


RR-TRAN



USERS GUIDE



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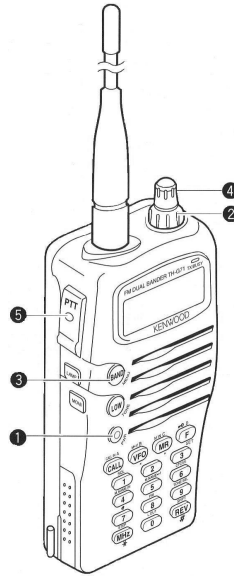
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- 6A. WARRANTY INFORMATION



SECTION 1: RR-TRAN

1A. RR-TRAN Description



Button descriptions:

- 1 PWR SWITCH** - This button is used to turn the Handheld Radio Remote unit ON and OFF.
- 2 SQUELCH / TUNING** - This knob is used for tuning frequencies and adjusting the level of squelch.
- 3 BAND** - This button is used to select between UHF and VHF. The VHF setting is used.
- 4 VOLUME** - This knob is used to increase or decrease the volume of the Handheld Radio Remote unit.
- 5 PTT** - This button is used to transmit voice and controller commands.

1B. RR-TRAN Technical Specifications

Transceiver Output: Variable from 50mW to 6W
 Temperature: -20 degrees to +60 degrees Celsius
 Receiver Sensitivity: 0.18 uV

Construction

Transceiver:
 Dimensions: 2.3" x 4.4" x 1.3"
 Transceiver weight: 11.6 oz.

Case: Tough polycarbonate

Compatibility

ET1: All versions after year 1999.
 ET2000: All versions through 2005 and Not using the model RRe Remote control.

Model Numbers

RR: Calsense integrated Radio Remote board.
 RR-TRAN: Calsense transceiver compatible only with the RR Radio Remote board.

SECTION 2: SETUP

2A. Use with model 2100 & ET1 Controllers

The RR-TRAN Handheld Radio Remote can be used in conjunction with the REC-RR Receiver to transmit commands to any 2100 & ET1 irrigation controller that conforms to the following guidelines:

2100 controller

- Operating on software version 025 or later.

ET1 controller

- All versions prior to 1999.
- Operating on software version up to 139.

CAUTION:

The use of harnesses or extensions other than supplied by Calsense can damage the equipment and void manufacturer's warranty.

1. Make sure that the On/Off volume knob on the handheld transceiver is in the **OFF** position.
2. Install the enclosed antennas to both the Handheld Radio Remote and the REC-RR Radio Remote receiver (Figure 2.1).

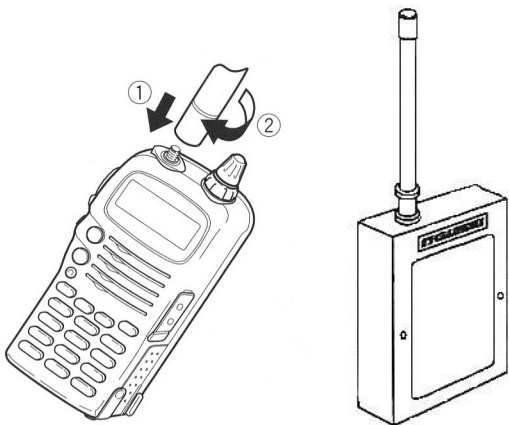


Figure 2.1

3. Connect the REC-RR receiver cable (9 pin female) to the port (9 pin male) on the front face of the controller panel (Figure 2.2).

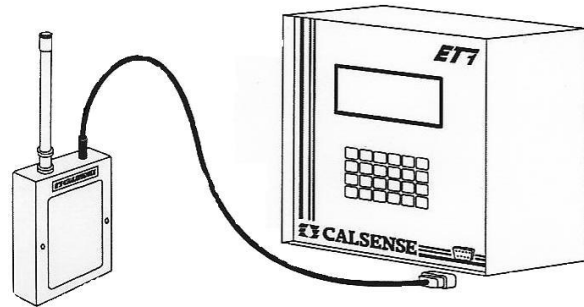


Figure 2.2

4. The Calsense controller supplies power to the receiver, the **RED** indicator light on the top of the receiver should be "blinking", if the indicator light is blinking proceed to step 5, if the indicator light is not blinking contact Calsense.
5. Insure that fully charged batteries are installed in the transceiver (spare batteries and charger are available). (See Section 4 Battery charging & replacement).
6. Turn the Transceiver ON by rotating the On/Off volume control knob clockwise. Rotate the squelch control knob clockwise until the desired noise level is reached. (Figure 2.3).

Note: Two-way voice communications are possible if there is a second transceiver in use.

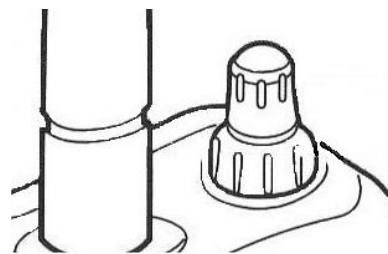



Figure 2.3

To confirm that a compatible version of software is installed in the Calsense controller:

1.  Press and hold the **PTT** button.

2.  Press the **STAR** key.

3.  **Release the PTT** button.

The controller should display:

“CALSENSE RADIO REMOTE STATIONS ON:”





This confirms a compatible version of software is installed.

If the **RED** light on the REC-RR receiver blinks but

“CALSENSE RADIO REMOTE STATIONS ON:”

does not appear, check the version of software installed in the controller as follows:

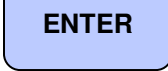
Enter the ET1 controller Set-Up mode by pressing the following sequence of keys:

1.  Press the **IRIGATE ON / OFF** key.
2.  Press the **STATION UP** key.
3.  Press the **STATION DOWN** key.
4.  Press the **ON / ARROW** key.

The upper left corner of the display will show the software version installed.

Example:


139M, 139G, 017, 023

5.  Press the **ENTER** key repeatedly until the controller “beeps” to exit the Set-up mode.

Note: When not in use make sure the ON / OFF volume control knob on the handheld transceiver is in the OFF position (fully counter-clockwise).

2B. Use with model ET1 controllers 1998 and older with (-RR) board.

ET1 controllers manufactured after 1999 and having software version 139 or older have the built in Radio remote board (-RR) option available. The Radio Remote screen can be accessed by performing the following steps:

1.  Press the **TEMP** key to access the RADIO REMOTE screen (Figure 2.4).

RADIO REMOTE: (use CHANGE key)

- > Enable RADIO REMOTE NOW
- > Code for NORMAL COMMANDS is *111
- > Code for ADDRESSED COMMANDS is * -

Figure 2.4

Note: Use the **CHANGE** key to select an entry, use the **ON / ARROW** and **OFF / ARROW** keys to scroll through the choices.

Normal Command Mode: This is the “Wake up” command code for this specific controller. This number can be changed to any three digit number and must be entered by the Handheld Radio Remote prior to issuing station commands.

Example:



The wake up command for this controller is 114.

Addressed Command Mode: Once set the controller is ready to receive all commands in the Command List. If changed, this number will have to proceed any station number commands.

Example:



Two (2) is the address command and the station number is four (4). This will turn on station 4.

Note: Once set the address remains in effect until either the STAR, TWO, STAR, STAR, STAR command is entered, any key at the controller is pressed, or 1 hour of time has passed. Then the controller will default back to the STAR only command.

Example:



This will turn on station four (4).

2C. Use with model ET2000 (500 & 400 Series) controllers

The RR-TRAN Handheld Radio Remote can be used with any ET2000 controller that conforms to the following guidelines:

ET2000 controller

- All versions through 2005.

At the ET2000 irrigation controller:

1. Press the **MAIN MENU** key.
2. Press the **RADIO REMOTE** key.

The RADIO REMOTE ACTIVATION screen is displayed (Figure 2.4).

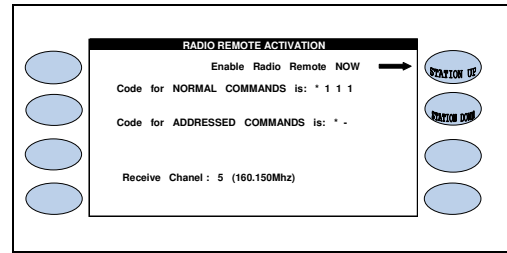


Figure 2.4

Normal Command Mode: This is the “Wake up” command code for this specific controller. This number can be changed to any three digit number and must be entered by the Handheld Radio Remote prior to issuing station commands.

Example:



The wake up command for this controller is 114.

You can also accomplish this step by:

3. Pressing the **ENABLE RADIO REMOTE NOW** key.

Addressed Command Mode: If two users are in the same vicinity and each is using the Radio Remote on separate controllers, it could be necessary to use the Address Command mode, otherwise each user could be activating stations simultaneously on both controllers. Addressed commands can only be entered at the controller, and will remain active only during the current session.

Example:



Two (2) is the address command and the station number is four (4). This will turn on station 4.

Note: Once set the address remains in effect until either the STAR, TWO, STAR, STAR, STAR command is entered, any key at the controller is pressed, or 1 hour of time has passed. Then the controller will default back to the STAR only command.

Example:






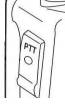
This will turn on station four (4).

THIS CONCLUDES THE SETUP SECTION

SECTION 3: GENERAL USE

3A. Turn a station ON

To turn an individual station ON:

1.  Press and hold the **PTT** button.
2.  Press the number key for the station desired.
3.  Press the **POUND** key.
4.  Release the **PTT** button.

Example:



To turn ON station 14 press and hold the **PTT** key then:



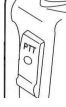
Then release the **PTT** key.

3B. Turn a station OFF

To turn an individual station OFF:

1.  Press and hold the **PTT** button.
2.  Press the number key for the station desired.

3.  Press the **STAR** key.

4.  Release the **PTT** button.

Example:




To turn OFF station 14 press and hold the **PTT** key then:



Then release the **PTT** key.

3C. Turn multiple stations ON


To turn multiple stations ON:

1.  Press and hold the **PTT** button.
2.  Press the number key(s) for the station desired.
3.  Press the **POUND** key.

Repeat steps 2 and 3 until all stations desired are ON.

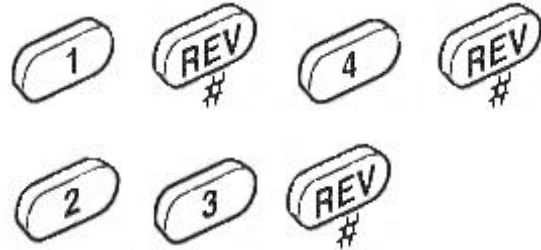
CAUTION:

Turning on more than four (4) stations at one time may cause excessive current flow and result in damage to the controller.

4.  Release the **PTT** button.

Example:




To turn ON station 1, 4, and 23 press and hold the **PTT** key then:




Then release the **PTT** key.

3D. Turn multiple stations OFF

To turn multiple stations OFF:

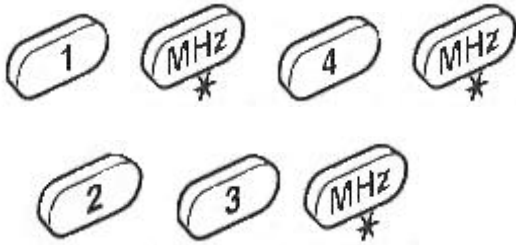
1.  Press and hold the **PTT** button.
2.  Press the number key(s) for the station desired.
3.  Press the **STAR** key.

Repeat steps 6 and 7 until all stations desired are OFF.



4.  Release the **PTT** button.

Example:

To turn OFF station 1, 4, and 23 press and hold the **PTT** key then:




Then release the **PTT** key.



5.  Press the **STAR** key to turn off the last station selected **ONLY**.
6.  Press the STAR key twice (2x) to turn off **ALL** stations.



3E. Station Auto UP / DOWN

To activate the Auto UP/DOWN mode of the Handheld Radio Remote.

1.  Press and hold the **PTT** button.





Press the following keys in order.

2.  Press the **NINE** key.
3.  Press the **ONE** key.



4.  Press the **POUND** key.
5.  Release the **PTT** button.

This will activate the Station Auto UP/DOWN mode.

Turn ON a station using the steps in (Section 2A turning on a station).

6.  Press and hold the **PTT** button.
7.  Pressing the **THREE** key will turn off the station ON and turn ON the next higher station.
8.  Pressing the **ONE** key will turn off the station ON and turn ON the next lower station.
9.  Release the **PTT** button.

To deactivate the Auto UP/DOWN mode of the Handheld Radio remote

10.  Press and hold the **PTT** button.
11.  Press the **NINE** key.

12.  Press the **ONE** key.

13.  Press the **STAR** key

3F. Master Valve actuation

To open a normally closed Master Valve use the following steps:

1.  Press the **POUND** key.

“Master Valve” will appear on the Calsense controller display.

To re-close a “Normally Closed” Master Valve use the following steps:

2.  Press the **EIGHT** key.

3.  Press the **STAR** key.

“Master Valve” will disappear from the controller display.

THIS CONCLUDES THE GENERAL USE SECTION

SECTION 4: BATTERY CHARGING & REPLACEMENT

4A. Battery charging

You must charge the battery pack before using the Handheld Radio Remote, or after storing the pack removed from the transceiver for more than two (2) months. It takes several charge/discharge cycles before achieving the full battery pack capacity.

CAUTION:

- Exceeding the specified charge period shortens the useful life of the NiCd battery pack.
- The provided charger is designed to charge only the provided PB-38 or PB-39 NiCd battery pack. Charging other models of battery packs will damage the charger and the battery packs.

Note: Charging should be done within an ambient temperature between 41 degrees and 104 degrees Fahrenheit. Charging outside this range may not fully charge the battery.

Always switch OFF the Handheld Radio Remote equipped with the NiCd battery pack before charging the unit. Using the Handheld Radio Remote, while charging the battery pack, will interfere with correct charging.

Repeatedly recharging a fully charged battery pack, or almost fully charged pack, shortens its operating time. To resolve this problem, use the pack until it is completely discharged. Then recharge the pack to full capacity.

If the operating time of a battery pack decreases although the battery pack is fully and correctly charged, the battery pack life is over. Replace the battery pack.

1. Install the NiCd battery pack on the Handheld Radio Remote. (See Section 4B Battery replacement).
2. Insert the DC plug from the charger into the DC IN jack on the Handheld radio remote (Figure 4.1).

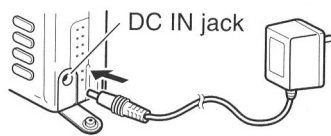


Figure 4.1

3. Insert the charger AC plug into an AC wall outlet.
 - Charging starts and will take approximately 16 hours for PB-38 or 15 hours for PB-39.
4. After 16 hours (PB-38) or 15 hours (PB39) remove the charger DC plug from the Handheld Radio Remote DC IN jack.
5. Remove the charger AC plug from the Ac wall outlet.

4B. Battery replacement

Installing the NiCd Battery pack:

The battery pack is provided uncharged, charge the battery pack before using it with the handheld Radio Remote. (See Section 4A for recharging the NiCd battery pack.).

1. Position the two groves on the inside bottom corners of the battery pack over the corresponding guides on the back of the Handheld Radio Remote (Figure 4.2).

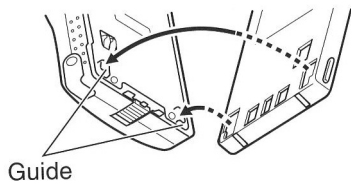


Figure 4.2

2. Slide the battery pack long the back of the Handheld Radio Remote until the release latch on the base of the Handheld Radio remote locks the battery pack in place (Figure 4.3).

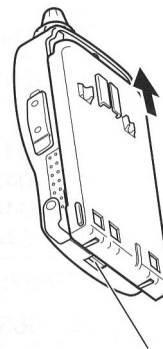


Figure 4.3

3. To remove the battery pack, push up the release latch, then slide the battery pack back (Figure 4.4).

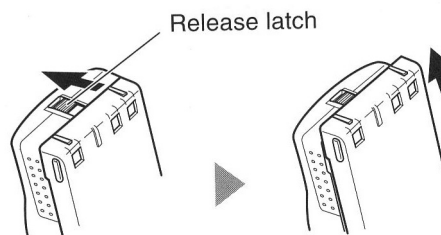


Figure 4.4

Installing alkaline batteries:

It is recommended to use high quality alkaline batteries rather than manganese batteries to enjoy longer periods of battery life. Do not use commercially available NiCd batteries.

If you will not use the Handheld Radio Remote for a long period, remove the batteries from the battery case.

Do not use different quality batteries together.

When the battery voltage is low, replace all four (4) old batteries with new ones.

1. To open the battery case cover, Push on the locking tab, then pull the cover (Figure 4.5).

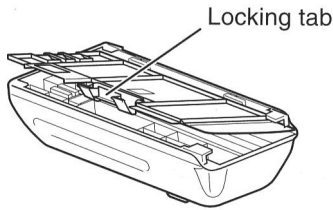


Figure 4.5

2. Insert (or remove) four AA (LR6) alkaline batteries (Figure 4.6).
 - Be sure to match the battery polarity with those marked on the bottom of the battery case.

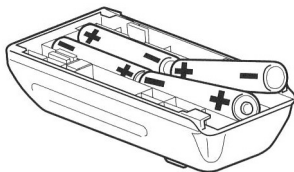


Figure 4.6

3. Align the two (2) tabs on the battery case cover, then close the cover until the locking tab clicks (Figure 4.7).

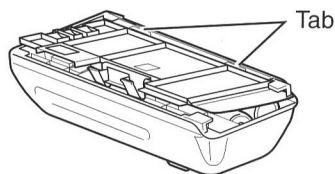


Figure 4.7

4. To install the battery case onto (or remove from) the Handheld Radio Remote, follow steps 1 through 3 for "Installing the NiCd battery pack".

**THIS CONCLUDES THE BATTERY
CHARGING & REPLACEMENT
SECTION**

SECTION 5: FCC INFORMATION

5A. FCC Part 15

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 generate 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 the interference will 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 receiver antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer for technical assistance.

5B. FCC Warning

FCC WARNING:

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

SECTION 6: WARRANTY INFORMATION **6A. Warranty information**

The California Sensor Corporation warrants the purchaser of its manufactured products against defects in material and workmanship for a period of twelve (12) months from the date of original purchase by the owner.

California Sensor Corporation liability is limited solely to the replacement or repair of defective parts. There are no other express warranties. This warranty does not apply where the equipment is used, or installation performed, in any manner contrary to California Sensor Corporation's specifications and instructions, nor where equipment is altered, modified, misused or neglected.

California Sensor Corporation is not liable for indirect, incidental or consequential damages in connection with the use of equipment, including but not limited to, vegetation loss, property damage or personal injury from installer's negligence.



