Parking Alert Signs

Engineered safety systems for you parking facilities

www.passsigns.com 480-689-1993

Quick Sheet & Manual

Presence Detector for vehicles or persons

Part Number: PS-PD20 EchoSense20

Solutions: Detects vehicles and/or pedestrians to either act as a safety device or to act as an activation device. The sensor uses radar to generate a signal and detect when a vehicle and'/or pedestrian is present.

Dimensions:	4.6H x 4"W
Mounting Height:	18" to 30" from the ground
Mounting Type:	Wall or post
Detection Area:	20' Depth x 6' Wide at 20' depth
Relay Output Info	Options: Pulse, Constant, or 1 thru 6 seconds. Rating

Applications

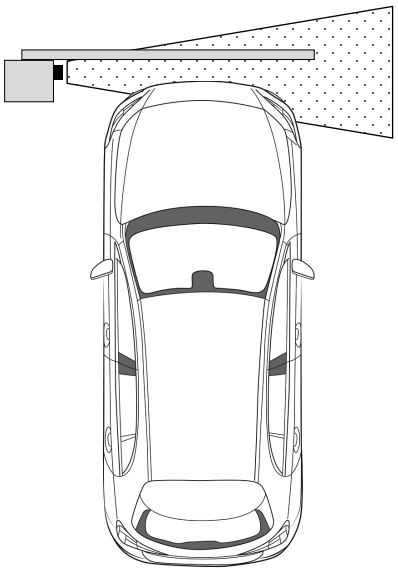
- Activate Parking Alert Safety Sign
- Automatic Gate Safety
- Replace old in-ground loop detection
- Parking Lot Entry & Exit Control
- Industrial Facility Access
- Loading Dock Monitoring
- Warehouse Door Activation
- Pedestrian Safety in Mixed-Use Areas
- Vehicle Direction Control
- Toll Booth / Parking Machine Vehicle Detection
- Drive-Thru Queue Management

Wire Color	Function
Red	+12V DC Power Input
Black	Power Ground (GND)
Yellow	Set Button Input
White	Input Ground (GND)
Orange	Relay Normally Closed (NC)
Brown	Not Connected
Blue	Relay Common (COM)
Green	Relay Normally Open (NO)

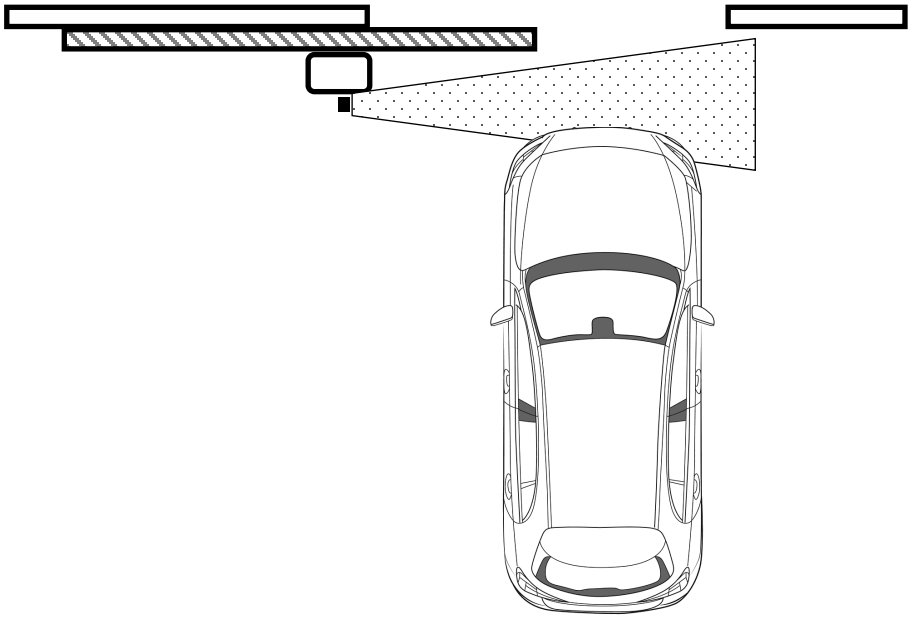
No Objects Detected

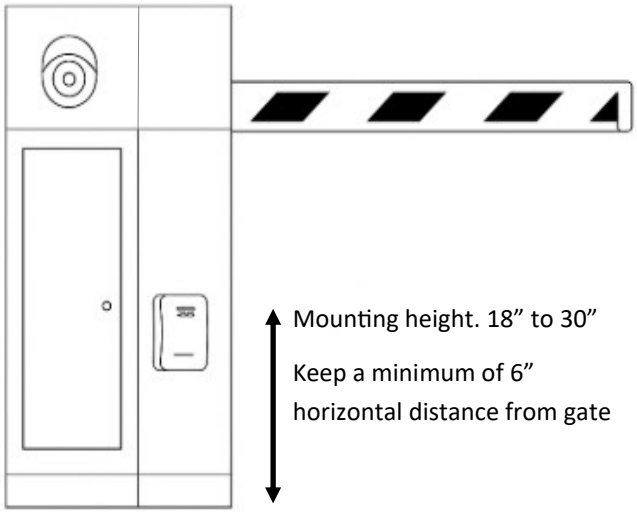
Object Detected

Barrier Gate mounting



Sliding Gate mounting





Quick Settings

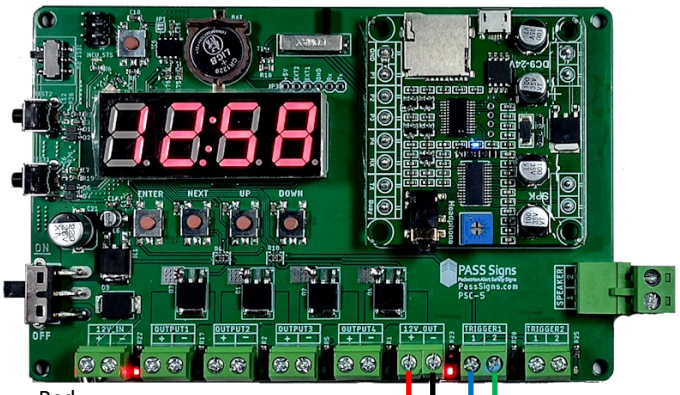
Barrier Gate settings:

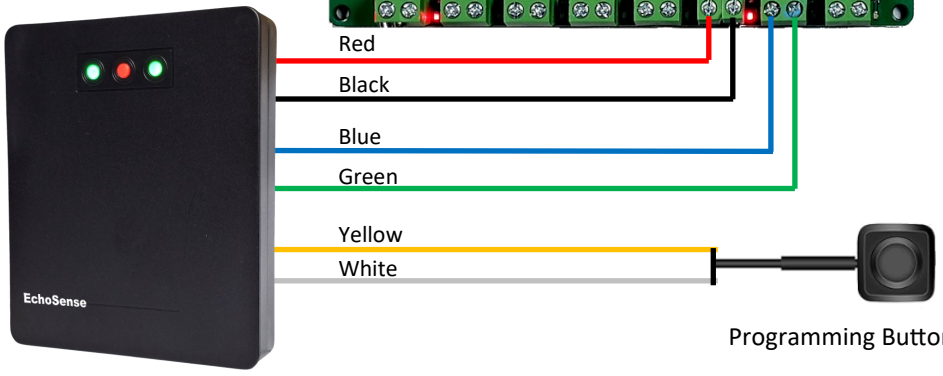
- Section 1—Set for distance of lane
- Section 6 - Set for 1 Barrier arm

Sliding Gate settings:

- Section 1—Set for distance of lane
- Section 3– Set the closing speed of gate
- Section 6 - Set for 2 sliding gate

PS-PD20 to PSC-5
Control Board





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Programming Instructions for EchoSense

Steps in programming:

1) Select the Section you want to program
2) Change the Settings for that Section
3) Save the Setting

1) SELECT THE SECTION TO PROGRAM

Hold the Programming Button for 5 seconds until Section1 Lights appear. **Continue to hold** to go to Section2 through Section6. Once you are at the Section of your choosing, then release the Programming button.

2) CHANGE THE SETTING FOR THE THAT SECTION

Press the Programming Button to cycle through the Settings following the charts to select the setting you want.

3) SAVE THE SETTING

Once you have the Setting you want, **Press and Hold** the Program Button until all three lights flash.

	SECTIONS	Default setting
	Section 1: Detection distance	10ft
	Section 2: Sensitivity settings & **FACTORY DEFAULT**	Mid
	Section 3: Closing speed of gate	6 secs
	Section 4: Differentiate between vehicles and pedestrians	2– Yes
	Section 5: Relay holding count in seconds or pulses	Presence only
	Section 6: Type of device connect-ed to	1 – Barrier Gate

Section 1 settings - Detection distance

	3ft
	5ft
	6.5ft
	8ft
	10ft
	11.5ft
	13ft
	15ft
	16.5ft
	18ft
	20ft

Section 2 settings - Sensitivity

	Low
	Mid
	High
	Factory Default

Section 4 settings - Differentiate Vehicles & Ped

	No
	Yes

Section 3 settings - Closing Speed seconds

	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
	12

Section 5 settings - Relay holding seconds or pulses

	Presence Only
	1
	2
	3
	4
	5
	6

Section 6 settings - Type of device connected to

	Barrier Gate
	Sliding Gate
	Pulse output

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Optimizing for best performance

Sensitivity Setting

- For **electric vehicles**, set sensitivity to **Medium** or **Low**.
- For **pedestrian pathways**, use **Medium** or **High**.
- If two detectors are used (e.g., entry and exit), you can set one to Medium and the other to High or Low for best coverage.

Pedestrian and Vehicle Differentiation

- We strongly recommend enabling pedestrian/vehicle distinction in most applications.
- For dedicated **electric vehicle lanes** or **pedestrian-only areas**, set the mode to **"No distinction between pedestrians and vehicles."**
- In mixed-use areas, enable **"Distinguish between pedestrians and vehicles"** to help prevent the gate arm from closing on pedestrians or non-vehicle traffic.

Relay Output Delay

- In **Trigger Mode**, if the delay is set to **0 seconds**, the relay will output continuously while a vehicle is detected (presence mode).
- If the delay is **1–6 seconds**, the relay will output a pulse for the selected time when triggered.

Troubleshooting Sensor

Radar Triggered by the Gate Arm During Opening or Closing

- Verify the distance between the radar and the center of the gate arm matches installation requirements.
- Ensure the radar mounting surface is vertical to the gate arm post.
- Adjust the radar position or add a 0.08–0.16 inch (2–4 mm) spacer on the side nearest the gate arm.
- Check if the **set opening speed** is higher than the **actual gate arm closing speed**.
- If **pedestrian/vehicle distinction** is enabled but not necessary, turn it off and lower sensitivity by one level to reduce false triggers.

Sensor Has Not Reset

- This can happen if the set detection distance is longer than the lane width, if a foreign object is detected, or if the radar is not mounted vertically.
- Long press the function key to perform **Radar Initialization**.
- After initialization, power the unit off and back on again.

Three Green Lights Stay On After Power-Up

- This indicates radar initialization failed.
- If the problem continues after repeated restarts, the unit may require factory inspection and servicing.

Green Lights #1 and #3 Flashing

- This occurs if the radar detects the gate arm closing and cannot distinguish between a gate arm and a vehicle, or if a rebound signal is detected at the edge of the detection beam.
- After the gate opens or the signal disappears, if no vehicle is detected, the radar will delay opening the gate as a safety measure to prevent striking the rear of a vehicle.
- This safety mechanism does not require further action.