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# Part Task Trainer Interfacing

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*Caveats...*

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**ABSTRACT**

This document provides a detailed description of the AICC serial cable interfacing of CBT hardware with Part Task Trainers (PTT).

**KEY WORDS**

CBT/PTT interface  
interface - CBT/PTT  
Part Task Trainer

PTT  
serial interface

## REVISION HISTORY

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**NEW**

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This is a new document. The contents of each page is published here for the first time

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## 1.0

### Purpose

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#### Guidelines

The purpose for creating these guidelines is to enable CBT hardware to be connected and work well with part task trainers (PTT).

#### Definition

A part-task trainer in this context refers to an external, detachable device which connects to a CBT station by a cable. Examples of such devices include:

- CDU (Control Display Unit),
- MCP (Mode Control Panel),
- ACP (Autoflight Control Panel),
- Flap handle,
- Throttle lever,
- Electrical panel.

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**2.0****General Recommendations**

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**Power supply**

The PTT should be powered by its own supply with a line cord to an AC outlet, and should be capable of 50/60 Hz 110/220 V operation.

**Cooling**

The PTT should have adequate active or passive cooling for operation in a semi-enclosed carrel environment (at least 85 degrees Fahrenheit local ambient.)

**Diagnostics**

The PTT should perform a power-up diagnostic sequence.

**Serial interfacing**

The PTT should interface to the CBT station through a COM: serial port using modem-control signals: RTS/CTS, DTR/DSR



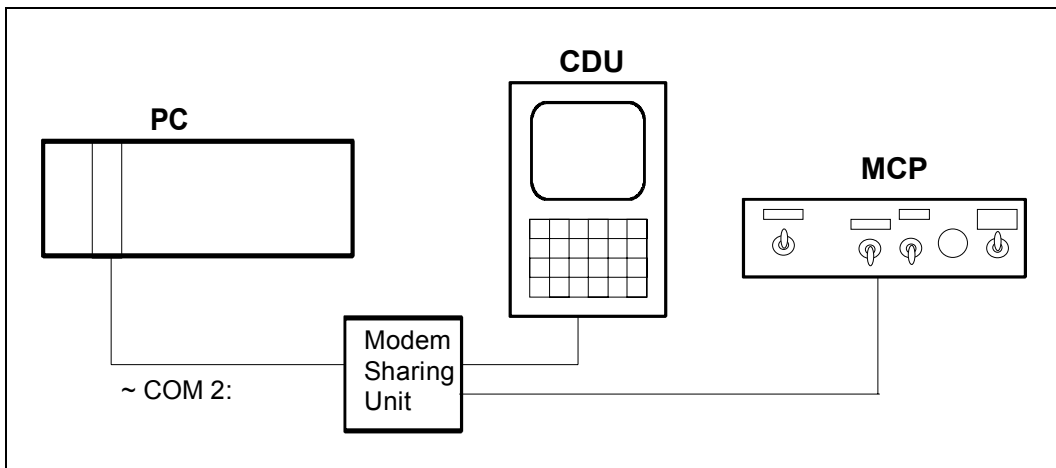
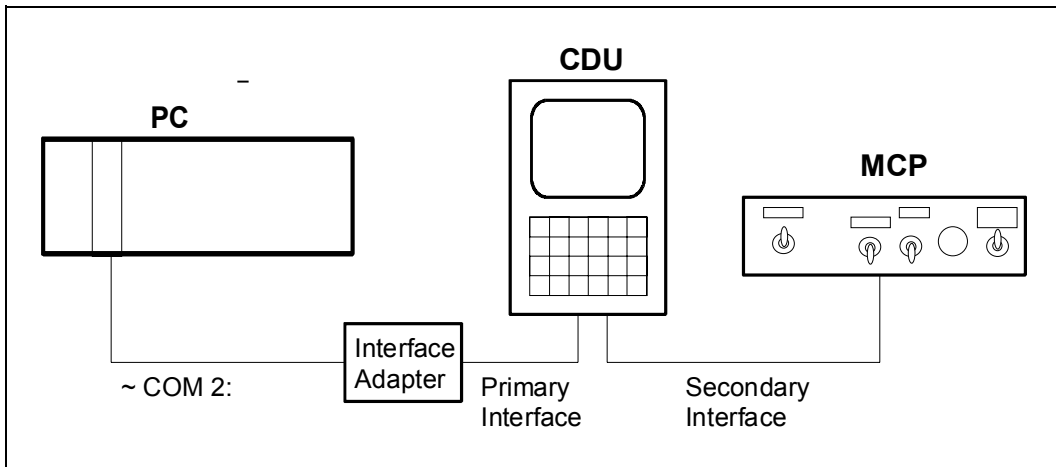
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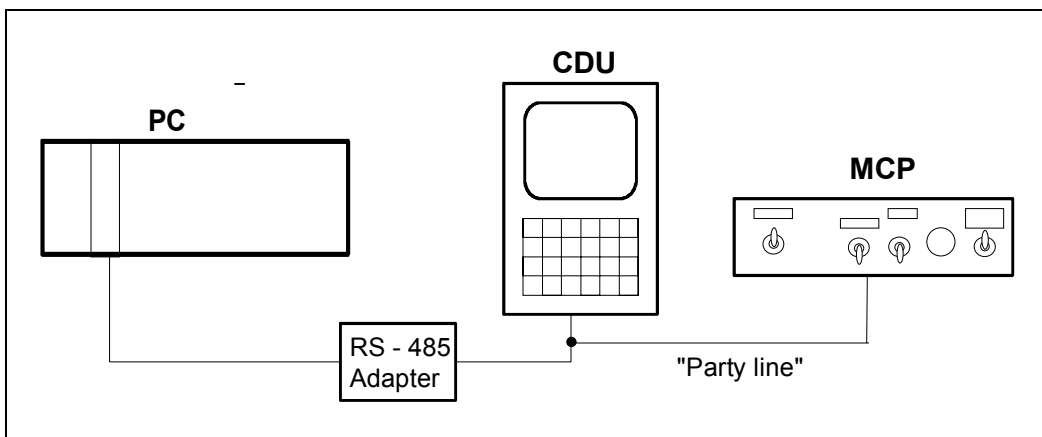
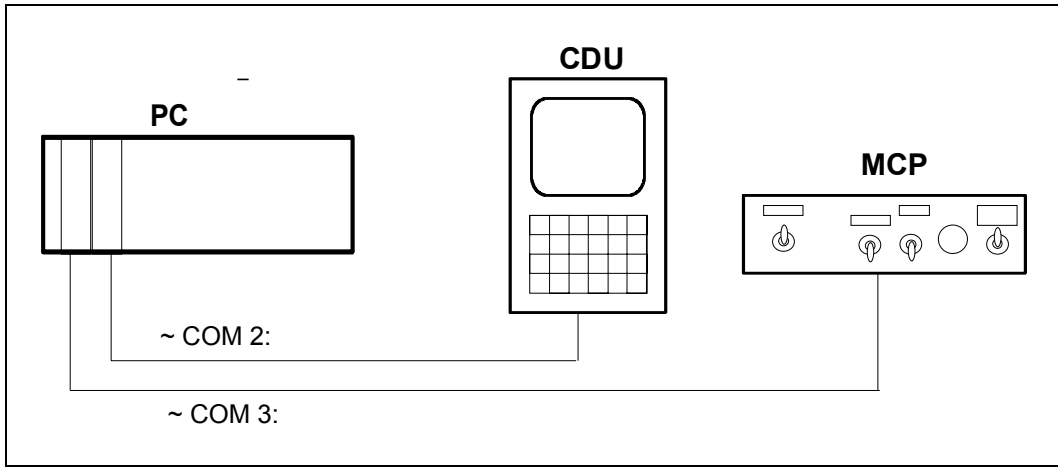
**3.0****Connection Topologies for PTTs**

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**Examples**

These are sample topologies. They represent some example configurations. Specific configurations depend on system capabilities, and vendor and manufacturer requirements.





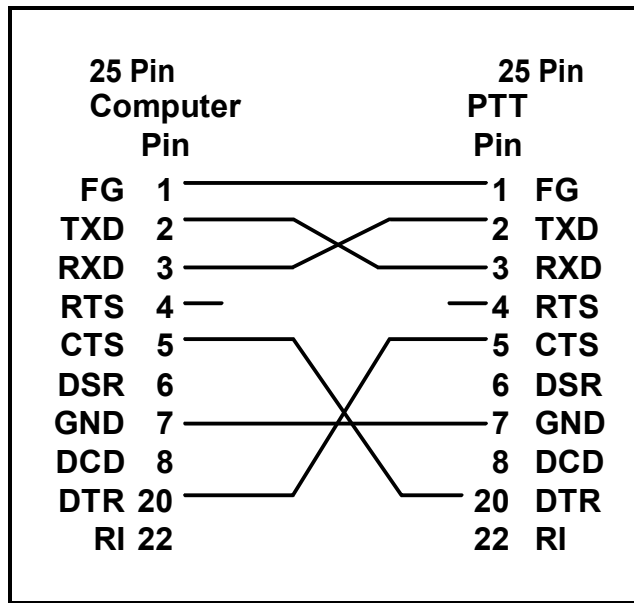
## 4.0 Serial Interface Tables

### PTT Serial Interface

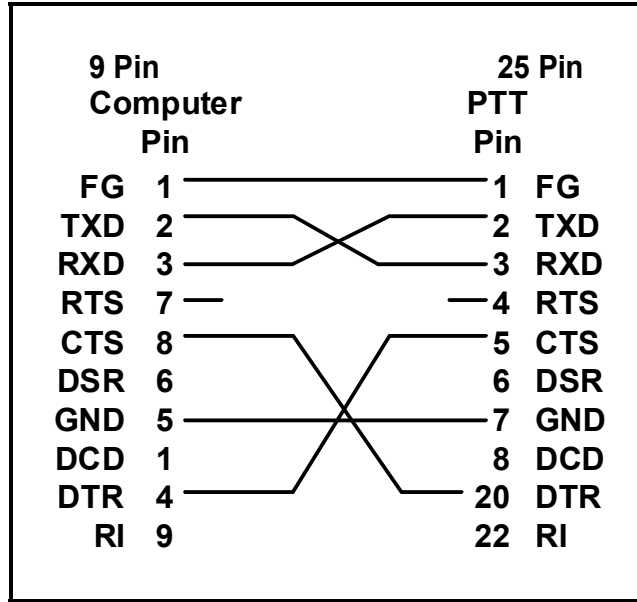
Physical	DTE	Driver/Protocol
RS-232 (RS-422/485)	Modem compatible Direct connect Flow control	COM: port assignable  Interrupt driven
Multiplexed I/O capability	Concatenation (pass-through) -or- MSU compatible (device asserts only for duration of message, then releases)	Unit ID; I/O buffer separation  Modem control signal: flow control or X-on/X-off.
Support for unit ID		
Full duplex		
9600 baud minimum		

### RS-232-C DTE Direct Connection

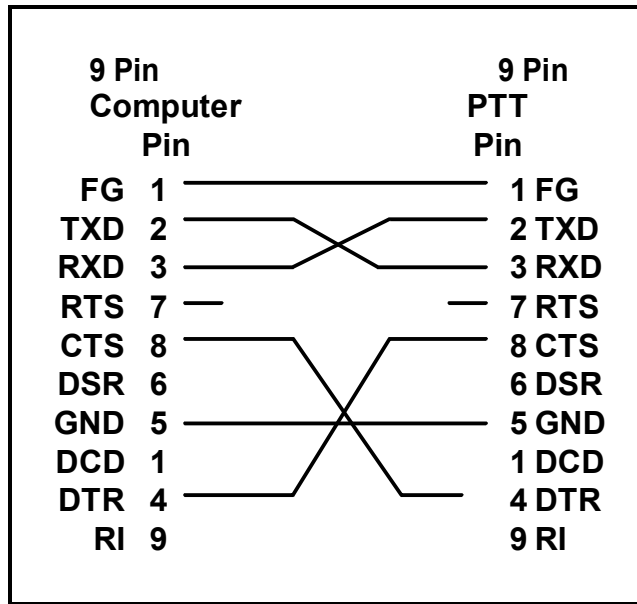
DTR used as an input-halt signal.



25 Pin to 25 Pin Connections



9 Pin to 25 Pin Connections



9 Pin to 9 Pin Connections