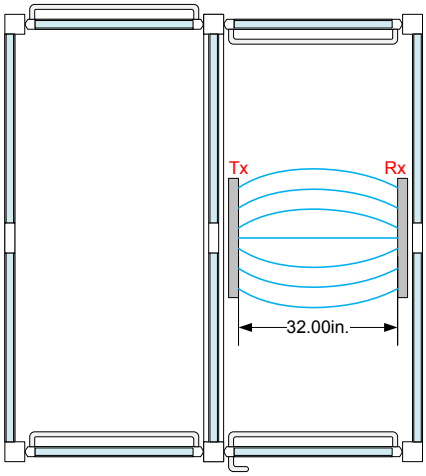
Metal Detector Set-Up Guide
Ceia 02PN8 Series

Metal Detector Placement

Generally, placement of the transmitter and receiver coils is not critical to the installation of an Isotec system. This is due to the isolation of the structure against Eddie currents created by surrounding metal. In some applications problems with the installation can be minimized by the proper placement of the transmitter and receiver coils. It is recommended that the receiver coil (RX) be place as far away as possible from the active devices in the structure to minimize this effect as depicted below.



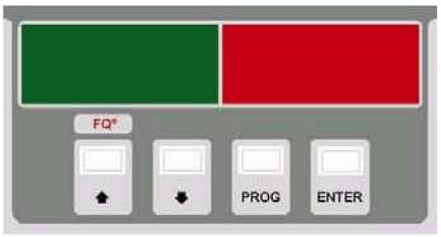
Initial Setup

Isotec has run a number of tests to determine the correct settings necessary to detect a weapon passing through its Weapons Control Systems. Compliance with these settings will assure a reliable operation with little false alarms.

The system provides for an integrated metal detection system that prevents exit from the portal upon detection of objects configured above the set limits. These limits of detection are set such that it can detect the following weapons at typical heights of head, waist, and ankle. The three-gun test used by the Federal Government provides the basis for all standards used by Isotec. The three guns used in our tests are as follows:

- ❒ Steel and aluminum alloy 0.25-caliber automatic pistol, manufactured in Italy by Armi Tanfoglio Giuseppe, sold in the United States by Excam as Model GT27B and by F.I.E. as the Titan (weight: about 343 grams),
- ❒ Aluminum, Model 7, 0.380-caliber derringer, manufactured by American Derringer Corporation (weight: about 200 grams),
- ❒ Stainless steel 0.22-caliber long rifle mini-revolver; manufactured by North American Arms (weight: about 129 grams).

Every system has a control panel located above the metal detector for monitoring alarms and programmable configurations as defined below.



Ceia Control Panel

Local Programming:

To make any configuration changes under the "User" level press the **"PROG"** Key then the **"ENTER"** key.

Enter User Level **PROG** then **ENTER**

To make any configuration changes under the "Super-user" level press **"PROG"** Key then use the ⬆ (increase) and ⬇ (decrease) keys to enter the password by selecting the cyclical sequence: of numbers and letters of 0-9 and A-Z. Once a character is found use the **"ENTER"** key to move to next character. * Once passwords characters are entered press the **"ENTER"** key one more time to enter programming.

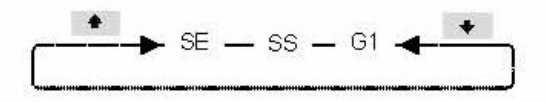
During programming the metal detector is deactivated.

To Exit the programming mode use the **"PROG"** key and all changes will be programmed into the metal detector.**

*To obtain the "Super-User" Password please contact Isotec Security.
**The Metal Detector may restart.

Selecting Command:

To select a command use the ↑ (increase) and ↓ (decrease) keys are used to choose the function and select the data to enter; confirmation is via the **"ENTER"** key. The commands are in a cyclical sequence:



This can occur in two direction by pressing the ↑ and ↓ keys.

Transmission Channel: (CH)

The Transmission channel is used to set the frequency of the metal detector this comes from the factory set to 50. This should not be need to change unless two metal detectors are in relation to each other then both metal detectors need to be on two different channels.

Factory Value: 50
Isotec Recommended Value: anything from 50-99
Possible Values: 0 – 99
0 – 49 is for 50Hz Power Supply
50 – 99 is for 60Hz Power Supply

Gate direction: (GD)

The gate direction selects the direction of transit through the antennae relative to the position of the archway.

Factory Value: 1
Possible Values: 1, 2

GD=1: If you look at the gate from the point of entry the transmitter (Tx) antenna should be on the right.

GD=2: If you look at the gate from the point of entry the transmitter (Tx) antenna should be on the left.

(Only 02PN8 HI-PE & Bi Directional models)

Alarm Duration: (AD)

The Alarm duration is how long it takes the metal detector to reset after an alarm.

Factory Value: 1C
Isotec Recommended Value: 1P
Possible Values: 0P – 5P; 0C – 5C

P = Proportional Alarm indication

In this case the display will always provide an indication proportional to the metal mass in transit, using the red sector on the right when there is an alarm.

C = Constant alarm indication

In this case, during normal operation the display will indicate the selected sensitivity; when there is an alarm, 4 asterisks light up in the red section on the right.

0P – reset time = 0.3s	0C – reset time = 0.3s
1P – reset time = 1s	1C – reset time = 1s
2P – reset time = 2s	2C – reset time = 2s
3P – reset time = 3s	3C – reset time = 3s
4P – reset time = 4s	4C – reset time = 4s
5P – reset time = 5s	5C – reset time = 5s

Alarm Volume: (AV)

User can change the level of volume during a alarm.

Factory Value: 3
Possible Values: 0 – 9

During local programming, the device provides an audible signal using the selected tone.

Alarm Tone: (AT)

User can change the tone of the alarm.

Factory Value: 2
Possible Values: 0 – 9

5 different continuous tones ranging from **0** (deep sound) to **4** (high sound)
5 different pulsed tones ranging from **5** (deep sounds) to **9** (high sound)

During local programming, the device provides an audible signal using the selected tone.

International Security Standard: (IS)

The international Security Standard is a security level specified by international regulations. This command allows the adjustment of the detector to the specification of selected standard without having to carry out the test procedure physically.

Factory Value: 1
Isotec Recommended Value:

Isotec recommended that the IS command be set to customers preference for what they would like to detect and adjusted the sensitivity*** of the metal detector to allow some devices. ie cell phones, and purses

***To adjust see the Sensitivity command (SE)**

Possible Values: 1 – 10 **(See Table 1)**

NOTE: if the 02PN8 Bidirectional model is being used, this command selects the International Security Standard to be applied for transits in the normal (inbound) direction.

Table 1: IS Command

PROGRAM: IS	DISPLAY MESSAGE*	SECURITY LEVEL/APPLICATION	SAMPLES
1	NILECJ1	Standard: NILECJ-STD-0610.00 Security Level 1	AM9
2	NILECJ2	Standard: NILECJ-STD-0610.00 Security Level 2	AM7, AN7
3	NILECJ3	Standard: NILECJ-STD-0610.00 Security Level 3	AM5; AN5
4	NILECJ4	Standard: NILECJ-STD-0610.00 Security Level 4	AM3; AN3; B6
5	NILECJ5	Standard: NILECJ-STD-0610.00 Security Level 5	AM1; AN1 B2
6	3GUN TST	Standard: 3-GUN-TEST (FAA-USA)	OTP and weapons foreseen by the standard
7	3GUN TSE	Standard: ENHANCED 3-GUN-TEST	OTP and weapons foreseen by the standard
8	SPH.44.4	-	Sphere AISI 420 ø44.25
9	SPH.41.3	-	Sphere AISI 420 ø41.275

Sensitivity: (SE)

The sensitivity **(alarm threshold)** of the metal detector can be adjusted for the requirements of the metal detector. The SE command can also modify the IS command to the customer's request. The adjustment of the SE command should be completed with a test piece **(listed in table 1)** so there is no location the gun can pass through the metal detector without being detected.

Factory Value: 32
Isotec Recommended Value:
For commercial installation using security level 1 the IS command need to be set to 1 and then adjust the SE command to 19 – 25. **This recommendation should only be completed with testing with Level 1 test piece.**
Possible Value: 0 – 99
0 = minimum sensitivity, detection of large metal masses
99 = Maximum sensitivity, detection of small metal masses

NOTE: if the 02PN8 Bidirectional model is being used, this command selects the sensitivity (alarm threshold) to be applied for transits in the normal (inbound) direction.

Super-User Commands:

These following commands should only be used within conjunction with an Isotec Security factory representative.

Lower Coefficient: (LC)

The Lower coefficient is used to adjust the sensitivity of the electromagnetic field emitted by the antenna at the lower level

Factory Value: 0
Possible Value: -20 – -1; 0; 1 – 20
-20 = decrease sensitivity at lower level
0 = No change at the lower level
+20 = Increase sensitivity at lower level

Upper Coefficient: (UC)

The Upper coefficient is used to adjust the sensitivity of the electromagnetic field emitted by the antenna at the Upper level

Factory Value: 0
Possible Value: -20 – -1; 0; 1 – 20
-20 = decrease sensitivity at upper level
0 = No change at the upper level
+20 = Increase sensitivity at upper level

Useful Width: (UW)

This command selects the effective useful width of the archway, in mm. The correct value is preset in the factory and is indicated in the Factory Acceptance Test Report which can be found at the end of the Ceia manual. This command can be change only on the Ceia 02PN8-Bidirectional model.

Factory Value: 820
Possible Values:
720mm = 28"
760mm = 30"
820mm = 32"

International Security Standard Outbound: (ISO)

The International Security Standard outbound command is for the reverse (outbound) directions is only available for the 02PN8-Bidirectional model

Factory Value: 10
Possible Values: 1 – 10 **(see IS command)**

NOTE: if the 02PN8 Bidirectional model is being used, this command selects the International Security Standard to be applied for transits in the reverse (outbound) direction.

Sensitivity Outbound: (SEO)

Sensitivity **(alarm threshold)** of Metal Detector for the reverse (outbound) direction is only available for the 02PN8-Bidirectional model

Factory Value: 15
Possible Values: 0 – 99 **(see SE command)**

NOTE: if the 02PN8 Bidirectional model is being used, this command selects the sensitivity (alarm threshold) to be applied for transits in the reverse (outbound) direction.

For more in-depth of all the commands and troubleshooting please refer to the Ceia 02PN8 HI-PE Installation and Maintenance Manual provided with your purchase of the Metal Detector.