



58KHz

WiFi Floor Guard & Door Guard

EAS Systems

(EAS5.0 ver1.6 AM board)

Installation Manual

March 2015

Manual Ver. 03261501

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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OVERVIEW

System Overview

All WIFI EAS Systems utilize a common controller, differing only in the antennas that are used. Pedestal controllers (Ad Guard, Ad Guard XL, Premier Guard and Premier Pro) are imbedded in the pedestal base. Door Guard and Floor Guard controllers are contained in a separate housing. In either case, the controller is comprised of a main circuit board for performing all the functions of transmitting, receiving and alarm notification. The power board facilitates all the antenna transmission. ***This manual applies to the WiFi Floor Guard and WiFi Door Guard.***

Door Guard and Floor Guard Antennas

These modules contain only the antennas whose operation and power are derived from the separate Control and Adaptor boxes.

WiFi Control and Adaptor Boxes

The Controller Box contains the WiFi Controller and PSU (WG SPS-24) for controlling the antenna and processing tag data. Between the Control Box and Antenna is the Adaptor Box which ensures signal stability between the WiFi Controller and the antennas. The Control Box includes WiFi capability so that the systems can be synchronized and tuned remotely over the Internet.



WiFi Floor Guard



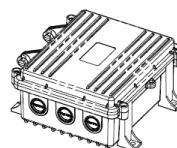
WiFi Door Guard

WiFi Controller

WG SPS-24



WiFi Control Box



WiFi Adapter Box

System Configurations

Each WiFi system is powered by its own dedicated SPS. The SPS not only provides 24vac power to the transceiver pedestal, but it includes some very important features.

- Accepts a wide range of AC input voltage
- Controls transmitter bursts for troubleshooting
- Adjusts pedestal alarm volume
- Provides alarm visual & audio indication and relay output
- Provides Jammer Detection alarm and relay output

24vac power and data/control is carried by a single TX cable from the SPS to the controller. The WiFi Control Box can only be connected to only one adaptor and from that to only one antenna.



Caution! One WiFi Control Box can only be connected with one antenna and Adapter Box.

WiFi Floor Guard & Door Guard EAS Systems

Product Codes and Descriptions

Systems

Product Code	Description	Comment
WG WFFG	Floor Guard WiFi Transceiver, 6-foot	Includes antennas, WiFi Control Box and Adaptor Box.
WG WFDG	Door Guard WiFi Transceiver, Gray	Includes antenna, WiFi Control Box and Adaptor Box.
WG WFDG-B	Door Guard WiFi Transceiver, Black	Includes antenna, WiFi Control Box and Adaptor Box.
WG WFDG-W	Door Guard WiFi Transceiver, White	Includes antenna, WiFi Control Box and Adaptor Box.
WG SPS-24	Smart Power Supply (24vac)	Ordered separately but mounted inside the Control Box

Accessories, Spares and Options

Product Code	Description	Comment
WG WFCB	WiFi Control Box (with WG SPS-24)	Included with WG WFFG and WG WFDG
(N/A)	Adaptor Box	Included with WG WFFG and WG WFDG

WiFi Floor Guard & Door Guard EAS Systems

Specifications

Smart Power Supply (WG SPS-24) Electrical

Primary Input (Stepdown Transformer)	100vac \pm 10 % 110vac \pm 10 % 120vac \pm 10 % 220vac \pm 10 % 240vac \pm 10 %
Secondary Output	26Vac \pm 5 %
Rated Output Current	1.8A
Maximum Secondary Output Current	1.9 A
Built-in Fuse (self-resettable)	500mA

Smart Power Supply (WG SPS-24) Mechanical

Height	80mm (3.15")
Width	110mm (4.33")
Thickness	140mm (5.5")
Weight	3 Kg (6.6 lbs)

Environmental (Antenna, Control Box, Adaptor Box and Power Supply)

Operating Temperature	45 °C (113°F)
Relative Humidity	0 to 85% non-condensing

Mechanical (Antenna, Control Box and Adaptor Box)

Floor Guard Antenna	59.25"L x 15.75"W (150.5cm x 40cm) Thickness 1.13" (2.9cm) Weight 33 lb. (15kg)
Door Guard Antenna	59"H x 9.5"W x 1.75"D (150 x 24 x 4.4cm) Weight TBD
Control Box	Dimensions TBD Weight TBD
Adaptor Box	7.75" x 7.5" x 3.5" (197 x 190 x 90cm) Weight TBD

CONTROLLER CIRCUIT BOARD

WiFi Main Board Connectors

WiFi Module



TX
Connector



RX
Connector

Alarm Connector



PRE-INSTALLATION INFORMATION

Quick Start for System Connections

A Floor Guard system consists of a smart power supply (WG SPS-24), WiFi Control Unit, Floor Antenna and Adapter box. A Door Guard system consists of a smart power supply (WG SPS-24), WiFi Control Unit, Door Guard and Adaptor Box. Connection between the various modules is identical.

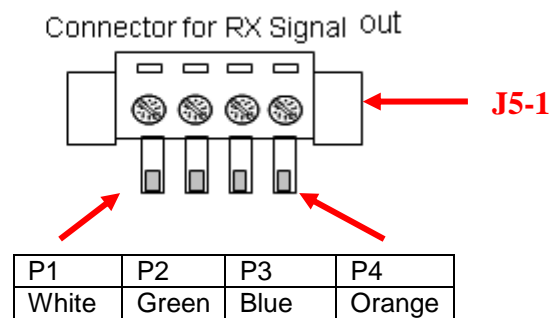
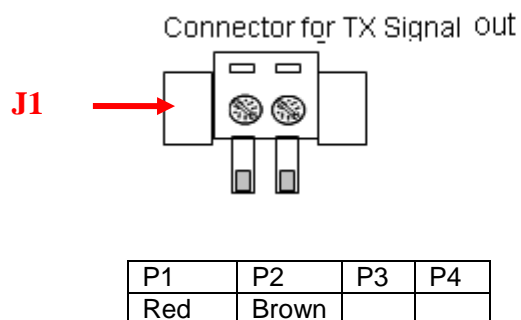
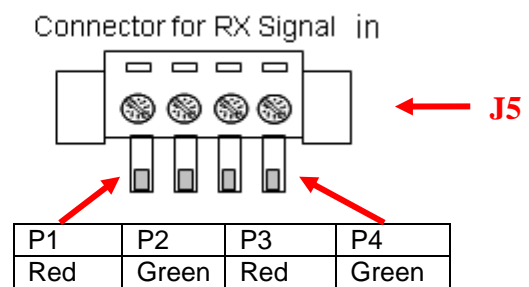
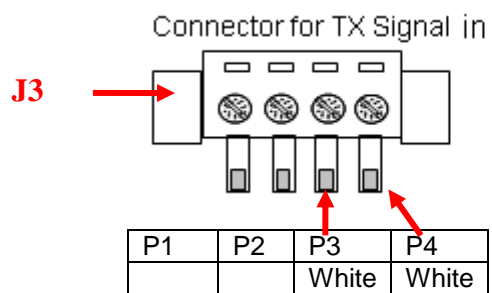
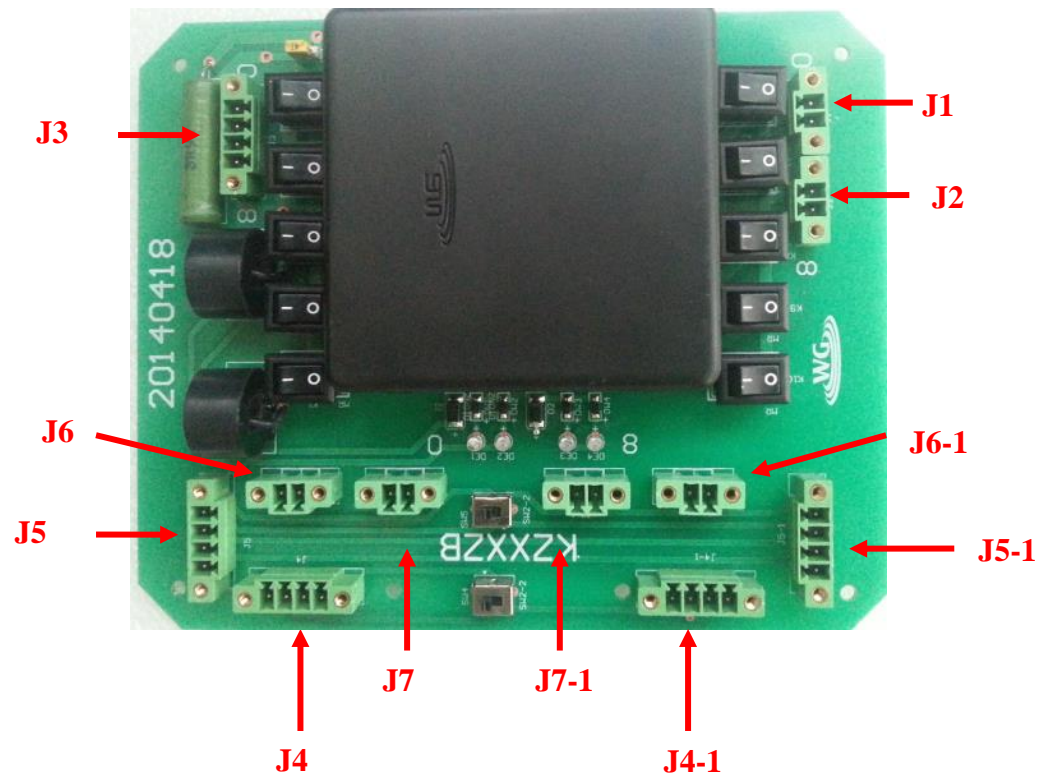
The smart power supply has a 6-pin output connector for the 24vac output to power the WiFi Controller and also communicate with the control unit for tuning control and remote alarm display features.

The WiFi Control Box is powered and controlled by the WG SPS-24 power supply unit. Also the control unit has two 4-conductor connectors for cables that will connect to the WIFI Control Unit AM board. One of the connectors is 4-pin connector for TX transmitting signals from the Control Unit to drive a loop antenna coil. The other connector is a 4-pins connector for RX signals from the Control Unit to receive signals from Floor Guard RX antennas.

Note: Both the TX and RX cables are color coded and it is critical not to transpose the order.

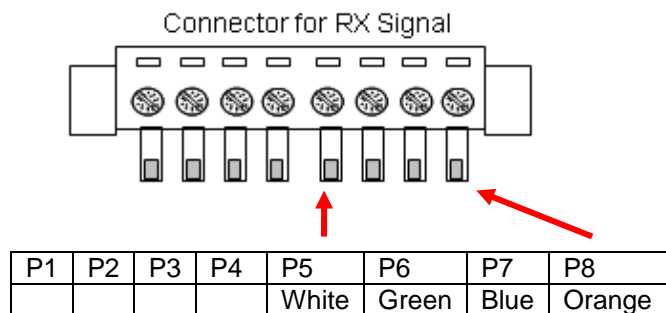
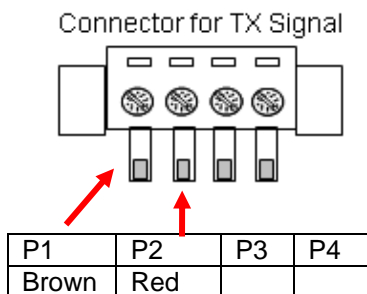
WiFi Floor Guard & Door Guard EAS Systems

WiFi Control Unit and Adapter box and antenna Connection

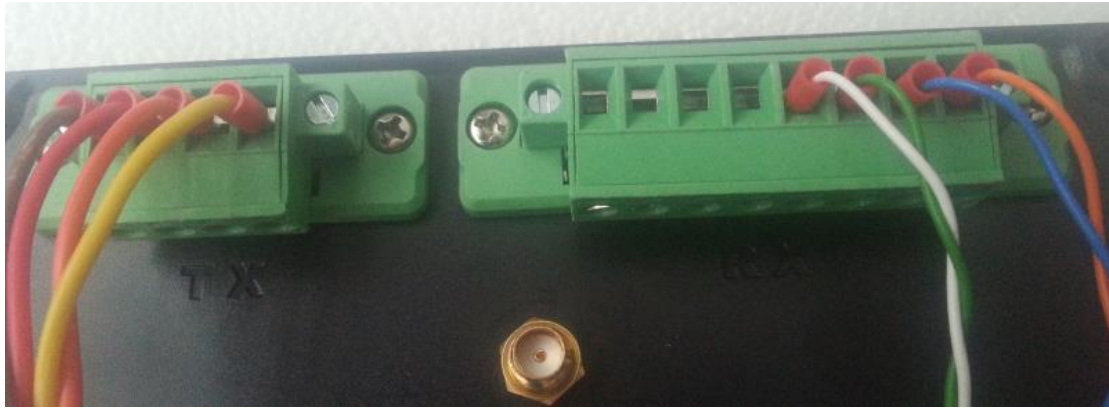




- J3 port of Adapter Box connects to the Transmit antenna (2 white wires).
- J1 port of the Adaptor Box connects to the figure “O” antenna.
- J2 port of the Adaptor Box connects to the figure “8” antenna. At this time there is no connection required for figure “8”; only figure “O”.
- J5 port of the Adaptor Box connects the RX antenna to Adapter PCB (2pcs 2-core wires).
- J5-1 port of the Adaptor Box is the output port for RX antenna.
- SW5 is antenna phasing adjustment switch. Use this switch to adjust if the site is too noisy.



WiFi Floor Guard & Door Guard EAS Systems

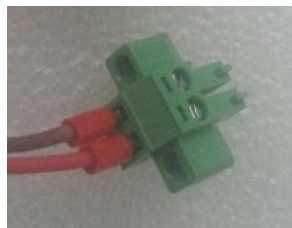


TX ampere debug

TX "8" debug jumper



TX "O" debug jumper



Connect transmit detector to J1, turn on the power supply of CB and transmit detector, adjust TX "O" debug jumper, from the bottom the up. System will be under optimum working status when the transmit detector shows a value from 17 to 22.

WiFi Floor Guard & Door Guard EAS Systems

Antenna Installation Instructions:

The antenna is designed to be buried in the flooring, in a rectangular of sufficient size to conveniently fit the antenna size. Coverage may be standard flooring (concrete or wood material).

There is a cable extending out of the antenna case. Ensure the connector end is extended far enough for service access. Distance from the Antenna Box to the antenna should be no more than 25 feet. Distance between the Antenna Box and Controller should be no longer than the included interconnect cable.



WiFi Floor Guard & Door Guard EAS Systems

SMART POWER SUPPLY (WG SPS-24)

Controls and Connections

SPS Front View



Fuse Replacement:
Internal AC fuse rating
(T3.15AL, 250V)



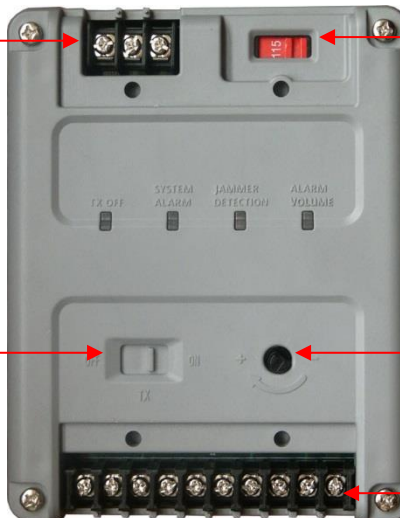
SPS Power
On/Off Switch



**Caution! Remove power
before service.**

SPS Top View

Main AC Power In



Input Voltage
Select Switch A

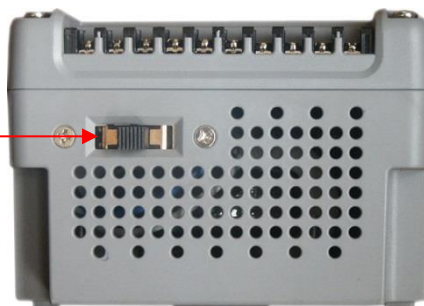
TX Antenna
On/Off Switch

Pedestal Alarm
Volume Adjust

24vac
Power & Data
Output

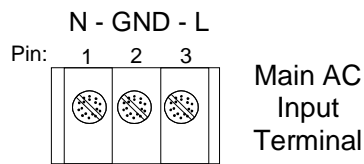
SPS Rear View

Input Voltage
Select Switch B



WiFi Floor Guard & Door Guard EAS Systems

Terminals Description



SPS Main AC Input Terminal Layout

Main AC Cable (3 wires)		
Pin	Function	Color
1	Neutral	Blue
2	Ground	Green w/Yellow Stripe
3	Live	Red(Brown)



LED Status

LED	On	Off
TX Off	TX is Off	TX is On
System Alarm	Alarm Enabled	Alarm Disabled
Jammer Detection	Detection Enabled	Detection Disabled
Alarm Volume	Dim Means Weaker	Bright Means Louder

SPS Output Terminal Layout (10 pins)

SPS to Pedestal Cable (6 wires)							Alarm Relay		Jammer Relay	
Pin #	1	2	3	4	5	6	7	8	9	10
Function	GND	24VAC	TX OFF	Alarm	Anti-Jammer	Alarm Volume				
Electrical	Common GND	26 VAC	>4.0vdc	<2.5vdc	<2.5vdc	5-15vdc	1A Contact		1A Contact	
I/O	Output	Output	Output	Input	Input	Output	Output		Output	

WiFi Floor Guard & Door Guard EAS Systems

Main AC Input and Voltage Setup

The Smart Power Supply (WG SPS-24) accepts 5 input voltages: 100vac 110vac and 120vac in North America and Japan, 220vac and 240vac in Europe and Australia.

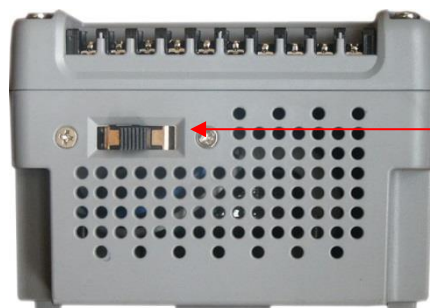


Caution: Set the two Voltage Switches (A and B) on the power supply at the specified combination based on the local incoming voltage value (see picture below).

AC Power In



Voltage Switch A



Voltage Switch B



HIGH MID LOW
(Three Positions)

100vac

Voltage Switch A - 115



Voltage Switch B - LOW



220vac

Voltage Switch A - 230



Voltage Switch B - MIDDLE



110vac

Voltage Switch A - 115



Voltage Switch B - MIDDLE



240vac

Voltage Switch A - 230



Voltage Switch B - HIGH



120vac

Voltage Switch A - 115



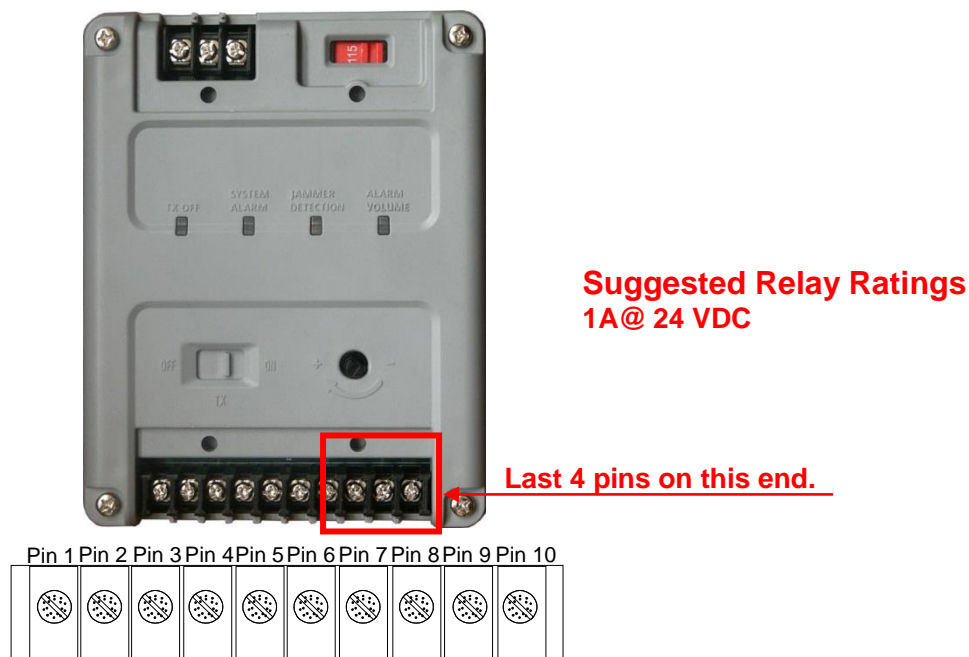
Voltage Switch B - HIGH



WiFi Floor Guard & Door Guard EAS Systems

External Relay interface

The external relay interface is located at Output side of the SPS.



Power Supply Output Terminal Layout (10 pins)

	SPS to Pedestal Cable (6 wires)						Alarm Relay		Jammer Relay	
Pin #	1	2	3	4	5	6	7	8	9	10
Function	GND	24VAC	TX OFF	Alarm	Anti-Jammer	Alarm Volume				
Electrical							1A Contact Rating		1A Contact Rating	

Notes:

1. Wire length to the dry contact circuit is limited to 20 feet.
2. To prevent high voltage noise from being introduced into the transceiver and degrading the system's performance, it is highly recommended that you use a 24vdc output relay.
