchors, 2880-0105-01, from the Pedestal mounting installation kit, 0352-0781-01.
5. Locate the pedestal that you previously set aside, and slip the pedestal over the pedestal base.

Section III: Connecting the Ultra 1.5m ABS Pedestal

This section outlines how to connect the cables and wire the Ultra 1.5 meter ABS Pedestal System.

Overview of connection steps

The following list outlines the steps you must complete to connect and wire the Ultra 1.5 meter ABS Pedestal System:

- Step 1: Connect the primary pedestal
- Step 2: Connect the secondary pedestal
- Step 3: Connect AC power
- Step 4: Tune the Ultra 1.5 meter ABS Pedestal System
- Step 5: Check EAS performance
- Step 6: Adjusting the audio alarm
- Step 7: Install the pedestal covers
- Step 8: Cover the antenna cables
- Step 9: Apply anti-theft labels in other languages
- Step 10: Clean the pedestal

Step 1: Connecting the primary pedestal

To connect the cables to the controller board of the primary pedestal, complete the following steps:

1. **Note:** Skip this step, if you are installing only a single primary pedestal.

On the main controller of the primary pedestal, attach the interconnect cable to the 5-position Euro-style connector which is plugged into connector P6. For the connections, see **Table 9** and **Figure 3**. For the location of the P6 connector, see **Figure 4**.

Table 9. Primary pedestal interconnect cable connections

Pin	Color	Signal name
1	Black	Top coil
2	Red	Top coil return
3	Green	Bottom coil
4	White	Bottom coil return
5	Shield	Shield

Figure 3. Connecting the interconnect cable

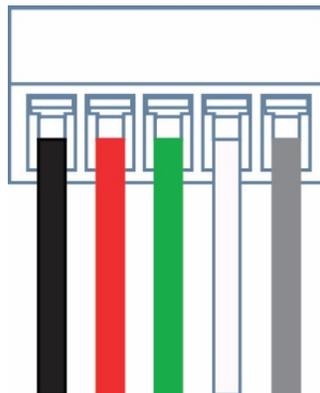
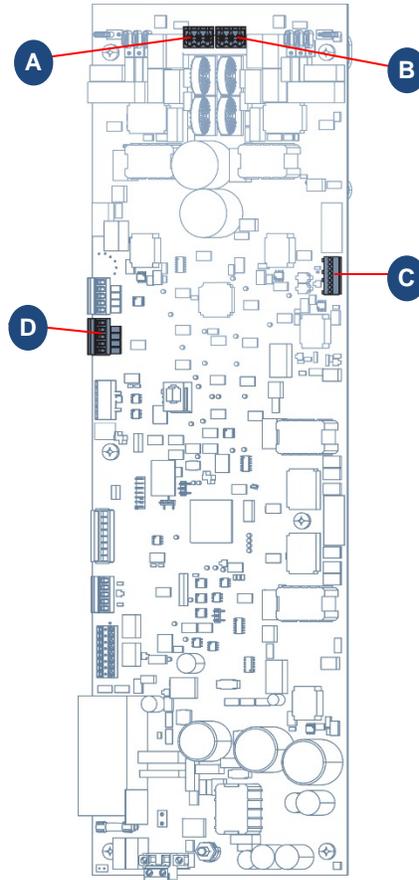


Figure 4. P6, P5, and top and bottom coil locations on the main controller board



A	Bottom coil connector, P3	C	Connector P5 location
B	Top coil connector, P1	D	Secondary P6

Note: If you are replacing the main board, connect P1, P3 and P5 alarm cable.

2. On the primary pedestal, plug the alarm cable 0652-5812-01, into connector P5 of the controller board.
3. Attach the 3-position connector to the upper antenna coil cable as shown in **Table 10**. Plug the cable into the top coil connector, P1, on the controller board.

Table 10. Antenna top coil connections

Pin	Color	Signal name
1	Black	Primary top coil return
2	Red	Shield
3	White	Primary top coil

4. Attach the 3-position connector to the lower antenna coil cable as shown in **Table 11**. Plug the cable into the bottom coil connector, P3, on the controller board.

Table 11. Antenna bottom coil connections

Pin	Color	Signal name
1	Black	Primary top coil return
2	Red	Shield
3	White	Primary top coil

Step 2: Connecting the secondary pedestal

To connect the cables to the receiver board on the secondary pedestal, complete the following step:



WARNING: Risk of electric shock

Disconnect power from the primary pedestal before you proceed.

- On the receiver board of the secondary pedestal, attach the interconnect cable to the 5-position Euro-style connector which is plugged into connector P2. For the connections, see **Table 12** and **Figure 5**. For the location of the P2 connector, see **Figure 6**.

Table 12. Secondary pedestal receiver cable connections

Pin	Color	Signal name
1	Black	Top coil
2	Red	Top coil return
3	Green	Bottom coil
4	White	Bottom coil return
5	Shield	Shield

Figure 5. Connecting the interconnect cable

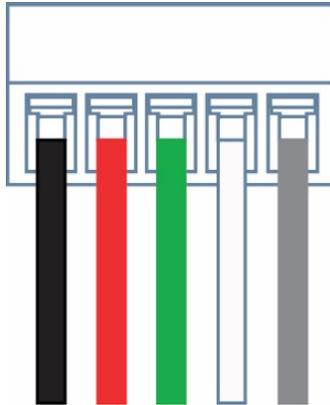
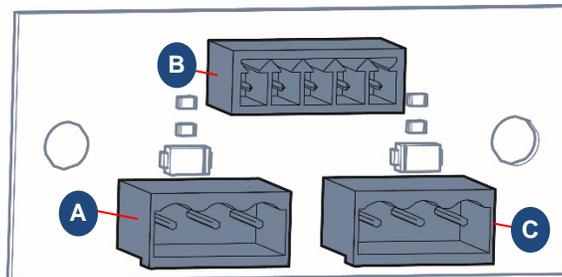


Figure 6. P1, P2 and P3 locations on the receiver board



A	Connector P1 location	C	Connector P3 location
B	Connector P2 location		

If you are replacing the secondary receiver board, you must complete the following steps:

1. Attach the 3-position connector to the upper antenna coil cable as shown in **Table 13**. Plug the cable into the top coil connector, P1, on the receiver board.

Table 13. Secondary antenna top coil connections

Pin	Color	Signal name
1	Black	Secondary top coil return
2	Red	Shield
3	White	Secondary top coil

2. Attach the 3-position connector to the lower antenna coil cable as shown in **Table 14**. Plug the cable into the bottom coil connector, P3, on the receiver board.

Table 14. Secondary antenna bottom coil connections

Pin	Color	Signal name
1	Black	Secondary bottom coil return
2	Red	Shield
3	White	Secondary bottom coil

Step 3: Connecting AC power

To connect the system to AC power, complete the following steps:



CAUTION: A 15A, two-pole, ganged disconnect device, which also provides short circuit and overload protection, and has a minimum 3 millimeter open circuit clearance, in accordance with the National Electric Code and applicable local codes must be installed by a licensed electrician at a location readily accessible to the equipment. If the only line providing power is the primary/L1, you can use a single-pole breaker.

1. Locate the voltage shunt, 2109-0062-01, which is in a bag taped inside the primary pedestal enclosure.



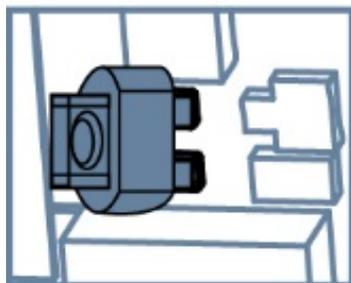
WARNING: Risk of electric shock

Ensure that the system is not powered before moving the shunts.

2. Select the proper voltage for the site using the shunt, 2109-0062-01. The default setting is 240Vac. For the location of J5, see **Figure 8**.

Figure 7. Voltage settings and shunts

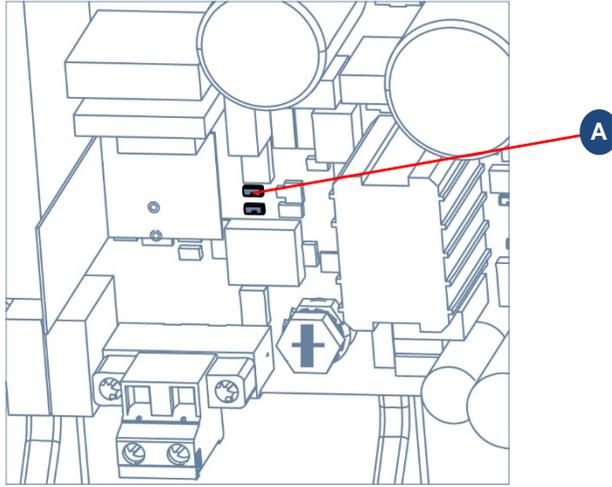
120 Vac: J5 shunt IN



240 Vac (Default): J5 shunt OUT



Figure 8. J5 location on the capacitor board



A	J5
---	----



WARNING: Risk of electric shock

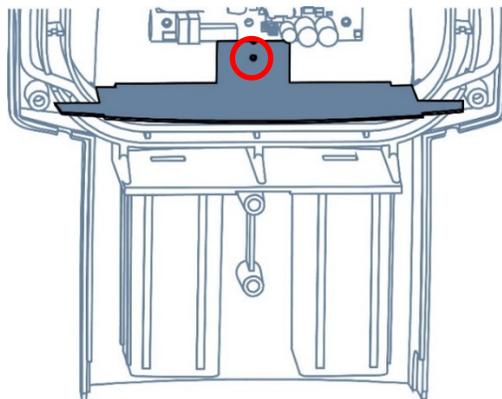
Ensure that the circuit breaker for the power cable is off before connecting the pedestal to AC power. The AC power cord may carry 120Vac or 240Vac.



CAUTION: You can not use a power cord with the Ultra 1.5 meter ABS Pedestal System. You must hardwire the system.

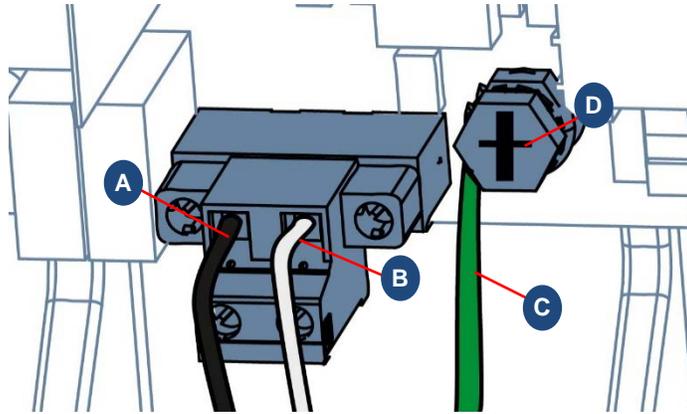
3. Connect the pedestal to AC power by hard-wiring the system.
4. Complete the following steps to remove the metal drip plate:
 - a. Locate the screw securing the drip plate to the pedestal, as shown in **Figure 9**.
 - b. Unscrew the screw from the drip plate, and set the drip plate aside for later use.

Figure 9. Metal drip plate screw



- Loosen the ground screw, positioned to the right of the power connector. For the location of the ground screw, see **Figure 10**.

Figure 10. Wiring the power connector



A	Line	C	Ground jumper, ground point
B	Neutral	D	Ground screw

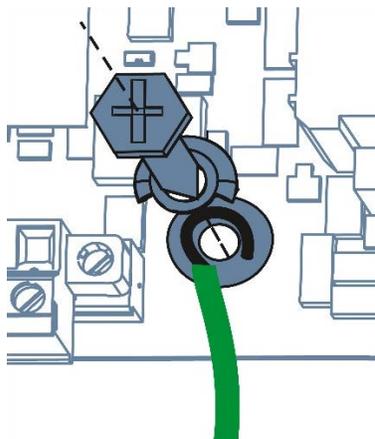
- Route the AC power cord up the right side of the pedestal base.
- Connect the AC power wires to the power connector on the main controller board. Connect the Line wire (black) to L, the Neutral wire (white) to N, and the Ground wire (green) to the ground screw on the main controller board, as shown in **Figure 10**.

Note: The power connector accepts 0.75 to 2.0 mm² (18 to 14 AWG) wire.

Important: If you remove the connector, do not pull it out by the wires; pull on the connector.
- Tighten the ground screw, and secure the Ground wire (green).

Note: When connecting the ground wire, ensure the slot on the washer is pointing down to allow the jacket on the cable to fit behind the washer. See **Figure 11**.

Figure 11. Connecting the Ground wire



WARNING: After tightening the ground wire screw, carefully inspect the ground wire to insure that no wire strands are touching any components on the board.

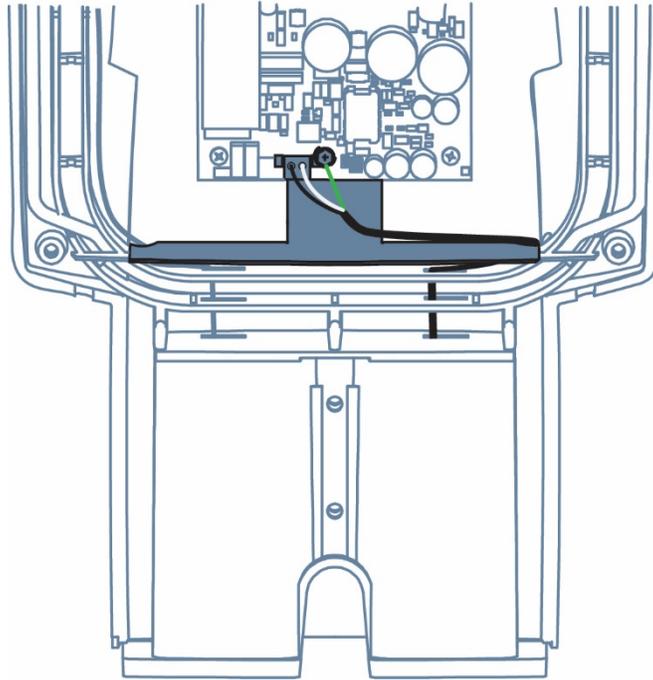
9. Reattach the metal drip plate positioning the wires behind the access slot, as shown in **Figure 12**.



WARNING: Risk of electric shock

When reattaching the drip plate do not damage or pinch any cables routed behind it. Ensure the cables route up through the access slot.

Figure 12. Routing the cables



WARNING: Do not run the power and comm cables in the same conduit or raceway. Building codes require that power wiring be separated from other types of wiring.

Step 4: Tuning the Ultra 1.5 meter ABS Pedestal System

The goal of tuning is to adjust the total capacitance on the capacitor board until the current amplitudes in the top and bottom coils are maximized.



WARNING: Risk of electric shock

High-voltage AC is present on the Cap board whenever the pedestal power is on. Ensure that the system is not powered before touching the tuning jumpers.

Before you tune the Ultra 1.5 meter ABS Pedestal System

Tuning jumpers are used to adjust the total capacitance of the antennas. The main controller board on the primary pedestal has two groups of tuning jumpers: JW6-JW8 and JW12 for the top coil, and JW9-JW11 and JW13 for the bottom coil. The secondary pedestal requires no tuning.

Before applying power to the antenna and tuning the primary pedestal, complete the following steps:

1. Verify the board is properly seated and all cables are securely connected.
2. Ensure the tuning jumpers are in their default tuning positions on the primary pedestal. See **Table 17** and **Figure 17** on page 27.

Tuning the Ultra 1.5 meter ABS Pedestal System

To tune the Ultra 1.5 meter ABS Pedestal System, complete the following steps:



WARNING: Risk of electric shock

High-voltage AC is present on the Cap board whenever the pedestal power is on. Ensure that the system is not powered before touching the tuning jumpers.

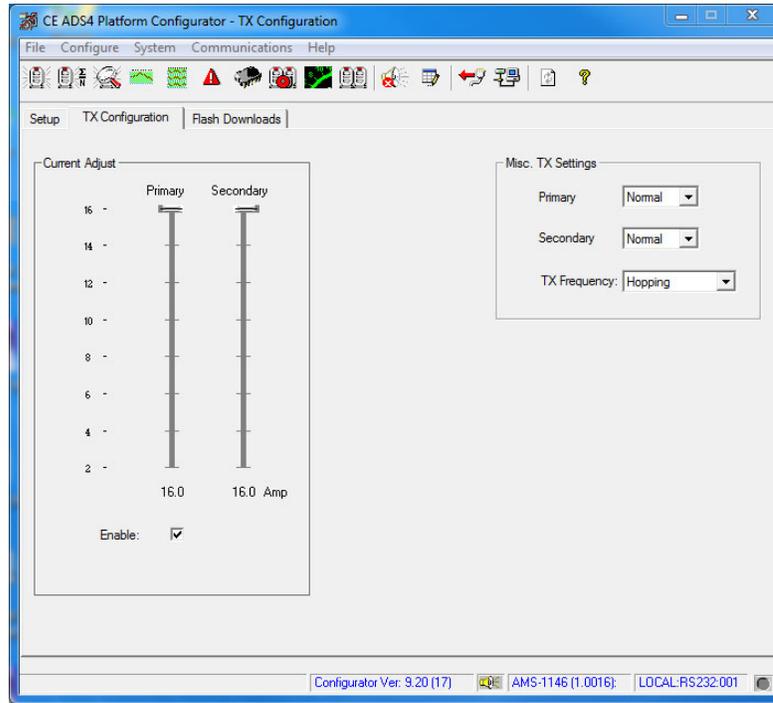
1. Supply power to the system.
2. Connect your laptop computer to the RS-232 service port, J2, on the primary controller board. For the location of the J2 service port, see, **Appendix F: Main board pinouts** on page 44.
3. Launch the CE ADS4 Platform Configurator.
4. Click the **TX Configuration** tab. See **Figure 13**, on page 23.
5. In the **Misc. TX Settings** area, select the following parameters for the antenna:
 - Ant Polarity: **Aiding**
 - TX Frequency: **Nominal**



CAUTION:

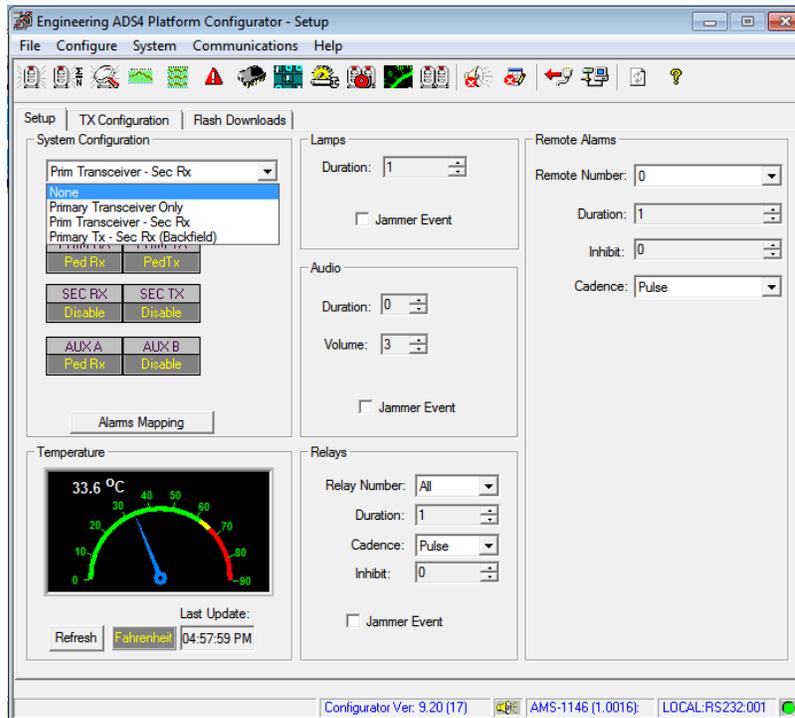
After you have finished tuning the pedestal, you must return the **Misc. TX Settings** to previous values to return the pedestals to their normal operating modes.

Figure 13. TX Configuration window



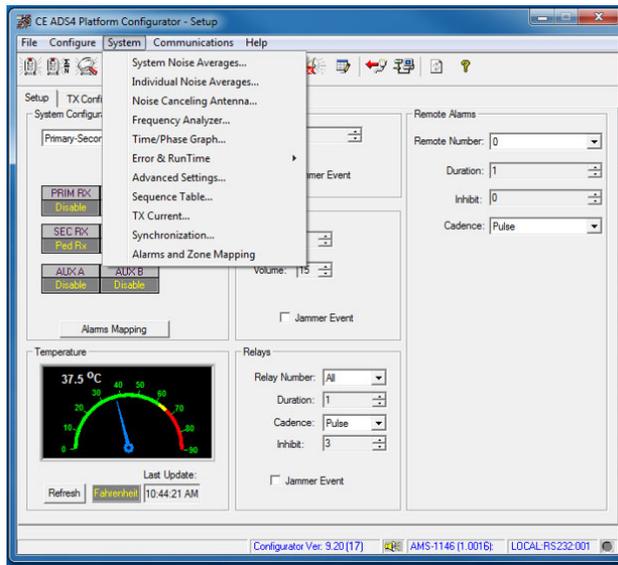
6. Click the **Setup** tab. From the **System Configuration** list, select the correct configuration for the site, for example, **Prim Transceiver Only**. See Figure 14.

Figure 14. Setup tab location



7. From the **System** menu, click **TX Current**. This window displays transmit current meters for the antennas.

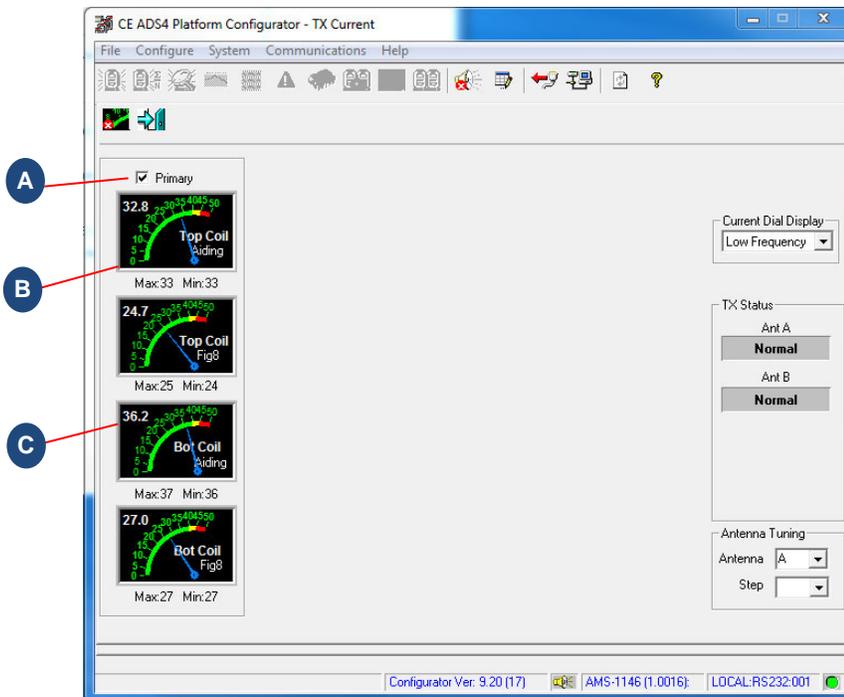
Figure 15. CE ADS4 Platform Configurator System menu



8. On the **TX Current** window, observe the Top Coil Aiding and the Bottom Coil Aiding meters as you tune the current for the highest amplitude. See **Figure 16**.

Note: The current for the primary pedestal should not exceed 33-40A.

Figure 16. TX Current window meters



A	Antenna transmit enable checkbox	C	Bottom Coil Aiding meter
B	Top Coil Aiding meter		

Tuning the primary pedestal

The main controller board has two banks of four jumpers: JW6-JW8 and JW12 for the top coil, and JW9-JW11 and JW13 for the bottom coil. Ensure you are looking at the correct jumpers. For the location of the jumpers see **Figure 17**, on page 27.

Note: The jumper configurations do not have to be the same. The top coil and bottom coil, can have different jumper configurations.

Tuning the top coil

To tune the top coil on the primary pedestal, complete the following steps:



WARNING: Risk of electric shock

Before adjusting jumpers, clear the **Antenna** check box in the configurator to disable the antenna. After changing the jumper, select the box to re-enable the antenna.

1. From the **TX Current** window, disable antenna transmission. To disable an antenna transmission, clear the relating check box.
2. Using **Table 17** on page 27, set the top coil tuning jumpers to their default tuning positions.
3. Referring to **Table 17**, reposition the top coil tuning jumpers, JW6-JW8 and JW12, one step up from their default positions. Enable antenna transmission to observe the current meters.
4. If the current increased, add capacitance by completing the following steps:

Important: Before adjusting the jumpers in the following steps, you must clear the antenna check box on the configurator.

- a. Disable antenna transmission and reposition the top coil tuning jumpers one more step up.
- b. Enable antenna transmission again and observe the meters. If the current increased again, move another step up in the table.
- c. Continue until the current displayed on the meter decreases. Then move one step down and reconfigure the top coil tuning jumpers to obtain the highest coil current.

Table 15. Target current, top coil

Ultra 1.5 meter ABS Pedestal System
33-40A

Note: The values of the currents are for a line input of 120Vac and a four meter-long interconnect cable.

5. If current decreased, subtract capacitance by completing the following steps:

Important: Before adjusting the jumpers in the following steps, you must clear the antenna check box on the configurator.

- a. Disable antenna transmission and reposition the top coil tuning jumpers one step down in the tuning table.
- b. Enable antenna transmission again and observe the meters. If the current increases, move another step down in the table.
- c. Continue until the current displayed on the meter decreases. Then move one step up and reconfigure the top coil tuning jumpers to obtain the highest coil current.

Tuning the bottom coil

To tune the bottom coil of the primary pedestal, complete the following steps:



CAUTION:

After you have finished tuning the pedestal, you must return the **Misc. TX Settings** to their previous values to return the pedestals to their normal operating modes.

1. From the **TX Current** window, disable antenna transmission. To disable an antenna transmission, clear the relating check box.
2. Using **Table 17** on page 27, set the bottom coil tuning jumpers, JW9-JW11 and JW13, to their default tuning positions.
3. Referring to **Table 17**, reposition the bottom coil tuning jumpers one step up from their default positions. Enable antenna transmission to observe the current meters.
4. If the current increased, add capacitance by completing the following steps:

Important: Before adjusting the jumpers in the following steps, you must clear the antenna check box on the configurator.

- a. Disable antenna transmission and reposition the bottom coil tuning jumpers one more step up.
- b. Enable antenna transmission again and observe the meters. If the current increases again, move another step up in the table.
- c. Continue until the current displayed on the meter decreases. Then move one step down and reconfigure the bottom coil tuning jumpers to obtain the highest coil current.
- d. When the antenna is properly tuned, return the **Misc. TX Settings** to their previous values:
 - Ant A|B|C|D Polarity: **Normal**
 - TX Frequency: **Hopping**

Table 16. Target current, bottom coil

Ultra 1.5 meter ABS Pedestal System
33-40A

Note: The values of the currents are for a line input of 120Vac and a four meter long interconnect cable.

5. If the current decreased, subtract capacitance by completing the following steps:

Important: Before adjusting the jumpers in the following steps, you must clear the antenna check box on the configurator.

- a. Disable antenna transmission and reposition the bottom coil tuning jumpers one step down in the tuning table.
- b. Enable antenna transmission again and observe the meters. If the current increases, move another step down in the table.
- c. Continue until the current displayed on the meter decreases. Then move one step up and reconfigure the bottom coil tuning jumpers to obtain the highest coil current.

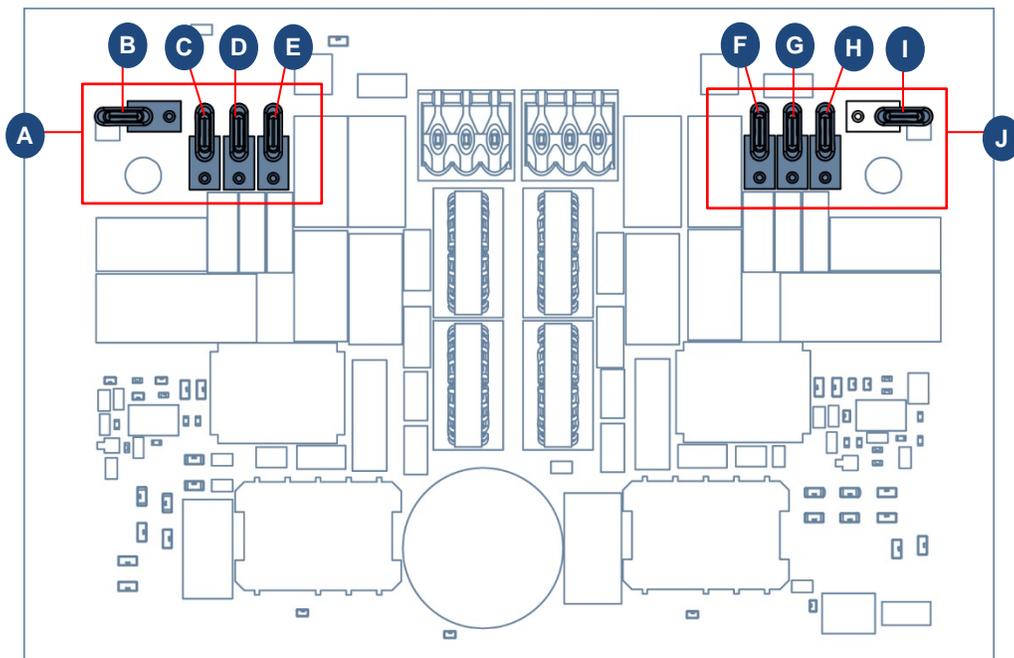
Note: You may have to retune the top coil again. If adjustment is required, disable antenna transmission and reconfigure the jumpers one column to the left or right in the table as required. Recheck the antenna current and readjust as required.

- d. When the antenna is properly tuned, return the **Misc. TX Settings** to their previous values:
 - Ant A|B|C|D Polarity: **Normal**
 - TX Frequency: **Hopping**

Table 17. Primary pedestal tuning table

Step	Coarse Adjust		Med	Fine	Notes
	JW12	JW8	JW7	JW6	Top jumpers
	JW13	JW11	JW10	JW9	Bottom jumpers
1	Off	Off	Off	Off	Minimum capacitance
2	Off	Off	Off	On	
3	Off	Off	On	Off	
4	Off	Off	On	On	
5	Off	On	Off	Off	
6	Off	On	Off	On	
7	Off	On	On	Off	
8	Off	On	On	On	Top coil default
9	On	Off	Off	Off	
10	On	Off	Off	On	
11	On	Off	On	Off	
12	On	Off	On	On	
13	On	On	Off	Off	
14	On	On	Off	On	Bottom coil default
15	On	On	On	Off	
16	On	On	On	On	Maximum capacitance

Figure 17. Location of jumpers on the primary pedestal main board



Note: Locate the jumpers at the top of the Med main controller board, on the primary pedestal.

A	Bottom coil tuning jumpers	F	JW8
B	JW13	G	JW7
C	JW11	H	JW6
D	JW10	I	JW12
E	JW9	J	Top coil tuning jumpers

Step 5: Checking EAS performance

Using a known-good tag, test the performance of the system to ensure it performs satisfactorily.

- If the performance is satisfactory, you do not have to tune the antennas.
- If the performance is not satisfactory, you must retune the antennas. See **Step 4: Tuning the Ultra 1.5 meter ABS Pedestal System**, on page 22.

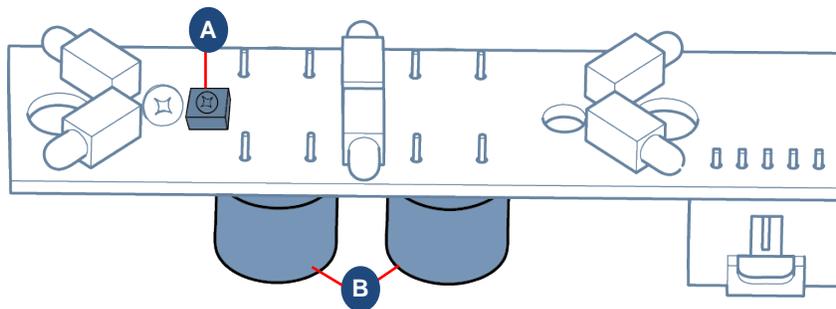
Step 6: Adjusting the audio alarm

To adjust the audio alarm from the piezo on the primary pedestal, complete the following step:

- Adjust the potentiometer using a Philips screw driver. For the location of the potentiometer see **Figure 18**.

Note: The alarm board is located under the lens cap of the primary pedestal.

Figure 18. Locating the potentiometer



A	Potentiometer	B	Piezo
---	---------------	---	-------

Step 7: Installing the pedestal covers

To install the base covers on the Ultra 1.5m ABS Pedestals, complete the following procedure.



WARNING: Risk of electric shock

Disconnect power from the pedestals before you proceed. Components on the circuit board have line voltage.

1. Disconnect power from the pedestals.
2. Locate the pedestal covers, you previously set aside.
3. Align the pedestal cover to the pedestal, and reattach the cover by snapping it into place.
4. At the top of the pedestal, insert the two captive screws, and then tighten the screws to secure the pedestal cover.
5. Supply power to the pedestals.
6. Test the system with an active EAS tag or label to verify that the pedestal is operational.

Step 8: Covering the antenna cables

If the cables were laid in a trench between the pedestals, cover them with a proper fill, such as non-metallic, non-shrink, 5000-psi mortar or concrete.

- The 4-meter transceiver cable assemblies, 0352-0792-01, use the cable part number 0652-0789-01.
- The 12-meter transceiver cable assemblies, 0352-0793-01, use the cable part number 0652-0789-02.
- The 15-meter transceiver cable assemblies 0352-0794-01, use the cable part number 0652-0789-03.

The following cable has been investigated and found suitable for direct burial in mortar and concrete. An inspector can request the listing file number for the cable.

Sensormatic part number	Listing file numbers*	Vendor
6002-0254-01 Rated CL2P	E34972	Belden

* The listing file number varies with the cable vendor and is printed on the cable.

Step 9: Applying anti-theft labels in other languages

To apply an anti-theft label in another language to the Ultra 1.5 meter ABS Pedestal System, complete the following step:

- Apply the anti-theft labels in the local language over the English labels on each side of the antenna. Order local language labels, 2412-0170-XX, from your distribution center. Do not cover the 'Anti-theft System' label.

Step 10: Cleaning the pedestal



WARNING: Risk of electric shock

Ensure that the pedestal is powered off before cleaning.



CAUTION: Avoid dripping liquids on the pedestal base.

Before cleaning the pedestal, ensure that the pedestal power is off. To power off and clean the pedestal, complete the following steps:

1. Turn off the circuit breaker that provides power to the pedestal.
2. Clean the pedestal using a soft, lint-free cloth, moistened with a non-corrosive cleaning product.
3. Turn on the circuit breaker that provides power to the pedestal.
4. Test the system with an active EAS tag or label, to verify that the pedestal is operational.

Field replaceable units

A complete parts list is available online at <https://sensormaticsecurelogin.com>. Login, and on the **Tech Support** page, select **Part Information**.

Part number	Description
0500-9887-01	Lens cover
0312-3112-05	AMS-1146 Main Board
0312-1617-01	Alarm board APS 1002
0312-7266-01	AMS-1146 Secondary Board
0404-0566-01	Covers

Boot Loader Mode

If the firmware in the main controller board is corrupt, you can override the normal boot sequence to prevent the controller board from using the firmware. Instead, the controller board will stop during the boot process and wait for new firmware to be downloaded.

Important: Only use the boot loader procedure if you can not successfully download firmware to the controller board.

To update the firmware on the main controller board, complete the following procedure:



WARNING: Risk of electric shock

High-voltage AC is present on the Cap board whenever the controller is on. Ensure the pedestal is powered off before installing the jumper on the capacitor board.

1. Turn off power to the pedestal.
2. On the main controller board, jumper pins 1 and 2 on P18. For the location of P18, see **Appendix F: Main board pinouts** on page 44.
3. Connect the service laptop to the system and launch the CE ADS4 Platform Configurator.
4. Apply power to the system. The following message displays:

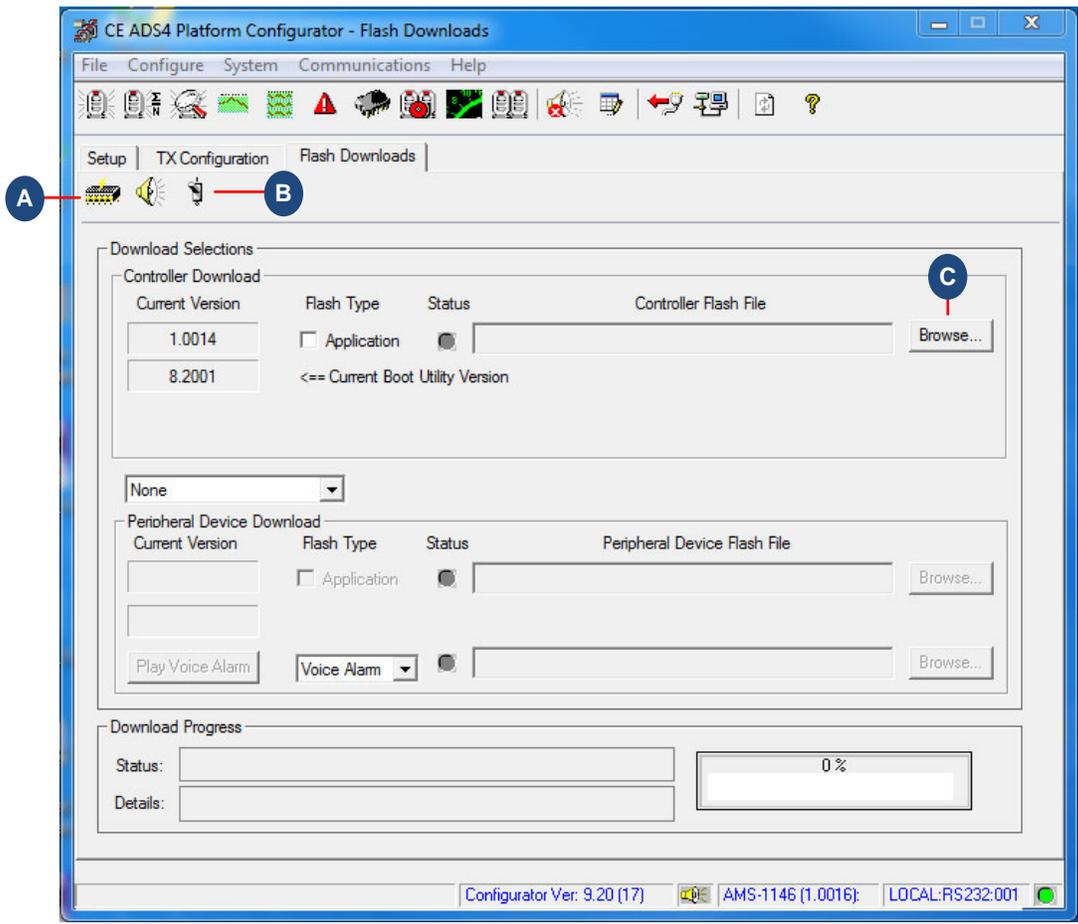
```
Boot utility is running. A Flash Download is needed. Please select a file to download.
```
5. Click **OK**.
6. On the **Setup** page, select **Flash Download**. See **Figure 19**.
7. Click **Browse...** and select the flash application firmware version 1.0014 for the controller board.



CAUTION: Do not interrupt the flash process.

8. Click the **Start Flash Download** button. For the location of the button, see **Figure 19**.
9. Once the download is complete, remove the jumper on P18, and reboot the system by clicking the **Reset Pack** button. See **Figure 19**.

Figure 19. Flash Downloads screen



A	Start Flash Download button	C	Browse button
B	Reset Pack button		

Specifications

Electrical

Power Supply (Primary pedestal)

Primary input	100-120/200-240Vac @ 50-60Hz
.....	1.4/0.8A
Primary power fuse.....	2.5A, 250V, 5x20, slo-blow, hi-breaking
Current draw (120V)	<1.2Arms
Current draw (240V)	<0.66Arms
Input power maximum (120V).....	<100W
Input power maximum (240V).....	<100W

Transmitter

Outputs	2 channel transmitter
Operating frequency	58kHz (±200Hz)
Transmit burst duration.....	1.6ms
Transmit current maximum (nominal)	40A peak
Burst Repetition Rate:	
Based on 50Hz ac.....	37.5Hz or 75Hz
Based on 60Hz ac.....	45Hz or 90Hz
Transmit coil resistance	0.11 ohms (±2%)

Receiver

Inputs.....	8 ports
Center frequency	58kHz
Receive coil resistance	0.11 ohms (±2%)

Alarm

Alarm Relay Output	DPDT contacts
Contact switching current	1.0A max.
Contact switching voltage	28V max.
Lamp/Audio duration.....	1–30 sec.
.....	(1 sec. increments)
Audio Level.....	80dB(A)

Environmental

Operating temperature.....	0°C to 50°C (32°F to 122°F)
Relative humidity	0 to 90% non-condensing
Enclosure rating.....	IPX0
Evaluated for altitudes less than 3200m (10500ft)	

Mechanical

Ultra 1.5 meter ABS Pedestal System

Height	134.5 cm (52.9 in)
Width	35 cm (13.8 in)
Depth (at base w/o cover).....	11.9 cm (4.7 in)
Primary pedestal weight (with cover)	10.4 kg (23 lb)
Secondary pedestal weight (with cover)	8.7 kg (19.2 lb)
Primary pedestal weight (without cover).....	7.3 kg (16.1 lb)
Secondary pedestal weight (without cover)	5.7 kg (12.5 lb)

Declarations

Regulatory Information

Regulatory Model: LFAMS1801

MODEL: AMS-1146

FCC ID: BVCAMSUSUPB

IC ID: 3506A-AMSUSUPB

This device complies with part 15 of the FCC Rules and Industry Canada's RSS-310. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

EMC:.....	47 CFR, Part 15
.....	EN 300 330
.....	EN 301 489-1
.....	EN 301 489-3
.....	EN 61000-3-2
.....	EN 61000-3-3
.....	ICES-003
.....	RSS-210
Safety	UL/EN 60950-1
.....	CSA-C22.2.60950-1



EQUIPMENT MODIFICATION CAUTION: Equipment changes or modifications not expressly approved by Sensormatic Electronics, LLC, the party responsible for FCC compliance, could void the user's authority to operate the equipment and could create a hazardous condition.

See **About the Ultra 1.5 meter ABS Pedestal System** on page 3.

Other declarations

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Appendix A: Dimensions

Figure 20. Ultra 1.5m Pedestal System dimensions

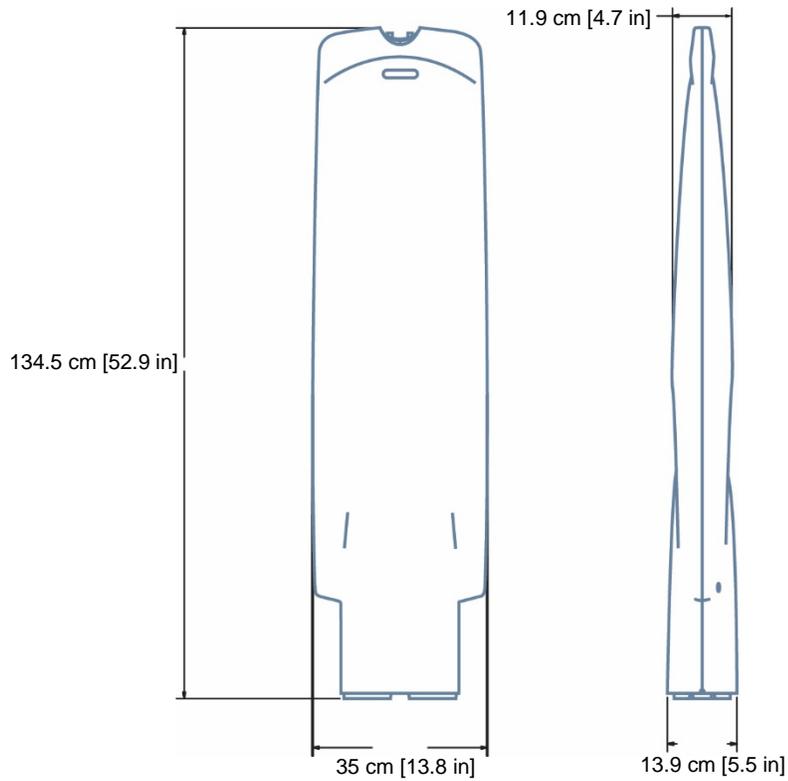
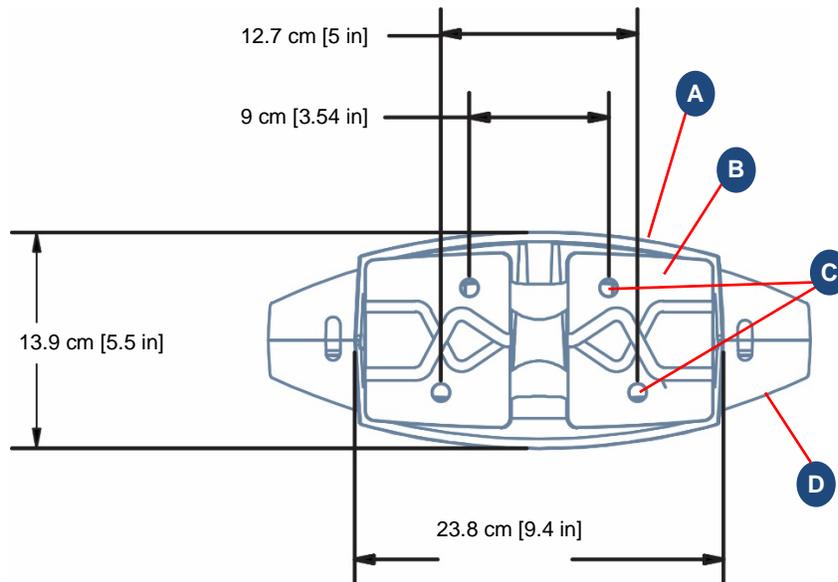


Figure 21. Pedestal footprint, top view



A	Front cover	C	Mounting bolt center
B	Base	D	Rear cover

Appendix B: Connecting an Auxiliary Receiver

The following section describes how to connect auxiliary receivers to the Ultra 1.5 meter ABS Pedestal System.

Auxiliary receivers are receive-only antennas that extend the detection range of a primary antenna. You connect the auxiliary receivers at ports P6 and P7 on the main controller board of the primary pedestal.

Note: To enable an auxiliary receiver, select a configuration that uses auxiliary receiver inputs.

To connect an auxiliary receiver to the Ultra 1.5 meter ABS Pedestal System, complete the following procedure:



WARNING: Risk of electric shock

High-voltage AC is present on the cap board whenever the pedestal power is on. Ensure that the system is not powered before you connect the auxiliary receivers.



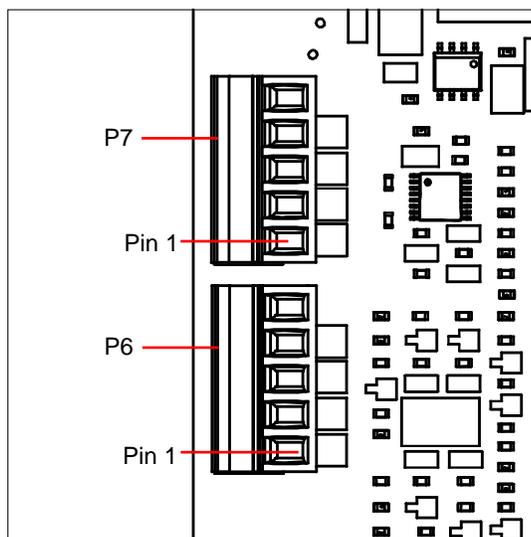
CAUTION: Auxiliary Receiver antennas are receive-only. A transmitter current will damage them. Do not connect the auxiliary receivers to the secondary connector at P4.

1. Disconnect power from the system.
2. Connect the cable from the auxiliary receiver to the connector, P6 or P7, on the main controller board of the primary pedestal, as shown in **Table 18**. See **Figure 22** and **Appendix F: Main board pinouts** on page 44.

Table 18. Connecting auxiliary receivers

Pin	Rangers	Satellite	Amorphous
1	Black	Black	Black
2	Red	Red	Red
3	Green	Black	Green
4	White	Red	White
5	Shield	Shield	Shield

Figure 22. P6 and P7 on the main controller board



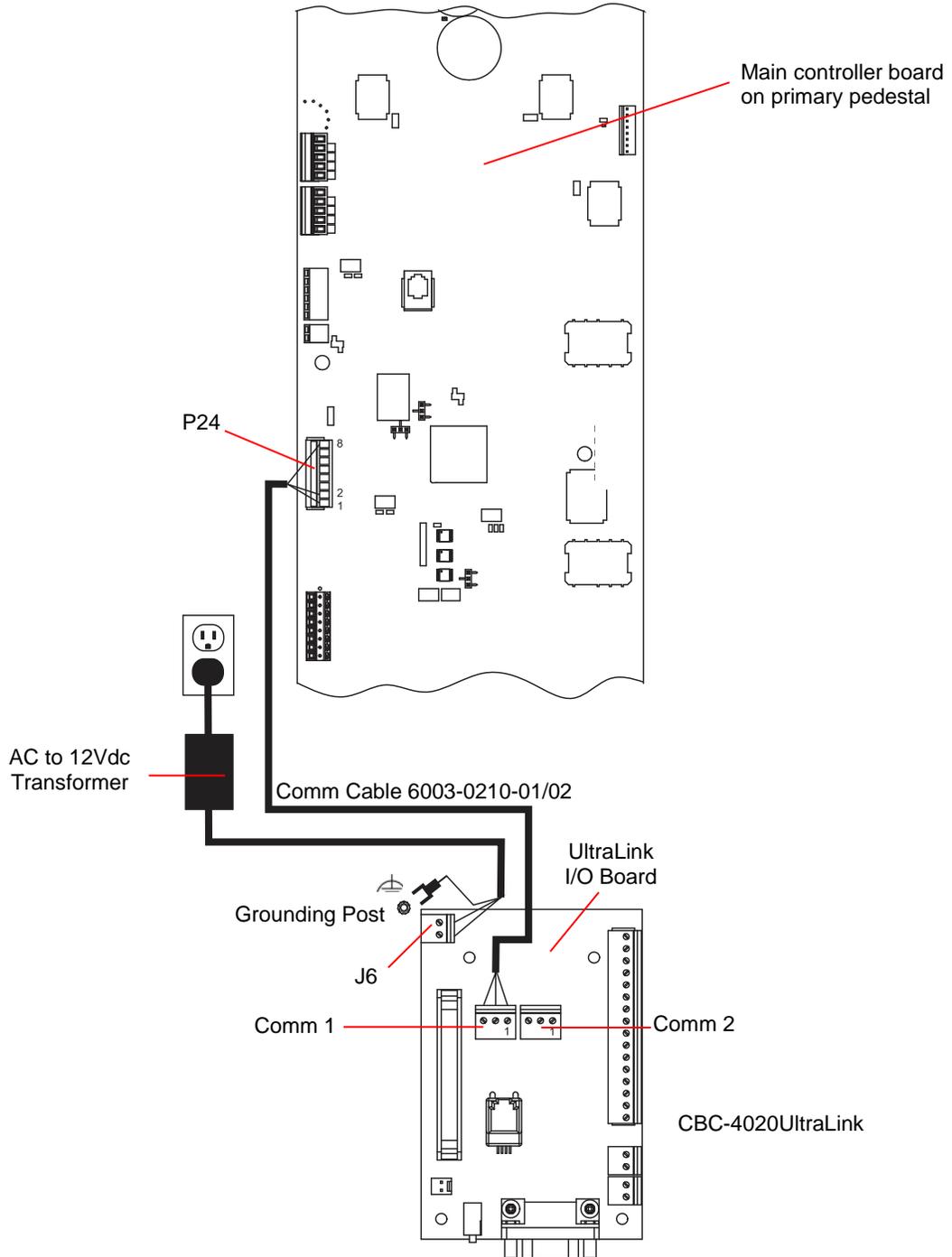
3. Supply power to the system.
4. Test the system with an active EAS tag or label to verify that the pedestal is operational.

Appendix C: Connecting an UltraLink

The following section describes how to connect an UltraLink to the Ultra 1.5 meter ABS Pedestal System.

You can connect an RS-485 network device such as an UltraLink to the Ultra 1.5 meter ABS Pedestal System at P24 on the main controller board, using pins 1, 2, and 8.

Figure 23. Connecting the system to an UltraLink



To connect an UltraLink to the Ultra 1.5 meter ABS Pedestal System, complete the following procedure:



WARNING: Risk of electric shock

High-voltage AC is present on the cap board whenever the pedestal power is on. Ensure that the pedestal system and the UltraLink are not powered before you connect the UltraLink to the system.

1. Disconnect power from the UltraLink and the Ultra 1.5 meter ABS Pedestal System.
2. Attach the 8-position RS-485 network connector to the comm cable, as shown in **Table 19**. Plug the cable into the connector, P24, on the main controller board on the primary pedestal. See **Figure 23**, on page 36.

Table 19. Connecting the Comms cable

Pin	Color	Signal
1	Red	RS485 Hi
2	Black	RS485 Lo
8	Shield	Shield

3. Attach the comm cable to the Comm 1 connector on the UltraLink I/O board. The connections on the I/O board are determined by the revision level of the UltraLink you are installing.
 - For UltraLink versions -01 or -02, attach the comm cable to the Comm 1 connector as shown in **Table 20**. For the location of the Comm 1 connector, see **Figure 23**, on page 36.

Table 20. UltraLink version -01 or -02 connections

Pin	Color	Signal
1	Red	RS485 Hi
2	Black	RS485 Lo
3	Shield	Shield

- For UltraLink versions -03, -05, or -06, attach the comm cable to the Comm 1 connector, as shown in **Table 21**. For the location of the Comm 1 connector, see **Figure 23**, on page 36.

Table 21. UltraLink version -03, -05, or -06 connections

Pin	Color	Signal
1	Black	RS485 Hi
2	Red	RS485 Lo
3	Shield	Shield

Note: For more information on how to connect the cable, see the *CBC-4020 UltraLink Indoor Installation and Service Guide, 8200-0172-01*, or other appropriate device manual.

4. Supply power to the pedestals and the UltraLink.
5. Test the system with an active EAS tag or label to verify that the pedestal is operational.

Configuring an UltraLink

The following section describes how to configure an Ultra 1.5 meter ABS Pedestal System.

Important: For correct operation, you require UltraLink Configurator Software, version 9.2.2.0 when you are installing the Ultra 1.5 meter ABS Pedestal System to an UltraLink.

To configure an UltraLink to the Ultra 1.5 meter ABS Pedestal System, complete the following procedure:

1. Launch the UltraLink configurator and from the **EAS SYSTEMS** window, set the **System Type** parameter to **Digital RS-485**.

Note: If you are connecting two Ultra 1.5m ABS Pedestals Systems, you also set EAS System 2 to **Digital RS-485**. By default, one is address 1 and the other is address 2. Both systems connect in parallel to the Comm1 port on the UltraLink.

2. Upload the `.ini` configuration file to the UltraLink configurator.

Note: You must upload the configuration file to the UltraLink for changes to take effect.

3. Configure the S1 switches on the UltraLink Single Board Computer (SBC) to select RS-485. The correct switch settings are printed on the Comm Mode label that is attached to the inside of the UltraLink back cover.

4. Connect your service laptop to the system and launch the CE ADS4 Platform Configurator.

5. From the **Configure** menu, select **Change Network Address**.

6. On the **Enter Device's Network Address** window, in the **Pack Address** field, enter the number 1.

Note: The primary pedestal uses address 1.

7. Click **OK**.

Note: You require the pack address for communication between the Ultra 1.5 meter ABS Pedestal System and the UltraLink.

Appendix D: Connecting a Local Device Manager

The following section describes how to connect a Local Device Manager (LDM) to the Ultra 1.5 meter ABS Pedestal System.

WARNING: Risk of electric shock



High-voltage AC is present on the cap board whenever the pedestal power is on. Ensure that the pedestal system and the Local Device Manager are not powered before you connect the Local Device Manager to the system.

To connect the Ultra 1.5 meter ABS Pedestal System to a LDM, complete the following procedure:

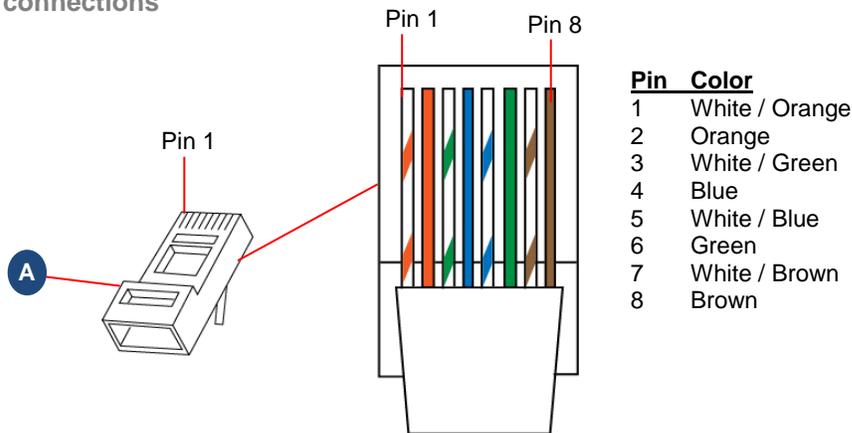
1. Disconnect power from the Local Device Manager and the Ultra 1.5 meter ABS Pedestal System.
2. Attach the 8-position RS-485 Network connector to the Cat5 cable, as shown in **Table 22**. Plug the cable into the connector, P24, on the main controller board of the primary pedestal. For the location of P24 on the main controller board, see **Appendix F: Main board pinouts** on page 44.

Table 22. Cat5 cable connections

Pin	Wire Color	Signal
1	White/ Orange	RS-485 Hi
2	Orange	RS-485 Lo
3	White / Green	Not used
4	Blue	Not used
5	White / Blue	Not used
6	Green	Not used
7	White / Brown	Not Used
8	Brown	Ground

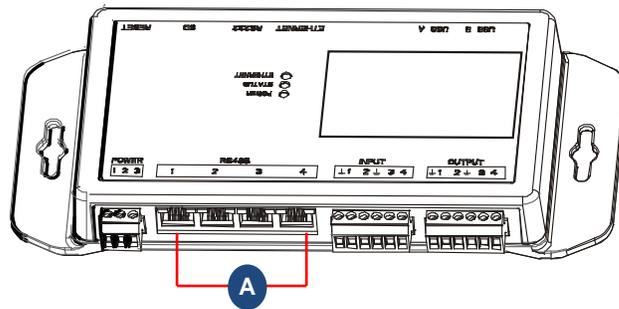
3. Attach the RJ-45 plug to the Cat5 cable, as shown in **Figure 24**. Plug the cable into port 1-4 on the LDM. See **Figure 25** on page 40.

Figure 24. Cat5 cable connections



A RJ-45 plug **Note:** Clip is pointing away from you

Figure 25. LDM II Ports 1-4



A	Ports 1-4
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4. Supply power to the pedestals and the UltraLink.
5. Test the system with an active EAS tag or label to verify that the pedestal is operational.

Configuring a Local Device Manager

The following section describes how to configure a Local Device Manager to the Ultra 1.5 meter ABS Pedestal System.

Note: For correct operation, you require LDM Configurator Software, version 9.2.2.0 when you are installing the Ultra 1.5 meter ABS Pedestal System to a Local Device Manager.

To configure a LDM to the Ultra 1.5 meter ABS Pedestal System, complete the following procedure:

1. Connect your laptop to the RS-232 service port, J2, on the primary controller board. For the location of J2, see **Appendix F: Main board pinouts** on page 44.
2. Launch the CE ADS4 Platform Configurator.
3. From the **Configuration** menu, select **Change Network Address**.
4. On the **Enter Device's Network Address** window, in the **Pack Address** field, set the device address in the range of 1 to 253.
5. Click **OK**.

Note: You must enter a unique address from other addresses on the network.

For more information on connecting the Ultra 1.5 meter ABS Pedestal System to a Local Device Manager, see the *CBC-4055 Local Device Manager II Installation Guide, 8200-0858-01*.

Appendix E: Connecting a Digital Remote Alarm

The following section describes how to connect a digital remote alarm to the Ultra 1.5 meter ABS Pedestal System.

The Ultra 1.5 meter ABS Pedestal System supports the use of the AMC-1060 Digital Remote Alarm (DRA). You can connect the DRA to the main controller board in two ways. You can connect to the RS-485 Peripheral Network connector at TB2, or the relay port at J1.

Connecting the digital remote alarm to relay port J1

The following section describes how to connect the DRA to the relay port J1 on the main controller board of the Ultra 1.5 meter ABS Pedestal System.

If you connect a DRA to the relay port, the Remote Alarm will alarm only on tag detection and will not support additional features such as tags-too-close, jammer detection, and people-count display.

To connect the Digital Remote Alarm to the relay port J1 on the AMS-1146 Pedestal, complete the following procedure:



WARNING: Risk of electric shock

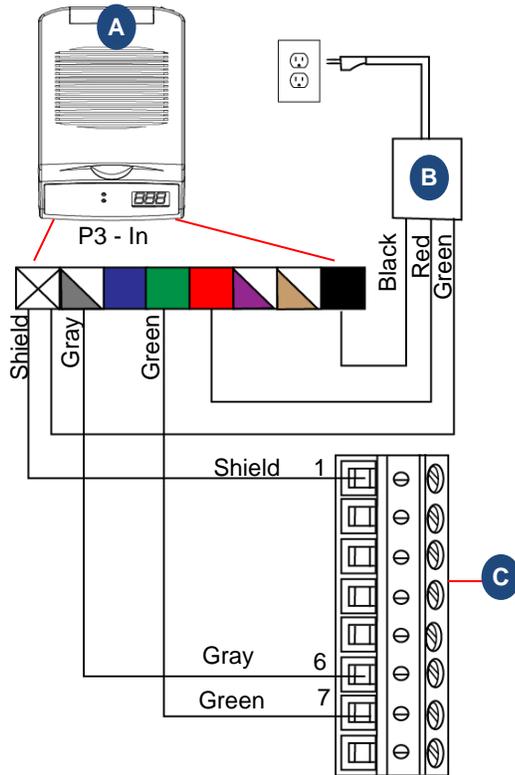
High-voltage AC is present on the cap board whenever the pedestal power is on. Ensure that the pedestal system and the digital remote alarm are not powered before you connect the digital remote alarm to the system.

1. Disconnect power from the digital remote alarm and the Ultra 1.5 meter ABS Pedestal System.
2. Ensure that jumper P3 in the DRA is in the 'IN' position.
3. Connect the alarm cable to the DRA and the pedestal.

Note: If you are connecting the DRA to a single pedestal system, connect the alarm cable to the DRA and the main controller board of the primary pedestal, as shown in **Figure 26** on page 42. For the location of J1 on the main controller board, see **Appendix F: Main board pinouts** on page 44.

4. Supply power to the pedestals and the digital remote alarm.
5. Test the system with an active EAS tag or label to verify that the pedestal is operational.

Figure 26. Wiring the DRA to the relay port



A	Digital Remote Alarm	C	Relay port, J1, on main controller board
B	AC Adapter Note: You must use the ZP1060-T AC Adapter. Do not use the Universal Transformer		

Connecting the DRA to the Peripheral Network RS-485 Port (TB2)

The following section describes how to connect the DRA to the Peripheral Network RS-485 Port, TB2, on the main controller board of the Ultra 1.5 meter ABS Pedestal System.

If you connect a remote alarm to TB2, the DRA supports all types of alarms, for example, tags-too-close, jammer detection, and people-counting.

To connect the Digital Remote Alarm to the Peripheral Network RS-485 Port, TB2, on the Ultra 1.5 meter Pedestal, complete the following procedure:

WARNING: Risk of electric shock



High-voltage AC is present on the cap board whenever the pedestal power is on. Ensure that the pedestal system and the digital remote alarm are not powered before you connect the digital remote alarm to the system.

1. Disconnect power from the digital remote alarm and the Ultra 1.5 meter ABS Pedestal System.
2. Ensure that the jumper P3 in the DRA is in the 'OUT' position, and the rotary switch is set to address 0.
3. Locate the connector, 0304-2930-01, in the DRA installation kit and attach the connector to the DRA, as shown in **Figure 27** on page 43.

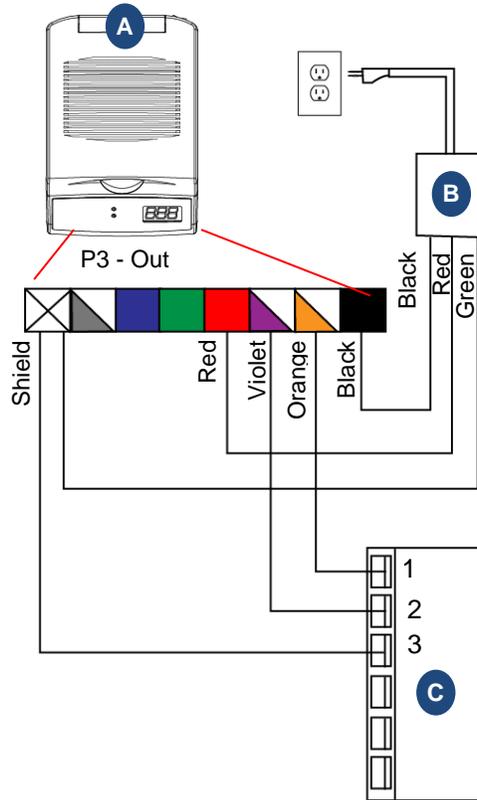
4. At the main controller board of the primary pedestal, connect the cable to the Peripheral Network terminal block, TB2. For the location of the Peripheral Network terminal block, see **Appendix F: Main board pinouts** on page 44.

Note: You can also connect the DRA at pins 4, 5 and 6 on the TB2 terminal block.

5. Supply power to the pedestals and the digital remote alarm.

6. Test the system with an active EAS tag or label to verify that the pedestal is operational.

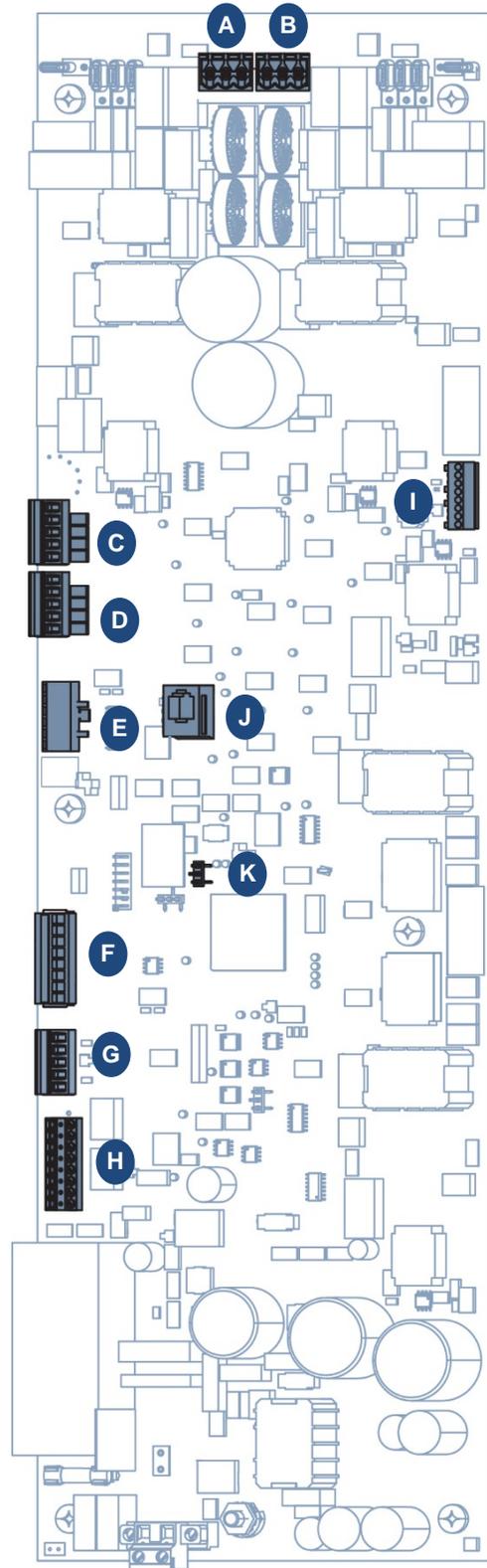
Figure 27. Wiring the DRA to the RS-485 port



A	Digital Remote Alarm	C	Peripheral Port, TB2, on the main controller board
B	AC Adapter Note: You must use the ZP1060-T AC Adapter. Do not use the Universal Transformer		

Appendix F: Main board pinouts

A	Top coil	P3	Pins	Signal
			1	Top coil return
			2	Shield
			3	Top coil
B	Bottom coil	P1	Pins	Signal
			1	Top coil return
			2	Shield
			3	Top coil
C	Aux Rec 2	P7	Pins	Signal
			5	Ground
			4	Antenna D2 return
			3	Antenna D2
			2	Antenna D1 return
			1	Antenna D1
D	Aux Rec 1	P6	Pins	Signal
			5	Ground
			4	Antenna C2 return
			3	Antenna C2
			2	Antenna C1 return
			1	Antenna C1
E	Peripheral Network	TB2	Pins	Signal
			1	RS-485 low*
			2	RS-485 high*
			3	Ground
			4	RS-485 low*
			5	RS-485 high*
			6	Ground
F	RS-485 Network*	P24	Pins	Signal
			8	Ground
			7	Ground
			6	Sync low (B)
			5	Not used
			4	Not used
			3	Sync high (A)
			2	RS-485 Low*
			1	RS-485 high*
G	Wired sync	P8	Pins	Signal
			5	Ground
			4	Wired sync arm low
			3	Wired sync arm high
			2	RS-485 low*
			1	RS-485 high*
H	Relay	J1	Pins	Signal
			1	Ground
			2	Not used
			3	NO 2
			4	ARM 2 (COM 2)
			5	NC 2
			6	NO 1
			7	ARM 1 (COM 1)
			8	NC 1
I	Alarm board	P5	Pins	Signal
			1	Power LED-
			2	Alarm CLK-
			3	Audio
			4	+12V
			5	+5V
			6	Ground
			7	Tx Inhibit
			8	Ground
J	Service	J2	Pins	Signal
			1	RS-232 RX
			2	RS-232 TX
			3	Ground
			4	Not used
K	Flash Override**	P18	Pins	
			1	
			2	



* Connect RS-485 options by connecting the RS 485 LO wire to the RS 485 LO pin and the RS 485 HI wire to the RS 485 HI pin.

**To override the normal boot process, short pins 1 and 2 of connector P18.