Cornflake
SERIAL TERMINAL

Cornflake is a multi-windowed native OS X Cocoa application, which supports communication to multiple serial devices at once. Simply open a window (⌘ N) for each device, and they will function independently of each other. The diagram below describes the entire Cornflake interface and its functionality.

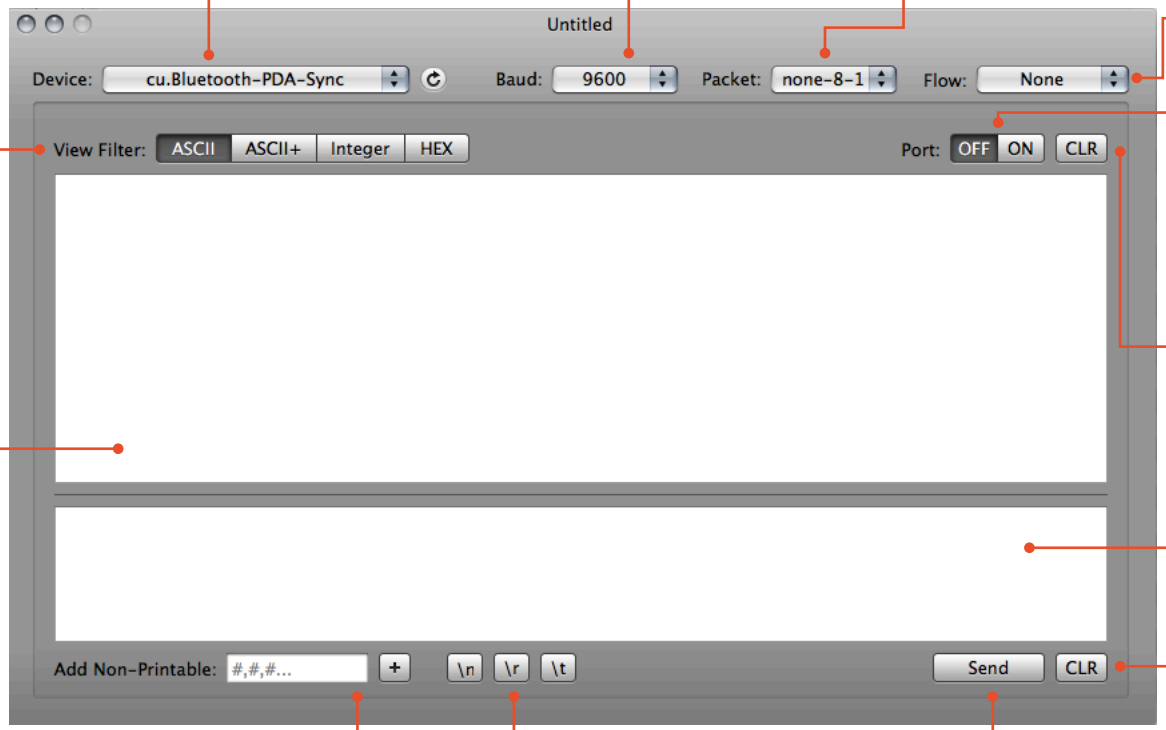
View Filter (Receive Only):
The view filter allows the user to choose how they see the incoming serial data. The filter is set by clicking the different view buttons, and the filtering happens instantly and over the entire receive (Rx) buffer. The available view filters are as follows:
ASCII: displays the data as ascii text, spaces (value 32), tabs(value 9), and line fees (value 10) returns will behave like they do in a standard text editor.
ASCII+: displays the incoming data as ascii values when in the printable range (33-126) and as integer values when in the non-printable range. The non-printable values are preceded by a '\' and highlighted in grey.
Integer: displays the data as it's integer value. This is useful when the incoming serial data is numerical, not textural... eg. the letter 'M' will be displayed as a 77, etc... each value is preceded by a '\' and highlighted in grey.
HEX: displays the incoming data as its hexadecimal value... eg. the letter 'M' will be displayed as 0x4D.

Received Data (Rx) Field:
Text field that displays the received data from the selected device. This data is filtered by the current view filter. (This field is read-only, to send data use the 'Send Data (Tx) Field')

Device Selection/Refresh Button:
This pull-down allows you to select the serial device you want to use, to refresh the list, press the round refresh button next to it.

Baud Rate Selection:
This pull-down allows you to select the baud-rate (speed) to use for the selected device. This must match the device's baud rate, or you will get erroneous data.

Packet Type Selection:
This pull-down allows you to select the packet structure of the serial data (parity-data bits-stop bits).
Defaults to: none(no parity)-8(data bits)-1(stop bits)
Options are: odd(odd parity)-7(data bits)-1(stop bits)
even(even parity)-7(data bits)-1(stop bits)



Flow Control Selection:
This pull-down allows you to select the flow control for the port. Defaults to 'none' rarely would you need 'Hardware' or 'Xon/Xoff.'

Port Control:
This toggles the serial port on or off. When off is pressed, this unbinds and closes the port; enabling other programs to use it.

Clear Button:
Clears the receive (Rx) buffer.

Send Data (Tx) Field:
Text field were user inputs data to send to selected device. This field acts like a typical text box, capturing all user keyboard input... including returns and tabs. This field is special however, because it displays typically invisible characters as their value representation. This is important because the user can see exactly what is being sent to the selected serial device. For instance, spaces are printed as '\32' (their byte value) and a tab is printed as '\9' (its byte value). Additionally, non-printable values entered via the 'Add Non-Printable' entry box and buttons, are also displayed as byte values highlighted in grey.

Add Non-Printable Characters:
Enables the user to enter values into the send (Tx) buffer that are not in the ASCII printable range (32-127). This is necessary and useful because there is no way to enter a value not present on the keyboard eg. 128-255. For convenience, multiple values can be entered at once by separating them with a comma: eg. 128,255,233. Pressing the '+' button sends the values to the end of the send (Tx) buffer.

Add Non-Printable Shortcuts:
These buttons are shortcuts for adding common non-printable values into the send (Tx) buffer. Their values are as follows:
'\n' is 10 (line break)
'\r' is 13 (carriage return)
'\t' is 9 (tab)

Send Button:
Sends the contents of the send (Tx) buffer to the selected device (if the port is 'on').

Clear Button:
Clears the send (Tx) buffer.