

RANGER™

Operation instruction Manual

WALL Multi-Zone Metal Detector



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Version 1.0

Introduction

WALL is a fast, reliable, simple to use scanning system designed to detect small metals objects.

The WALL can applicable for both law enforcement and loss prevention application:

- Prison, jails and detention centers
- Customs and Border Patrol facilities
- Precious metal mines and refineries
- Jewelry and watch manufacturing industries
- Electronics manufacturing

WALL can be used in loss prevention applications. It detects items such as gold shot, Rings, watches, computer CPU's memory modules and microelectronic components.

The Wall configuration ensures accurate position of the subject. Introduction coupling is achieved between the sensor and the metal object concealed in the body. Relative to a walk through or hand held scanning device, a much higher measurement of precision is possible.

Operating Principal

When a person stands in front of the wall all body gets scanned from head to feet. The person must stand in front facing forward and then facing the back to the sensor wall. This way all the body gets scanned for all metals.

When metal is detected, visual and audible alarms are activated. An alarm activates when a person carrying a concealed object moves within range of the detection field. The illuminated alarms show the position of the metal within the height of the person. The audio alarm only sounds for about three seconds and

then is turn off. The illuminated light can be adjusted to illuminate from one the 100 seconds.

The WALL utilizes a dynamic detection technique. Capable of detecting fast moving objects and this contributes to fast screening rate. The unit is self calibrating so there is no need to re calibrate if the unit is moved.

The sensors' transmitter produces a magnetic field that generates eddy currents in metal items that are introduced into its magnetic flux. The eddy currants react with the primary magnetic field and changes in induction coupling are detected by a receiver element. Each sensor has its own independent signal processing channel.

The signal processing channels are equipped with sensitivity controls. This allows the user to adjust for the size of the weapon or object to be detected.

Installation

The shipment consist of one panel, control head and a plastic pouch containing the required hardware for the unit to be assembled plus ten foot power cable.

First, get the head box and make sure that the 25-pin cables are coming outside the back cut window.





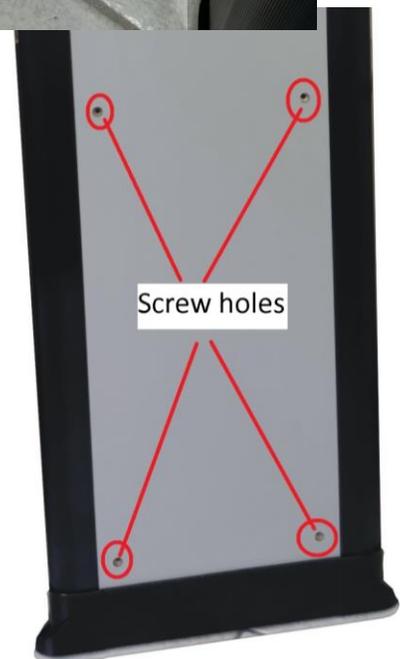
Secondly, bring the panel and the head box together where the 25-pin cables and the connectors are facing each other.



Third, connect the cables to the connection on the panel. Make sure the cables are securely connected and screw all the way in.



Bring the panel and the head box together and aligned with the holes screws.





Once all the screws are secure and fastened. Insert the black caps covering the screw holes.

Connect the AC connector to the side of the control box.



Setup Test

This unit is made operational by first connecting the power cord to the AC power unit. Next the power key is turned $\frac{1}{4}$ turn in a clockwise direction.

After power is applied the unit undergoes a brief self-diagnostic routine. The routine is completed immediately when the five LED side lights illuminate. During the self-diagnostic procedure, stay clear of the detector and keep metal away from its sensors. If during the diagnostic procedure the detector is moved or metal objects passed in close vicinity to the unit; turn the power off and on or reset the detector.

The distance from the sensor at which an object produces an alarm is dependent on the size of an object and the setting of the sensitivity control. The pre-set factory setting should be suitable for most applications. Use metal free clothing when testing the unit. Be aware that most footwear contains structural metal and metal eyelets.

Adjustment

The WALL has Alarm Display Panel with an L.C.D. alpha-numeric display and a 20 button Keypad. The L.C.D. display and keypad allow the user to adjust operating parameters and to tailor the unit's operation to meet his/her specific security requirements.

Turn the unit on by inserting the key into the Key switch and turning it clockwise. All the L.E.D. elements on the side panel light up in sequence one at a time. The L.C.D. Panel displays a SELF-TEST message while a self-diagnostic test is in progress.



Next it reads CALIBRATION. During this period the unit calibrates itself to its surrounding environment (**always keep moving metal objects and people clear of the unit when it is undergoing calibration.**)

If any disturbance to the surrounding environment occurs during SELF-TEST or CALIBRATION (e.g. a metal cart is moved by the unit, person touches the unit, person walks through it, etc.) the unit must be returned to SELF-TEST mode. To reset, press the “**Rst**” (Reset) key on the Keypad. Alternative, turn the AC power off and then back on; it then automatically self-test and recalibrates.

When the unit has completed testing and calibrating the L.C.D. continuously shows the version number. The WALL will perform all normal screening operations in this operating mode. Adjustments to the operating parameters settings cannot be made in this program mode; for example, sensitivity values cannot be accessed. Security screening should always be performed in this mode.

Operating parameters can only be accessed by an authorized person. Entry into the operating menu is gained by entering a six-digit pass-code via the keypad. If, after accessing the menu no keypad changes are made within a five minute period, access to the operating parameters is automatically terminated. The default pass-code key strokes are **1, 2, 3, 4, 5, 6** and **Ent** (Enter).

KEYPAD LAYOUT



Select (M↑) Tabs down through the menu in forward direction

Select reverse (M↓) Tabs through the menu in reverse direction

Backspace (Bks) Deletes what has been typed; allows for corrections.

Nominal (Nom) Resets the settings to the nominal operating parameters (original operating values set at the factory)

Escape (Esc) Escapes from the scrolling menu program and back to the normal operating mode

Reset (Rst)	Recalibrates the unit.
Negative (-)	adds a negative value to a number (e.g. used to lower zone sensitivity settings).
Increment and Decrement (Inc) (Dec)	used to adjust single digits settings. (Inc) For up and (Dec) for down.
Enter (Ent)	To enter a parameter value.
Numerals.	0. through 9.

Main Menu Selections

Baseline Sensitivity – Sets unit sensitivity range between 1 (minimum) and 99 (highest)

Alarm Tone – Sets the frequency of the alarm to 500,100 or 1500 hertz.

Alarm Volume – Sets the volume of the alarm in steps between 0 and 7.

Alarm Hold Time – Sets the time the side LED alarm indication is on after an alarm. This value is between approximately 1 second and 99 seconds.

Target Filter – Sets the amount of low frequency filtering needed to reduce noise in the target spectrum.

Skew Frequency – Sets the unit in different frequencies channels in order to work with multiple units. (1-8)

Zone Settings – Sets gain in each of 5 independent zones. It can go from -99 complete off up to 99 max gain.

Programing parameters

The WALL comes with base sensitivity of 35%. This setting is good to detect big objects like guns, knife and cell phones.

The maximum sensitivity recommended to detect the smallest object like paper clip, handcuff key, bullets, RAM memory, CPU's and other smallest objects is. Max Sensitivity at 90% and zone settings at 99%. This will work well on a good environment were the detector is not surrounded by metal that will affect the calibration.

MAINTENANCE AND REPAIR

There are no user adjustable controls inside the unit. If equipment fails to perform properly contact the factory technical support department at **1-800-852-8266**. Equipment repair should only be performed by a qualified trained technician.

RMA

Return Merchandise Authorization (RMA)

1. Contact Ranger Security Detectors, Inc. (please have serial number present).
2. An RMA Number is required for any repair or returns.
3. RMA Number must be identified on outside of box/package.
4. Merchandise will not be accepted without an RMA.

WARRANTY

RSD warrants the WALL metal detector against workmanship or materials, under normal use for a 2 year period from the date of purchase to the original user. Liability in all events is limited to the purchase price paid. Liability under the aforesaid to RSD El Paso factory.

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