Trimble 5600 Robot and Parani communication procedure
Trimble Survey Controller Software

Equipment for initial startup:
- Instrument on tripod
- TSC2 unit with Survey Controller Software installed
- (2) Parani SD1000 with extended battery packs and 5dBi antenna
    - SD1 has null modem attached for easier reference
- External "Y" power cable / data cable
- 12 volt battery

Getting started:
1. Turn on TSC2 and bring up Survey Controller Software
    a. Connect Parani SD2, **no** null modem attached, and have in off position
2. Set up instrument on tribrach and rough level utilizing tribrach bubble
3. Connect instrument to 12v battery using a "Y" power / data cable
    a. Connect Parani SD1, **_null modem attached_**, and have powered on
4. Turn on instrument and wait for double beep signifying instrument has initialized
5. Rotate horizontal or vertical motion knob to initialize communication with Parani SD1
    a. Turn on power to Parani SD2 at TSC2 controller and watch for RS232-TX/RX communication light to flicker red – signifies system communication proceed to work
        i. If Parani RS232-TX/RX communication light blinks green at TSC2 controller, communication was not successful, turn off Parani SD2 at controller, make sure robot is still on by rotating horizontal or vertical motion knob and watch for rotation to make sure still on.
            1. If instrument is still on should activate communication with Parani SD1
        ii. If no rotation utilizing horizontal motion knob, power on instrument again repeat steps 5. and 5.a.
    b. Should be able to proceed with initializing compensator and start surveying

Powering down instrument from controller:

1. Turn off Parani at controller and wait for Survey Controller software to signify communication ended – Robot will be grayed, turning, and no data on screen
2. Turn Parani at controller back on and instrument will shut down
    a. If Parani RS232-TX/RX communication light blinks green at TSC2 controller instrument will have shut down

Parani SD1000 should be programed to each other: SD1 / SD2, if not follow instructions below:

Step 1. Turn on SD1 and SD2 and reset both of them by pressing Factory Reset Button.

Step 2. Press the Pairing Button of SD1 (<u>null modem attached</u>) for 2 seconds until Mode LED blinks 3 times every 3 seconds.

> Keep the power ON.

Step 3. Press the Pairing Button of SD2 for 2 seconds until Mode LED blinks 3 times every 3 seconds.

> Now press again the Pairing Button for 2 seconds until Mode LED blinks every second.

Step 4. Wait for SD1 & SD2 to connect to each other until the Connect LED's of SD1 and SD2 blink every 1 second.

It takes about 10 seconds to make a connection.

> If there are many Bluetooth devices nearby, it may take longer.

Step 5. Turn SD1 off and on. Mode LED blinks twice in green every 3 seconds.

Step 6. Turn SD2 off and on. Mode LED blinks in green every second.

Step 7. Now SD1 and SD2 are configured to make automatic connection to each other, whenever they are powered on.