



# Installation and Operation Manual

## RSD-E1

January 2016

Form IOM-RSD-E1 - Rev 02

**IMPORTANT: KEEP THIS DOCUMENT WITH THE PRODUCT UNTIL IT REACHES THE END USER.**

1. Contact with or inhalation of Anhydrous Ammonia (NH<sub>3</sub>) can cause **SERIOUS INJURY OR DEATH**.
2. Before installation or removal of any valve, the system must be purged of all product.
3. Personal Protective Equipment (PPE), safety gloves, goggles and clothing should be worn.
4. For proper handling and storage of NH<sub>3</sub>, refer to ANSI Standard K61.1, CGA 2.1 or Local Authority having jurisdiction.
5. An abundant supply of fresh water should be available to provide immediate first aid treatment for exposure to NH<sub>3</sub>.
6. To ensure long term safe operation, the manufacturer recommends that under normal service conditions this product should be inspected at least twice every year and be repaired or replaced as required. Transmitter battery should be checked/tested once daily when in use.

**WARNING: This product should be used with Anhydrous Ammonia (NH<sub>3</sub>) only.**

**WARNING: Remote is for emergency use only. Not intended for operational shut-down. Always reset the receiving unit after actuating system with handheld remote.**

**DESCRIPTION**

The RSD-E1 is a handheld, wireless transmitter. Together with the RSD-E-BOX, they are designed to add remote shut-down capabilities to a stationary anhydrous ammonia (NH<sub>3</sub>) storage tank. In the event of an unintentional product release, the operator may remotely shut-down the electromagnet or pneumatically actuated valves using the RSD-E1 transmitter.

When the "Emergency Shut-down" button is pressed on the RSD-E1, it sends an encoded 32-bit ID number and commands to the receiver. Only the receivers that have that transmitter's ID in its programmed list of transmitters will respond. One RSD-E-BOX receiver can be easily programmed to respond to up to 15 different RSD-E1 transmitters.

**ELECTRICAL SPECIFICATIONS**

Modulation:	FM
Carrier Frequency:	433.92 MHz
Antenna:	Reduced Height ¼ Wave Whip
Transmit Range:	Up to 120 meters (400 feet) over open ground
Battery:	2 X AAA Alkaline or rechargeable NI-CD or NI-MH
Battery Life:	> 10,000 Transmits
Low Battery Voltage:	2.3 Volts Typical (1.15 V per cell)
Operating Humidity:	0 to 100%
Operating Temperature Range:	-25°C to +80°C (-13°F to +176°F)
Weight:	160g (5.6oz)
Enclosure:	Buna-N Rubber and Stainless Steel 2.25" X 3.72" X 0.80" (excluding antenna)

**RSD-E1 TRANSMITTER**



**NOTICE**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**WARNING: Any changes or modifications not expressly approved by the Parker Hannifin Corporation could void the user's authority to operate this device.**

*While this information is presented in good faith and believed to be accurate, Individuals using this literature must exercise their independent judgment in evaluating product selection and determining product appropriateness for their particular purpose, system requirements and certifications. The manufacturer reserves the right to change product designs and specifications without notice.*

## PROGRAMMING RECEIVER (NEW INSTALL) OR ADDING A TRANSMITTER

1. Turn the power switch ON. Verify the system status LED is solid ON.
2. Press and hold the programming button until the status LED starts flashing (about 5 seconds), then release the button.
3. Press and hold the Emergency Shut-down button on the transmitter until the status LED stops flashing.
4. The receiver has now added the transmitter to its list and is ready to be used.

**NOTE:** To verify the transmitter and receiver have been paired, confirm that the status LED in the box flashes when the red button on the transmitter is pushed. Once you have verified the pairing, perform a system reset by cycling the power switch OFF and then ON.

**NOTE:** Maximum 15 transmitters per receiver.

## CLEARING ALL TRANSMITTERS FROM THE LIST

1. With the status LED solid ON, press and hold the programming button.
2. After 5 seconds, the status LED will start flashing. Keep holding the button for an additional 10 seconds until the status LED stops flashing. Release the button, and after 10 seconds verify that the status LED turns solid ON.
3. All transmitters are now cleared from the list. The receiver will need to learn at least one transmitter before it can be used.

## RESETTING AFTER A SHUT-DOWN

After a shut-down, to reset the system, cycle the power switch in the RSD-E-BOX to OFF then back to ON. The status LED will return to solid ON and the system will be ready to operate.

## BATTERY REPLACEMENT

Each time a button is pressed the batteries are tested. If the batteries are good, the status indicator will flash one time. If the batteries are weak, the status indicator will not flash and the batteries should be replaced as soon as possible.

To replace the batteries, remove the four screws on the back of the transmitter. The back cover can then be lifted out of the transmitter's rubber enclosure. Replace the batteries with fresh AAA alkaline cells while carefully observing battery polarity. Replace the cover and screws.

**NOTE:** Never store the transmitter with weak or dead batteries. Always remove the batteries if the transmitter will be stored for an extended time.

**WARNING:** Installing the batteries in the wrong polarity may cause permanent damage to the transmitter.



## CONTACT SQUIBB-TAYLOR

If you have any additional questions about anything contained in this manual or desire additional copies, please call Squibb-Taylor at 1-800-345-8105.

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