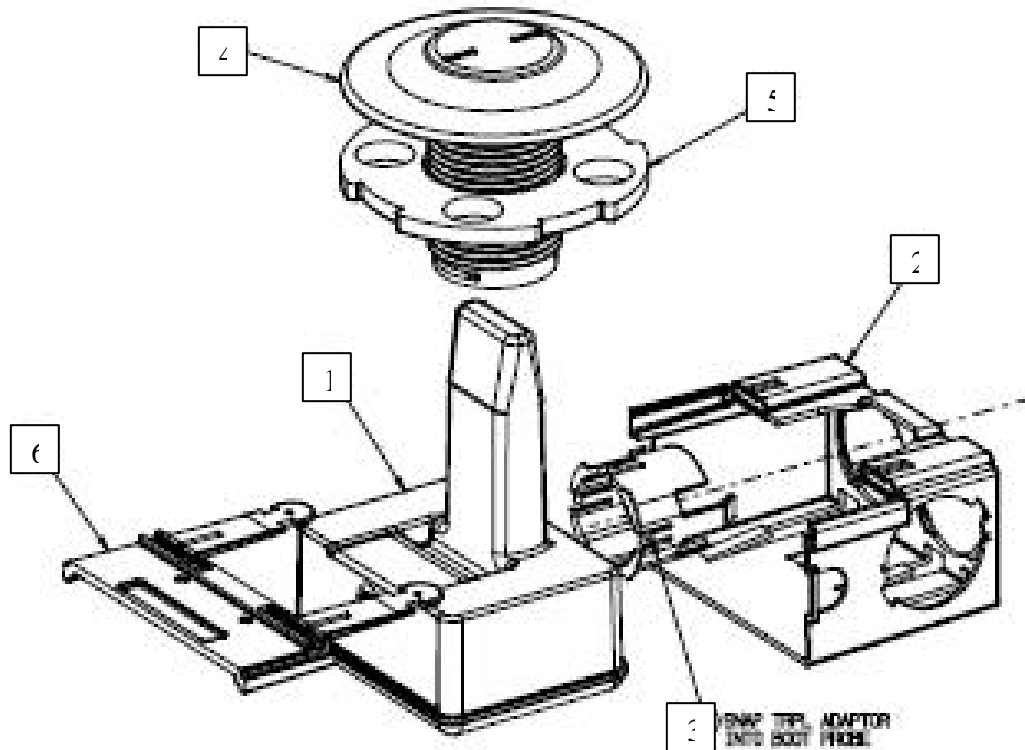




RadioRead®

Model 520 Installation Instructions

Definitions



- | |
|--|
| <ul style="list-style-type: none">1 – HDPE Radio2 – Boot3 – TouchCoupler TR/PL Adaptor (TouchCoupler enabled units only)4 – Pit Lid Housing5 – Pit Locking Nut6 – Boot Locking Clip |
|--|

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Step 1 Disassemble 520 Unit

- 1.) Disassemble the model 520 unit to begin the installation procedure. Unlock the radio device by pressing down on the two tabs on the Boot Locking Clip facing the port side connections. Once the tabs are depressed, slide the Boot Locking Clip partially out until the Boot Locking Clip disengages from the Pit Lid Housing.
- 2.) Slide out the HDPE Radio and Boot from the Pit Lid Housing.
- 3.) Remove the Pit Locking Nut from the underneath of the Pit Lid Housing by turning the Nut to the left.

Sample pit lid is shown below:



Step 2 Inserting the Pit Lid Housing

Place the Pit Lid Housing thru the pre-drilled hole in the top of the pit lid.



Pit Lid Housing Inserted Through Pit Lid (Top View)



Pit Lid Housing Inserted Through Pit Lid (Bottom View)

Step 3 Securing the Pit Lid Housing to the Pit Lid

Place the Pit Locking Nut at the bottom of the Pit Lid Housing aligning the Pit Locking Nut with the shaft of the Pit Lid Housing. Tighten the Pit Locking Nut by turning to the right until the unit is firmly secured against the bottom of the pit lid. (See picture below)

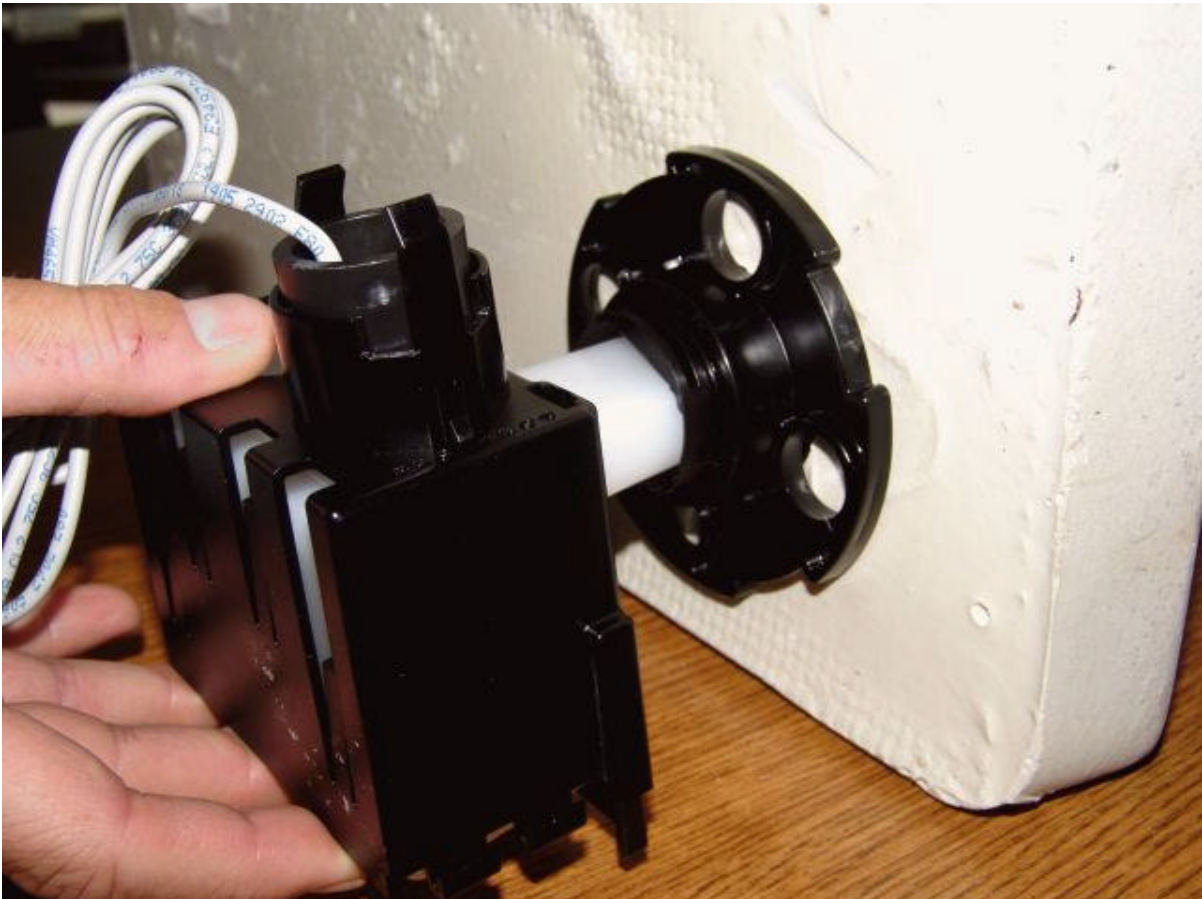


Securing the Pit Lid Housing to the Pit Lid

Step 4 Inserting the Radio Device in the Pit Lid Housing

- 1.) Insert the HDPE Radio with Boot into the cavity of the Pit Lid Housing
(See picture below)
- 2.) Align the Boot with the slot located on the bottom of the Pit Lid Housing to secure the unit.
- 3.) To lock the unit into place, push Boot Locking Clip (opposite of the tabs) until tabs are engaged and locked.

The endpoint is then inserted into the Pit Lid Housing:

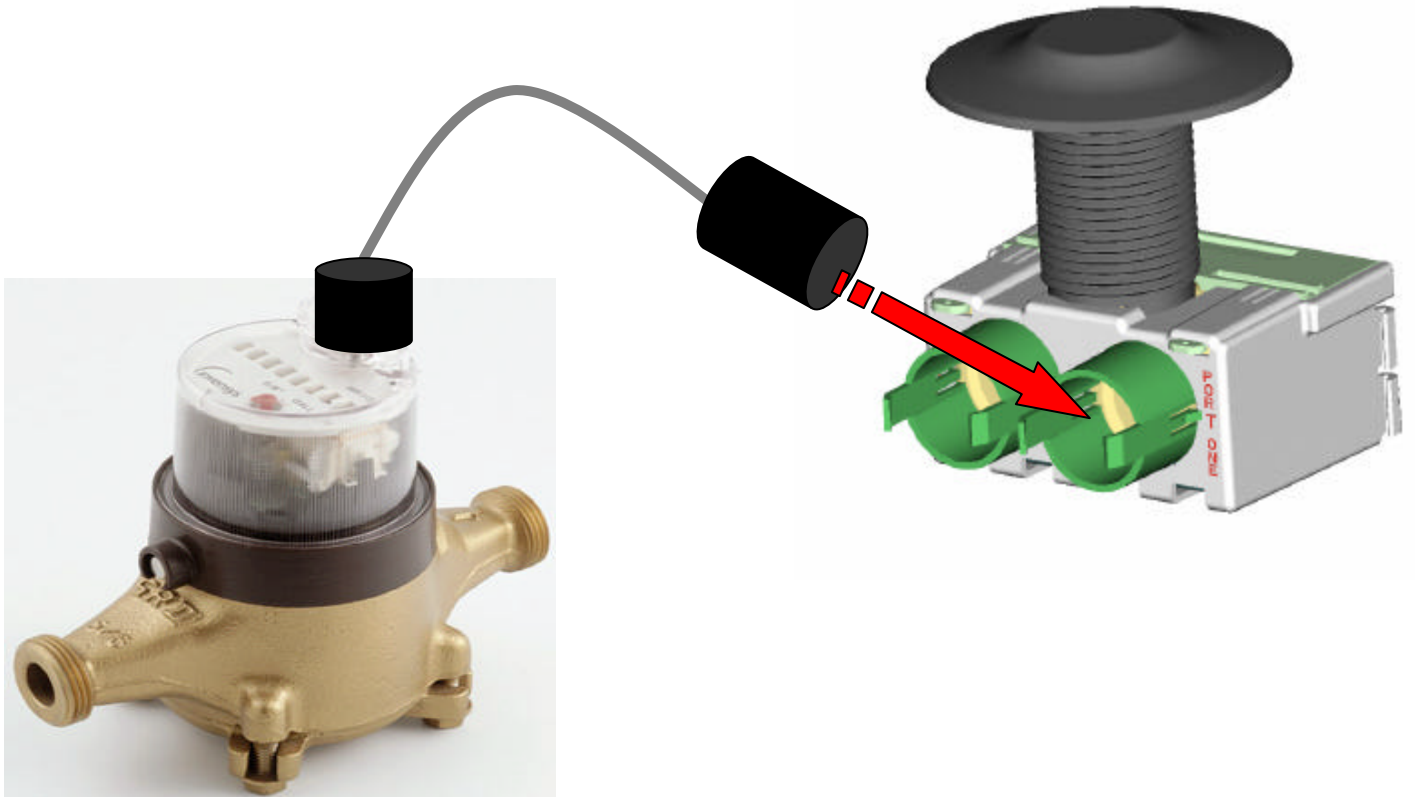


Insertion of the Endpoint into the Pit Lid Housing

Step 5 Connecting meters to the radio

TouchCoupler (Sensus Only)

- 1.) Grasp the TRPL housing and place into Port 1 of the TouchCoupler TR/PL Adaptor until secured. (See picture below)
- 2.) Repeat process into Port 2 if needed.



Wired Units (Sensus, MultiRead Module (RadioRead Only), Neptune)

Sensus Encoder

- 1.) Gel cap the red wire from the encoder to the red wire on the reading port (either port 1 or port 2 – if available).
- 2.) Gel cap the green wire from the encoder to the green wire on the reading port.
- 3.) Gel cap the black wire from the encoder to the black wire on the reading port.

MultiRead Module

- 1.) Gel cap encoders to the MultiRead Module per the instructions sheet for the MultiRead Module (AMR-306).
- 2.) Once all encoders are connected to the MultiRead Module, gel cap the red wire from the MultiRead Module to the red wire on the reading port (either port 1 or port 2 – if available).
- 3.) Gel cap the green wire from the MultiRead Module to the green wire on the reading port.
- 4.) Gel cap the black wire from the MultiRead Module to the black wire on the reading port.

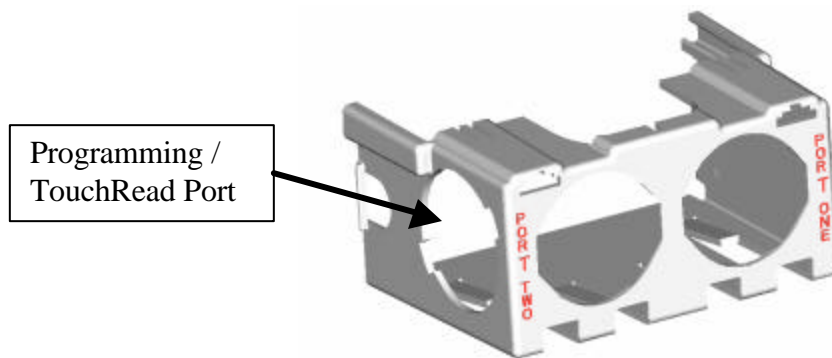
Neptune Encoder

- 1.) Gel cap the red wire from the Neptune encoder to the green wire on the reading port (either port 1 or port 2 – if available).
- 2.) Gel cap the green wire from the Neptune encoder to the black wire on the reading port.
- 3.) Gel cap the black wire from the Neptune encoder to the red wire on the reading port.

Step 6 Activate Radio

Note: if no meters are connected to this radio, the radio will not activate.

- 1.) Once all meters are connected, the radio must be activated in order for it to perform its function. To activate, using a TouchReader or Model 4090 AutoGun, attempt a TouchRead on the Programming/TouchRead port (See picture below). Once TouchRead is activated, the radio will determine what is connected to this unit automatically. This may take up to 3-6 seconds depending on if this unit is dual port capable and what encoders are connected to it.



TouchReader

- 2.) The TouchReader will beep once indicating that the radio acknowledged the TouchRead and is now detecting what is connected.
- 3.) After waiting ~3 seconds, attempt another TouchRead, if a read error occurs, the radio is still in detect mode. Repeat this step again in 3 more seconds.
- 4.) If successful detection, it should provide either a TouchRead reading (Sensus only) or a single beep to indicate that the encoder is connected but TouchRead is not supported via the radio.
- 5.) If detection is unsuccessful, the TouchRead will beep once and restart the activation similar to step 2 above.

AutoGun

(ID type set to Factory ID – see AutoGun manual for instructions)

- 2.) The AutoGun will beep and display for the ID “MXUGPTC0”. This indicates that the radio acknowledged the TouchRead is in mode “0” which is inactive. This will start the detecting process.
- 3.) After waiting ~3 seconds, attempt another TouchRead, if a read error occurs, the radio is still in detect mode. Repeat this step again in 3 more seconds.
- 4.) If successful detection, the AutoGun will display either a TouchRead reading (Sensus only) or

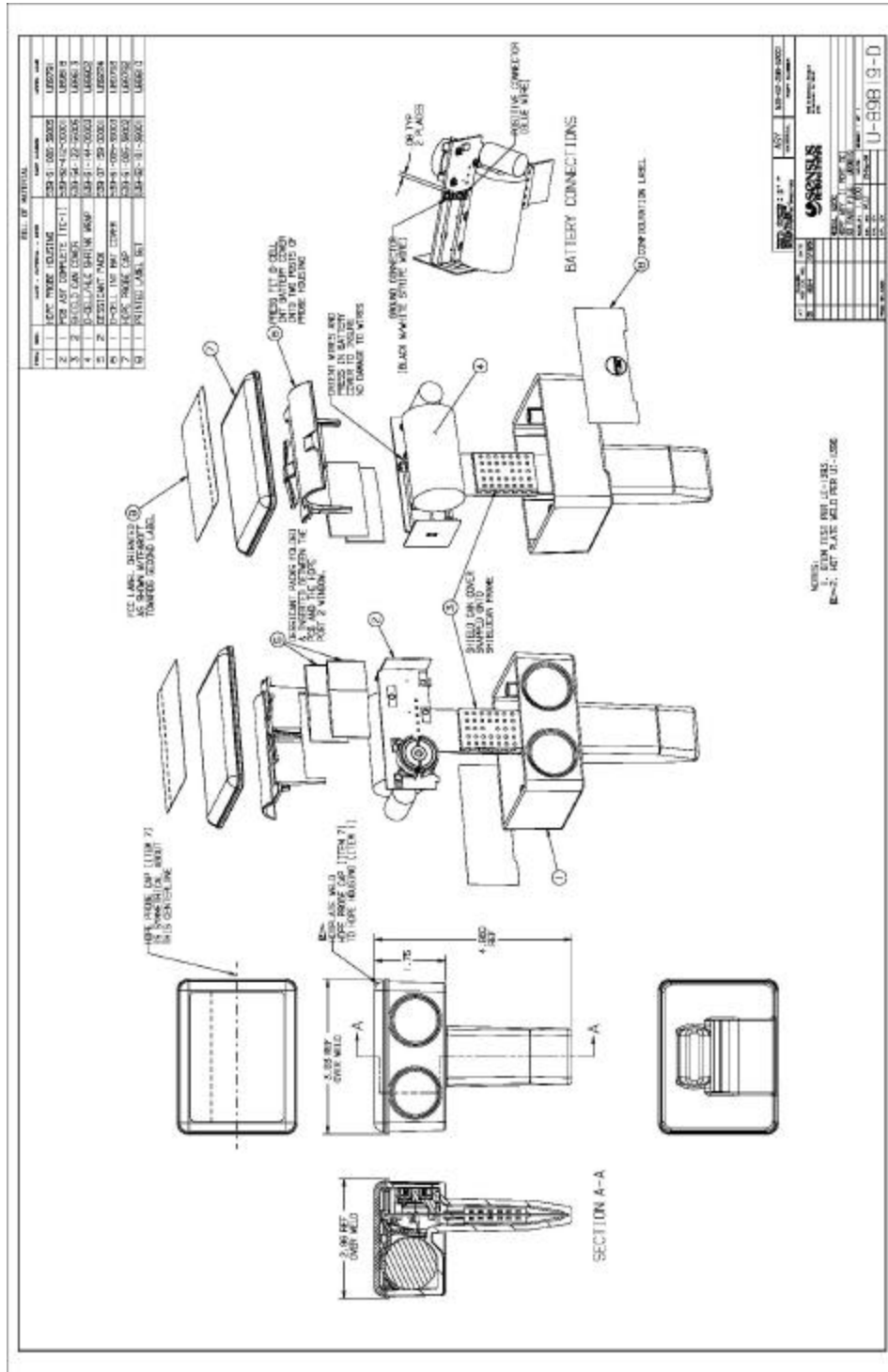
- **ID: MXUGPTC1** – which means a TouchRead was attempted on an unsupported meter (Neptune).
 - **ID: MXUGPTC2** – which means that the port was configured for a meter type that supports TouchRead (Sensus only) but there was no response from the meter.
- 5.) If unsuccessful detection, the TouchRead will start the activation process again. The ID on the AutoGun will display **MXUGPTC0** similar to the step 2 above.

Note: Once the radio is activated and it detected what is connected, the only way to change its configuration as to what is connected is to deactivate the radio using a programming tool and re-activate the radio or use a programming tool to reprogram the port manually.

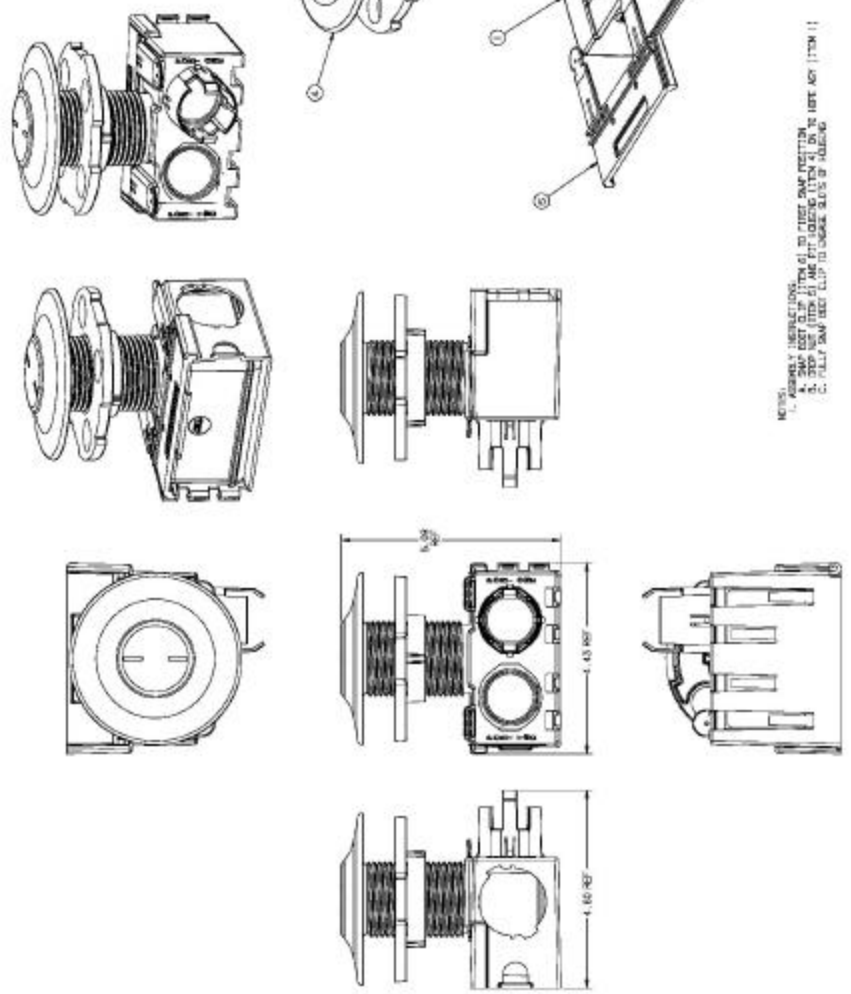
Warning... Programming a port manually will not allow the unit to perform an automatic detection on that port unless reset to “AutoDetect”. The activation process will not reset the port type.

Appendix A:

The following drawings show how the PCB is oriented and installed into an enclosure.



REV. BY		REASON FOR CHANGE		DATE
1	MR. GUY	1.1	INITIAL	1957-01-15
2	MR. GUY	1.2	INITIAL	1957-01-15
3	MR. GUY	1.3	INITIAL	1957-01-15
4	PT. ALBINE (MILITARY)	1.4	INITIAL	1957-01-15
5	PT. ALB	1.5	INITIAL	1957-01-15
6	PT. G. P.	1.6	INITIAL	1957-01-15



REV.	BY	DATE	REASON FOR CHANGE
1	MR. GUY	1957-01-15	INITIAL
2	MR. GUY	1957-01-15	INITIAL
3	MR. GUY	1957-01-15	INITIAL
4	PT. ALBINE (MILITARY)	1957-01-15	INITIAL
5	PT. ALB	1957-01-15	INITIAL
6	PT. G. P.	1957-01-15	INITIAL

ASSEMBLY INSTRUCTIONS:
 1. SLIP THE CAP (1) OVER THE HOUSING (2).
 2. SLIP THE HOUSING (2) OVER THE INTERNAL MECHANISM (3).

U-90817-D

Appendix B: Regulatory Information

FCC Information to User:

Changes or modifications not expressly approved by Sensus Metering Systems could void the user's authority to operate the equipment.

In order to meet FCC's RF exposure limits in section 1.1307 of the Rules, a minimum separation of 20 cm must be maintained between the antenna of this device. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.