



## FREQUENTLY ASKED QUESTIONS

### Why did Neptune combine these products into a single housing?

- Customers requested ways to reduce both installation costs and potential for tampering. The E-Coder)R900*i* meets both of these needs.

### Where is the R900® MIU?

- The R900 radio board has been combined with the E-Coder® board inside the register housing. (The "i" stands for integrated.)

### How does the radio performance compare to a standard R900 wall MIU?

- The performance is equal to or exceeds the performance of an R900 wall MIU in an inside set basement application. An R900 wall MIU installed 4' above grade on the exterior of a home will exceed the performance of below grade inside set MIUs.

### Does the E-Coder)R900*i* feature the same E-Coder PLUS functions and R900 protocol?

- Yes. The E-Coder)R900*i* is able to provide the same customer service value-added data, such as leak, tamper and reverse flow detection.

### My E-Coder)R900*i* pit version unit is equipped with a small whip antenna. Can I upgrade to a through-the-lid antenna to further increase my range?

- Yes. The pit version of the E-Coder)R900*i* comes standard with the whip antenna to provide the utility with an easy installation. It also provides the flexibility to upgrade from the whip antenna to the existing R900 antenna if additional range is desired.

### Is the antenna of the E-Coder)R900*i* inside version removable?

- No. The antenna is permanently molded to the lens register cover.

### Can the E-Coder)R900*i* inside version be installed in pits?

- No, an inside version installed in a pit will be VOID of Warranty.

### Is the battery replaceable on the E-Coder)R900*i*?

- Yes. For the inside version you must destroy the tamper nail located on the top of the battery pack. By destroying the tamper nail, the battery pack can be removed by sliding it up the antenna shaft. For the pit version the register seal pin must be destroyed, and the battery pack can be removed by hinging the battery pack up. A new battery pack can be re-installed by reversing the procedure.

### Does the E-Coder)R900*i* have a battery inside to power the register?

- No. The E-Coder)R900*i* registers water consumption using no external power supply and no internal battery. The E-Coder)R900*i* features a patent-pending, advanced Application Specific Integrated Circuit (ASIC) design using nonvolatile memory technology for a self-powered digital odometer. The light sensor (recessed under the small hole near the center of the faceplate) activates the LCD read-out for local direct reading. The E-Coder PLUS features and LCD are powered by the R900 MIU.

### Will the E-Coder)R900*i* reduce the battery life of the MIU?

- No. The power requirement is so minimal there will be no noticeable effect on the battery life of the MIU due to extremely low power electronics.

### Where is the solar panel that is featured on the standard E-Coder?

- The solar panel has been replaced by a photo sensor that detects light and activates the LCD.

### Is it possible to read the E-Coder)R900*i* if the LCD read-out is not activated or failed?

- Yes. During initial installation, the light sensor recessed under the small hole near the center of the faceplate will activate the LCD for several minutes when the unit is exposed to light and triggers the unit to begin transmitting. The unit will continue to transmit even when the LCD turns off due to low light. The absolute odometer reading is stored in nonvolatile memory in the ASIC and is not dependent on the LCD.

### Is the E-Coder)R900*i* networkable for compound meters?

- No. Due to the wireless design, a separate E-Coder)R900*i* must be installed on each side of a compound meter assembly. Note that one ID number is printed on each label.

### Is the E-Coder)R900*i* field programmable like the ProRead™ or standard E-Coder? If so, can you use the standard field programmer and the same programming functions that are used for ProRead?

- No. The E-Coder)R900*i* does not require any programming. Once the light sensor is exposed to a light source the unit begins transmitting the 8-digit meter reading, MIU ID and the E-CoderPLUS data.

**Since the E-Coder)R900i does not have a mechanical odometer wheel bank, how are the digits encoded and what makes the E-Coder)R900i absolute?**

- The E-Coder)R900i features a patent-pending, advanced ASIC design using nonvolatile memory technology for a self-powered digital odometer. The digital registration odometer in the ASIC and the LCD read-out are guaranteed to be absolutely the same. The visual registration and the remote reading are provided by the same source, making the E-Coder)R900i an absolute encoder.

**Why are there 9 digits on the LCD read-out and I receive only 8 digits on my reading device?**

- The E-Coder)R900i features 9 digits for a visual read only for high-resolution meter testing and leak indication. Eight (8) digits are passed through the route management software for operational and billing purposes.

**I only bill in 100s/1000s. What happens to the additional digits?**

- The meter reading software will truncate the unnecessary digits for billing if desired.

**What are the solid and striped lines around the six most significant digits on the dial face of the E-Coder)R900i?**

- These lines were added to assist meter readers in identifying the 4 or 6 most significant digits for visual meter reading based on 100 or 1000 billing units.

**An E-Coder)R900i I installed has a forward arrow with a plus sign (+) flashing very slowly in the LCD read-out, and it will not stop flashing. What is the problem?**

- This indicates a very slight flow. Watch the 9th digit in the LCD read-out and you will see it increment over time.

**An E-Coder)R900i I installed has a reverse arrow with a negative (-) sign in the LCD read-out. What does this mean?**

- This icon indicates reverse flow. You either have reverse flow occurring at the site or the water meter has been installed backwards.

**What is the solid faucet icon on the LCD read-out?**

- The solid faucet indicates a continuous leak occurrence over the last 24 hrs. Check the 9th digit in your LCD readout to see if it is incrementing. If so, check your interior and exterior faucets, the valves in your toilets, and look around the exterior of your home for signs of surface water.

**What is the flashing faucet icon on the LCD read-out?**

- The flashing faucet indicates an intermittent leak occurrence over the last 24 hrs. Check your interior and exterior faucets and the valves in your toilets to see if leakage is occurring.

**Why are all of my E-Coder)R900i units showing days of no flow following installation?**

- Since the E-Coder)R900i is an integrated unit, the PLUS features are activated and the 35 day window is in effect. As long as there is no consumption, the E-Coders will log days of no flow. The E-Coders will also show reverse flow due to factory testing for reverse flow functionality. Current leak data will clear after 24 hours following testing at factory, but days of no flow and reverse flow data will not clear for 35 days following activation in the water system.

**Does the E-Coder)R900i provide rate of flow information?**

- The E-Coder)R900i provides a localized read out of average flow rate every 6 seconds on the LCD display. Every 6 seconds the word "RATE" will flash and the flow rate will be displayed for 2 seconds on 5/8 - 2" meters. For 3" and larger meter sizes the flow rate will be averaged over 30 seconds and displayed every 30 seconds.

**Does the E-Coder)R900i unit provide data logging capabilities?**

- Yes. As of August 2008, data logging is standard on the E-Coder)R900i.

**How many days of data logging information is stored in the E-Coder)R900i?**

- The E-Coder)R900i stores consumption in hourly intervals for a rolling total of 96 days. This is equal to 2,304 hourly intervals of consumption.

**How can I easily identify E-Coder)R900i units in the field that have data logging capability?**

- Data logging units will be identified by two methods. First, each unit will have the symbol "DL" laser printed directly beneath the "RW" or "RD" on the dial plate. Secondly, all data logging units will start with an MIU ID serial number starting with "183."

**How is the E-Coder)R900i activated in order to retrieve the data logging information?**

- The special data logging activation flashlight will be required for this process. This flashlight will be used to activate the E-Coder)R900i for data transmission for collection by the CE handheld. The flashlight shall be held within 2-3 inches from the photo sensor (recessed hole on dial plate) for 3-4 seconds or until the LCD changes to read "RF LOG."

**What products do I use to capture the data logging data?**

- The data logging information will be captured using a CE handheld or CE tablet that is running ARB® N\_SIGHT™ Mobile. Capture of the data will be accomplished with the program entitled "data logger" on the handheld or tablet that stores the data for synchronization with ARB N\_SIGHT Mobile.

**How long does it take to retrieve the data from the E-Coder)R900i?**

- After activation and the data is being received by the CE handheld or CE tablet it will take approximately 5 minutes to download all 96 days worth of data logging information.

**Does the data logging feature have an impact on my battery life of the E-Coder)R900i unit?**

- No. The battery warranty for the E-Coder)R900i is still 20 years even though the unit is logging 96 days of consumption data. The E-Coder)R900i still carries the twenty (20) year warranty with the first ten (10) years offering full replacement and the remaining ten (10) years being at a prorated discount off the then-list price.

**Will my current host software be compatible with data logging?**

- No. In order to successfully graph the data logging consumption graphs an upgrade to ARB N\_SIGHT Mobile host software will be required.

**What type of graphing functionality will be available in ARB N\_SIGHT Mobile host software?**

- ARB N\_SIGHT Mobile host software will have the ability to graph by date range, hourly interval, and daily consumption in both bar and line graph functionality.

**Will I be able to determine when a leak flag or reverse flow flag actually begins?**

- Yes. Both the leak and reverse flow flags will be stored in the data logging data. The time and date of these flags will show on the usage analysis graphs. In addition, if a leak is present then the consumption bars will be color coded red for the number of days the leak remains present. If a backflow event occurs then the consumption bars will be color coded black. Lastly, missed data and the first/last days of the graph will be colored yellow to signify incomplete data.

Neptune engages in ongoing research and development to improve and enhance its products. Therefore, Neptune reserves the right to change product or system specifications without notice.

**Neptune Technology Group Inc.**

1600 Alabama Highway 229  
Tallahassee, AL 36078  
USA  
Tel: (800) 645-1892  
Fax: (334) 283-7299

**Neptune Technology Group (Canada) Ltd.**

7275 West Credit Avenue  
Mississauga, Ontario  
L5N 5M9  
Canada  
Tel: (905) 858-4211  
Fax: (905) 858-0428

**Neptune Technology Group Inc.**

Ejército Nacional No. 418  
Piso 12, Desp. 1201-1202  
Col. Chapultepec Morales  
Delegación Miguel Hidalgo  
11570 México, Distrito Federal  
Tel: (525) 55203 5294 / (525) 55203 5708  
Fax: (525) 55203 6503

