

Installation Instructions



Industrial Remote Device

EXCLUSIVE DISTRIBUTOR

DESSCO

(801) 972-1836

Diesel Electric Service & Supply Co., Inc
652 west 1700 south, Salt lake City, Utah 84104

www.dessco.com



Important! Please Read Carefully. Please see notes 1 & 2

NOTE 1:

Installation of the Remote Control Unit should be performed by a licensed electrician. With any electrical connections there is always a risk of shock. A safety switch or power disconnect switch should be installed between the industrial equipment and the relays. In the event of the unit starting while maintenance or some other procedure is being performed on the industrial equipment this safety or disconnect switch would prevent possible injury.

Please use extreme caution.

INSTALLATION

Disconnect AC power from all equipment before installation

1. Mount the Receiver in a convenient location.
2. Connect the proper wires from what equipment you are controlling to the appropriate terminals in the receiver.

The receiver will work with 12 VDC wired straight to the receiver board terminals or with a 120 VAC to 12 VDC wall adapter supplied with the unit.

NOTE 2:
Very Important!!

The Remote Control Unit has a maximum input DC voltage of 15 volts. The Remote Control Unit is designed for a 12 volt DC system. Some battery chargers can produce an excess of 15 volts DC. If the user is connecting to a battery charging system the Remote Control Unit must be disconnected to prevent overload. As with any electrical device use extreme caution and use a licensed professional, if needed.

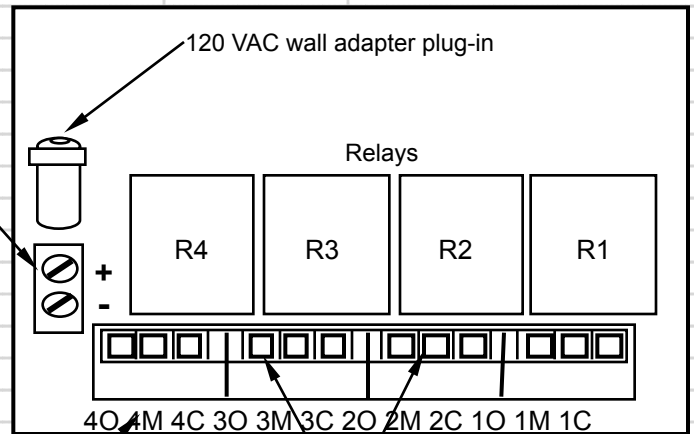
TERMINAL STRIP WIRING

- N.C. Relay #1 - Terminal 1C
- COMMON Relay #1 - Terminal 1M
- N.O. Relay #1 - Terminal 1O
- N.C. Relay #2 - Terminal 2C
- COMMON Relay #2 - Terminal 2M
- N.O. Relay #2 - Terminal 2O
- N.C. Relay #3 - Terminal 3C
- COMMON Relay #3 - Terminal 3M
- N.O. Relay #3 - Terminal 3O
- N.C. Relay #4 - Terminal 4C
- COMMON Relay #4 - Terminal 4M
- N.O. Relay #4 - Terminal 4O

- Stand-by current: 8 mA
- Maximum current: 200 mA
- Stand-by battery drain: 5 Amp hrs/month
- Suggested fusing: 1/2 Amp fuse

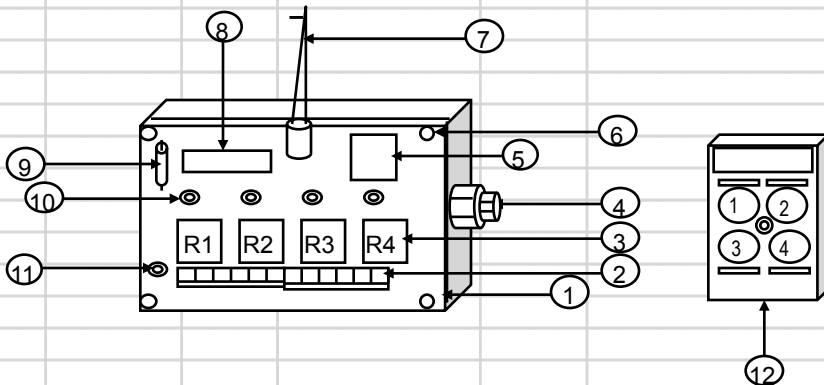
Rear view of Receiver

12 VDC connection



Terminal numbers

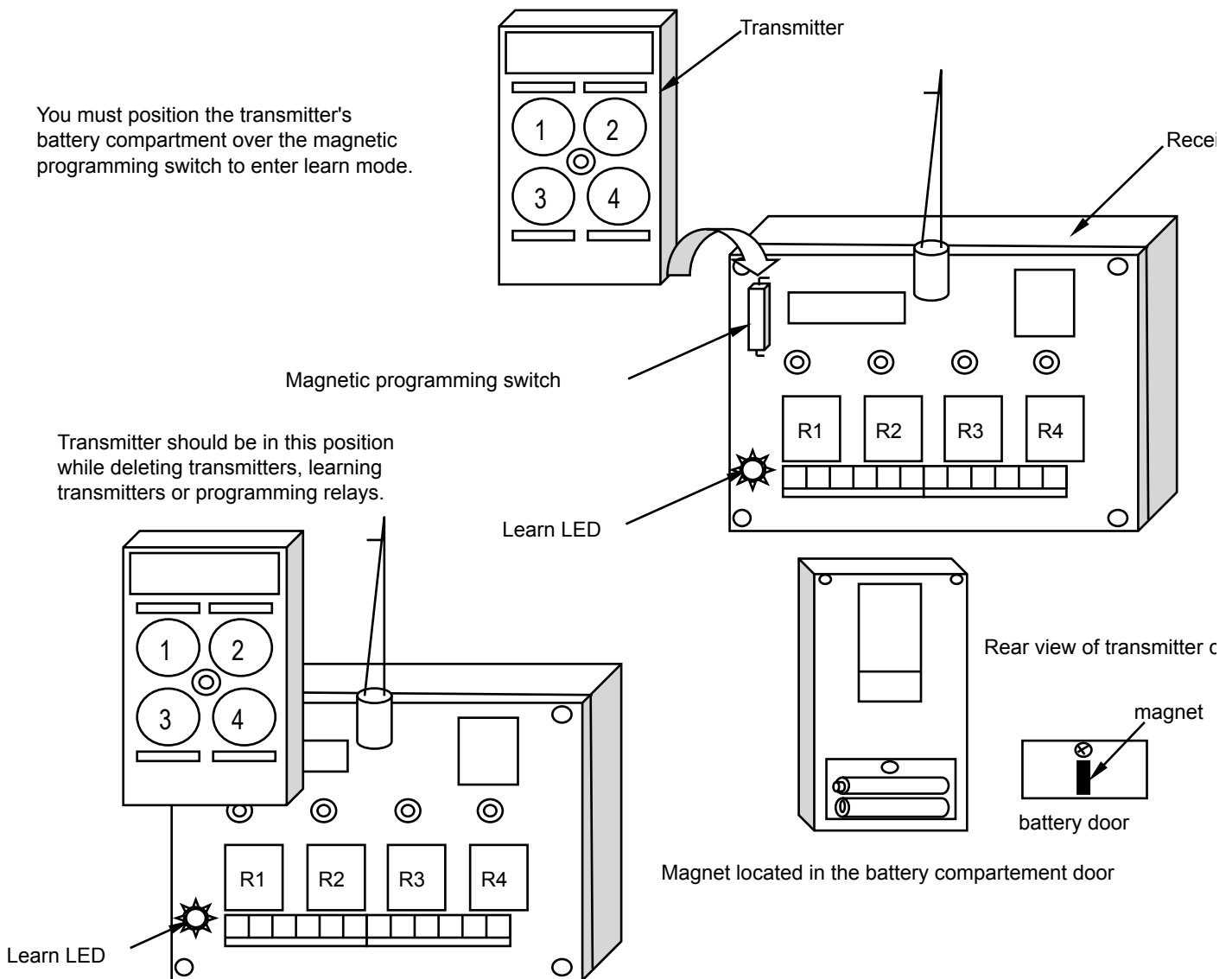
Terminals



1. Firefly Receiver
2. Terminal strip
3. Output relays 1-4
4. Strain relief connector
5. Receiver module
6. Mounting holes
7. Receiver antenna
8. Programmed microchip
9. Magnetic programming switch
10. Relay LED indicators
11. Learn LED indicator
12. 4 button Transmitter

The magnetic programming switch is used for **3** functions. The **FIRST** is used to clear the receiver's memory of stored transmitter serial numbers. This is done by holding the transmitter in proximity of the magnetic programming switch for a period of 10 seconds or until the learn LED flashes off. The **SECOND** function is to instruct the receiver to learn a new transmitter serial number. This is done by bringing the transmitter in proximity of the magnetic programming switch for 1 second or until the LED turns on. A pushbutton on the transmitter must then be pressed within a 15 second period. Once the transmitter is learned, the learn LED will flash twice. This learning process can be repeated so that the receiver can record up to 15 more transmitter serial numbers. The **THIRD** function is to instruct the receiver to accept user programmable output functions. This is done by bringing the transmitter in and out of proximity of the magnetic programming switch four times within a 2 second period. The learn LED will flash at a fast rate to indicate the receiver is in the user programmable mode. A sequence of 2 pushbuttons must be pressed on the transmitter in order to select the desired mode of operation. For example if the user wants all of the relays to be momentary, the programming sequence is to press pushbutton 1, wait 1 second then press pushbutton 1, again. When the pushbutton is pressed the first time, the learn LED will change to a slow blink. After the pushbutton is pressed again, the learn LED will turn off. If the user fails to input the desired sequence within the 15 second period, the receiver will not accept the change.

There are 16 functions programmed in the receiver to give the user the ability to change between momentary and toggle functions. A table of relay functions with programming sequences are shown on the next page.



NOTE: The 16 functions shown in this table are used to program the receiver to the users desired relay functionality. The programming is done by selecting the desired transmitter pushbutton mode as described on the User Programmable procedures page.

RELAY FUNCTION TABLE

Pushbutton Modes	RELAY 1	RELAY 2	RELAY 3	RELAY 4
1 - 1	M	M	M	M
1 - 2	M	M	M	T
1 - 3	M	M	T	T
1 - 4	M	T	T	T
2 - 1	T	T	T	T
2 - 2	T	T	T	M
2 - 3	T	T	M	M
2 - 4	T	M	M	M
3 - 1	M	M	M	Light 2 min off Timer (S1,S2,S3)
3 - 2	M	M	M	Light 5 min off Timer (S1,S2,S3)
3 - 3	M	M	Light 2 min off Timer (S1)	Light 2 min off Timer (S2)
3 - 4	M	M	Light 5 min off Timer (S1)	Light 5 min off Timer (S2)
4 - 1	On S1 Off S2	Same as R1	On S3 S4 Off	Same as R3
4 - 2	On S1 Off S2	Both S3 & S4	S3 only	S4 only
4 - 3	On S1 Off S2	On S3 Off S4	Both S1 & S2	Both S3 & S4
4 - 4	M	M	On S1 S2 Off	On S3 & R3 S4 or S2 Off

Legend

M=MOMENTARY

T=TOGGLE

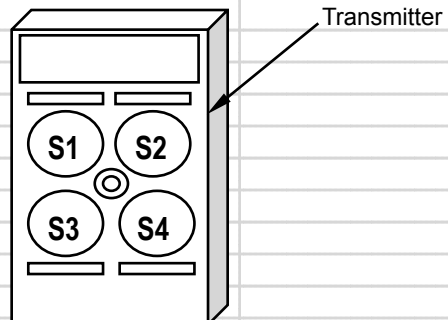
S1=Transmitter pushbutton 1

S2=Transmitter pushbutton 2

S3=Transmitter pushbutton 3

S4=Transmitter pushbutton 4

Mode 1 - 1 is the default



NOTE: S1, S2, S3, S4 denotes the actual switch located inside the transmitter.

INSTRUCTION TO THE USER

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

This equipment has been certified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

LIMITED WARRANTY STATEMENT

Firefly Remote Controls Inc warrants the Firefly Industrial Remote Control System, if properly used and installed, will be free from defects in material and workmanship for a period of 1 year after date of purchase. Said warranty to include the repair or replacement of defective equipment. This warranty does not cover damage due to external causes, including accident, problems with electrical power, usage not in accordance with product instructions, misuse, neglect, alteration, repair, improper installation, or improper testing. This limited warranty, and any implied warranties that may exist under state law, apply only to the original purchaser of the equipment, and last only for as long as such purchaser continues to own the equipment. This warranty replaces all other warranties, express or implied including,

but not limited to, the implied warranties or merchantability and fitness for a particular purpose. Firefly Remote Controls Inc makes no express warranties beyond those stated here. Firefly Remote Controls Inc disclaims without limitation, implied warranties of merchantability and fitness for a particular purpose. Some jurisdictions do not allow the exclusion of implied warranties so this limitation may not apply to you. To obtain warranty service, contact Firefly Remote Controls Inc for a return material authorization. When returning equipment to Firefly Remote Controls Inc, the customer assumes the risk of damage or loss during shipping and is responsible for the shipping costs incurred.

FIREFLY REMOTE CONTROLS INC
325 FRONT ST SUITE 143
EVANSTON, WY 82930

FCC STATEMENT

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Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

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DECLARATION OF CONFORMITY

TRADE NAME: Universal Remote RF Receiver

MODEL NUMBER: 1001 RF Receiver

COMPLIANCE TEST REPORT NUMBER: COMPATIBLE ELECTRONICS T30205C01

COMPLIANCE TEST REPORT DATE: 02/05/2003

RESPONSIBLE PARTY (IN USA): Firefly Remote Controls, Inc.

ADDRESS : 325 Front St. Suite 143, Evanston, WY 82930

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If the unit does cause harmful interference to radio or television reception, please refer to your user's manual for instructions on correcting the problem.