

Wireless IR Configuration Tool

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USING THE FSIR-100 CONFIGURATION TOOL

The FSIR-100 Wireless IR Configuration Tool is a handheld tool for changing defaults and testing of WattStopper devices. It provides wireless access to the devices for parameter changes and testing.

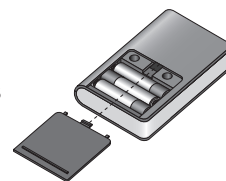
The FSIR-100 display shows menus and prompts to lead you through each process. The navigation pad provides a simple way to navigate through the customization fields.

Within a certain mounting height of the sensor, the FSIR-100 allows modification of the system without requiring ladders or tools; simply with a touch of a few buttons.

The FSIR-100 IR transceiver allows bi-directional communication between the device and the FSIR-100 configuration tool. Simple menu screens let you see the current status of the sensor and make changes. It can change device parameters such as high/low mode, sensitivity, time delay, cut off and more. With the FSIR-100 you can also establish and store device parameter profiles.

BATTERIES

The FSIR-100 operates on three standard 1.5V AAA Alkaline batteries or three rechargeable AAA NiMH batteries. The battery status displays in the upper right corner of the display. Three bars next to **BAT=** indicates a full battery charge. A

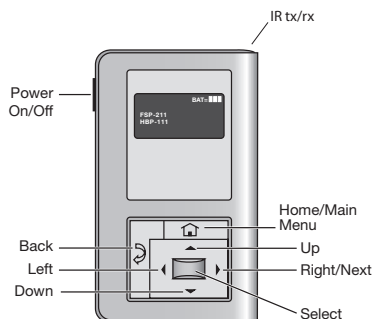


warning appears on the display when the battery level falls below a minimum acceptable level. To conserve battery power, the FSIR-100 automatically shuts off 10 minutes after the last key press.

- If communication is not successful, (if possible) move closer to the sensor.
- If still not successful, there may be too much IR interference from other sources. Programming the unit at night when there is no daylight available may be the only way to communicate with the sensor.

NAVIGATION

Navigate from one field to another using (up) or (down) arrow keys. The active field is indicated by flashing (alternates) between yellow text on black background and black text on yellow background.

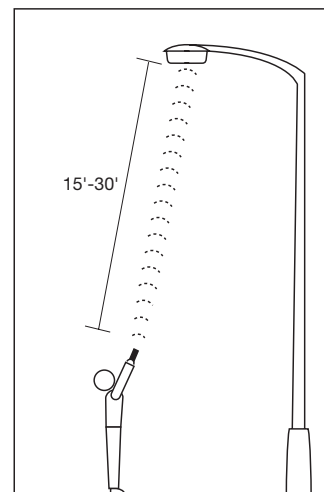


Once active, use the Select button to move to a menu or function within the active field. Value fields are used to adjust parameter settings. They are shown in “less-than/greater-than” symbols: <value>. Once active, change them using (left) and (right) arrow keys. The right key increments and the left key decrements a value. Selections wrap-around if you continue to press the key beyond maximum or minimum values. Moving away from the value field overwrites the original value. The Home button takes you to the main menu. The Back button can be thought of as an undo function. It takes you back one screen. Changes that were in process prior to pressing the key are lost.

IR COMMUNICATION

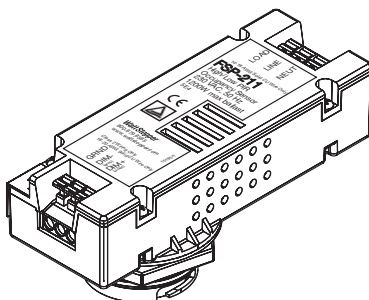
IR communication can be affected by the mounting height of the sensor and high ambient lighting such as direct daylight or electric light such as floodlights, and some halogen, fluorescent lamps, LED's.

When trying to communicate with the device, be sure to be positioned under the sensor without any obstructions. Every time the commissioning tool establishes communication with the device, the controlled load will cycle.



* Distance may vary depending on the lighting environment

FSP-211

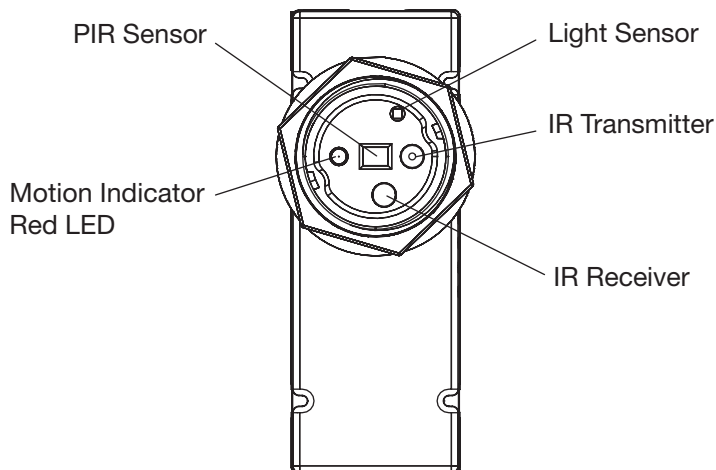


The FSP-211 is a motion sensor that dims lighting from high to low based on movement. This slim, low-profile sensor is designed for installation inside the bottom of a light fixture body. The PIR lens module connects to the FSP-211 through a 1.30" diameter hole in the bottom of the fixture.

The sensors use passive infrared (PIR) sensing technology that reacts to changes in infrared energy (moving body heat) within the coverage area. Once the sensor stops detecting movement and the time delay elapses lights will go from high to low mode and eventually to an OFF position if it is desired. Sensors must directly “see” motion of a person or moving object to detect them, so careful consideration must be given to sensor luminaire placement and lens selection. Avoid placing the sensor where obstructions may block the sensor’s line of sight.

Call 800-879-8585 for Technical Support

COMPONENTS



FSP-211 SCREENS

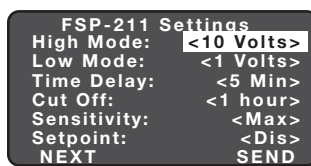
Home Menu



Choose FSP-211 Press Select

The Home (or Main) menu displays after the power-up process completes. It contains information on the battery status and sensor menu choices. Press the up or down buttons to highlight the desired sensor then press Select.

High Mode



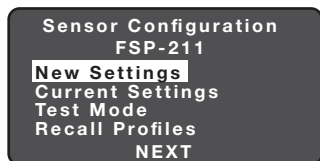
Press the Left/Right Arrow to Increase or Decrease Volts

When the sensor detects motion the dimming control output ramps up to the selected HIGH light level (default is 10V).

Range: 0 V to 10 V
Increments: 0.2 V

To program the FSP-211 with the selected parameters go to SEND and press the Select button. The controlled load should cycle once the sensor is updated.

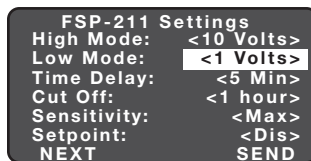
New Settings



Press Select

New Settings allow you to select the different sensor parameters such as: High/Low Mode, Time Delay, Cut Off, Sensitivity, Setpoint and Ramp/Fade rates.

Low Mode



Press the Left/Right Arrow to Increase or Decrease Volts

After the sensor stops detecting motion and the time delay expires the dimming control output fades down to the selected LOW light level (default is 1V).

Range: OFF, 0 V to 9.8 V
Increments: 0.2 V

Time Delay

FSP-211 Settings
High Mode: <10 Volts>
Low Mode: <1 Volts>
Time Delay: <5 Min>
Cut Off: <1 hour>
Sensitivity: <Max>
Setpoint: <Dis>
NEXT SEND

Press the Left/Right Arrow
to Raise or Lower Time Delay



The time period that must elapse after the last time the sensor detects motion for the lights to fade to LOW mode (default is 5 min).

Range: 30 sec, 1 min to 30 min
Increments: 1 min

Cut Off

FSP-211 Settings
High Mode: <10 Volts>
Low Mode: <1 Volts>
Time Delay: <5 Min>
Cut Off: <1 hour>
Sensitivity: <Max>
Setpoint: <Dis>
NEXT SEND

Press the Left/Right Arrow to
Increase or Decrease Cut Off



The time period that must elapse after the lights fade to Low Mode and the sensor detects no motion for the lights to turn OFF (default is 1 hour).

Range: Disable (No cut off, lights will stay in low mode) 1 min to 59 min, 1 hr to 5 hr (press and hold should cause to move faster through the increments)

Increments: 1 min or 1 hr

Sensitivity

FSP-211 Settings
High Mode: <10 Volts>
Low Mode: <1 Volts>
Time Delay: <5 Min>
Cut Off: <1 hour>
Sensitivity: <Max>
Setpoint: <Dis>
NEXT SEND

Press the Left/Right Arrow
to Increase or Decrease
Sensitivity



The response of the PIR detector to motion within the sensor's coverage area (default is max).

Range and Sequence: On-Fix, Off-Fix, Low, Med, Max
(On-Fix: relay closed, occupancy detection disabled; Off-Fix, relay open, occupancy detection disabled).

Hold Off Setpoint

FSP-211 Settings
High Mode: <10 Volts>
Low Mode: <1 Volts>
Time Delay: <5 Min>
Cut Off: <1 hour>
Sensitivity: <Max>
Setpoint: <Dis>
NEXT SEND

Press the Left/Right Arrow
to Increase or Decrease
Setpoint



The selectable ambient light level threshold that will hold the lights off or at LOW level when the sensor detects motion (default is Disable).

Range: Auto, Disable, 1 fc to 250 fc

Increments: 1 fc (press and hold should cause to move faster thru the increments)

Sequence: Disable, 1 fc to 250 fc

The Auto option invokes an automatic calibration procedure to establish an appropriate setpoint based upon the contribution of the electric light. As part of this procedure, the controlled load is turned on to warm up the lamp, and then it is switched off and on eight times, terminating in an off state. After this process, a new setpoint value is automatically calculated. During this time, communication to the FSP-211 is disabled.

Next

FSP-211 Settings
High Mode: <10 Volts>
Low Mode: <1 Volts>
Time Delay: <30 Sec>
Cut Off: <1 hour>
Sensitivity: <Max>
Setpoint: <Dis>
NEXT SEND

Choose NEXT to View
More Settings



To view more settings go to
NEXT and press the Select
button

Ramp Up

FSP-211 Settings
Ramp Up: <Dis>
Fade Down: <Dis>
Photocell: <Dis>
PRIOR SAVE SEND

Press the Left/Right Arrow to
Increase or Decrease Sec



Time period for light level to increase from LOW to HIGH (default is Disable; light/load switches instantly).

Range: Disable, 1 sec to 60 sec
Increments: 1 sec

Fade Down

FSP-211 Settings
Ramp Up: <Dis>
Fade Down: <Dis>
Photocell: <Dis>
PRIOR SAVE SEND

Press the Left/Right Arrow to
Increase or Decrease Sec



Time period for light level to decrease from HIGH to LOW (default is Disable; light/load switches instantly).

Range: Disable, 1 sec to 60 sec
Increments: 1 sec

Photocell On/Off

FSP-211 Settings
Ramp Up: <Dis>
Fade Down: <Dis>
Photocell: <Dis>
PRIOR SAVE SEND

When the light level exceeds this setting, the lights will turn off even when the space is occupied. Once the light level exceeds this setting, the sensor will wait and monitor for a short period of time

in order to confirm the light level increase is not temporary before forcing the lights to go off. When light level goes below the settings, the light will turn on even without motion detection. This feature is disabled by default. If using this setting in combination with the Hold Off setpoint, there must be at least 10fc of dead band between the two settings. The Photocell setpoint is automatically set to maintain at least 10fc of dead band above the Hold Off setpoint to help avoid load cycling.

Prior

FSP-211 Settings
Ramp Up: <Dis>
Fade Down: <Dis>
Photocell: <Dis>
PRIOR SAVE SEND

Press the
Down Arrow
to Choose PRIOR



Press
Select



To go back to previous
settings go to PRIOR and
press the Select button.

Send

FSP-211 Settings

Ramp Up: <Dis>
Fade Down: <Dis>
Photocell: <Dis>

PRIOR SAVE **SEND**

Press the Down Arrow
to Choose SEND

To program the FSP-211 with the selected parameters go to SEND and press the Select button. The controlled load should cycle once the sensor is updated.

Light Level

FSP-211 Settings

Ramp Up: <Dis>
Fade Down: <Dis>
Light Level: <15>
Photocell: <Dis>

PRIOR SAVE **DONE**

Displays the light level at the FSP-211. The light level reading can be used as a reference for setpoint adjustments.

Save

FSP-211 Settings

Ramp Up: <Dis>
Fade Down: <Dis>
Photocell: <Dis>

PRIOR **SAVE** DONE

Press the
Down Arrow
to Choose SAVE

Press
Select

To Save these New Settings parameters as one of the profiles go to SAVE and press the Select button.

Done

FSP-211 Settings

Ramp Up: <Dis>
Fade Down: <Dis>
Light Level: <15>
Photocell: <Dis>

PRIOR SAVE **DONE**

Press the Down Arrow
to Choose DONE

To go to the FSP-211 Home screen go to DONE and press the Select button.

Save FSP-211 Parms

Profile 1
Profile 2
Profile 3
Profile 4
Profile 5
Profile 6
Cancel

Press the
Up/Down Arrow
to Choose Profile

Press
Select

Test Mode

Sensor Configuration
FSP-211

New Settings
Current Settings
Test Mode
Recall Profiles
NEXT

Choose
Test Mode

Press
Select

Test Mode shortens timeouts for High/Low and Cut Off, to allow quick verification of settings. Test Mode disables automatically after 5 minutes.

Current Settings

Sensor Configuration
FSP-211

New Settings
Current Settings
Test Mode
Recall Profiles

Choose
Current
Settings

Press
Select

Point to desired
Occupancy Sensor

Press 'Select'

Point and
Press Select

Enable/Disable

FSP-211 Test Mode

Enable Disable

Press the Left/Right
Arrow to Enable or
Disable Test Mode

Press
Select

Test Mode has been enabled.

Current Settings allow you to recall the parameters for a specific sensor. These are read only parameters.

View Current Settings

FSP-211 Settings

High Mode: <10 Volts>
Low Mode: <1 Volts>
Time Delay: <5 Min>
Cut Off: <1 hour>
Sensitivity: <Max>
Setpoint: <Dis>

NEXT DONE

Press Select to
View More Settings

FSP-211 Settings

Ramp Up: Dis
Fade Down: Dis
Light Level: 15
Photocell: Dis

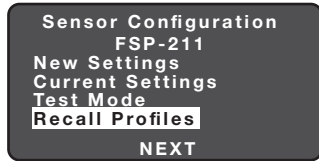
PRIOR SAVE DONE

Press the Down Arrow
to Choose PRIOR

Highlight and press Select to view the Current Settings.

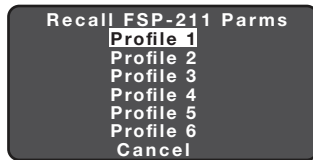
To go back to previous settings go to PRIOR and press the Select button.

Recall Profiles



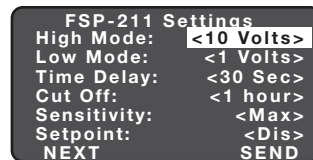
Choose Recall Profiles  Press Select 

Recall Profiles allow the user to select the saved parameter profiles. This feature is used when programming multiple FSP-211's with the same parameters.



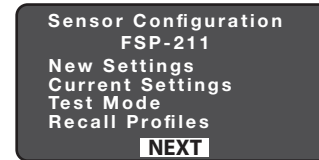
Press the Up/Down Arrow to Choose a Specific Profile  Press Select 

Selecting a specific profile allow the user to also change the parameters such as: High/Low Mode, Time Delay, Cut Off, Sensitivity, Setpoint and Ramp/Fade rates.



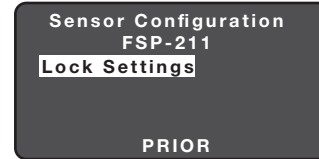
Lock Settings

IR communication locks to prevent unauthorized changes of FSP-211 parameters.



Press Select 


To view more sensor configuration settings go to NEXT and press the Select button.



Press Select 

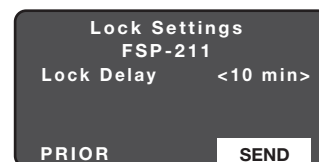
FSP-211 default settings communicate with the FSIR-100; however, this security feature limits communication only for authorized installers who have access to main power supply to the FSP-211 sensor. Press Select to set Lock Delay or press PRIOR to go back.



Press the Left/Right Arrow to Disable or set Lock Delay time 

Factory default Lock Delay setting is disabled and FSP-211 parameter can change with any FSIR-100 at anytime. To enable Lock Delay with time, select lock delay time and press SEND to set delay time in the FSP-211. Its parameter changes with the FSIR-100 will be locked after the specified timer expires from the last message. At the end of the specified time the FSP-211 will be locked unless there is a power cycle. Any locked sensor needs power cycling to initiate any configuration through the FSIR-100. To permanently disable Lock Delay after power cycling, select Disable and press SEND.

Range: 10 min - 240 min
Increments: 1 min



Press Select 

Highlight SEND and press Select to enable lock settings.



This screen will appear if the FSP-211 is locked. If it is locked, cycle the power.

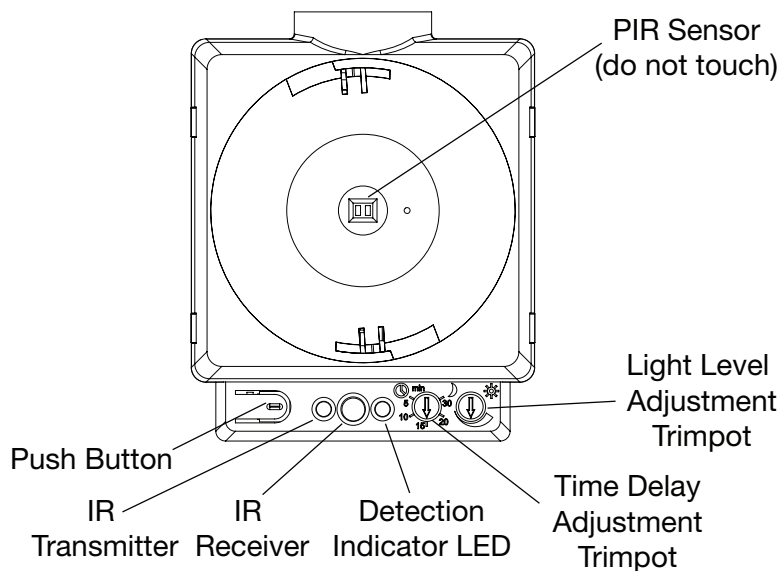
HBP-111



The HBP High Bay Passive Infrared (PIR) Occupancy Sensor consists of two components. These components were developed to work as a convenient system and include both sensor and lens modules. HBP-111 sensor is designed for automatic lighting control in warehouses and other indoor high bay spaces. The lens is specifically engineered to provide reliable coverage from a wide range of mounting heights. Time Delay and Light Level settings for the HBP sensor can be adjusted via trimpots designated for each. The HBP-111 can also be commissioned remotely using a wireless configuration tool.

The HBP occupancy sensor is designed to mount directly to a light fixture and control the load in the fixture. It can be wired to control all ballasts in the fixture. When motion is detected within the sensor's coverage area, the relay in the sensor closes, and lighting loads are automatically turned on. When motion is no longer detected for the duration of the time delay setting, the relay opens and the lighting load is turned off. The sensor's light level hold-off and time delay settings are factory preset at 300 foot candles and 15 minutes, respectively, which are suitable for most high bay applications.

COMPONENTS



HBP-111 SCREENS

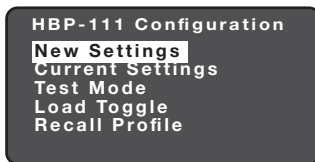
Home Menu



Choose HBP-111 Press Select

The Home (or Main) menu displays after the power-up process completes. It contains information on the battery status and sensor menu choices. Press the up or down buttons to highlight the desired sensor then press Select.

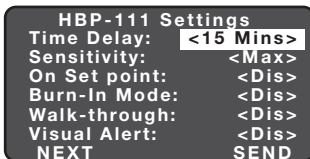
New Settings



Press Select

New Settings allow you to select the different sensor parameters such as: Time Delay, Sensitivity, On Set point and Burn-In Mode.

Time Delay



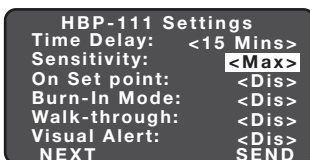
Press the Left/Right Arrow to Raise or Lower Time Delay

The time period that must elapse after the last time the sensor detects motion for the lights (default is 15 min).

Range: 1 min to 30 min
Increments: 1 min

To program the HBP-111 with the selected parameters go to SEND and press the Select button. The controlled load should cycle once the sensor is updated.

Sensitivity

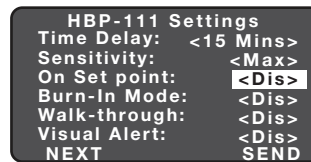


Press the Left/Right Arrow to Increase or Decrease Sensitivity

The response of the PIR detector to motion within the sensor's coverage area (default is max).

Range and Sequence:
Low, Med, Max

On Set point



Press the Left/Right Arrow to Increase or Decrease Set point

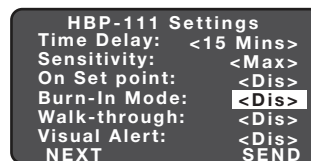
The selectable ambient light level threshold that will hold the lights off when the sensor detects motion (default is 300 fc).

Range: Disabled, 1 fc to 300 fc

Increments: 1 fc (press and hold should cause to move faster thru the increments)

Default: Disabled

Burn-In Mode

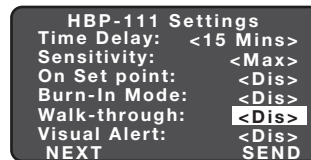


Press the Left/Right Arrow to Enable or Disable Burn-In

When burn-in is enabled, the light load will turn On for 100 hours and remain on regardless of occupancy. The push button on the HBP-111 can be used to toggle the load and exit burn-in mode. The FSIR-100 can also be used to exit burn-in mode.

Default: Disabled

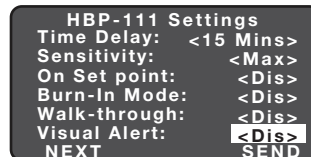
Walk-through Mode



Press the Left/Right Arrow to Enable or Disable Walk-through

Walk-through mode provides a 3 min time delay for applications where occupancy is brief, such as a copy room, closet, etc. When enabled, if no activity is detected after the first 30 sec from initial trigger, the sensor will turn the load off 3 min after the initial detection. If there is activity after the first 30 sec, the sensor will use the set time delay. Once the time delay has expired, the sensor will revert to using the standard walk-through mode time delay. Default is Off.

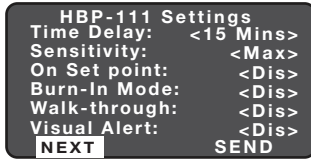
Visual Alert



Press the Left/Right Arrow to Enable or Disable Visual Alert

The sensor will toggle the load for 1 sec alerting the occupant that the set time delay will be reached within 1 min and turn the lighting off. This provides a visual indication so that the occupant can keep the lights on by moving within the coverage area if the space will still remain occupied. Default is Off.

Next

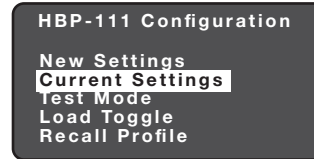


Press the Left/Right Arrow
to go to more settings



To view more settings go to
NEXT and press the Select
button

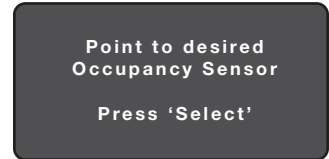
Current Settings



Choose
Current
Settings



Press
Select



Point to desired
Occupancy Sensor

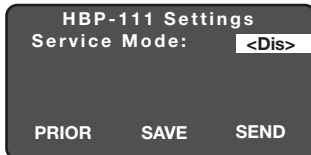
Press 'Select'

Point and
Press Select



Current Settings allow you to recall the parameters for a
specific sensor. These are read only parameters.

Service Mode

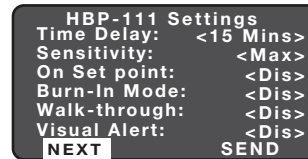


Press the Left/Right Arrow
to Enable or Disable
Occupancy Mode



In Service Mode, motion
detection is disabled. If
you enable Service Mode,
loads must be turned ON
and OFF manually. When
disabled (the default), the
sensor functions normally.

View Current Settings

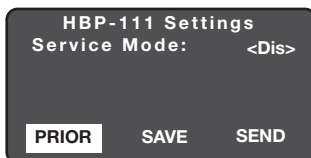


Highlight and press
Select to view the current
settings.

Press the Left/Right Arrow
to go to more settings



Prior



Press the
Down Arrow
to Choose PRIOR

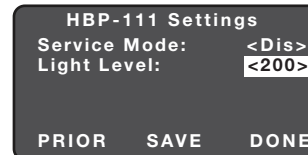


Press
Select



To go back to previous
settings go to PRIOR and
press the Select button.

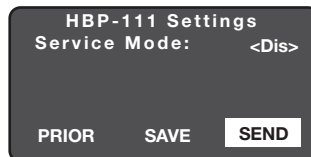
Light Level



Presents light level to the
HBP-111. The light level
reading can be used as
a reference for setpoint
adjustments.

To be able to Save
these Current Settings
parameters as one of the
profiles go to SAVE and
press the Select button.

Send

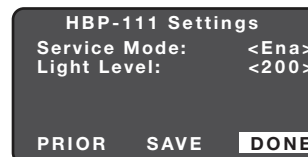


Press the Down Arrow
to Choose SEND



To program the HBP-111
with the selected parameters
go to SEND and press the
Select button. The controlled
load should cycle once the
sensor is updated.

Done



Press the Down Arrow
to Choose DONE



To be able to go to the
HBP-111 Home screen
go to DONE and press the
Select button.

Save



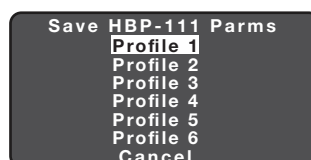
Press the
Down Arrow
to Choose SAVE



Press
Select



To Save these New
Settings parameters as
one of the profiles go
to SAVE and press the
Select button.



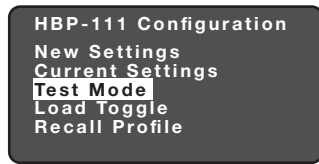
Press the
Up/Down Arrow
to Choose Profile



Press
Select



Test Mode



Choose Test Mode  Press Select 

Test Mode shortens the time delay to allow quick verification of HBP coverage for motion detection. Test Mode disables automatically after 10 minutes.

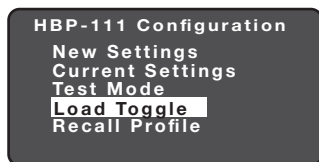
Enable/Disable



Press the Left/Right Arrow to Enable or Disable Test Mode  Press Select 

Test Mode has been enabled.

Load Toggle



Press Select 

Used to turn the load ON and OFF from the FSIR-100.

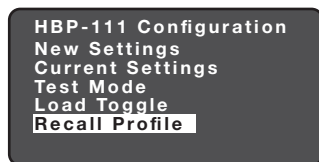
When occupancy mode is disabled, the light will remain ON or OFF depending on the last state.

Options: ON, OFF
Default: ON



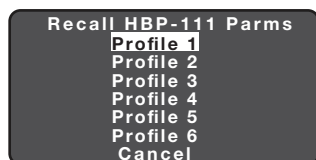
Point and Press Select 

Recall Profile



Choose Recall Profile  Press Select 

Recall Profiles allow the user to select the saved parameter profiles. This feature is used when programming multiple HBP-111's with the same parameters.



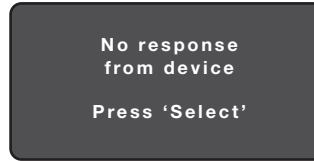
Press the Up/Down Arrow to Choose a Specific Profile  Press Select 

TROUBLESHOOTING

Problem: Display does not come on when I press the Power On Button.

- Make sure the batteries are installed correctly.
- Make sure batteries are good.

Problem: No Response Screen appears:



- Make sure that the device is not obstructed and try again.
- Move closer to the device.
- The angle may be too high, move closer so that you are directly underneath the sensor.
- If still not successful, there may be too much IR interference from other sources. Programming the unit at night when there is no daylight available may be the only way to communicate with the sensor.
- Make sure you are using the FSIR-100 and not the LMCT-100.
- Make sure the device is within range.
- Make sure the device you are pointing at is powered.

For other issues not related to communication, consult the appropriate installation instructions or contact Technical Support at 800.879.8585.

WARRANTY INFORMATION

WattStopper warrants its products to be free of defects in materials and workmanship for a period of five (5) years. There are no obligations or liabilities on the part of WattStopper for consequential damages arising out of, or in connection with, the use or performance of this product or other indirect damages with respect to loss of property, revenue or profit, or cost of removal, installation or reinstallation.

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