



NEPTUNE
TECHNOLOGY GROUP

ARB UTILITY MANAGEMENT SYSTEMS

WATER | ELECTRIC | GAS

R900G Endpoint for Natural Gas Meters Quick Install Guide



R900G ENDPOINT QUICK INSTALL GUIDE

1 General Instructions

The R900G endpoint is designed for use with multiple types of residential and commercial models of natural gas meters, including American, Sensus (Rockwell/Equimeter), and Actaris (Sprague).

Notes:

- This manual contains installation instructions for the R900G endpoint for natural gas meters.
- Proper performance and reliability of the R900G endpoint depends on the installation in accordance with these instructions.



For greater detailed information and installation instructions refer to the *R900G Endpoint Installation and Maintenance Guide* (Part #12778-001).

2 Safety & Preliminary Checks

- Verify that you are at the location specified on the Site Work Order.
- Verify that the site is safe for you and your equipment.
- Notify the customer of your presence, and tell the customer that you must have access to the gas meter.
- Confirm and/or update the MIU ID number on the Site Work Order.



When installing the R900G endpoint on natural gas meters, follow any guidelines issued by your company in addition to those given in this guide. Never perform an installation during a lightning storm or under excessively wet conditions.

3 Product Unpacking and Inspection

Upon receipt of the product, perform the following unpacking and inspection procedures.



If damage to the shipping container is evident upon receipt, request that the carrier be present when the product is unpacked.

Carefully open the shipping container, and follow any instructions that may be marked on the exterior. Remove all packing materials surrounding the product and carefully remove the product from the container.

Retain the shipping container and all packing materials in the event the product needs to be returned to the manufacturer for any reason.

Visually inspect the product and applicable accessories for any physical damage such as loose or broken parts or any other sign of damage that may have occurred during shipment.



If damage is found, request an inspection by the carrier's agent within 48 hours of delivery, and file a claim with the carrier. A claim for equipment damage in transit is the sole responsibility of the purchaser.

FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: 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.

RF Exposure Information

This equipment complies with the FCC RF radiation requirements for uncontrolled environments. To maintain compliance with these requirements, the antenna and any radiating elements should be installed to ensure that a minimum separation distance of 20cm is maintained from the general population.

R900G Endpoint Gas Meters Identification

All Current Residential and Top-mount Commercial American, Equimeter, and Actaris.

Table 1 Identification Table

Gas Meter Mfgr	Gas Meter Models	Neptune Part Number
Residential Meters		
American® Meter	AL/AR/AC/AM-175/250/425	12750-000
Sensus®/Invensys®/Rockwell®/Equimeter®	R-200/275/315 (Cubic Foot Registration)	12821-000
Sensus®/Invensys®/Rockwell®/Equimeter®	#415 (Cubic Foot Registration)	12821-100
Actaris®/Sprague®	175/250/400A METRIS	Availability to be announced at a later date.
Commercial Meters		
American® Meter	AC-630	12750-000
American® Meter	AL-800/AL-1000 AL-1400/2300/ 5000	Availability to be announced at a later date.
Sensus®/Invensys®/Rockwell®/Equimeter®	#750/1600/ 3000/5000,10000	
Actaris®/Sprague®	675A, 800A, 1000A	

Installation Tools and Materials

Table 2 Tools and Materials

Item	Description/ Recommendation	Use
Tool Kit	Contains standard tools including: <ul style="list-style-type: none">• 1/8" flat head screwdriver• 1/4" flat head screwdriver• #1 Phillips screwdriver• Pliers – wire-cutting, long-nose utility• Cordless electric drill/screwdriver (optional)• Putty knife	Various installation procedures performed by the utility
IR programming device	<ul style="list-style-type: none">• Neptune CE5320X handheld loaded with R900G programming software• Optical programming probe	To program the index, and so forth.

4 Installation of the R900G Endpoint for American, Sensus and Actaris Gas Meters



For greater detailed information and installation instructions refer to the **R900G Endpoint Installation and Maintenance Guide** (Part #12778-001).

Before proceeding with the installation, make sure the R900G Endpoint number matches the model required for the specific gas meter model being installed. Refer to Table 1 on page 3. Complete the following steps to install an R900G Endpoint.

Removing the Index and the R900G endpoint

- 1 Use a large, flat head screwdriver to puncture and remove existing Tamper Plugs, if present. (See Figure 1.)



Figure 1 Removing Existing Tamper Plugs



- 2 Use a large screwdriver to remove and discard the four lens mounting screws and the lens. (See Figure 2.)

Figure 2 Remove Mounting Screws

- 3 Remove the gasket. Use a putty knife to remove any excess gasket from the meter body casing.

- 4 Use a small screwdriver to remove the two index mounting screws. Do not discard these screws as they are needed to mount the existing index to the R900G housing. (See Figure 3.)



Figure 3 Index Removal

Installing the Index and the R900G Endpoint



When attaching the gas meter index to the R900G endpoint, make sure it is securely mounted.

The two drive dogs must mate without causing any binding or potential for disengagement.

- 1 Place the gas meter index on the front of the R900G Endpoint ensuring that the two drive dogs are aligned for engagement. (See Figure 4.)



Figure 4 Drive Dog Alignment



Figure 5 Securing the Index

- 2 Secure the index to the R900G housing using the two index mounting screws removed from the meter from Step 4. See "Removing the Index and the R900G endpoint" on page 4. (See Figure 3 and Figure 5.)

- 3 When mounting the R900G Endpoint to the front of the gas meter casing, ensure that the gas meter drive dog engages with the R900G Endpoint drive dog. These two drive dogs must mate without causing any binding or potential for disengagement. (See Figure 6.)



Figure 6 R900G Endpoint Drive Dogs



Figure 7 Using the Mounting Screw

- 4 Slide the cover over the R900G Endpoint housing. Use the four mounting screws (supplied) to secure the cover and the R900G Endpoint to the gas meter casing. (See Figure 7.)

- 5 Install two tamper snap seals (supplied) into recess in cover and seat firmly.
- 6 Continue to "Programming the R900G Endpoint" on page 7.

5 Programming the R900G Endpoint

To program an R900G Endpoint, use the Neptune CE5320X handheld with Equinox software to display and process the information.



Figure 8 Neptune CE5320X Handheld with Field Programmer

Start the R900G Programmer Software by completing the following steps from the Equinox main screen.

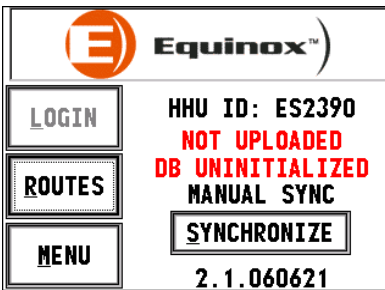



Figure 9 Equinox Main Screen

- 1 While on the Equinox main screen, touch . The Equinox main menu appears.

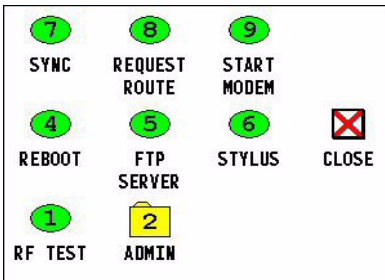



Figure 10 Equinox Menu Screen

- 2 Select  **Admin**.
The Equinox Administrator menu appears.

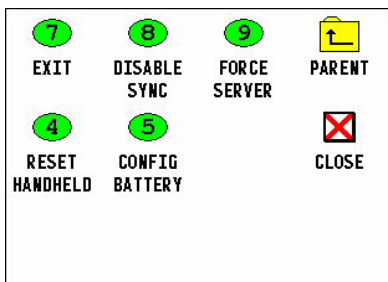



Figure 11 Equinox Administrator Menu

- 3 Select  **Exit**.
The Administrator Password screen appears.

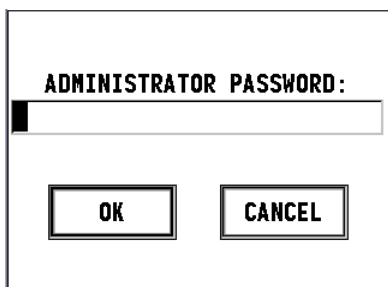



Figure 12 Administrator Password Screen

- 4 When prompted, type in the password provided by your company, and touch .





The default password for all factory configured CE5320X Handhelds is **BUBBA**. If you are unsure of your password, try the default password. If BUBBA is not correct, check with your administrator for the correct password.

- 5 The handheld reboots and the Windows CE.NET screen appears.



The screen backlight will turn off.

Press   to turn on the screen backlight.

- 6 Tap the screen once.

The Folder selection screen appears.

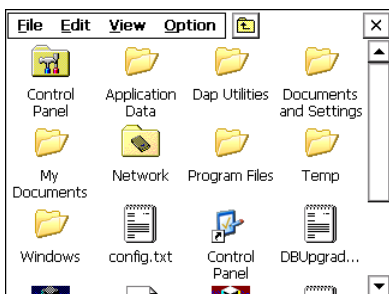


Figure 13 Folder Selection Screen

- 7 Double-click **My Documents**.
The R900G Programming icon appears.



Figure 14 R900G Programming Icon



- 8 Double-click **R900G Program...**.
When the programming software begins, the following screen appears.




Figure 15 R900G Programming Screen

- 9 Select the **Program** tab at the top of the screen.

The following screen appears.



Figure 16 Program Tab

- 10 Make the following selections on this window:
 - From the **Meter Make** drop-down selection list, choose the appropriate setting for the type of meter to program.
 - From the **Pressure** drop-down selection list, choose the appropriate setting for the pressure compensation.
 - From the **Test Hand** drop-down selection list, choose the appropriate resolution.
 - For the **Initial Reading**, type the index reading, for example, 2345.
 - Verify the number of digits you want to program.
- 11 When you have entered all the appropriate data, touch  to program the R900G unit.
- 12 When the programming is complete, the unit returns a **Checksum Match** message as illustrated in Figure 17.

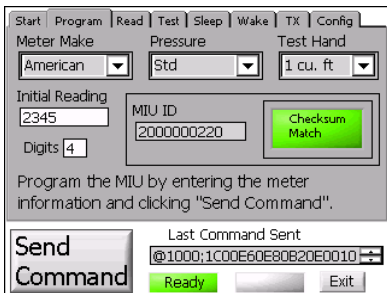


Figure 17 Checksum Match Message



This process takes approximately 5-10 seconds

Receiving the checksum match message indicates that the unit is programmed and transmitting.

6 Checklist

Before leaving the installation site, be sure to:

- Record MIU ID for each R900G endpoint gas meter.
- Verify that you have followed all requirements of this Quick Install Guide.
- Verify that you have recorded all required information.
- Clean up any installation debris.
- Verify that the requirements of the site work order have been completed.

7 Contact Information

Within the United States, Neptune Support is available Monday through Friday, 8:00 AM to 7:00 PM Eastern Standard Time, by telephone or fax.

To contact Technical Support by phone, call 1-800-647-4832. If all support technicians are helping other customers, your call will be routed to the Neptune Support voice mail system. Please leave your name, the name of your company, and your telephone number. Your call will be returned within business hours in the order it was received.

To contact Technical Support by fax, send a description of your problem to 1-334-283-7497. Please include on the fax cover sheet the best time of day for a support technician to contact you. To contact Technical Support by email, send your letter to the following address: hhsupp@neptunetg.com.

Notes



NEPTUNE
TECHNOLOGY GROUP

Take Control.

neptunetg.com

Neptune Technology Group Inc.

1600 Alabama Highway 229

Tallahassee, AL 36078

USA

Tel: (334) 283-6555

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