SBIR
SANTA BARBARA INFRARED, INC.
a HEICO company

WARNING: Do not touch the black emissive surface of the BTR. Fingerprints can damage the surface and affect performance.

1. Connect power supply to the reference source
2. Connect micro USB cable between the reference source and a computer
3. In Windows™, use the Device Manager to determine the number of the COM port of the USB serial port. (COM4 in this example)

319-002-810 REV A
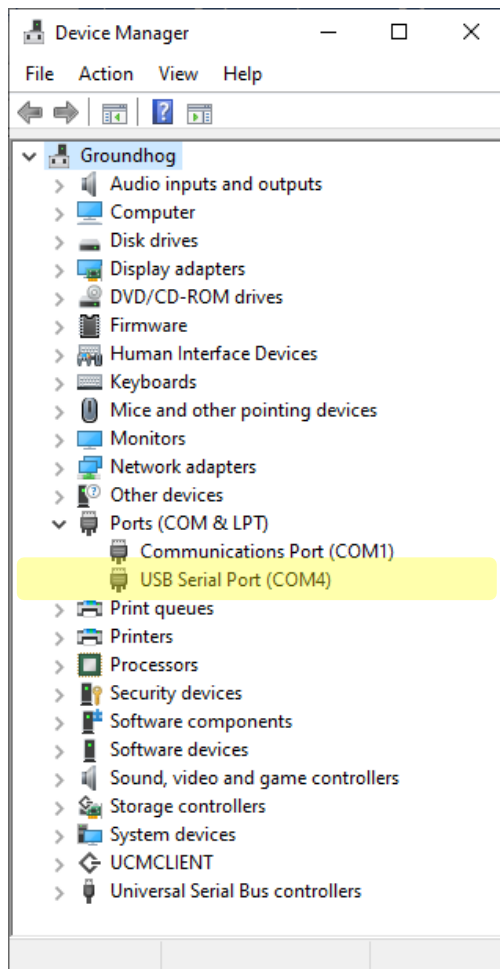
4. Use a terminal program such as PuTTY (this can be downloaded for free at www.putty.org) to connect to the USB serial port shown in the Device Manager. The full settings for the serial port of the reference are:
   - 9600 Baud
   - 8 Bit Data
   - No Parity
   - 1 Stop Bit.

5. Once PuTTY is open. Select Serial and type the COM# in the "Serial line" box (COM4 in this example) and type in 9600 into the "Speed" box. Then Select "Open" to connect to the reference.

   If the Data and Stop bits along with the Parity need to be set, select Connection→Serial in the Category section and enter the appropriate information.
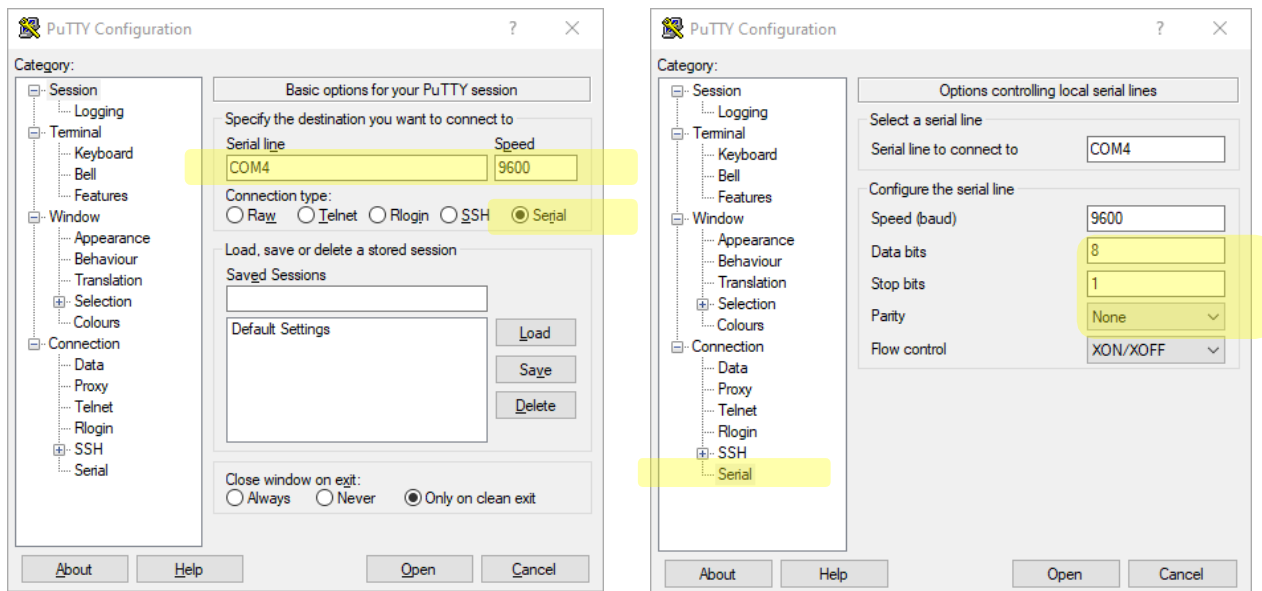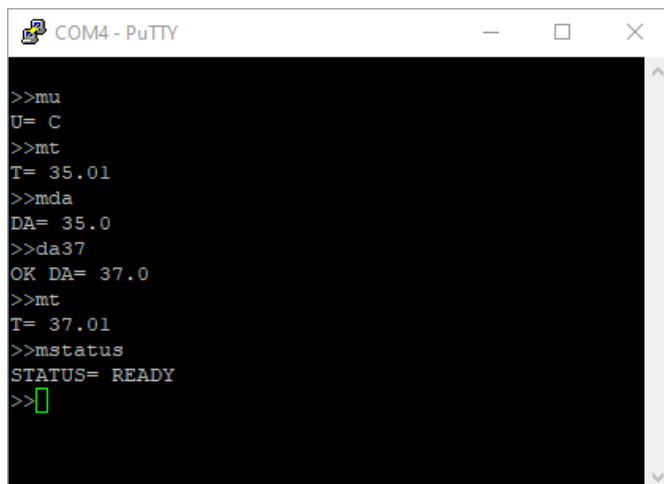
6. In the terminal, hit 'Enter' on the keyboard once to display the prompt. The reference will now respond to commands.
    *   The reference is set to 35C from the factory.
    *   The front LED will blink while the unit is slewing to the setpoint
    *   The front LED will remain on once the unit has reached the setpoint

Common Commands:

MU	Read back current units
MT	Read back current temperature
MDA	Read back current setpoint
DAxx.x	Configure new setpoint
UF	Change the units to Fahrenheit
UC	Change the units to Celsius
MSTATUS	Reports Status
SAVE	Store the current configuration (setpoint and units) to non-volatile memory.
IDENT	Identify BTR-03 source (LED light blinks rapidly for 5 seconds).

User Commands

Command	Response	Description
MT	T= xx.xx	Gets heater temperature in selected units (C or F)
MDA	DA= xx.x	Gets temperature setpoint in selected units (C or F)
DAxx.xx	OK DA= xx.x	Gets temperature setpoint in selected units (C or F) Setpoint resolution is 0.1C or 0.2F
MU	U= F/C	Returns F if units are Fahrenheit or C if units are Celsius
UF	OK U= F	Sets units to Fahrenheit Setpoint will adjust to match Fahrenheit resolution (0.2F)
UC	OK U= C	Sets units to Celsius Setpoint will adjust to match Celsius resolution (0.1C)
DOFF	OK DOFF	Turns off heater until a new setpoint is received
MS	SR= XX	Returns Status byte. The Status byte is returned as a decimal number. 0—READY 16—BUSY 32—ERROR and READY 48—BUSY and ERROR
ME	ER= XX	Returns error bit field as a decimal number. Errors are cleared on read. Bit 0: Unknown command Bit 1: Setpoint out of range Bit 2: Thermistor Error Bit 3: ADC Error
MSTATUS	STATUS=	Returns status as string: BUSY, READY, BUSY AND ERROR, or READY AND ERROR.
MERROR	ERROR=	Returns error descriptions and clears errors or NONE if no errors.
MSN	SN= xxxxx	Gets Serial Number
IDENT	OK IDENT	Rapidly blinks LED for 5 seconds to confirm communication
SAVE	OK SAVE	Saves user settings (Setpoint, Units) to non-volatile memory