



Wireless

Full Bin Alarm

INSTALLATION and OPERATING INSTRUCTIONS

The **G.Force** Wireless Full Bin Alarm is designed to provide the ultimate in convenience and safety to perform tasks remotely. It is a radio frequency (RF) sensing device that helps prevent overfilling of grain bins by activating an alarm when the grain Sensor Probe is activated. The Sensor Probe, which operates at 418 MHz FM, transmits securely encoded information to the Receiver, which then decodes the information and alerts the user that the bin is full. The Sensor Probe and Receiver are designed to operate within 300' but actual range is dependent on operating environment.

Features :

- Simplicity of design and quality of engineering
- Power On/Off switch on Receiver Console
- Alarm Cancel on Console
- Lo Battery level indicator
- User selectable security code
- LED Indicator lights
- 9v Transmitter Battery
- Ease of installation
- Multiple Transmitters can operate a single Receiver
- Multiple Receivers can operate from a single Transmitter

Manufactured By: Brehon Agrisystems Inc.

102 – 2750 Faithful Ave. Box 3
Saskatoon, SK S7K 6M6 Maymont, SK S0M 1T0
(306) 933 2655 phone/fax
Web: www.brehonag.com
Email: garth.brehon@sasktel.net

Brehon Agrisystems Inc. is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use or performance of the product or other damage with respect to any economic loss, loss of property, loss of revenue or profit, or costs of removal, installation, or reinstallation.

Specifications:

Sensor:

Power:	9 volt DC battery
Frequency:	418 MHz
Modulation:	FM
Indicators:	Internal System/Battery Test
Case Size:	3" dia. x 14" long
Range:	300'+ (depending on environment)
Antenna:	7" Flexible Tuned
Security Code:	3 ⁸ selections
Environment:	Weatherproof

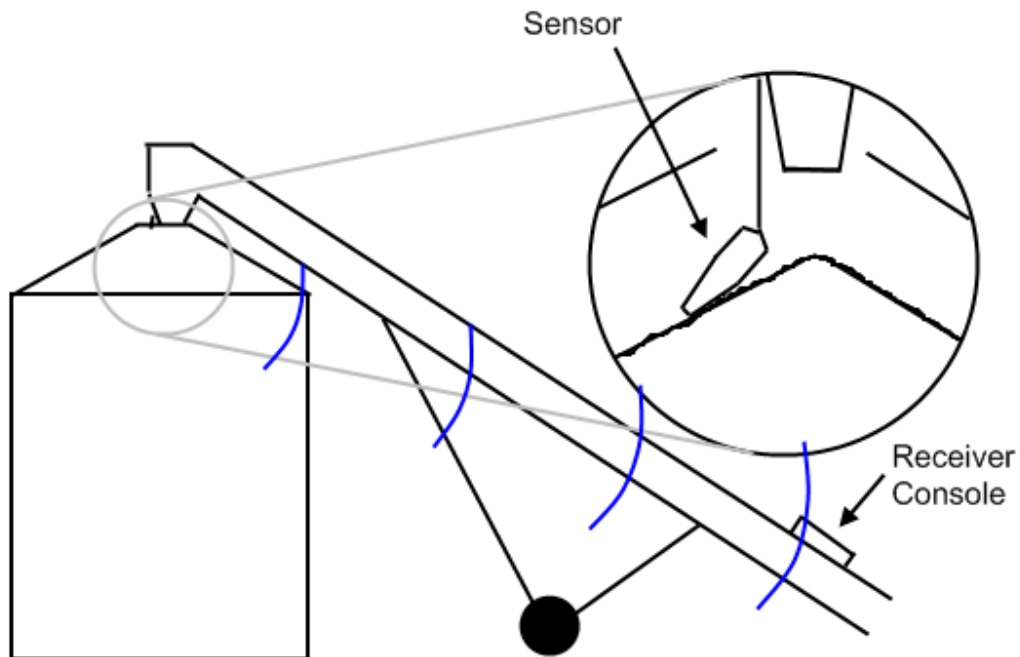
Receiver:

Power In:	12VDC
Standby Current:	40mA
Alarm Current:	400mA
Case Size:	7.5" x 4.8" x 3.4"
Security Code:	3 ⁸ selections
Power Input:	15' 16 ga. 2 conductor wire with Plug-and-Lock connectors
Indicators:	Power On Red LED Receive RF Data Yellow LED Transmitter Low Battery Level Green LED Face-mounted 2" Alarm LED Lamp 95dB audible siren
Antenna:	7" Flexible Tuned, Internal

Brehon Agrisystems Inc. is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use or performance of the product or other damage with respect to any economic loss, loss of property, loss of revenue or profit, or costs of removal, installation, or reinstallation.

Overview

The Full Bin Alarm is an auger-mounted monitoring system that indicates when the grain level in the bin is reaching its maximum. The system consists of a Receiver Console with audible and visible alarms and a Sensor Probe that hangs into the grain bin suspended from the spout of an auger. The battery-powered Sensor Probe is weather sealed and communicates wirelessly via radio frequency (RF) to the Receiver Console. When the grain level becomes high enough that the grain comes in contact with the Sensor Probe tilting the Sensor Probe beyond a angle of 15° to 20° vertically, the sensor will send an RF signal that tells the Receiver Console to activate the alarm.



Brehon Agrisystems Inc. is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use or performance of the product or other damage with respect to any economic loss, loss of property, loss of revenue or profit, or costs of removal, installation, or reinstatement.

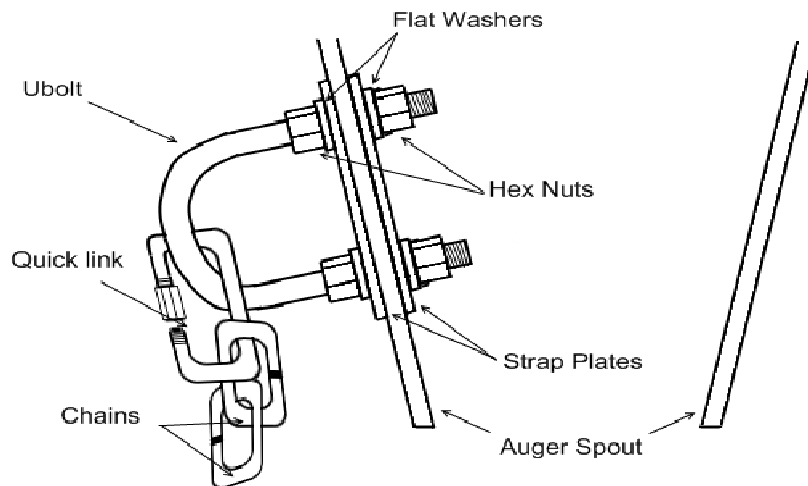
MECHANICAL INSTALLATION

RECEIVER CONSOLE

The Full Bin Alarm Receiver Console attaches easily to any metal surface using a pair of magnets located on the console back.

SENSOR PROBE

The transmitter mounting kit contains an 8-inch length of chain, a U-bolt, two strap plates, four hex nuts, four flat washers, and two quick link connectors. Drill two ¼” holes 1-3/8” apart in the spout and attach the U-bolt as shown in the following figure. Use a quick link to attach the chain to the U-bolt and the second quick link to attach the chain to the Sensor Probe.



ELECTRICAL INSTALLATION

RECEIVER CONSOLE

Connect +12VDC and ground to the Power Input wires as marked. The polarity must be as follows: +12V on the white wire, and GROUND on the black wire. When power to the Receiver is turned on the Red LED indicator light should be ON indicating normal operation. Press the “ON/OFF” button on the Receiver label to turn the power On and Off.

SENSOR PROBE

The Sensor is battery-powered and thus requires no external hook-up. To install/change the battery, remove the 3 screws holding the Sensor Probe halves together and separate the halves. Unclip the connector and slide the battery out of the cable ties to remove the battery. Insert and re-attach the new battery and clip the connector on to the battery. Perform self-test described on page 7. Reassemble.

Brehon Agrisystems Inc. is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use or performance of the product or other damage with respect to any economic loss, loss of property, loss of revenue or profit, or costs of removal, installation, or reinstallation.

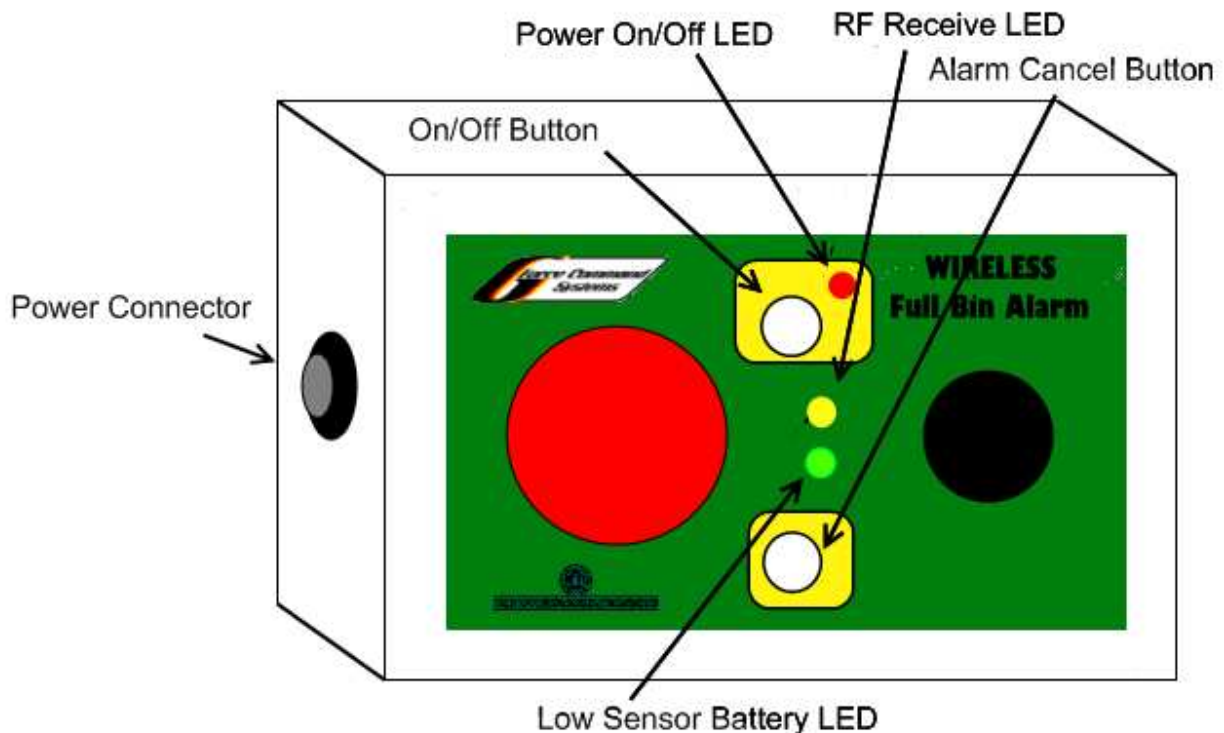
General Operation

RECEIVER CONSOLE:

The Receiver Console is powered by 12 volts DC and is equipped with a Power On/Off button and a Cancel Alarm (CAN) button on the front of the case. When the Power On/Off button is pressed, the red LED should light indicating normal operation. Press the Power On/Off button again to turn power off. The yellow LED indicates that the Receiver Console is receiving a valid RF transmission. In normal operation, when the Sensor Probe is tilted past its threshold angle it transmits an alarm signal, which causes the Yellow LED to light for ½ second and the alarm to activate.

LOW BATTERY LED

The green LED illuminates when the sensor sends a Low Battery signal, indicating that the Sensor Probe battery needs to be replaced. Once activated, the green LED will remain on until the receiver is powered off.



Brehon Agrisystems Inc. is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use or performance of the product or other damage with respect to any economic loss, loss of property, loss of revenue or profit, or costs of removal, installation, or reinstallation.

The Receiver Console activates the alarm when the alarm signal is received. The alarm remains on for ten seconds or until the Cancel button is pressed. If the Sensor Probe remains activated the alarm will continue for 60 seconds unless CANCELLED. While the alarm is active but has been cancelled, the alarm can be reactivated by pressing the CANCEL button a second time. If ten seconds elapse without receiving an alarm signal and the alarm is inactive from using the Cancel button, the receiver will automatically reset to normal mode and sound the alarm again should the sensor subsequently transmit the alarm signal.

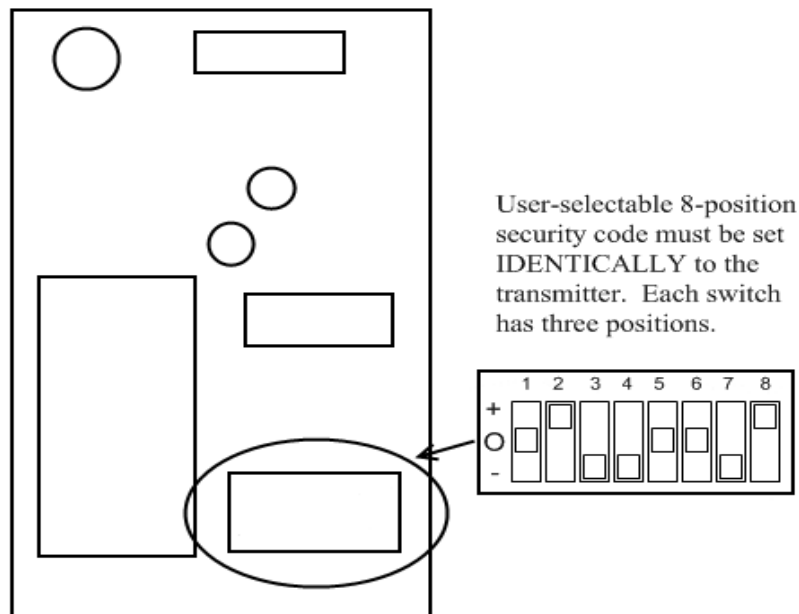
TO TEST THE RECEIVER CONSOLE:

Turn the power on, then press and hold the CANCEL button for four seconds, the alarm will sound and the light flash. Once tested, the alarm will shut off when the CANCEL button is released, and the unit will return to its normal mode.

The Receiver power may be turned off when not in use to prevent undesired operation.

SECURITY CODE:

The Receiver Console is equipped with an 8-position switch used to set the user security code. The security code is provided to prevent unwanted operation of the Receiver Console by other devices. Only a Sensor Probe with identical switch settings will be able to communicate with this Receiver Console. When the switches are set identically and the Sensor Probe communicates with the Receiver Console, the yellow Receive light will come on. This indicates that valid data with a matching security code has been received. Position these switches to any desired pattern for your own security code. REMEMBER: The 8-position switch on the Transmitter must be set IDENTICALLY. To access the security code switch, remove the screws on the Receiver Console front panel, and gently remove the panel.



Brehon Agrisystems Inc. is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use or performance of the product or other damage with respect to any economic loss, loss of property, loss of revenue or profit, or costs of removal, installation, or reinstallation.

SENSOR PROBE:

A nine-volt battery powers the Sensor Probe. If the battery voltage falls below 6.5 volts, the transmitter will transmit a Low Battery signal approximately once per hour, which will illuminate the green LED on the receiver to indicate that the Sensor Probe battery needs replacing. If the battery voltage falls below 6.0 volts, the sensor will be unable to transmit.

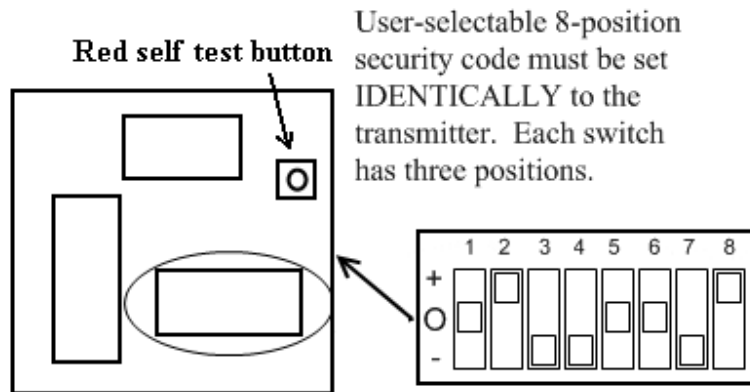
The Sensor Probe contains no external buttons or switches. Once the battery is installed it is always active. When the Sensor Probe is vertical, it is in very low-power sleep mode, waking every two seconds to check the tilt angle. A tilt angle greater than the threshold in a angle of 15° to 20° will cause the sensor to remain awake and begin alarm transmission if the angle remains above-threshold for more than one second.

While active, the Sensor Probe sends the alarm signal for a short period every five seconds. This is indicated by a blink of the yellow “receive” LED on the console. If the Sensor Probe is tilted above the threshold range for more than one minute, transmission will not continue and the Sensor Probe will return to sleep mode. Only when the Sensor Probe is brought below-threshold then back above it will the sensor transmit the alarm signal again. When the Sensor Probe returns to below the threshold range for more than one second, it will return to low-power sleep mode.

SENSOR SELF-TEST

To test the battery level and threshold angle of the sensor, access the circuit board by removing the three screws on the sensor case and separating the two halves of the assembly. The circuit board and battery are mounted on the black sensor mounting plate. With the battery attached, hold the red button on the circuit board for a few seconds. If the yellow LED begins flashing, the battery is low and needs to be replaced. If the yellow LED stays on, the battery is good. To test the threshold angle the red LED will light up when the circuit board is tilted beyond the threshold. To exit test mode, hold the button again until the yellow LED remains off.

Set the 8-position switch to your own security code, which matches the code on the Receiver Console to which it is to communicate. Note that any number of Sensor Probes can communicate to the same Receiver Console as long as they have the security code that matches the receiver.



Brehon Agrisystems Inc. is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use or performance of the product or other damage with respect to any economic loss, loss of property, loss of revenue or profit, or costs of removal, installation, or reinstallation.