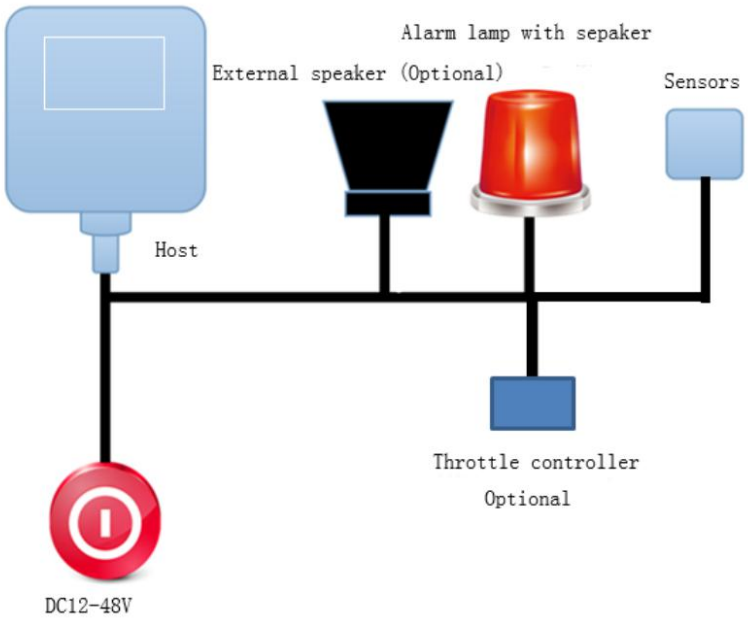
Waytronic Security
Non Tag Proximity warning system
SF-111

1. Features

1, Wide voltage power supply (DC12-24V);
2, Support wireless infrared remote control configure;
3, With audible and visual warning
4, Can be set collision avoidance area, early warning area by infrared remote controller;
5, Using millimeter-wave radar technology to detect objects, and realize anti-collision warning;
6, 3 collision prevention zone, distance in the prompt zone, distance in the warning zone, and distance in the braking zone, which correspond to the speed limit in the prompt zone, the speed limit in the warning zone, and the speed limit in the braking zone;
7, Bilingual language(Chinese and English) operation voice tips;
8, 7 level volume adjustable;
9, IC card access control

2. Wiring Diagram



3. Technical parameter

Power supply	DC12-40V	
Work current（DC12V）	Standby,connect with ACC	≤320MA
	Limit speed status	⩽ 2A
	Alarm status	≤600mA
Audio format	MP3	Bitrate:16Kbps~320Kbps

Speaker	8Ω/3W（Typical value）
Alarm output	≤100db
Sensor transmission power	20dB
Sensor emission frequency	24.00GHz~24.2GHz
Work temperature	-20～+70℃
IR remote distance	1m
valid distance	⩽20m
Measure accurancy	<10cm

4. Product panel

5. Setting

Function	Description	Operation
anti collision distance setting	Remarks: distance from prompt area> distance from warning area> distance from braking area, setting range: 0 ~ 2000 Reference distance: 1000> 500> 300 (unit: M)	Press System button ,Press up and down to plus and minus to choose anti collision ,choose prompt area distance ,warning area distance or braking area distacne ,then directly input number 0-9,then press Enter button
IC card register	Register new IC card (the IC card equip with host already be registered)	Short press System button on remote control Enter the authorization management by ▲▼, press Enter button, then Press ▲▼ button to select the new user to complete the registration
Function setting	Turn on /off functions	Short press System button on remote control to enter function selection, press Enter button ,then press ▲▼ to select the corresponding function, press Enter button to turn on or turn off function
Speed Sensor configuration	Pair new speed sensor (only need do that when pair new sensor) the speed sensor which supply together with host ,already be paired ,one sensor only can pair with one host at one time	Short press System button on remote control to enter sensor configure ,Press enter button ,then press ▲ ▼ to select wireless speed sensor ,press Enter button ,short press ▲▼ to select sensor learning ,short press Enter button , at that time shake the sensor in the hand until you see Sensor ID code appears on display screen , select the ID code by remote control, short press Enter button Remarks: The wireless sensor must be statically transmitted for 10 seconds before learning, otherwise the learning will not be successful.
Input wheel diameter	Input accurate wheel diameter	Short press sensor set button on the remote . Enter the Tire diameter by using the 0~9 number buttons. Remark: Before setting, you need to measure the diameter of the tire which be installed wireless sensor The unit is cm.
Alarm speed level setting	Set alarm speed level of forklift	Short press Alarm set button on remote control ,Press ▲▼ to select the alarm level and press to confirm. Enter the alarm speed through 0~9 number buttons and press Enter to confirm.
Radar sensors ID setting	Set 1 sensor ID as master sensor ,balance 2 sensors as slave sensor	The host connects to a single millimeter-wave radar sensor (only 1 sensor), and short-press remote control System button , Press ▲ ▼ to enter the sensor configuration. Press Enter to confirm. Press ▲ ▼ to select the radar ID. Note: ID = 0 is the primary radar, ID = 1 or ID = 2 is the secondary radar, the radar ID number setting cannot exceed 2, and it cannot be identified beyond the host

Vehicle width setting	Input vehicle width	Short press the remote control System button, Press ▲ ▼ to enter the system parameters,short press to confirm ,Press ▲ ▼ to select the vehicle width ,Short press Enter to turn on the corresponding function Note: Under normal circumstances, the vehicle width can be input, and the customer can also set the width to be detected according to their own needs. The unit is CM.
Slave radar sensor setting		Short-press System button ,Press ▲ ▼ enter the anti-collision management,Short-press to confirm ,press ▲ ▼ Select the radar sensor induction, Short-press Enter to confirm, input 0-9 numeric keys(detailed distance parameters) short-press to confirm Note: This parameter needs to be set when equipped with more than two radar IDs, the unit is CM
Volume setting		Short press the remote control System button, Press ▲ ▼ to enter the system parameters ,Press Enter to confirm ,Press ▲ ▼ to select the volume level Press Enter to select the appropriate volume level, press Enter to confirm

6. Installation

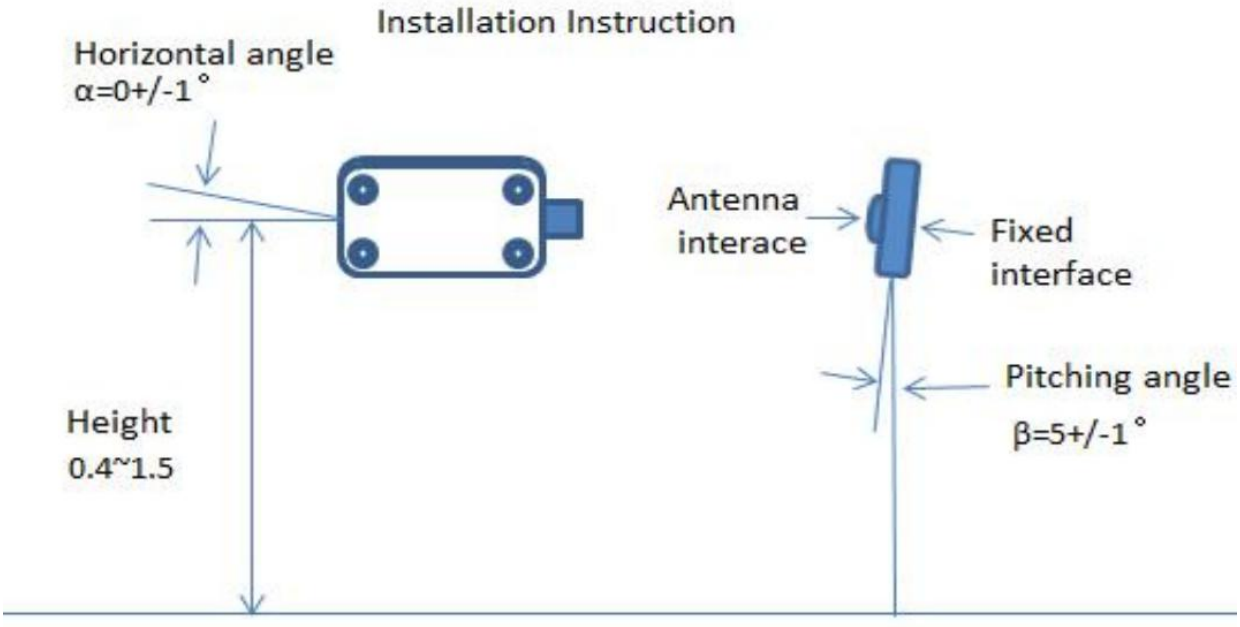
Host

Audible and visual alarm

Speed Sensor

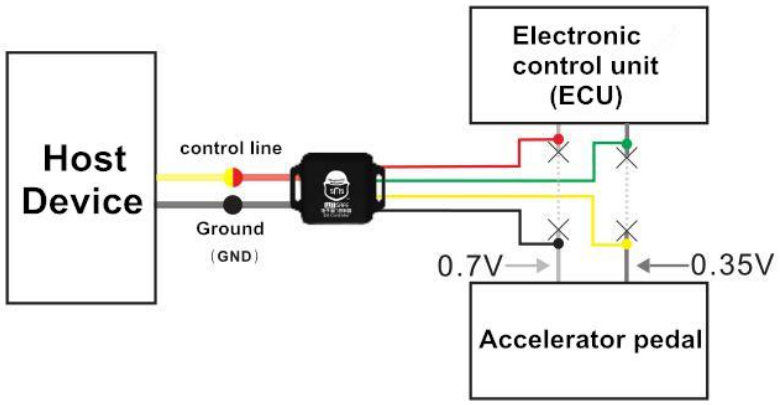
Distance detect sensor

The sensor should be installed 400-1500mm far away from the ground when it’s used in front/rear detecting, the radar antenna have to be posited front. The installation diagram is as below



7. Electronic throttle controller（Optional） installation

Please Find out two signal lines of the accelerator pedal, one is about 0.35V, the other is about 0.7V, cut off, connecting wire show as below.



Color	Function
Red	0.7V signal line, connect ECU
Black	0.7V signal line, connect pedal
Green	0.35V signal line, connect ECU
Yellow	0.35V signal line, connect pedal

Definition of 4 signal lines:

Color	Function
Red	0.7V signal line, connected to ECU connector
Black	0.7V signal line, connected with accelerator pedal

Green	0.35V signal line, connected to ECU connector
Yellow	0.35V signal line, connected with accelerator pedal

Note: Different vehicle have deviation on the voltage signal of accelerator pedal . The voltage signal of throttle controller can be adjusted through Potentiometer .
Electronic throttle controller only be used in battery feed type vehicle.