

**NOTES:**

1. **WARNING:** This drawing does not illustrate completely the installation methods required for hazardous locations. Prior to any installation in a Classified Hazardous Location, verify installation methods by the Control Drawing referenced on the product's name tag and national and local codes.
2. **WARNING:** Using a non-factory RS485 data cable between radio and first unit may result in damage and may void system warranty.
3. Zero second Listen Time is required.
4. Maximum length of RS485 bus is 4000 Ft. @9600 baud using Totalflow cable P/N 2011648-001 or equivalent.
5. No Star Configurations.

Jumper 1 to 2 on J7 to terminate last unit on bus.

Jumper 2 to 3 on J7 for first and intermediate units.  
or  
If the first unit is the only unit, jumper 1 to 2 to terminate.

Totalflow RS-485 Cable  
P/N 2011648-001  
Between Each Unit

Plug in modules with smooth side of the module on the left which puts pin 1 on the bottom.

RS-485 Communications Module  
Totalflow P/N 2015193-002/003  
In Each Unit.

Totalflow Cable  
P/N 2101238-002

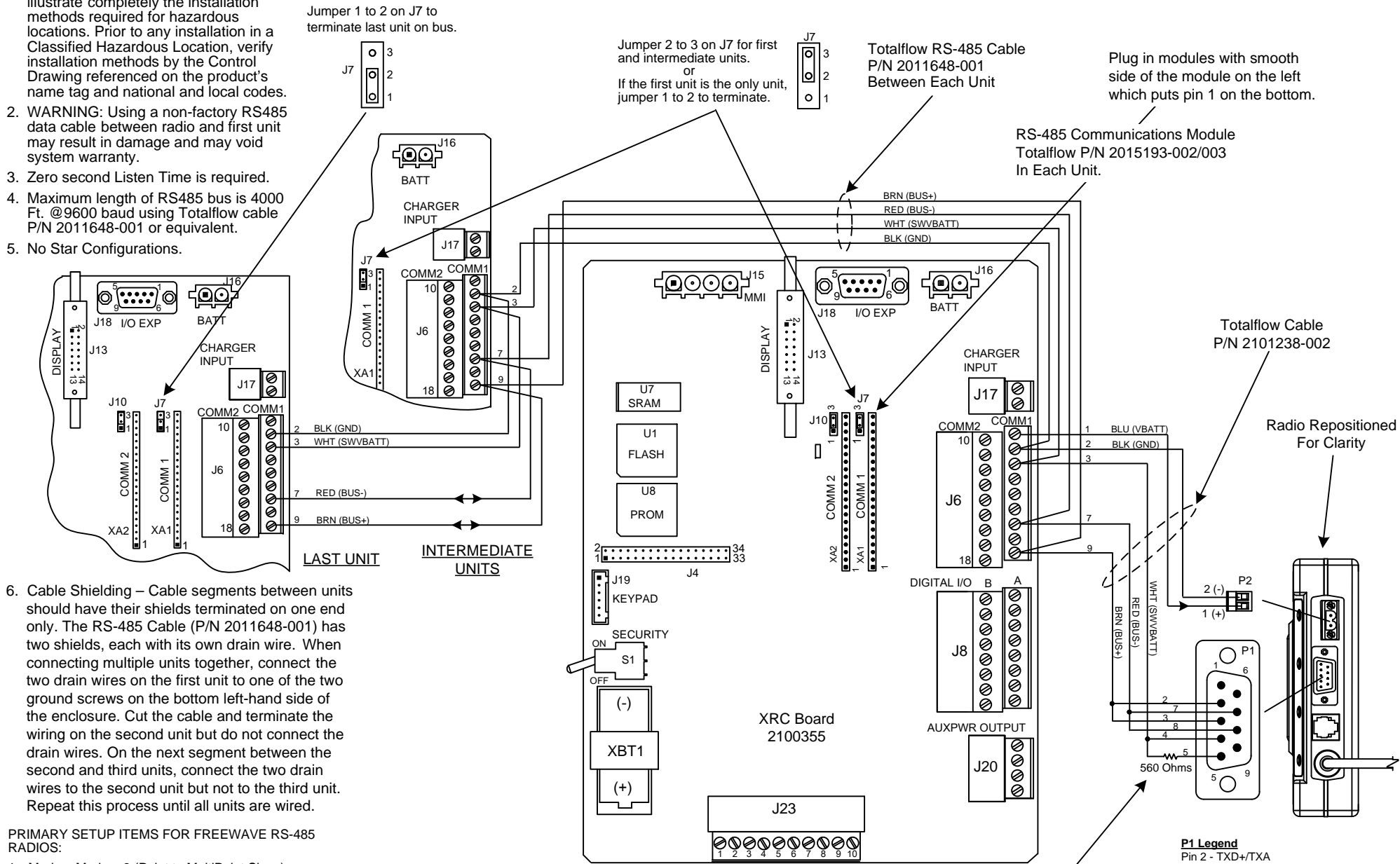
Radio Repositioned For Clarity

6. **Cable Shielding** – Cable segments between units should have their shields terminated on one end only. The RS-485 Cable (P/N 2011648-001) has two shields, each with its own drain wire. When connecting multiple units together, connect the two drain wires on the first unit to one of the two ground screws on the bottom left-hand side of the enclosure. Cut the cable and terminate the wiring on the second unit but do not connect the drain wires. On the next segment between the second and third units, connect the two drain wires to the second unit but not to the third unit. Repeat this process until all units are wired.

**PRIMARY SETUP ITEMS FOR FREEWAVE RS-485 RADIOS:**

1. Modem Mode = 3 (Point to MultiPoint Slave).
2. Modem Baud = 6 (9600) - (other baud rates can be used but needs to match flow computer's baud rate).
3. RS232/485 = 2 (RS485)
4. Number Repeaters (Enter number of repeaters)
5. NetWork ID (Enter address ID of radio which is also the same as the Master Radio's ID.

Note: Typically, all other setup items can be left in their default state.



**P1 Legend**  
Pin 2 - TXD+/TXA  
Pin 3 - RXD+/RXA  
Pin 4 - Sleep (Gnd = Sleep)  
Pin 5 - Signal Gnd  
Pin 7 - RXD-/RXB  
Pin 8 - TXD-/TXB

Resistor Is Built In To  
Factory Data Cable

REF: 2101240-WI

	<b>TOTALFLOW</b> Products	ACTION	DOC TYPE	TITLE	DWG NO.	REV	SHEET
		D22584	UD	XRC COMM 1 (2100355 BD) TO MDS TRANSNET 900 RADIO (RS-485)	2101978	AC	1 OF 1