Remote Hams Client Setup

Configuration for WinKeyer/PTT/KEY/PADDLE

Version: RCForb Client v0.9.218

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12/14/2017

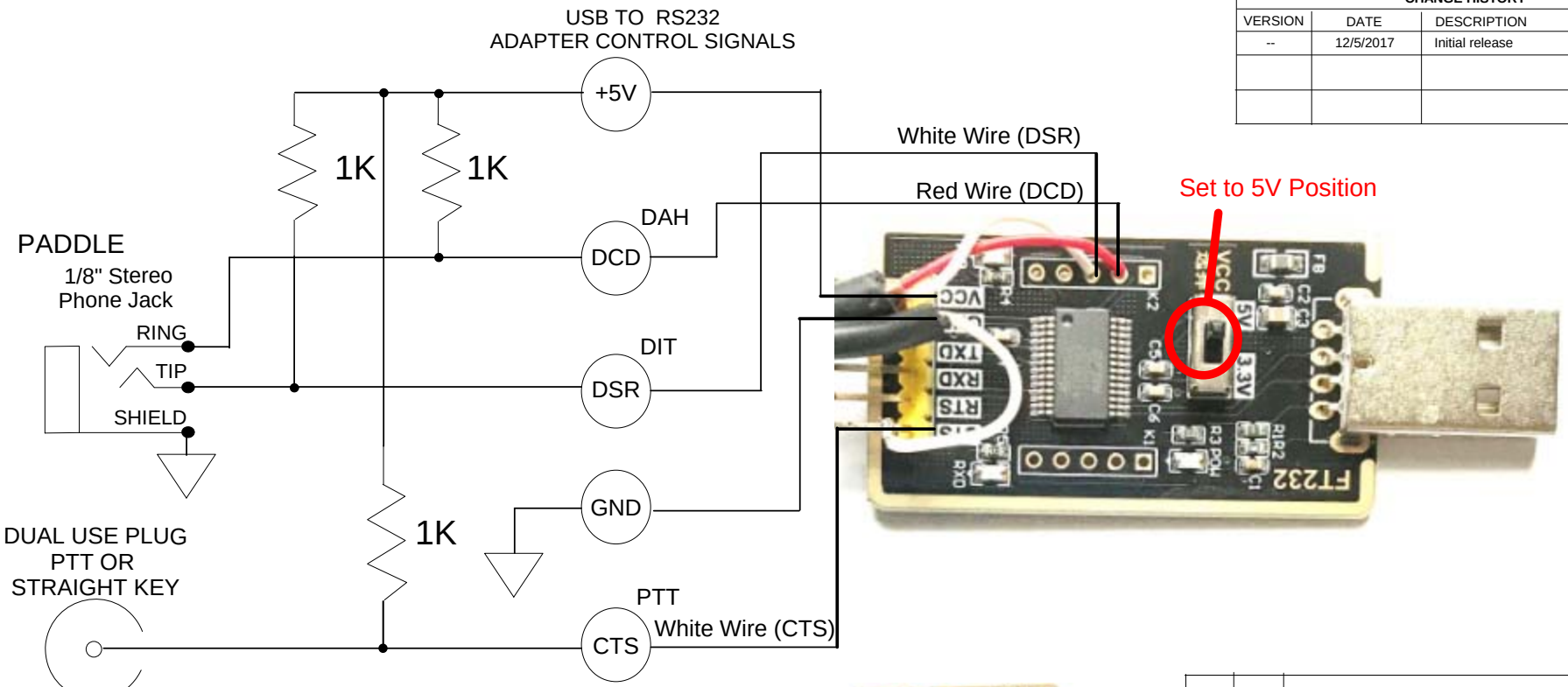
Important Notice

- The USB to TTL Adapter part numbers I list using the FTDI chipset were the ones used in this technical note. These are NOT RS-232 signaling levels as you would find with in-line USB to RS-232 adapters (https://en.wikipedia.org/wiki/RS-232). RS-232 levels (not what I am using) are:
  - **logic 0** voltage between +3 and +15 volts
  - **logic 1** is between -3 and -15 volts.
  - Notice the range +3 to -3 volts is invalid.
- I find it easier and less expensive to use these small circuit cards with the USB connector in order to design circuit interfaces.
- For the circuit I specify, the logic levels at the circuit board pins are either 3.3v or 5v (TTL) levels and set by a small circuit board slide switch.
- If you substitute in-line type of USB to RS-232 adapters, the information presented here will likely not work. Beware and understand the differences.

Interfaces

- Two common USB to RS-232 Interface Schematics are Provided
  - Drawing # 4000-0041, PCBA plugs into USB port
  - Drawing # 4000-0042, In-line PCBA with USB Jack
- Configuration Shown for Key or WinKeyer and Paddle Connection
- Alternately, Can Also Set Configuration for PTT

CHANGE HISTORY		
VERSION	DATE	DESCRIPTION
--	12/5/2017	Initial release



Add Clear Heatshrink Over Completed Assembly to Protect Circuit Board During Handling

Notes:

1) All Resistors are Soldered on Backside of Circuit Board Assembly
2) Wire Colors Are Dependant on Manufacturers Part Numbers. Verify Continuity of Connectors to the Pigtail Wire Colors Prior to Soldering!

ITEM	QTY	DESCRIPTION
1	1	Heatshrink, Clear, Tech-Tron P/N PLU 3222441, 1 Inch, Cut 2-1/4" Length
1	1	Cable Assembly with TRS Jack and Pigtails
1	1	Cable Assembly with Pigtails, RCA Plug On End
1	3	Resistors, 1K Ohm, 5%, 1/4 W
1	1	USB to TTL Adapter FTDI Chipset FT232RL Moyina, P/N M-FT232 (Source: Amazon)

K5PA Design Concepts

TITLE: CW-PTT INTERFACE TO USB-RS232 ADAPTER

SIZE	CAGE CODE	DWG NO	REV
A2		4000-0041	--

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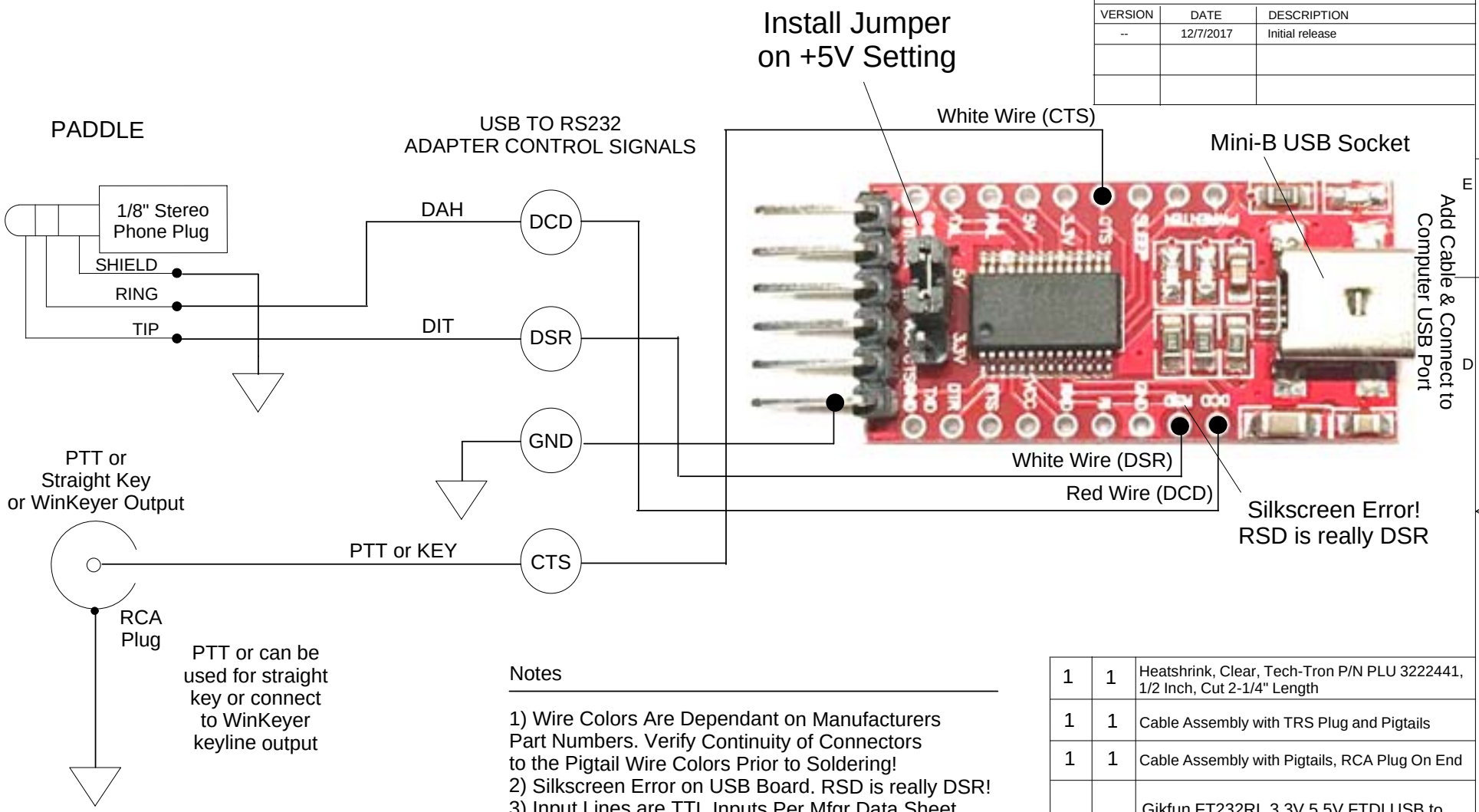
CHANGE HISTORY		
VERSION	DATE	DESCRIPTION
--	12/7/2017	Initial release



Notes

1) Wire Colors Are Dependant on Manufacturers Part Numbers. Verify Continuity of Connectors to the Pigtail Wire Colors Prior to Soldering!
2) Silkscreen Error on USB Board. RSD is really DSR!
3) Input Lines are TTL Inputs Per Mfgr Data Sheet
4) Add Clear Heatshrink Over Completed Assembly to Protect Circuit Board During Handling

ITEM	QTY	DESCRIPTION
1	1	Heatshrink, Clear, Tech-Tron P/N PLU 3222441, 1/2 Inch, Cut 2-1/4" Length
1	1	Cable Assembly with TRS Plug and Pigtails
1	1	Cable Assembly with Pigtails, RCA Plug On End
1	1	Gikfun FT232RL 3.3V 5.5V FTDI USB to TTL Serial Adapter Module for Arduino Mini Port (Pack of 2pcs) AE1186x2

K5PA Design Concepts

TITLE: CW-PTT INTERFACE TO USB-RS232 ADAPTER

SIZE	CAGE CODE	DWG NO	REV
A2		4000-0042	--

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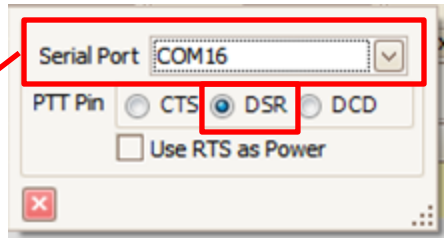
PTT/DIT-DAH/PADDLE CONNECTIONS
Key Concepts (no pun intended)

- The schematic diagrams for the USB to Serial converter boards show connections to the control signals CTS, DSR and DCD
- These control signals can be defined for whatever connections are needed
  - Example #1, Using a WinKeyer with its own paddle and internal memories
    - External PTT: DSR to signal the PTT command
    - External Key: DIT and DAH not used
    - External Key: DCD to signal KEY command
    - The WinKeyer will invoke a PTT constantly when code is sent and the DCD will be the actual Morse code sent (WinKeyer has PTT1 and KEY1 connections)
  - Example #2, Using Just a Paddle connected to the USB-Serial Port (no WinKey used)
    - External PTT: DSR to signal the PTT command
    - External Key: DSR to signal the DIT paddle closure
    - External Key: DCD to signal DAH paddle closure
    - On the DIT/DAH paddle connections to the USB-Serial interface
  - Next 2 pages shows the setting graphically

Example #1: If Using the WinKeyer to Send CW
Settings

These are the Menu Selections in the Client Interface

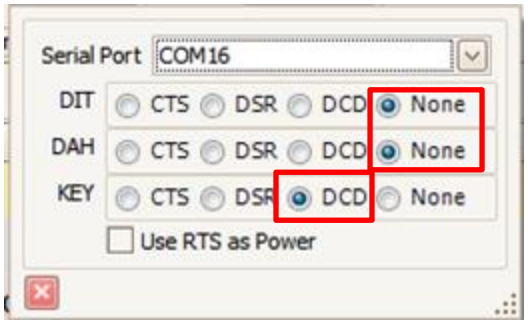
CONTROL DEVICE > EXTERNAL PTT



See Note Below

1/8” TRS Plug: TIP = PTT1
TRS Plug to RCA Adapter Required

CONTROL DEVICE > EXTERNAL CW



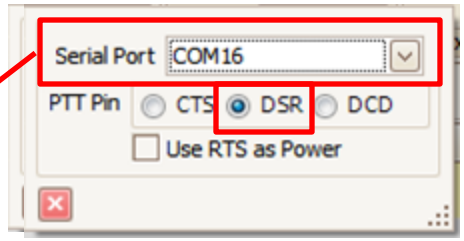
1/8” TRS Plug: RING = KEY1
TRS Plug to RCA Adapter Required

IMPORTANT NOTE
The COM PORT shown as COM16 but yours is whatever the port is defined as when the USB-Serial interface device is plugged into the computer

Example #2: If Using the Just a Paddle to Send CW (No WinKeyer)
Settings

These are the Menu Selections in the Client Interface

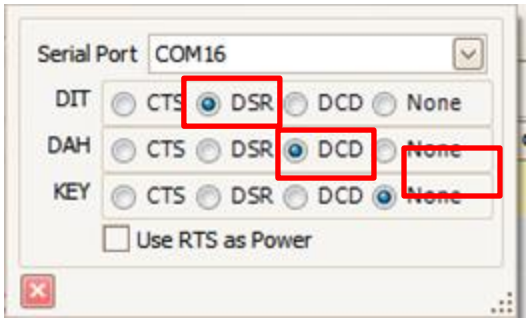
CONTROL DEVICE > EXTERNAL PTT



See Note Below

CABLE NOT USED

CONTROL DEVICE > EXTERNAL CW



1/8” TRS Plug:
TIP = DIT
RING = DOT

IMPORTANT NOTE

The COM PORT shown as COM16 but yours is whatever the port is defined as when the USB-Serial interface device is plugged into the computer

Example Interface Diagram

Twin Paddle – WinKeyer - Computer