WARRANTY

SEVA BT-2000 GATE & SYSTEM WARRANTS against defects on material and workmanship in normal use. Bangsan Technologies, Inc. will, at its option, replace or repair any defective electronic part within one year but other parts within two years from the date of purchase/delivery.

If this product is serviced by unauthorized personnel, this warranty will become void and Bangsan Technologies, Inc. will not be responsible for its consequences. Since this product function is affected, to a certain degree, by external factors that are beyond manufacturer's control, Bangsan Technologies, Inc. will not be responsible for direct/indirect damages to persons or equipment caused by negligence or misuse.

INSTALLATION INSTRUCTION.

GENERAL NOTES

- Detector installation area should be flat.
- Two pedestals must be aligned as per provided information
- Side panels must be perpendicular to the ground after installation
- Detector side panels must be 500mm away from the door if door frame is made out of metal.
- No holes are allowed to be drilled to any part of the detector without permission of authorized service personnel.
- It is recommended to have a power outlet at the ceiling for the easier connection to the detector.

Prior to installation, all warnings and cautions should be followed and observed very carefully. Bangsan Technologies will not be responsible for the damages done to the SEVA BT-2000 system which may be caused by not following the instructions in this manual.

Mechanical Interference

Moving Door: Locate the detector minimum of 500 mm away from the door. Make sure that door swings outward. If door is double door type, detector should be installed on one side of double doors. The other door is recommended to be locked. If the door is metal type, it is recommended to insulate its metal looping by cutting one edge of the door metal frame. Check the swinging door effect to the detector by swinging after installation of the detector. If detector is still affected by swinging door, install door closer system (P/N: SEVA-05) which is provided with detector as per its installation instruction.

Nearby Moving Object: If the detector is installed too close to the road, large moving vehicle may affect its function. Therefore, it is recommended to install the detector away from the road as far as it can.

Electrical Interference

There are many sources which may cause electrical interference problems to the detector. They are electric motors, neon signs, CRT type TV & computer monitors, power line, telephone line, cellular phones. They should be located away from the detector. If serious interference is detected continuously, consult with your dealer.

Electrical power cords should be at a distance of minimum 150 mm from the side panels.

INSTALLATION OF DETECTORS IN SERIES

The minimum distance between two detectors should be maintained at a distance of 500mm.

MAINTENANCE MANUAL

Before working on electricity or any electronic parts, make sure that electrical power is disconnected.

How to remove Electronic Board

Remove the mounting screws from the bridge cover (P/N : BR-003) located at the center of Bridge. Remove four screws at each corner of the board. Disconnect all connectors carefully from the board. Pull out board.

How to remove Power Supply Board

Remove four mounting screws from the bridge cover (P/N : BR-003) located at Bridge. Power supply board will be shown from the hole. Remove 4 screws from the mounted hinges, Disconnect 8 wires from the board. Board is free to remove.

How to get its replacement parts and its reinstallation

Send the disabled boards to the authorized service center for its replacement parts.
After receiving replacement part, you should place new part to the detector. Installation procedure is exactly opposite of removal procedure.

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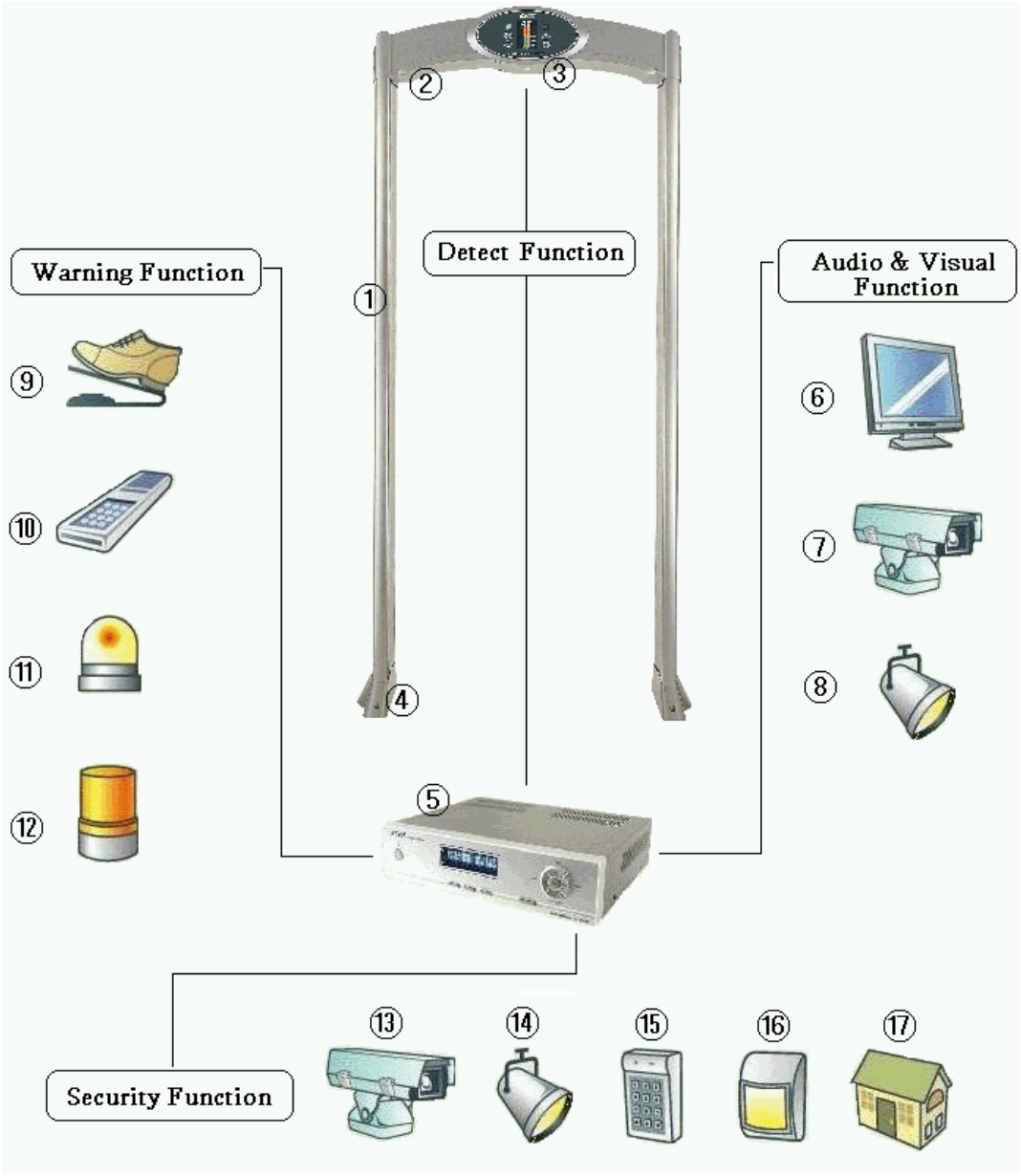
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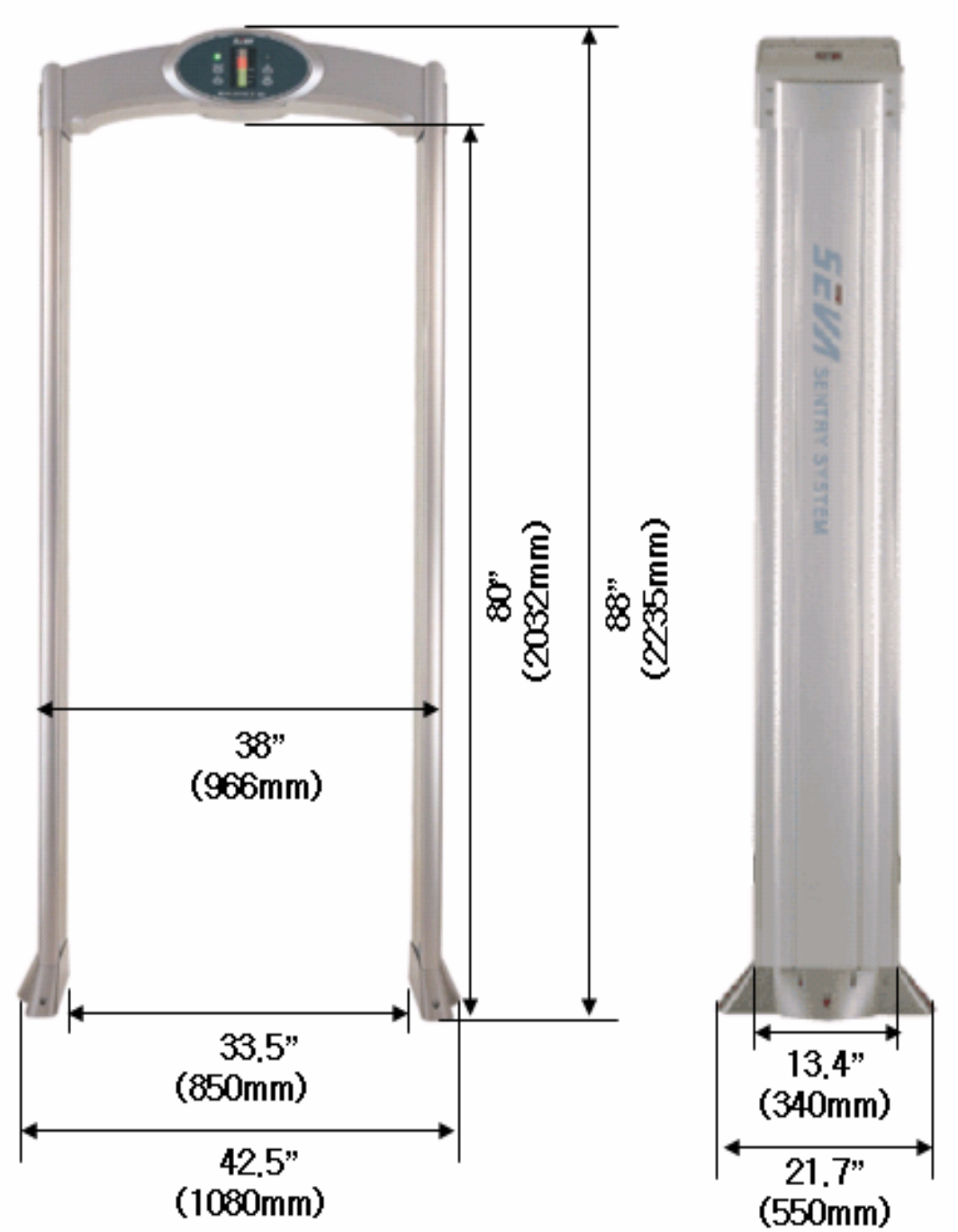
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1. SEVA SENTRY SYSTEM

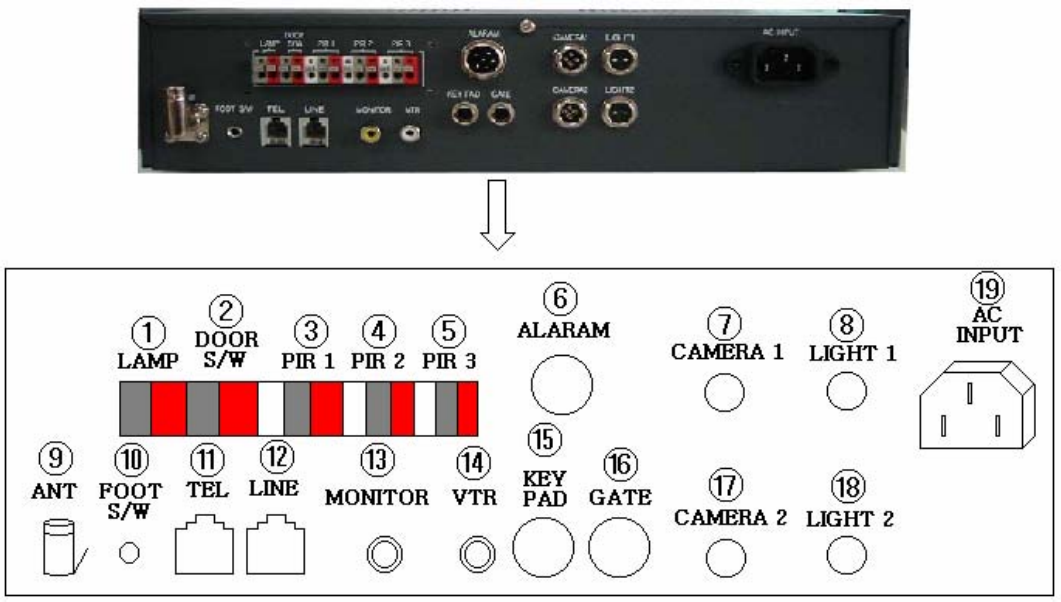


① Side Panels
② Bridge
③ Electronic Display
④ Pedestals
⑤ Controller
⑥ Monitor
⑦ CCD Camera 1
⑧ Spot Light 1
⑨ Foot Switch
⑩ Remote Control
⑪ Indoor Warning Light
⑫ Outdoor Warning Light
⑬ CCD Camera 2
⑭ Spot Light 2
⑮ Key Pad
⑯ Motion Sensor
⑰ Door/Window Sensor

2. DETECTOR DIMENSION



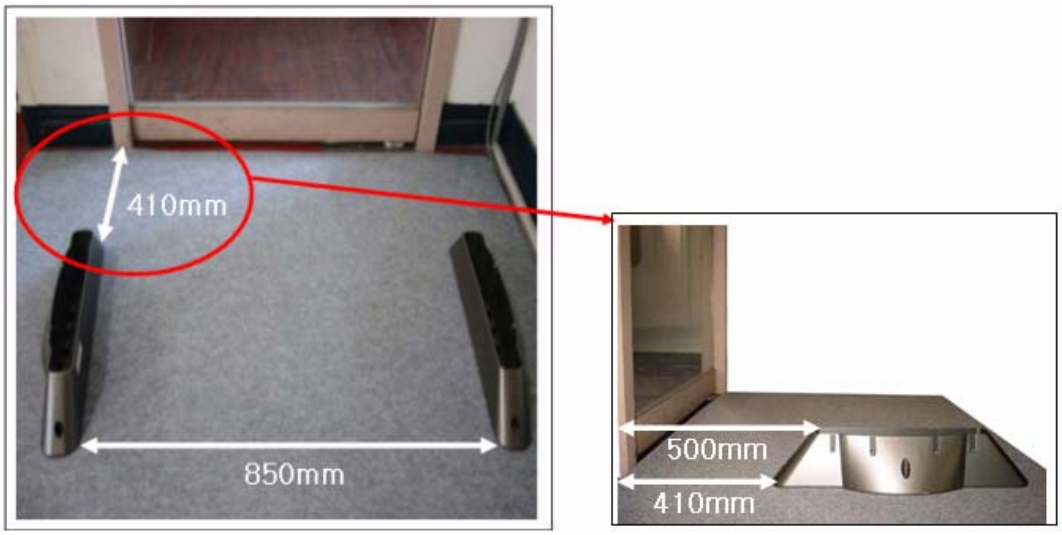
3. CONTROLLER CONNECTORS



① INDOOR WARNING LIGHT
② DOOR/WINDOW SENSOR (Option)
③④⑤ MOTION SENSOR (Option)
⑥ OUTDOOR WARNING LIGHT
⑦ CCD CAMERA 1
⑧ SPOTLIGHT 1
⑨ REMOTE CONTROL ANTENNA
⑩ FOOT SWITCH
⑪ PHONE
⑫ LINE
⑬ MONITOR
⑭ VTR
⑮ KEY PAD (Option)
⑯ DETECT
⑰ CCD CAMERA 2 (Option)
⑱ SPOTLIGHT 2 (Option)
⑲ POWER

4. Mechanical Assembly

4-1. Locate two pedestals 410mm away from the door (distance from door to side panel is 500mm) and mark the anchor hole locations (6 holes).



4-2. Remove the pedestals and drill anchor holes (3/8” drill x 1-1/2” deep) and fix 6 anchor bolts through holes.



4-3. Place two pedestals on both sides over anchor bolts (3 places – each). Tighten the nuts (6Φ mm – 3 places each) after inserting washers.



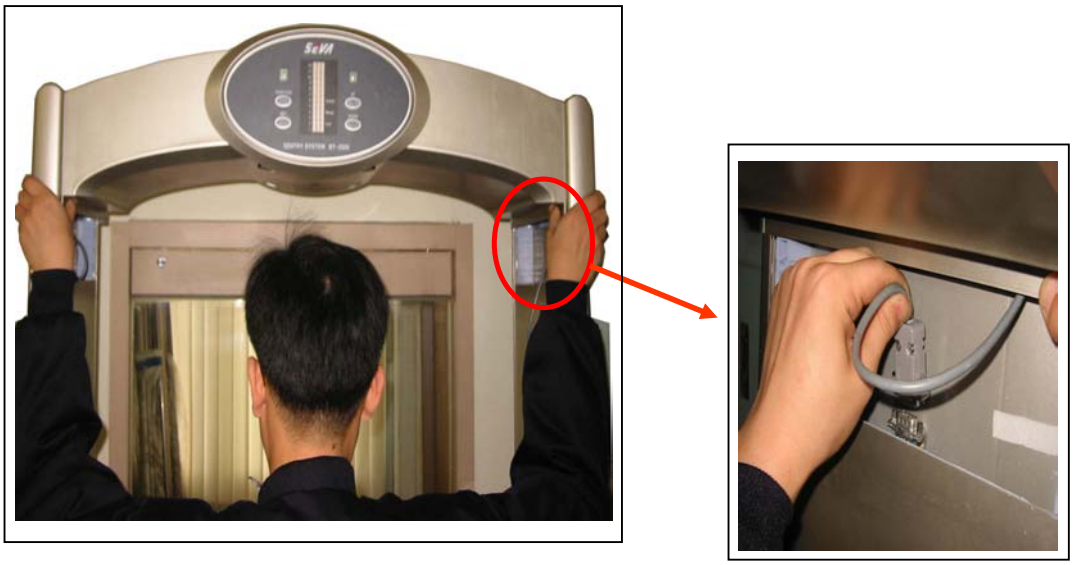
4-4. Place side panels on the left and right pedestals.



4-5. Tighten 4 screws (4x70mm) on each pedestal to the side panel



4-6. Before placing the bridge, make sure that electronic display faces away from the door. Connect 9 pin data connectors from the bridge to the side panels (1 place per side).



4-7. After connectors are connected to the side panels, snug in Bridge to Side Panels.



4-8. Place 4x60mm bolts and 5mm washers (4 places-each side) to the bridge to connect bridge and side panels. Make sure stainless steel stiffener is placed.



4-9. Place plastic caps over the bolt heads (4 places – each side).



4-10. Place panel supports to the side panel and screw the bolts (4 x 20mm) with washers (5mm).



4-11. Place anchor bolts (6 x 53mm) to the panel supports floor.



4-12. Plug in power cord to the power connector located on the top of the bridge.

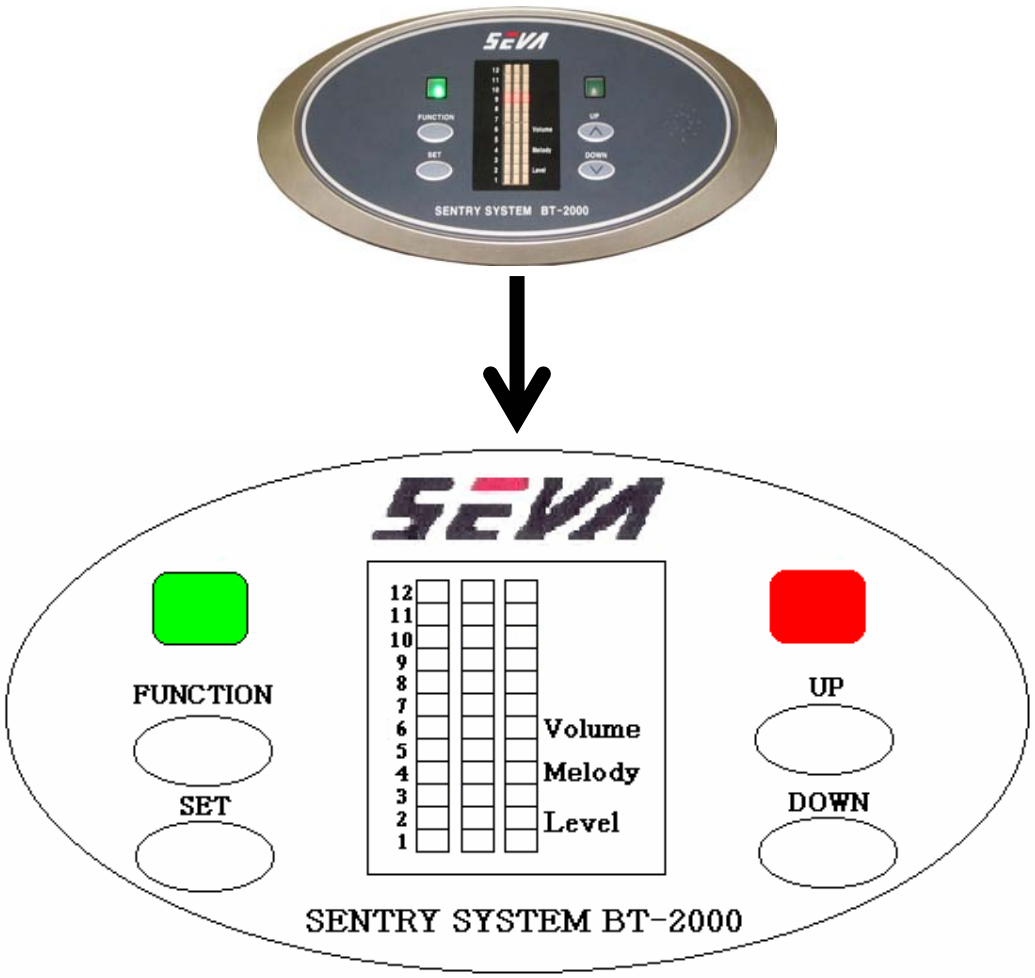
4-12-1 Data : This port will not be used
4-12-2 Control : Controller Gate connector
4-12-3 Door : Door Brake connector



□ Caution :
* Installation floor must be flat.
* Gate should be installed 500mm away from the door (410mm away from the tip of the pedestal).
* Two pedestals must be in parallel.
* The distance between two panels is 850mm.
* Electronic Display side on the bridge must face away from the door.
* If the floor reflects the beam from the top sensors, carpeting is necessary under the bridge area.

5. ELECTRONIC DISPLAY OPERATION

After connecting to power source, 12 LED lights on Electronic Display will light in sequence from the bottom to the top and green light on the left, red light on the right will be lit. Finally, green light on the left will lit and the detector will be ready for its operation.



5-1. Function Key
This key controls the selection of programs of Volume, Melody, Level which will be lit in turn by pressing this key.

5-2. Set Key
This key stores the program to the system for use.

5-3. Up Key
The value of the set program will increase.

5-4. Down Key
The value of the set program will decrease.

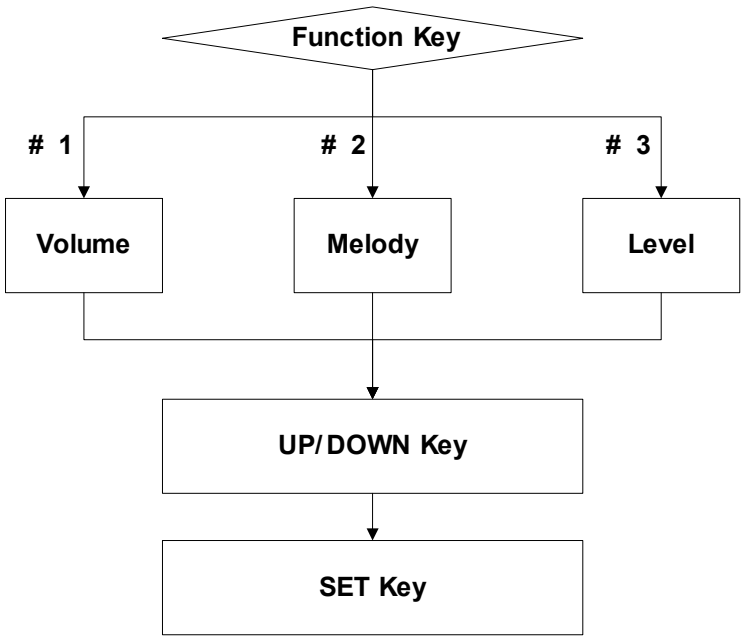
5-5. Example

5-5-1. When controlling the volume, press Function Key until the yellow light reaches to Volume on Electronic Display. Then, press UP/Down Key to reach to the desired volume.

5-5-2. When choosing the different melody, press Function Key until yellow light reaches to Melody. Press Up/Down Key to select the desired melody. Press Set Key.

5-5-3. When selecting different sensitivity level, press Function Key until the yellow light reaches to Level. Press Up/Down Key to select desired level. Press Set Key.

5-6. Electronic Display Diagram



6. DOOR BRAKE SYSTEM (SEVA-05)

This is a patented system to control the door movement to minimize mechanical interference effect to the detector. Door Brake System will hold the door open until a person passes through the detector.

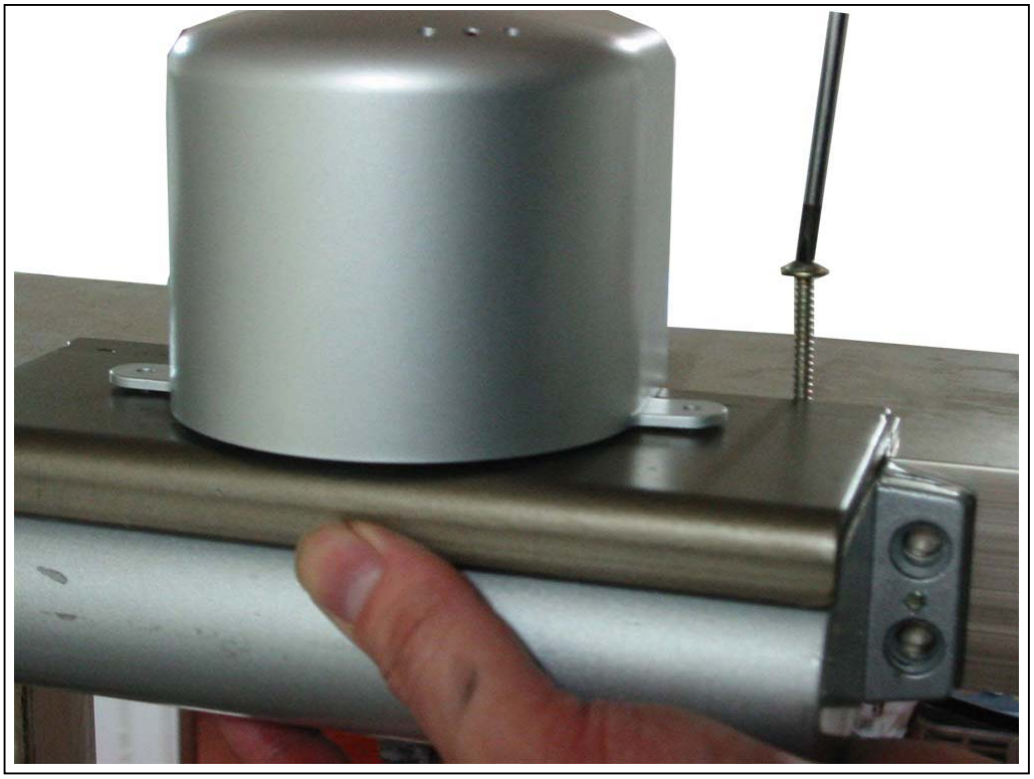
The followings are the differences from the existing door closer

6-1. This system is equipped with electronic brake.

6-2. A sensor is installed on the door frame to control the system function.

6-3. Installation

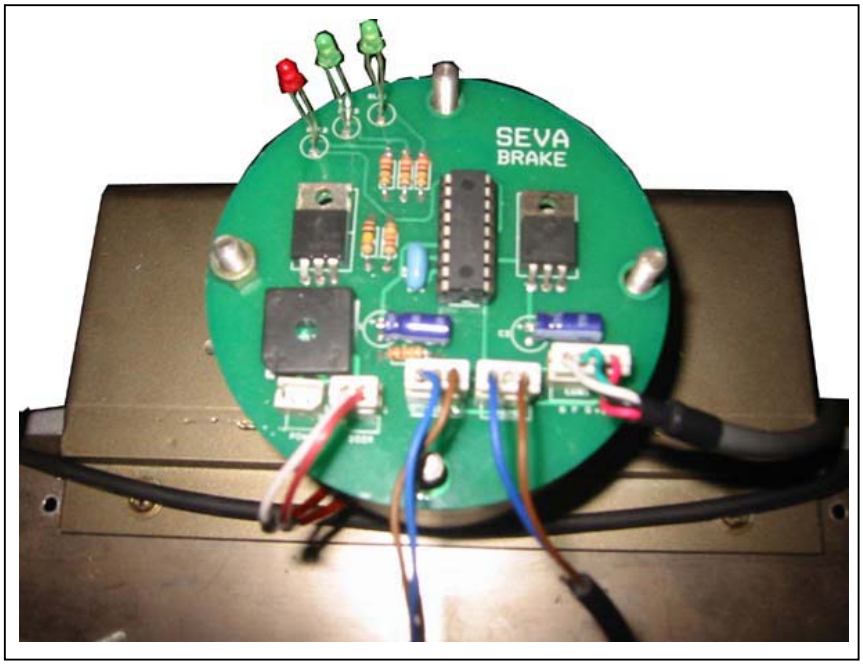
6-3-1. Its installation method is exactly same as the existing door closer except it requires two extra screws (4x30mm – each side) to place electronic brake on its top..



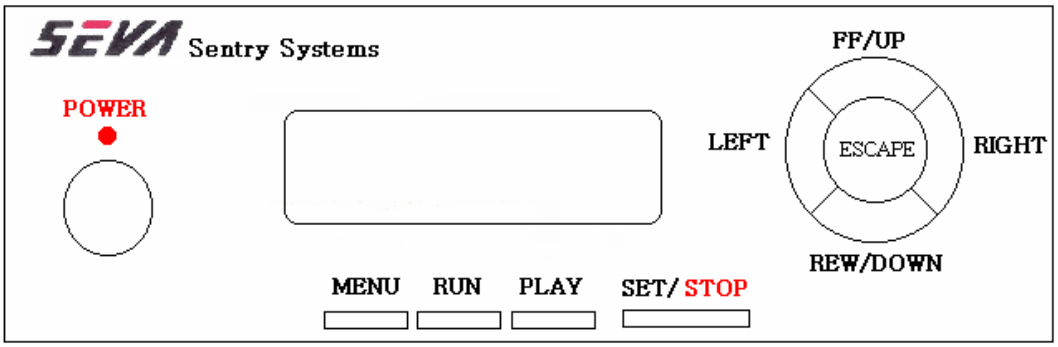
6-3-2. Door brake sensors should be installed on the door frame at the 750mm above from the floor. (Refer to attached manual)



6-3-3. Remove the door brake cover and find markings of "dsen", "conl", "power". Connect two sensor lines to "dsen" and cable from detector (see 4-12-3) to "conl", and DC adaptor cable connector to "power".



7. OPERATION OF CONTROLLER (SEVA-04)



7-1. Turn on the Controller.
7-2. Press the MENU button once
7-3. Select Menu by using FF/UP or REW/DOWN

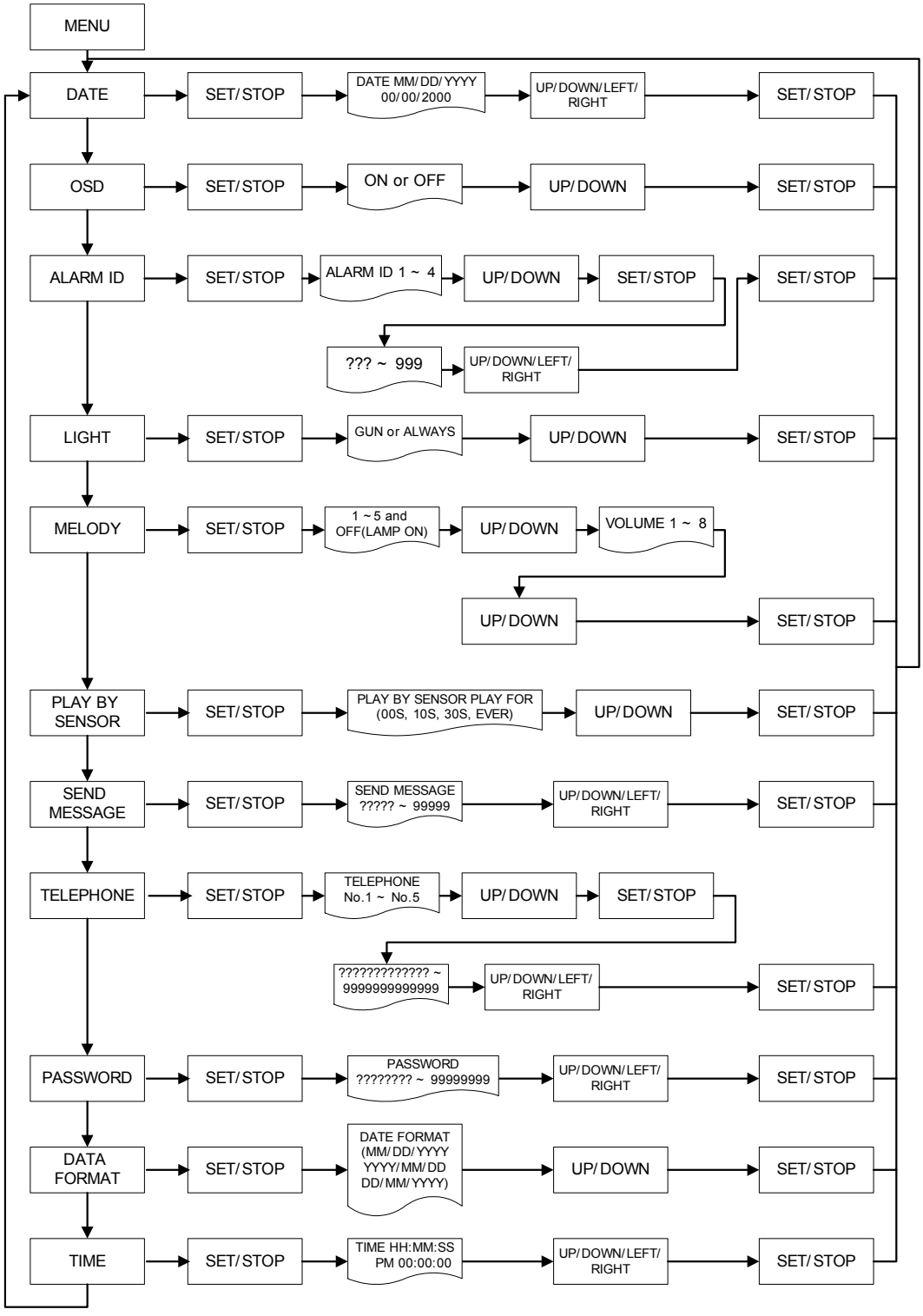
DATE : Current date
OSD: Selecting date, time, photo numbers on monitor when weapon is detected.
ALARM ID : Designate number to Motion Sensors
LIGHT : GUN - Light will be lit when the weapon is detected
ALWAYS - Light will be lit when a person passes the gate
MELODY : Selection of melody alarm when weapon is detected.
OFF(LAMP ON) : No melody but Indoor Warning light will be on.
PLAY BY SENSOR : Image showing time on the monitor when weapon is detected.
PLAY FOR 00S - flash
PLAY FOR 10S - 1 second
PLAY FOR 30S - 3 second
PLAY FOREVER – until new image
SEND MESSAGE : Storing phone numbers for emergency calls
TELEPHONE : Five phone numbers can be stored for emergencies. Phone numbers will be dialed automatically when pressing the remote control button, foot switch or door/window sensor & motion sensors are activated.
PASS WORD : Storing phone numbers for emergency calls
DATE FORMAT : YYYY/MM/DD --> Year, Month, Date sequence
MM/DD/YYYY --> Month, Date, Year sequence
DD/MM/YYYY --> Date, Month, Year sequence
TIME : Hour, Minute, Second sequence

7-4. After new input or correction is made, press SET/STOP button for storage.

7-5. RUN : Detection function is activated

7-6. PLAY : Search function of stored images.
Press PLAY button. Press FF/UP REW/DOWN or LEFT/RIGHT until Desired image is obtained.
To return to Detection Function. Press RUN.

7-7. Controller Operation Diagram



8. SPECIFICATIONS

8-1. TECHNICAL SPECIFICATION

Operating Temperature	From -17C to +50C (form 0F to 122F)
Humidity	To 95% non-condensing
Power Supply	100~260 Volts AC with 50/60Hz Power consumption : 45W
Alarm	Audible and visual alarm
Sensitivity Adjustment	12 Levels
Calibration	FCC approved Meet NILECJ-0601
Interference Rejection	100% sensor coil shielded by conductive shielding Specially built-in circuitry for noise suppression Special hardware to filter noise
Masking	Special program to cancel the effect caused by different metal objects
Construction	Reinforced fiber glass. Scratch resistant lamination
Throughput	Minimum 60 people per minute
Warranty	One year for electronic part.

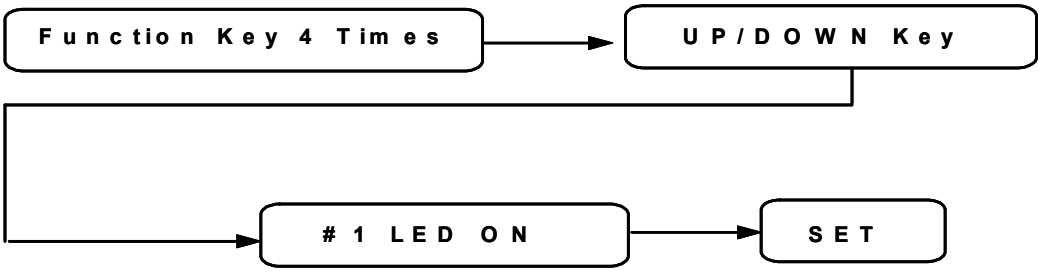
8-2 PHYSICAL SPECIFICATION

Outline Dimension	42.5" x 88" x 21.7" (1080 x 2235 x 550mm)
Passageway Dimension	33.5" x 80" x 13.4" (850 x 2030 x 340mm)
Shipping Dimension	Box1 : 87.8" x 17" x 8.5" (2230 x 440 x 215mm) Box2 : 41" x 16" x 18" (1050 x 415 x 465mm) Box3 : 18.5" x 14" x 11.6" (470 x 365 x 295mm)

Net Weight	Box1 : 59.6 lbs (27kg) Box2 : 30 lbs (13.5kg) Box3: 18.8 lbs (8.5kg)
Shipping Weight	Box1 : 72.8 lbs (33kg) Box2 : 37.5 lbs (17kg) Box3 : 21 lbs (9.5kg)

9. TEST

9-1 Program Setting



9-2 Test Condition

SPEED	1.0 M/S
Belt	Equipped
Watch	Equipped
Shoes	Equipped

9-3 Test Pieces

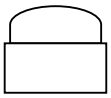
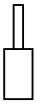
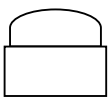
Ref.	Name of Gun	Dimensions in(mm)		Weight lb(g)	Material
		Length	Height		
CS-40	Smith&Wesson CS-40 .40 S&W Chiefs Special	6.5(165)	5.3(135)	1.51(686)	Aluminum, Stainless Steel
910	Smith&Wesson Model 910 9mm	7.4(187)	5.4(138)	1.75(794)	Aluminum, Carbon Steel
317	Smith&Wesson 317 .22 Long Rifle AirLite	6.2(157)	4.3(110)	0.74(337)	Aluminum, Stainless Steel
SW99	Smith&Wesson Model SW99 9mm	7.1(180)	5.7(145)	1.59(720)	Polymer Frame, Stainless Steel

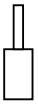
Ref.	Detail
Coin	30 Coins (□100)
Key	20 Keys (Standard Door key)
Cell Phone #1	Anycall SCH-A8100 (BTL1018S Battery Pack)
Cell Phone #2	LG-LDP-Cell phone 880 (Big Battery Pack)
Cell Phone #3	Panasonic-KX-T 9200 KR (KX-A45 Battery Pack)
Beer Can	Beer Can (Aluminum) (65Φ x 120mm)
Hair Spray	Hair Spray Can (Steel) (45Φ x 210mm)
Knife	Knife (Stainless steel, length closed : 13Cm)
Test Gun	Test Gun (Garrett)
Accessory #1	Ladies Metal Accessory #1 (Steel)
Accessory #2	Ladies Metal Accessory #2 (Aluminum)

9-4 Test Result

O : Checked X : Not Checked OX : Often Checked

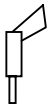
Below result is the combination of 9 test

Test Piece	Orientation	SENSITIVITY LEVEL			
		1	5	9	12
Coin		X	X	X	X
Key		X	X	X	X
Cell Phone #1		X	X	X	X
		X	X	X	X
Beer Can		X	X	X	X
		X	X	X	X
Hair Spray		X	X	X	X
		X	X	X	X
All together (Coins , Keys Cell phone #2 Accessory #1 Beer Can)		X	X	X	X
		X	X	X	X
All together (Coins ,		X	X	X	X

Keys Cell phone #3 Accessory #2 Hair Spray)		X	X	X	X

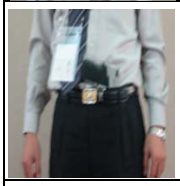
O : Checked X : Not Checked OX : Often Checked

Below result is the combination of 9 test

Test Piece	Orientation	SENSITIVITY LEVEL			
		1	5	9	12
Knife		X	X	X	X
		X	X	X	X
Test Gun		X	X	OX	OX
		X	OX	OX	OX
Gun CS-40		O	O	O	O
		O	O	O	O
Gun 910		O	O	O	O
		O	O	O	O
Gun 317		OX	O	O	O
		X	OX	OX	O

Gun SW99		X	OX	O	O
		O	O	O	O

Results are based on the weapon orientation shown on photo

Test Piece	Orientation	SENSITIVITY LEVEL			
		1	5	9	12
Gun CS-40		O	O	O	O
		O	O	O	O
		O	O	O	O
		O	O	O	O
Gun 910		O	O	O	O
		O	O	O	O
		O	O	O	O

		O	O	O	O

Results are based on the weapon orientation shown on photo

Test Piece	Orientation	SENSITIVITY LEVEL			
		1	5	9	12
Gun 317		X	O	O	O
		X	O	O	O
		X	O	O	O
		X	O	O	O
Gun SW99		X	O	O	O
		X	O	O	O
		X	O	O	O

		X	X	O	O