



ElectroMagnetic EAS System

Evolve-K4300 System

EAS (Electronic Article Surveillance)

User Guide
(Art No 735100)

Edition 1.5



1. FCC Instructions

1.1 FCC Compliance Statement

This device complies with part 15 of the FCC rules. 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.

1.2 FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

1.3 FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

2. General User Information

2.1 General information

Intended use

This equipment is intended to be used as an antitheft system for retail environments and for books of library, for important documents.

This manual describes the Koreit electromagnetic (EM) Electronic Article Surveillance Systems of Evolve-K4300(Stand-antenna) and Evolve-K2800(Floor-antenna), Mono-Electronic (Electronic-Control-Unit). Each system consists of a set of antenna frames and an electronics unit, connected cable-set-10M or 15M (Tx/Rx/Lamp/Network Cables)

Safety in electromagnetic fields

Users of pacemakers and other medical implants should additionally follow the device manufacturer's recommendations.

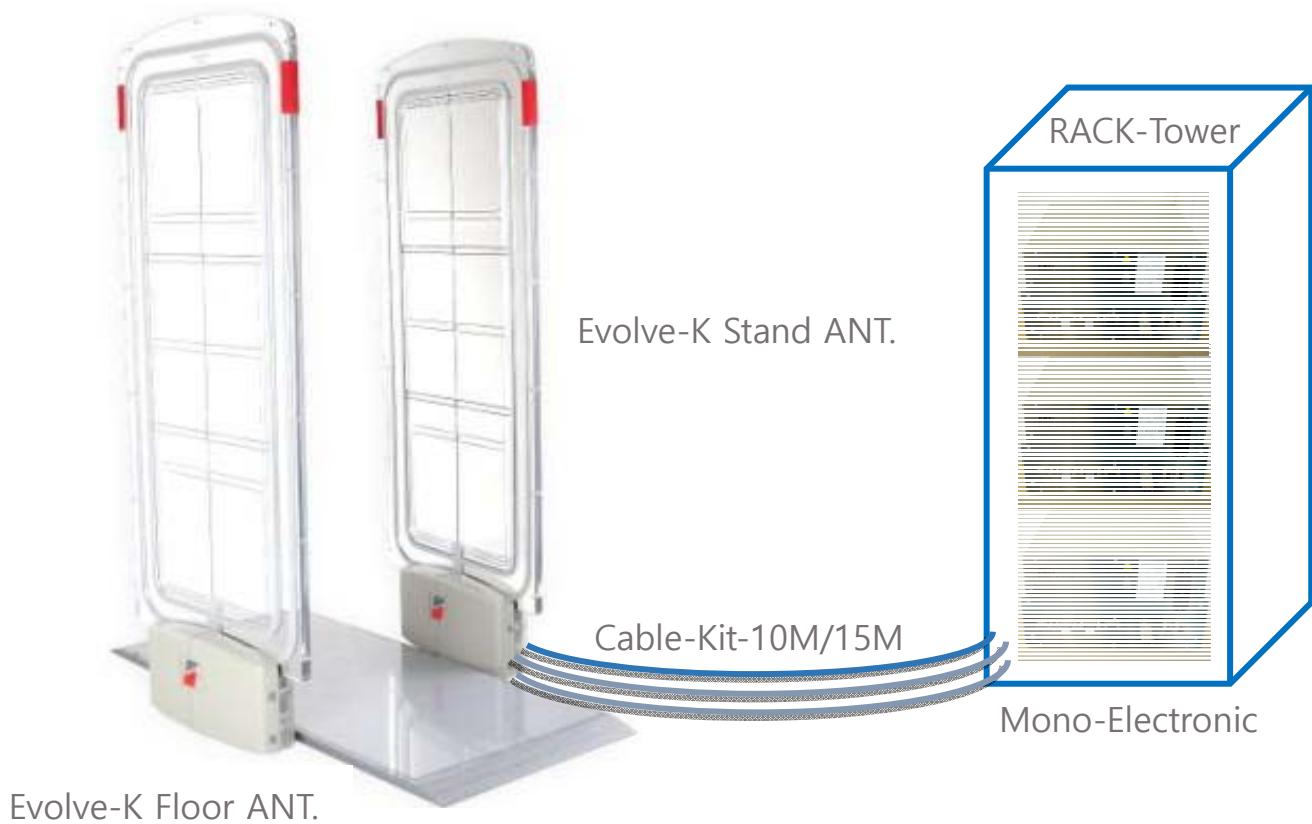


Figure-1 EM Security System 1 Lane in field

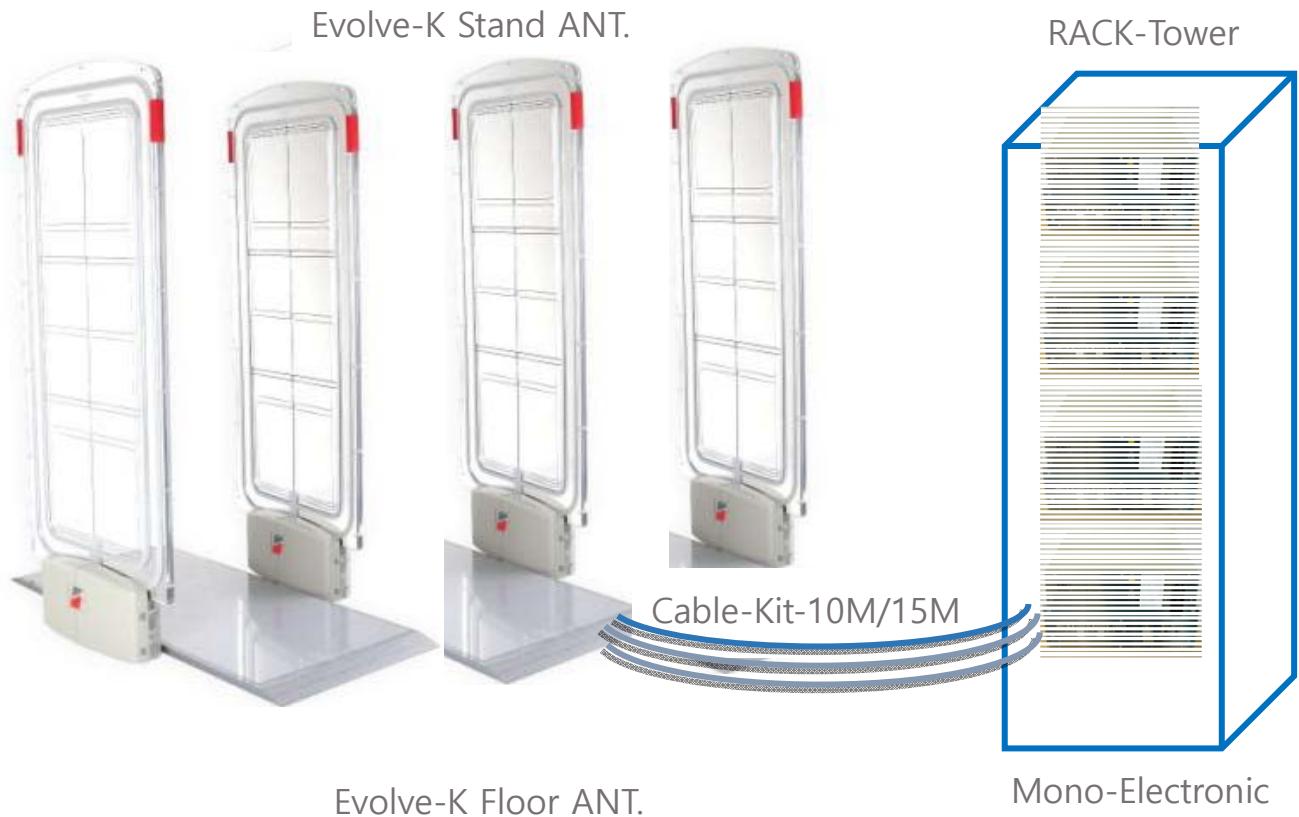


Figure-2 EM Security System Multi-Lanes in field

2. Evolve EAS system

2.1 Mono-Electronic

1) Height : 184 mm

2) Width : 352 mm

3) Length : 314 mm

4) Weight : 12.0 kg

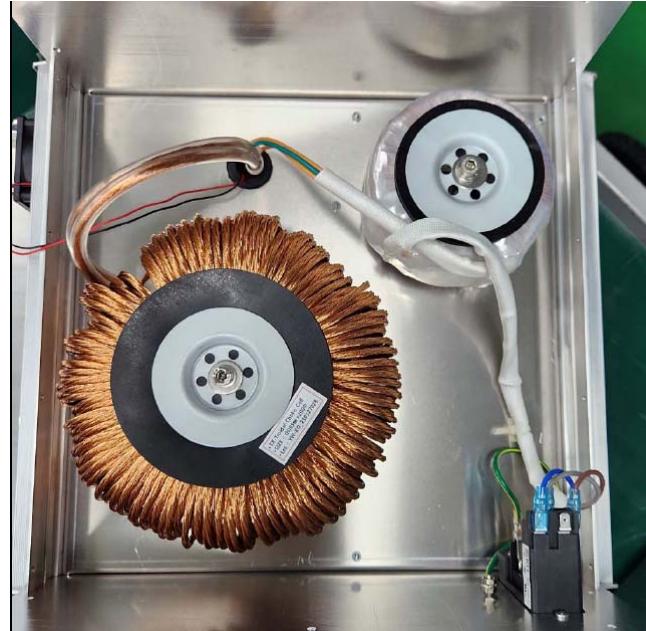
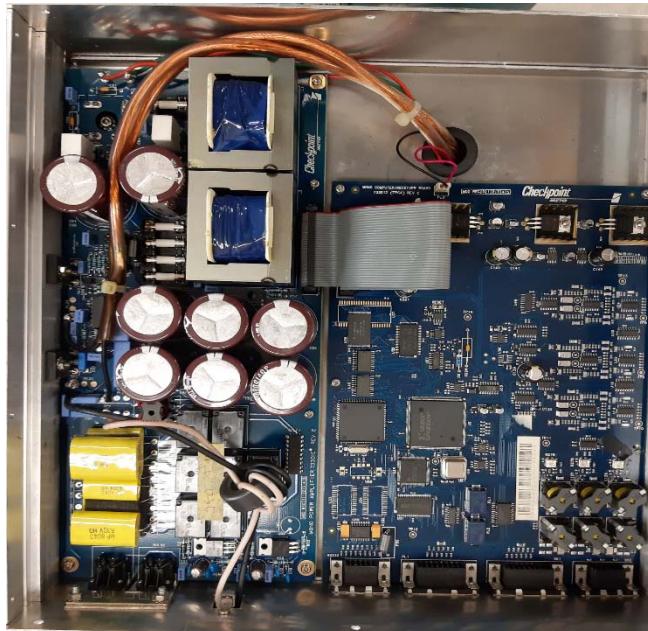
5) Material : Aluminium



6) Mains Supply : Input AC115-220V, Output DC+24/-24V

7) PCB Board : TxPower-Board, RxMain-Board

8) Internal Components/Boards of Mono-Electronic



Article	Mono-Electronic
Nominal Voltage	(230V / 115V) (switchable)
Article Number	733000
Mains Protection (Mains Fuse)	T5.0 AH/250V (S0, S1) Caution! Double Pole/Neutral Fusing
Transmit Power (+24V)	T5.0 AH/250V (FS1)
Transmit Power (-24V)	T5.0 AH/250V (FS2)
Processor Receiver (+24V)	T1.0 AL/250V (FS4)
Processor Receiver (-24V)	T1.0 AL/250V (FS5)
Alarm Lamps (+24V)	T4.0 AH/250V (FS6)

A mains outlet must be placed easily accessible near the Electronic.

Unplug the power cord before opening the unit!

2.2 Evolve K-4300 Stand Antenna

- 1) Height : 1,680 mm, Width : 665 mm
- 2) Depth : Foot 80 mm / Antenna 25 mm
- 3) Weight : 35.5 kg (including electronic)
- 4) Material : Acrylic Plexiglass
- 5) Antenna Coil :

- * TX Coil Winding : Copper Wire 2.0 m²
- * RX Coil Winding: Copper-Wire 0.3m², Electric-Tape 0.35(T)

- 6) Electrical Characteristics

- * Operating Frequency : 12.5 kHz
- * Channel : 1



2.3 Evolve K-5300 Stand Antenna

- 1) Height : 1,950 mm, Width : 670 mm
- 2) Depth : Foot 80 mm / Antenna 25 mm
- 3) Weight : 39.5 kg (including electronic)
- 4) Material : Acrylic Plexiglass

- 5) Antenna Coil :

- * TX Coil Winding : Copper Wire 2.0 m²
- * RX Coil Winding: Copper-Wire 0.3m², Electric-Tape 0.35(T)

- 6) Electrical Characteristics

- * Operating Frequency : 12.5 kHz
- * Channel : 1



2.4 Evolve K-2800 Floor Antenna

1) Thickness : 25T, Width : 570 mm

2) Length : 1,400 mm, Weight : 28 kg

3) Material : PVC Gray-Color

4) Antenna Coil :

* TX Coil Winding : Copper Wire 2.0*3.0 mm

* RX Coil Winding: Copper-Wire 0.3m², Electric-Tape 0.35(T)

5) Electrical Characteristics

* Operating Frequency : 12.5 kHz

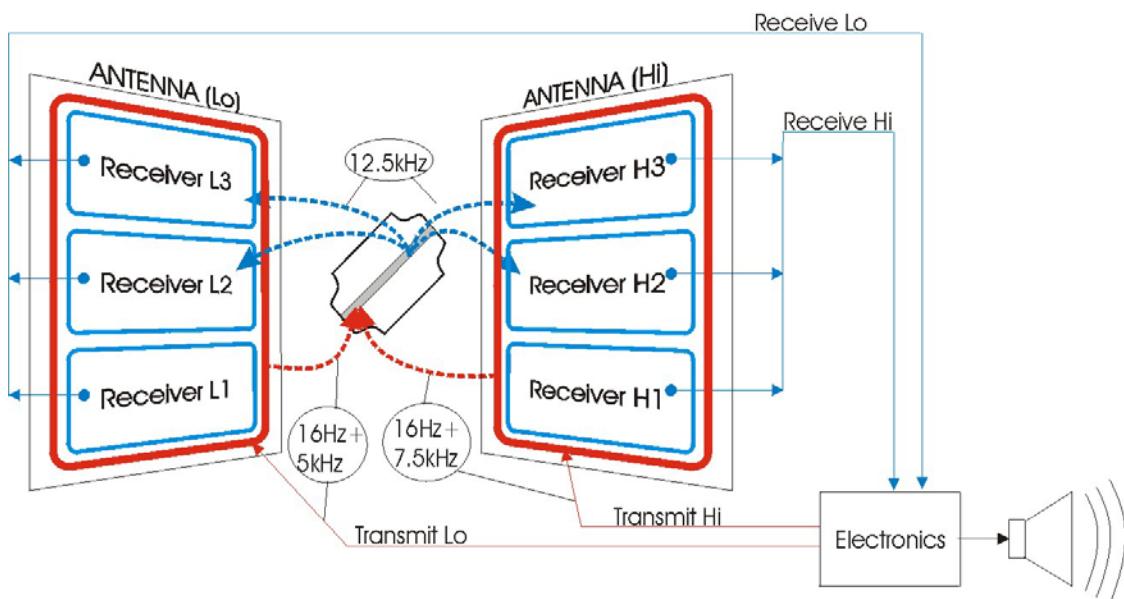
* Channel : 1



3. User Operation

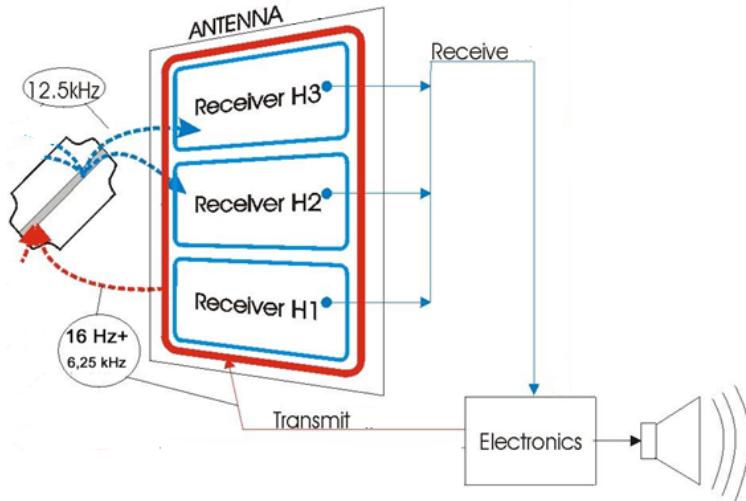
3.1 EM Electronic Article Surveillance system theory

Stand-antenna is mainly operating the intermodulation.



- Antenna (High) transmits 16Hz + 7,5 KHz / Antenna (Low) transmits 16Hz + 5,0 KHz
- Intermodulation Frequency 12.5KHz

Floor-antenna is mainly operating the second harmonic.



- Antenna (Left / Right) transmits 16Hz + 6,25 KHz
- Second Harmonic Frequency 12.5KHz

3.2 System Installation

Once your Koreit EAS System has been installed by a Koreit engineer it is ready for standard operation. There are three user control-units, the locations of which are shown in Figure-1.

- 1 Check the cable connections (Power / Transmitter / Receiver / Lamp / Network)
- 2 Power Switch ON/OFF (0 = OFF; 1 = ON)

3.3 Switching the unit on and off.

When the system is switched on, it requires about one minute to make self adjustments before it starts working. Afterwards the technician is able to set up the system. It need the set-up program.

3.4 Detecting the labels and tags

The Koreit EM EAS Systems provide labels and tags come in various types and sizes.

Some examples are shown in Figure-2, Figure-3. Talk to your local Koreit representative who can advise you on how best to label your goods.



Figure-2 Labels and Tags



Figure-3 A4 of Label or Micro-wire type

3.5 Detecting the labels and tags

The EM EAS system is used together with a Secudocu paper of Koreit. The Evolve-K4300 system is designed to allow an operator to the source of an alarm, caused by an active security Label or Tag

- 1) **Detect Area** : The Label or Tag detect area. This is the sensitive area which permits the detection operation to be carried out
- 2) **Red Lamp** : Lights when a Label or Tag is detected.
- 3) **Alarm Buzzer** : Sound when a Label or Tag is detected. You can change the beep turns.

4 Maintenance

4.1 Care

- Test the System periodically with a live label
- Clean the frames with a moist soft cloth
- Leave an air gap of 50mm around the electronics unit at all times

DO NOT

- Do not leave shopping trolleys in, or next to, the frames
- Do not clean the frames with any solvents
- Do not bolt, connect or lean anything against the frames
- Do not use abrasives to clean the frames

- Do not place the electronics unit in an enclosed box

4.2 Repair and Maintenance

- If the system is not working or is in need of maintenance then contact your local Koreit representative
- Do not attempt to carry out any repairs yourself.

5 Standards and Approval test

5.1 EMC

EN 300 683, June 1997

EN 55022, Class A

5.2 Safety

EN60950:1992+A1:1993+A2:1993+A3:1995+A4:1997+A11:1997, Class I equipment

DIN EN 60950 (VDE 0805):1997-11+A11:1998-08

IEC 60950:1991+A1:1992+A2:1993+A3:1995+A4:1996

CB Ref.Certif.No.: DE 1-10463

5.3 Other Approvals

EN 300 683, June 1997

In compliance with R&TTE Directive 99/5/EC