IR-USB Serial Command Reference:

Note: All commands sent to the IR-USB must be terminated by a carriage return or carriage return and linefeed, which is shown in this document as "$^{C}_{R}$" and "$^{L}_{F}$". Any parameters shown in square brackets "[ ]" are optional. Parameters are separated from commands and from each other by a space " ". Spaces within commands are shown in this document as "$^{S}_{P}$". All commands are case insensitive, meaning any combination of upper/lower case characters are accepted.

The USB connection appears on the PC as a virtual serial COM Port. In order to communicate with the IR-USB, the PC running a terminal program (such as HyperTerminal) must have the following serial communication settings:

Baud:	9600
Data Bits:	8
Parity:	None
Stop Bits:	1
Handshaking:	None

A Command:

Description: - Transmit ambient temperature in Deg C and Deg F.

Syntax: **A $^{C}_{R}$ [$^{L}_{F}$]**

Parts: None. There are no parameters for this command.

Remarks: Ambient temperature should not exceed 158 °F or damage to the electronics may result.

Example:

Assuming ambient temperature is 75.9 °F, the following is shown on the PC (terminal) screen after typing "A" and pressing the <Enter> key:

```
A
SNS AMB = 24.3, 75.9<CR><LF>>
```

C Command:

Description: - Transmit temperature in Deg C.

Syntax: **C $^{C}_{R}$ [$^{L}_{F}$]**

Parts: None. There are no parameters for this command.

Remarks: None.

Example:

Assuming probe temperature is 125 °C, the following is shown on the PC (terminal) screen after typing "C" and pressing the <Enter> key:

```
C
125<CR><LF>>
```

F Command:

Description: - Transmit temperature in Deg F.

Syntax: **F $^{C}_{R}$ [$^{L}_{F}$]**

Parts: None. There are no parameters for this command.

Remarks: None.

Example:

Assuming probe temperature is 257 °F, the following is shown on the PC (terminal) screen after typing "F" and pressing the <Enter> key:

```
F
257 C R L F >
```

E Command:

Description: - Set/Transmit emissivity.

Syntax: **E [$^{S}_{P}$ EMISSIVITY] $^{C}_{R}$ [$^{L}_{F}$]**

Parts:

EMISSIVITY (OPTIONAL)

Specifies the emissivity. Valid range of values is 0.10 to 1.00.

Remarks: None.

Example:

Assuming emissivity is 1.00, the following is shown on the PC (terminal) screen after typing "E" and pressing the <Enter> key:

```
E
E = 1.00 C R L F >
```

To set the emissivity to 0.50, type the following and press the <Enter> key:

```
E 0.50
```

This will then display:

```
E = 0.50 C R L F >
```

ENQ Command:

Description: - Transmit model number and firmware version.

Syntax: **ENQ $^{C}_{R}$ [$^{L}_{F}$]**

Parts: None. There are no parameters for this command.

Remarks:

The firmware version is a six-digit number

Example:

The following is shown on the PC (terminal) screen after typing "ENQ" and pressing the <Enter> key:

```
IRUSB2 C_R L_F
100716 C_R L_F >
```

IFILTER Command:

Description: - Set/Transmit IIR filter period.

Syntax: **IFILTER[$^{S}_{P}$ PERIOD] $^{C}_{R}$ [$^{L}_{F}$]**

Parts:

PERIOD (OPTIONAL)

Specifies the period to be used by the IIR filter. Valid range of values is 0 to 255. A value of 0 will disable this filter. The default value is 9.

Remarks:

IIR (Infinite Impulse Response) filter is used to filter raw analog to digital converter readings for high frequencies and impulse noise.

Example:

The following is shown on the PC (terminal) screen after typing "IFILTER" and pressing the <Enter> key:

```
IFILTER
I = 9 C_R L_F >
```

The following is shown on the PC (terminal) screen after typing "IFILTER 50" and pressing the <Enter> key:

```
IFILTER
I = 50 C_R L_F >
```

MFILTER Command:

Description: - Set/Transmit Moving Average filter order.

Syntax: **MFILTER[$^{S}_{P}$ ORDER]$^{C}_{R}$[$^{L}_{F}$]**

Parts:

ORDER (OPTIONAL)

Specifies the order value to be used by the Moving Average filter. Valid range of values is 0 to 63. A value of 0 will disable this filter. The default value is 4.

Remarks:

MA (Moving Average) filter used to filter temperature values (Deg F or Deg C) to smooth out low frequency variations in temperature.

Example:

The following is shown on the PC (terminal) screen after typing "`MFILTER`" and pressing the <Enter> key:

```
MFILTER
M = 4<CR><LF>
```

The following is shown on the PC (terminal) screen after typing "`MFILTER 10`" and pressing the <Enter> key:

```
MFILTER
M = 10<CR><LF>
```

PA Command:

Description: - Transmit Process and Ambient temperature in Degrees Fahrenheit, without units.

Syntax: **PA$^{C}_{R}$[$^{L}_{F}$]**

Parts: None. There are no parameters for this command.

Remarks: Ambient temperature should not exceed 158 °F or damage to the electronics may result.

Example:

Assuming probe temperature is 257 °F and the ambient temperature is 105 °F, the following is shown on the PC (terminal) screen after typing "PA" and pressing the <Enter> key:

```
257, 105.0<CR><LF>
```