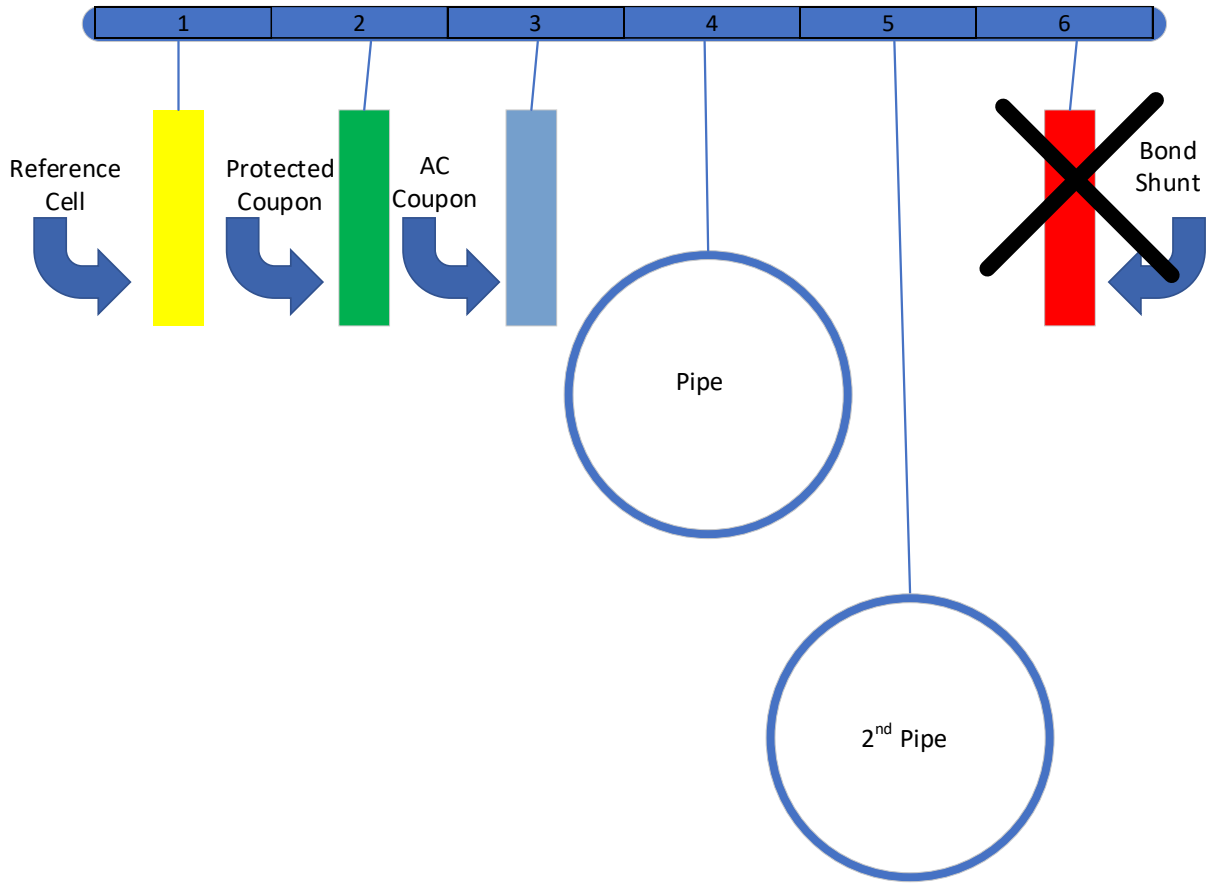
Connection Diagram:

Triple Coupon Connection + 2nd Pipe/Casing/DC Coupon Connection:



AC Coupon connection: Can read both AC and DC current. ***Must be set up to read and send DC current.***

Bond shunt connection: Not available for Patriot Plus triple coupon. **DO NOT CONNECT! Connecting a BOND to the Patriot Plus, when in TSM configuration (Triple Coupon), will cause electrical damage and void the warranty.**"

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Activating the Patriot Plus:

The Patriot Plus is delivered in 'Ship' mode. This is a very low power mode designed to conserve battery power as much as possible. Starting up the Patriot Plus is a three step process:

1. Hold the Patriot Plus vertically, looking down at the LED display; place the magnet on the outside of the housing near the little bull's eye next to the 'REF CELL' terminal. The magnet may need to be moved or rotated a bit, but eventually you will hear the relays close, and after a few seconds, the LED will show signs of life. Once the 'chasing' sequence begins,

alternating with a '1', remove the magnet. The Patriot Plus will now display an "r"

This indicates the radio being powered up. After the radio completes power-up, a series of numbers will be displayed. These numbers are the unique radio and SIM card ID and are only needed if the Tech Support personnel ask for them. Once the numbers begin to show, move to step 2.

2. Place the magnet back on the Patriot Plus until the 'chasing' sequence is displayed alternating with a '2'. Remove the magnet. The Patriot Plus will display an "A" followed by the signal level as a series of negative numbers, such as -082 db. The signal level should be -93 db or better (smaller negative number) for the Patriot Plus to operate reliably. Once the signal level numbers begin to show, move to step 3.

3. Place the magnet back on the Patriot Plus until the 'chasing' sequence is displayed alternating with a '3'.

***NOTE* Sometimes, the sequence displays a "1", but remove the magnet and place the magnet again at the bullseye and you will see a "3".**

Remove the magnet. The LED will show a series of letters, beginning with a 'C'.

The letters stand for: C= Clock setting (from the time on the OmniMetrix® server) E= Establish connection to the server F= Finish the log in process

Finally, a repeating 'OL' is displayed. This stands for 'On Line'. The unit is now fully functional and the installation may be completed.

Putting the Patriot Plus into SHIP Mode:

To put the unit back into ship mode after it has reached operational status, place the magnet back into position. The LED will blink 6 times. When the unit goes into SHIP Mode, it will spell S-H-I-P, quickly, several times and turn off.

Patriot Plus Operation:

In operation, the Patriot Plus "sleeps" most of the time to conserve battery power and Samples and records measurements at a programmed interval. The collected data is reported to the Omnimetrix server at a different programmed interval.

Referring to the diagram at the front of this document, the measurement process is:

Triple Coupon:

- Take Pipe-to-soil voltage between (1) and (4), DC Coupon current between (5) and (4), open the relay between (2) and (4) for about 500mS (programmable delay) to take collect the Instant Off Voltage, Take the AC Current between (3) and (4). And (if configured), take the Bond Shunt current between (4) and (6).

Double Coupon + 2nd Pipe Connection:

- Take Pipe-to-soil voltage between (1) and (4), 2nd Pipe Voltage (5) and (4), open the relay between (2) and (4) for about 500mS (programmable delay) to take collect the Instant Off Voltage, Take the AC Current between (3) and (4). And (if configured), take the Bond Shunt current between (4) and (6).

Data View:

All data and commands are accessed using the Omnimetrix OmniView website. For login credentials and general operating instructions for the website, contact Omnimetrix Technical Support at 770-209-0012 or email to techsupport@omnimetrixconnect.com

The data page can be configured to display a variety of operating parameters. It typically will show the following values: • Lithium Battery (VDC) • Battery Under Load (VDC) • Pipe-to-Soil (mVolts DC) • Instant Off (mVolts DC) • Native Coupon (mVolts DC) • Other Parameters

Below is a typical Data Page:

Index	Unit ID	Unit Description	MSG	Alarm	Lithium Battery (VDC)	Battery Under Load (VDC)	Pipe-to-Soil (mVDC)	Instant Off (mVDC)	Casing (mVDC)	Pipe-Casing Difference (mV)	Pipe AC Volts (VAC)	AC Current (A)	AC Current Density (A/m^2)	DC Current (A)	DC Current Density (A/m^2)	Report (Mode)	Sample (Mode)
1	45035	* Barness Hill Church Rd, N/O Baybrook, Rocky Mount - Piedmont Patriot+ trial	✉	✔	6.48	6.44	-1428	-738	-102	1326	1.95	0.076	0.759	0.264	2.641	6	6

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Sample and Report Timing:

Sample timing is how often the unit samples information from the pipeline. This is programmable by selecting the unit (right clicking on the unit ID), hovering your mouse over the "Command" menu and choosing the "Send Command" tab. Within the "Send Command" page, you will find the "Write Sample Mode" command in "Machine Command" list. The number that you want to send with this command (1-10) must be added to the "Lower Data Value (Decimal):" field.

Report timing is how often the unit wakes up and connects to the OmniMetrix server for information exchange. This is programmable, in the same way as above, except choosing the "Write Report Mode" command.

The valid modes are:

SAMPLE MODE

1 - Sample & record data every 5 minutes

2 - Sample & record data every 15 minutes

3 - Sample & record data this minute every hour

4 - Sample & record data this minute every 4 hours

5 - Sample & record data this minute every 8 hours

6 - Sample & record data this minute every 12 hours

7 - Sample & record data this minute every 24 hours

8 - Sample & record data this hour and minute every preprogrammed day of the week

9 - Sample & record data this minute/this hour/this day of the month (1-28) 10 - Sample & record data this minute every 23 hours

REPORT MODE (minutes)

1 - 5

2 - 15

3 – 60 1 Hour

4 – 240 4 Hours

5 – 480 8 Hours

6 – 720 12 Hours

7 – 1440 24 Hours, 1 Day

8 – 10080 168 Hours, 1 Week

9 – 43805 730 Hours, 30.42 Days, 1 month

10 – 1380 23 Hours

If Report mode is set to be more frequent than Sample mode, it will be reset to the same frequency as Sample mode.