# A Rough Guide to Configuring a Yaesu FT-991 for Ham Radio Deluxe and Digital Master 780

## By ZS1JEN (Andre le Roux)

Version 3_21112015

# Table of Contents

# Version History

Version 1_04102015  Original
Version 2_21112015  Included a section for Windows 7 and other minor updates
Version 3_21112015  Corrected typos and layout, added section for CW under Windows 7

# Acknowledgment

Thank you to Prof. Dr. Robert K. Frhr. von Weizsäcker (DL1BOB) for drawing my attention to the fact that the configuration Version 1_04102015 did not work for him.  When I tested the original configuration settings on Windows 7 I was able to confirm and identify the problem and have subsequently added a section for that platform.

# Configuration Prerequisites and Assumptions

This guide assumes that the radio CPU has been reset and that the Yaesu Virtual COM Port Drivers have not been installed on your computer.  It covers both configurations for Windows XP and Windows 7. To reset the FT-991 CPU ensure the radio is switched off, then press and hold in the Fast and Lock buttons while powering the radio on by pressing the on/off button. You will require a USB A/B cable to conenct the FT-991 to your computer.  Check that your USB ports are V2 or later.

# Common configuration Windows XP and 7

## *Yaesu Com Port Driver*

· Ensure the FT-991 is **NOT** connected to your computer via a USB A/B cable.
· If your FT-991 is connected via USB or Serial cable, power the F-991 off and unplug the USB and/or Serial cables
· Install the Yaesu Virtual COM Port Driver on your computer.
· Ensure the FT-991 is powered off.
· Connect the USB A/B cable to the FT-991 and your computer.
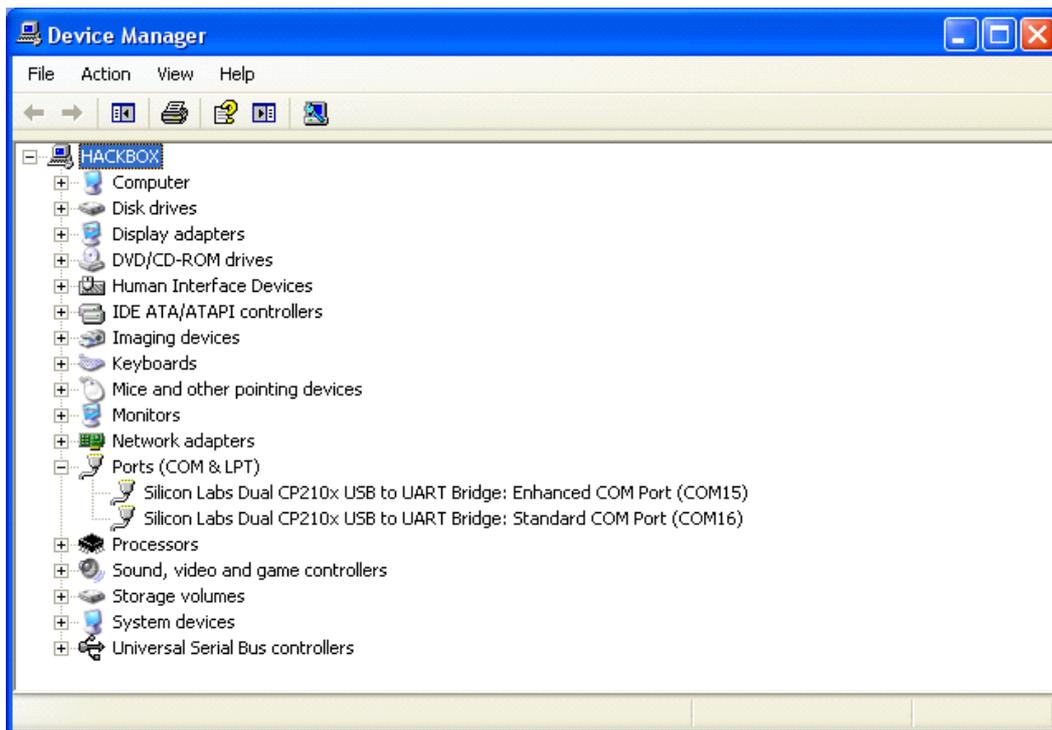
## *Yaesu FT-991 Menu Settings*

· Power on the FT-991
· Press Menu Setup
· Use the Multi selector and select;
· 031 Cat Rate change the value to 38400bps
· 033 CAT RTS ensure value is set to RTS
· 062 Data Mode ensure value is set to PSK
· 070 Data In Select ensure value is set to Rear
· For Windows XP  set 071 Data PTT Select ensure value is set to RTS
· For Windows 7 set 071 Data PTT Select ensure value is set to DTR
· 072 Data Port Select ensure value is set to USB

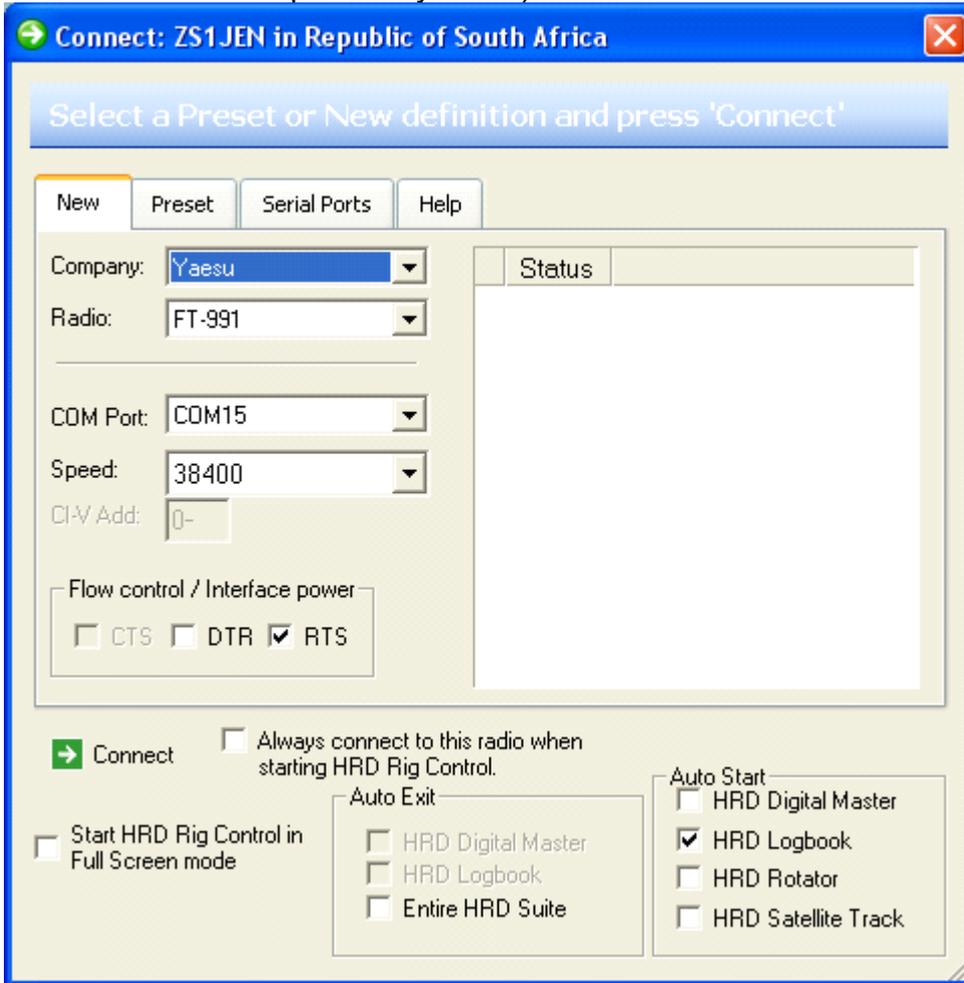# Configuration on Windows XP

HRD 6.2.10.377

Yaesu Main 02:05

• On your computer, open control panel, system, hardware, Device Manager. Under Ports (Com & LPT) you should see your port configuration similar to the following;
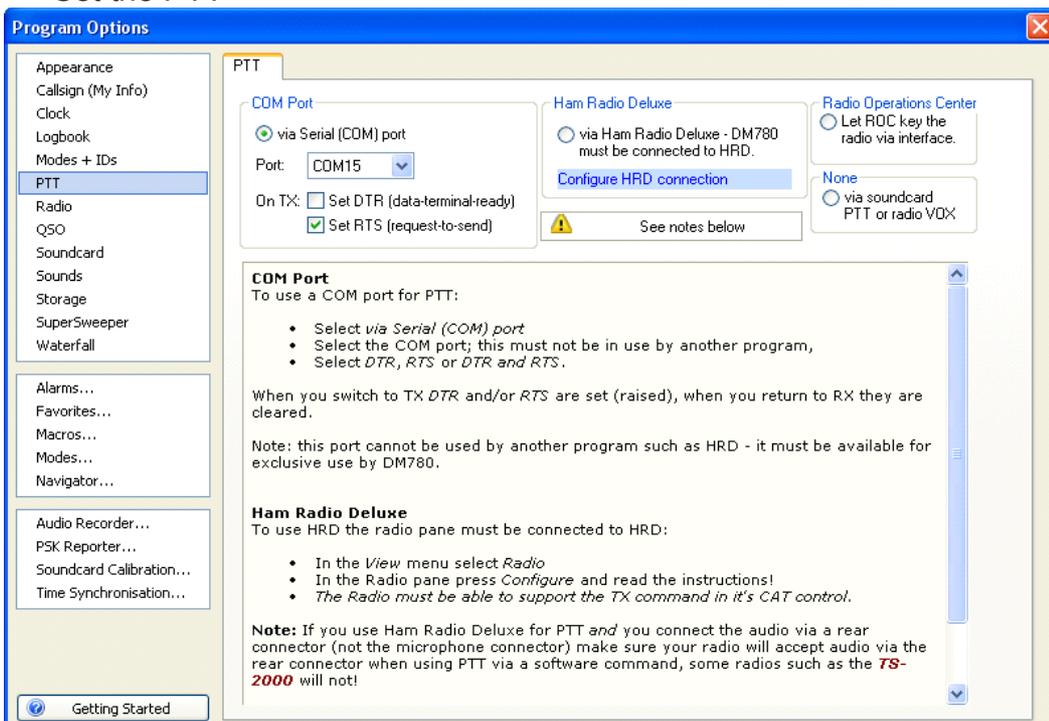


• Make a note of the com ports used by your radio USB interface. You will need that information later.
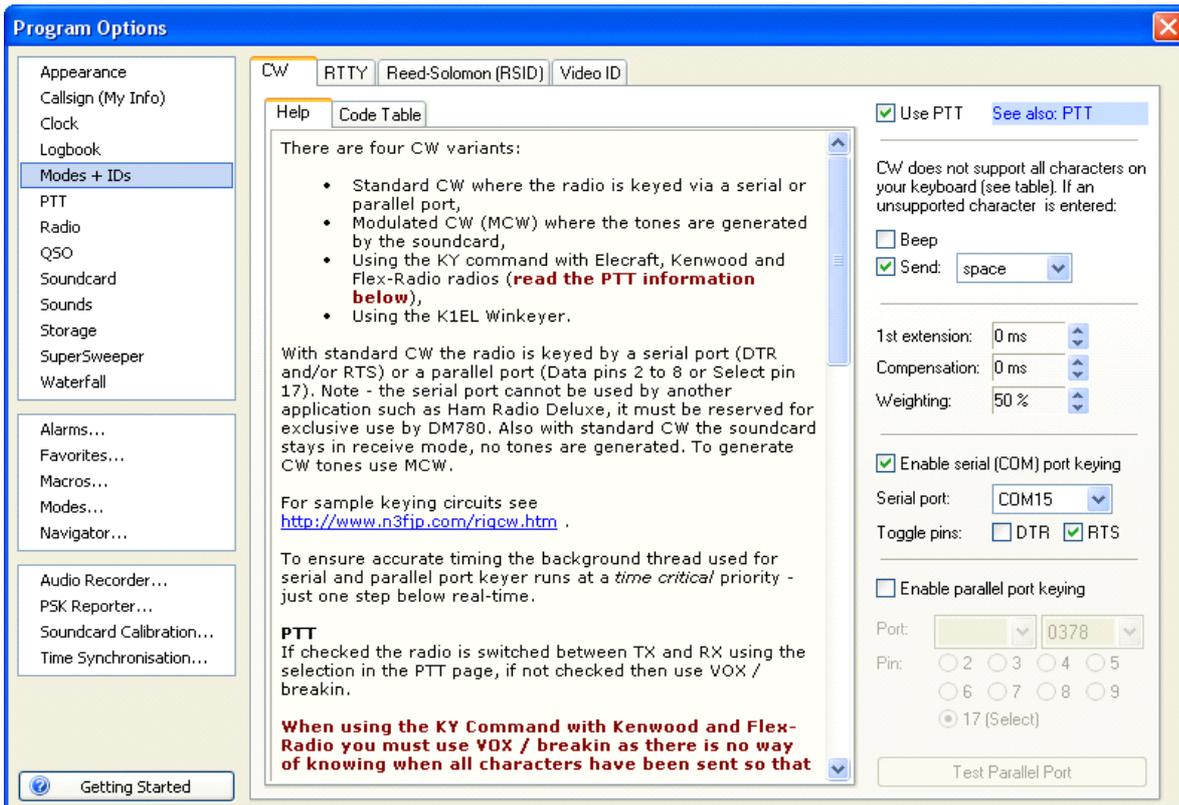
- Open HRD and set the radio parameters as follows (Note the COM port for Enhanced and Standard COM ports may differ.)
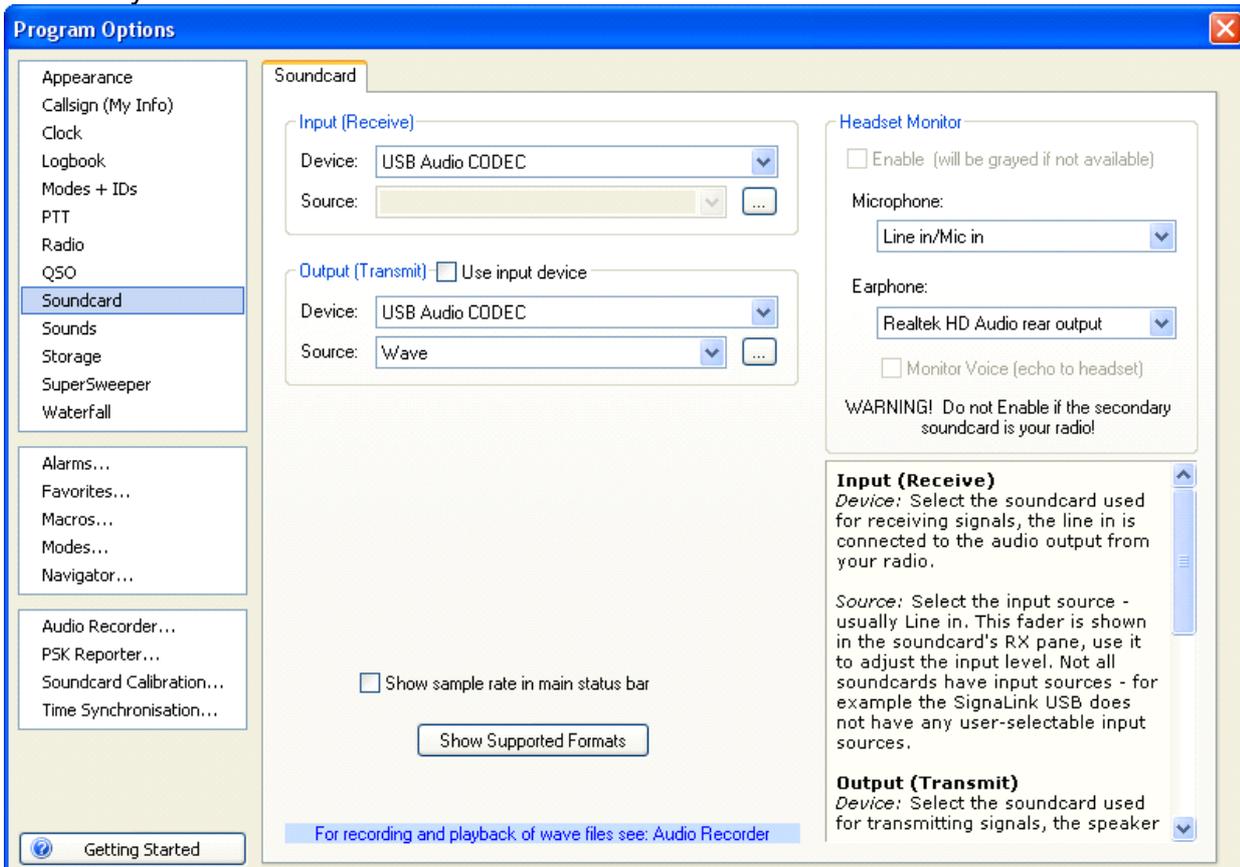


- Configure Digital Master 780 as follows;
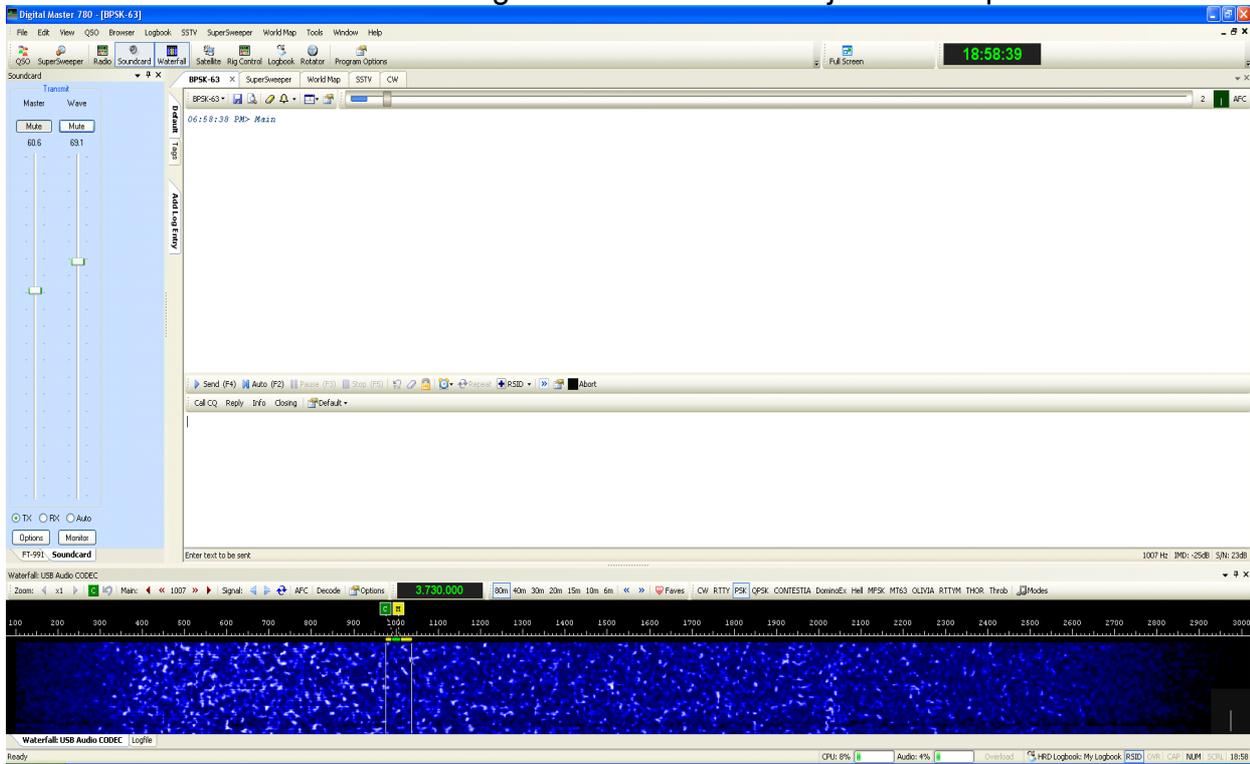- Set the PTT

- Under Modes +Ids set PTT for CW



- Finally set sound card as follows



- Close Digital Master 780 Program Options.

## *Digital Master  an FT-991 Audio Configuration*

• Adjust input to your computer using menu 073 Data Out level to a suitable value for decoding the received signal. This adjustment affects the volume of the input audio into the computer.

• Select the sound card tab in Digital Master 780 and adjust the output to a suitable level.
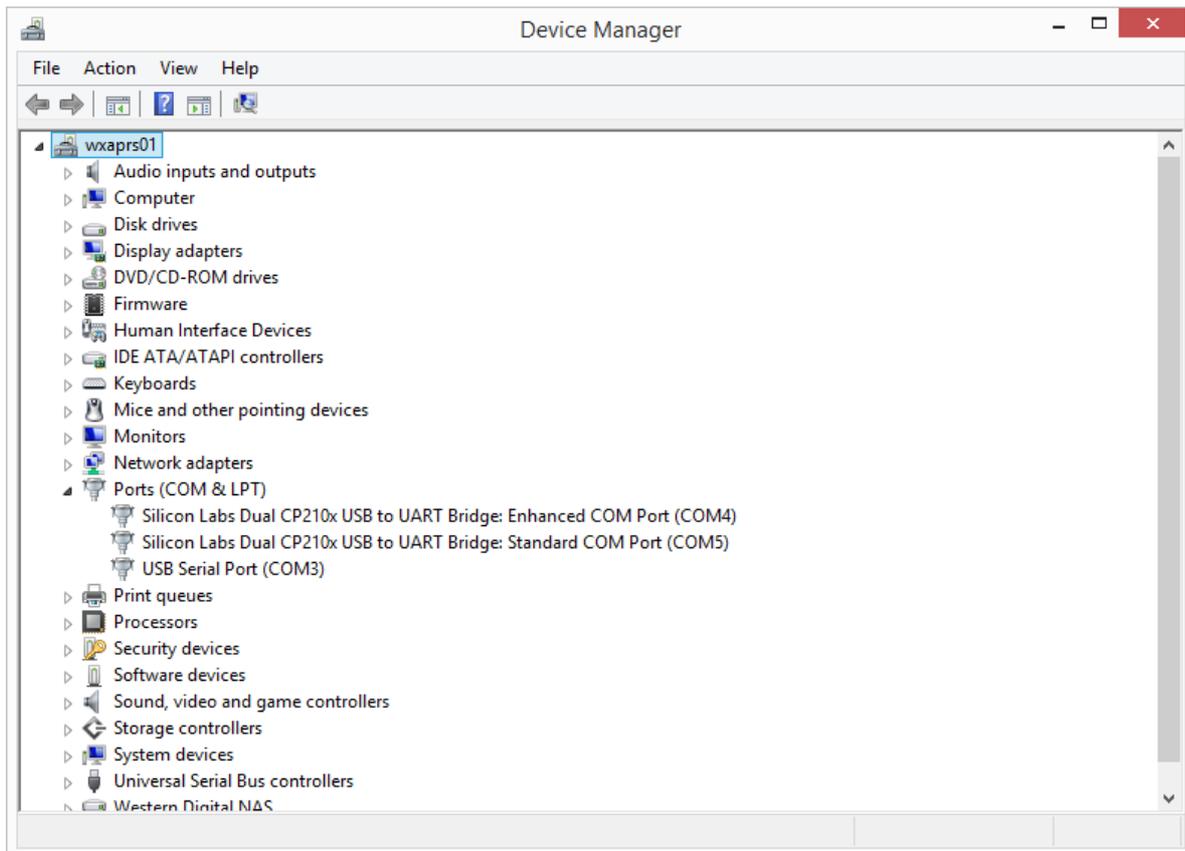


• Before you TX set your FT-991's mode to DATA-USB and reduce the RF power out put to so that it is no more than 30W (40W is max and viewed as QRO)

• You may also adjust the DT gain on the FT-991 to adjust the volume of the audio input into the radio during TX.  Observe your ALC and adjust as per the suggestions in the owners manual (select DT and reduce the Gain). No more than 3 to 4 bars (watch your output power at the point that it peaks you have enough audio input volume)

• Do not over-drive with your audio.  You want a clean signal, so keep an eye on the ALC.
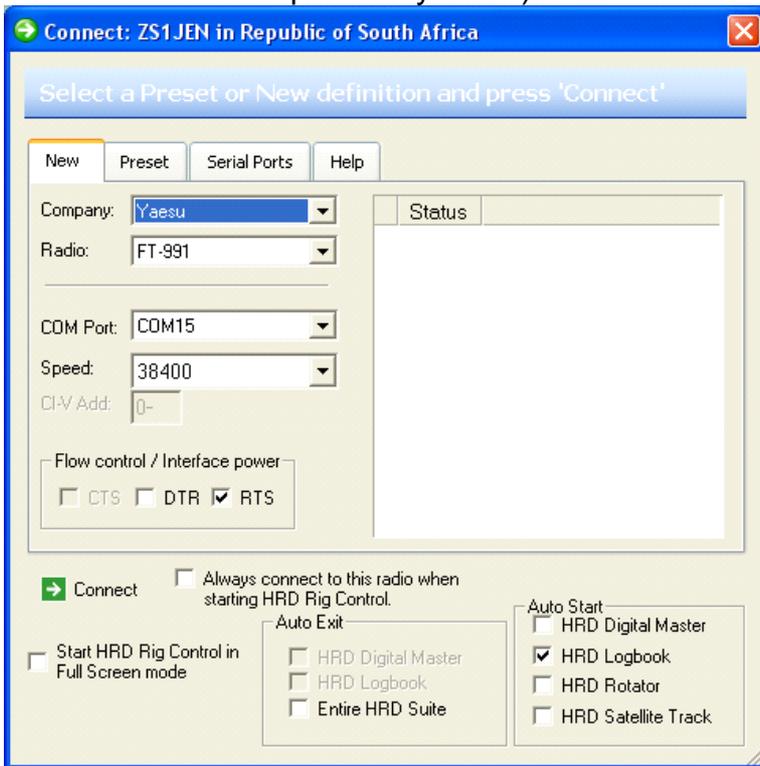
# Configuration on Windows 7

HRD 6.3.400

Yaesu Main Firmware 02:08

- On your computer, open control panel, system, hardware, Device Manager. Under Ports (Com & LPT) you should see your port configuration similar to the following;
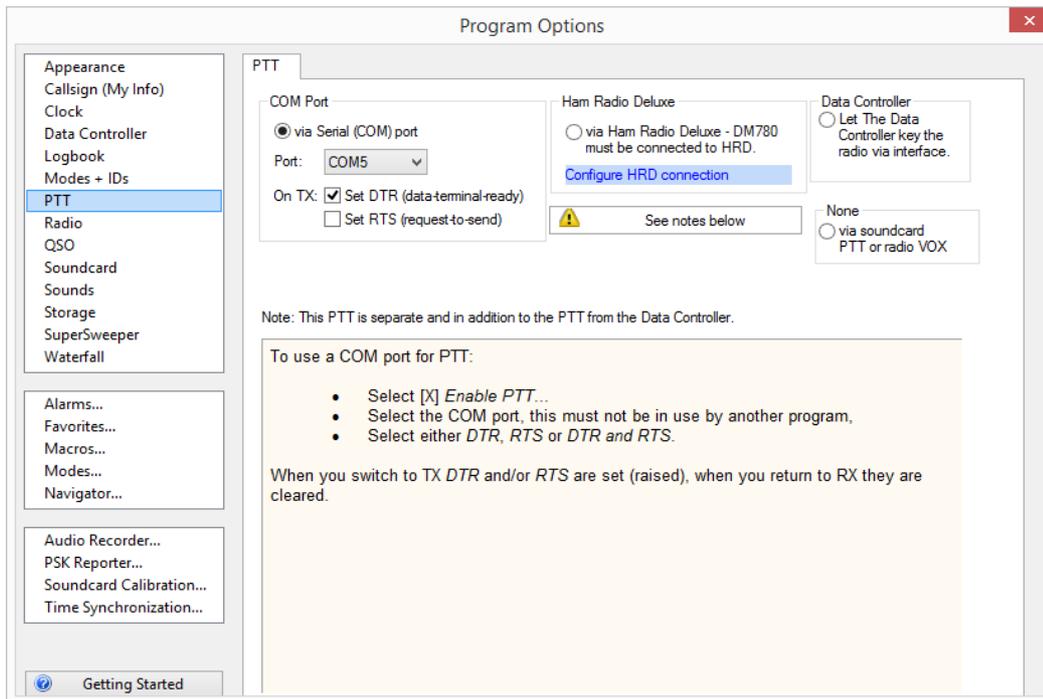


- Make a note of the com ports used by your radio USB interface. You will need that information later.

• Open HRD and set the radio parameters as follows (Note the COM port for Enhanced and Standard COM ports may differ.)
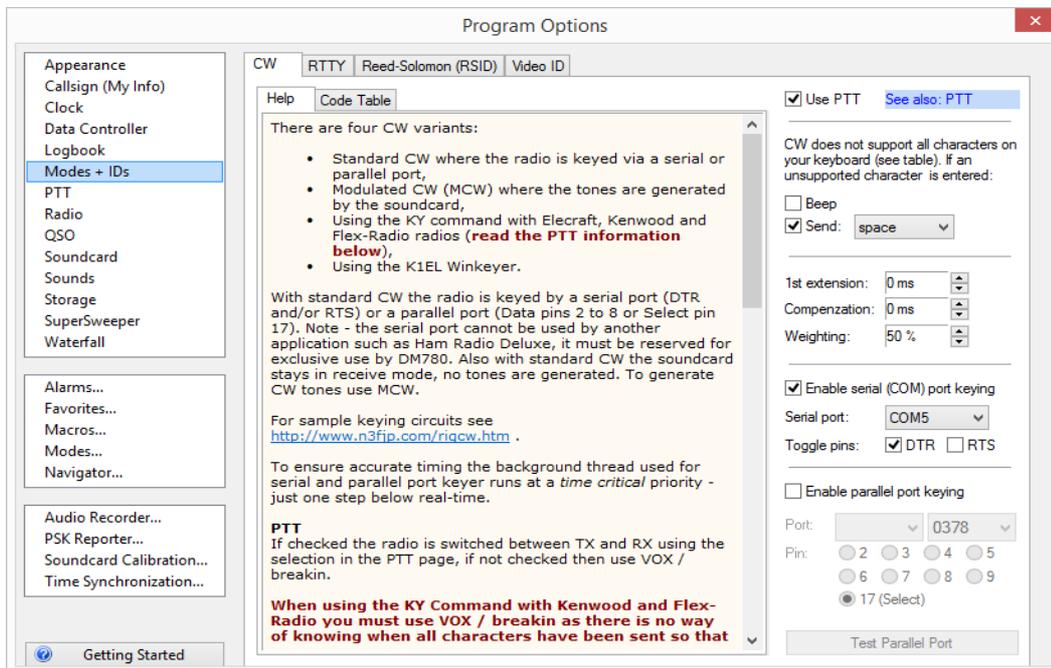
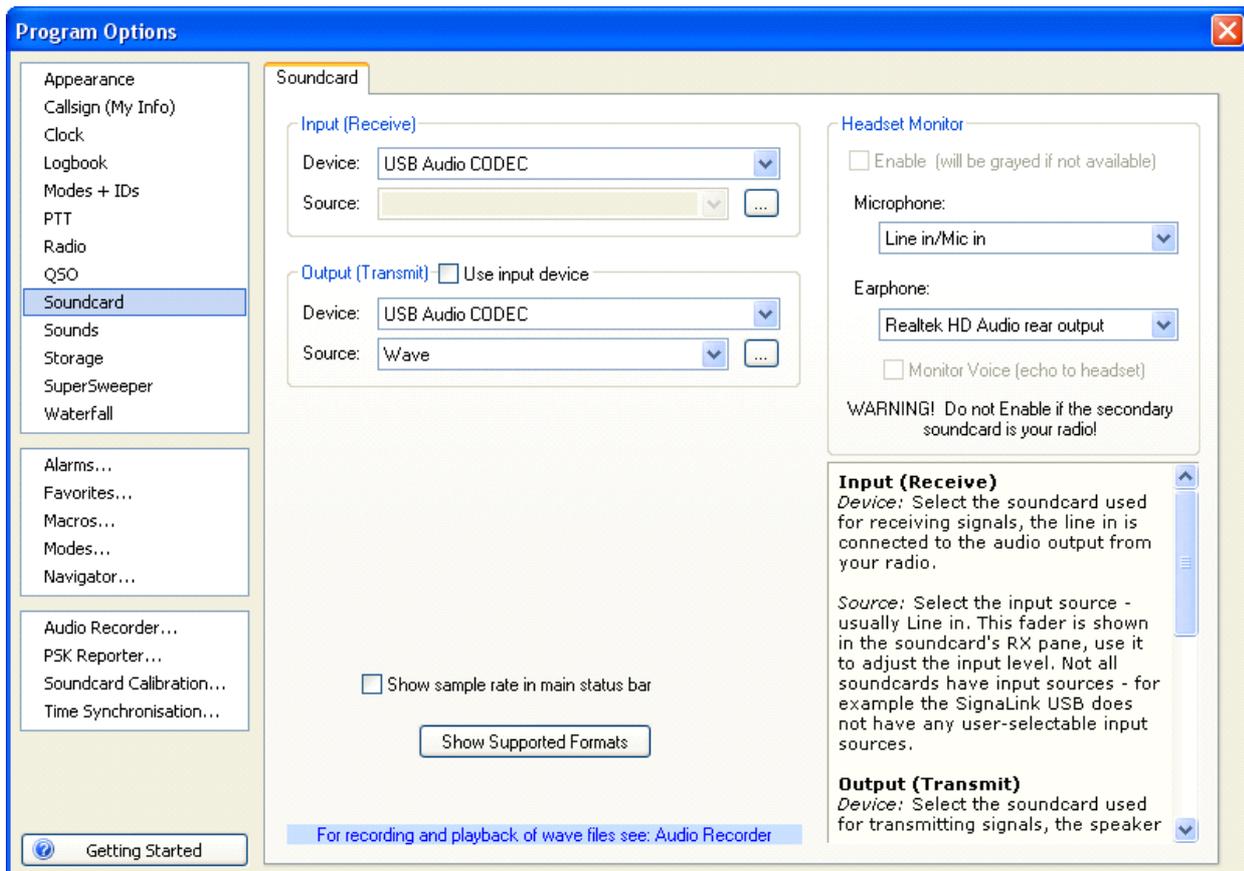Configure Digital Master 780 as follows;
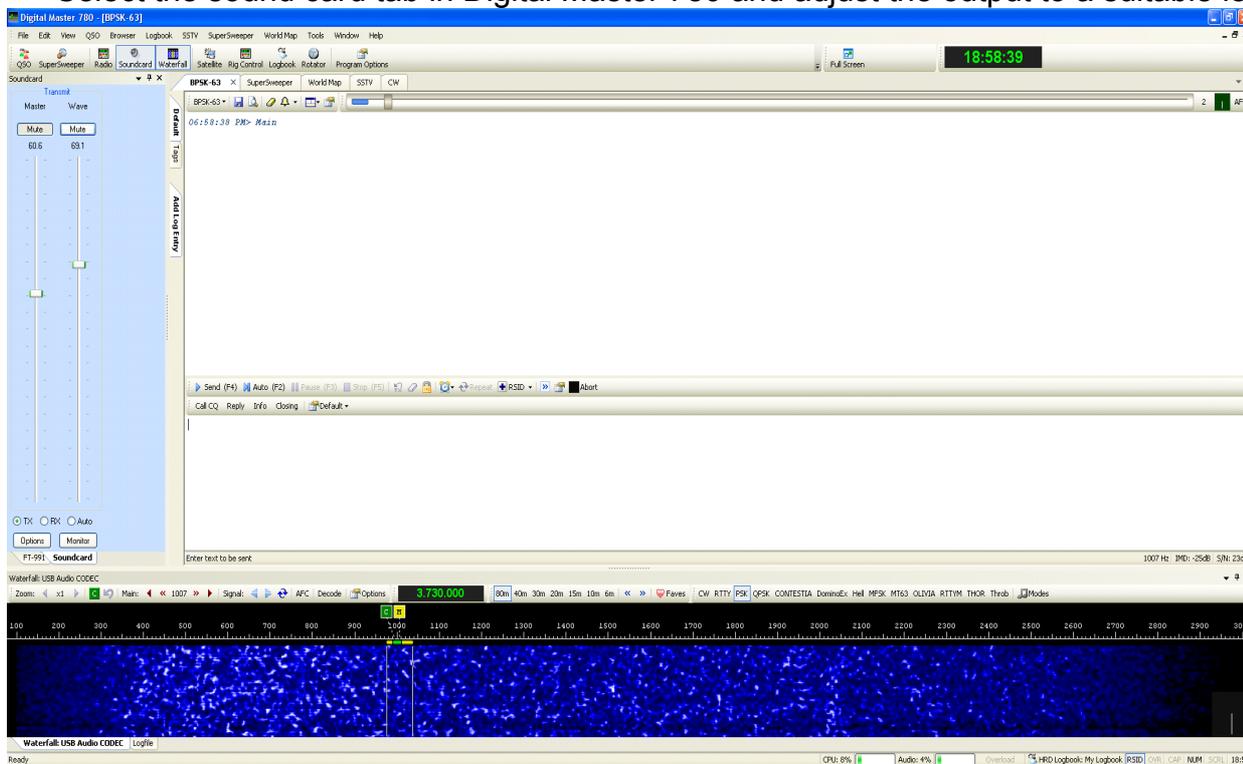- Set the PTT



- Under Modes +Ids set PTT for CW

- Set Sound card as follows



- Close Digital Master 780 Program Options.

## *Digital Master  an FT-991 Audio Configuration*

•   Adjust input to your computer using menu 073 Data Out level to a suitable value for decoding the received signal. This adjustment affects the volume of the input audio into the computer.

•   Select the sound card tab in Digital Master 780 and adjust the output to a suitable level.



•   Before you TX set your FT-991's mode to DATA-USB and reduce the RF power out put to so that it is no more than 30W (40W is max and viewed as QRO)

•   You may also adjust the DT gain on the FT-991 to adjust the volume of the audio input into the radio during TX.  Observe your ALC and adjust as per the suggestions in the owners manual (select DT and reduce the Gain). No more than 3 to 4 bars (watch your output power at the point that it peaks you have enough audio input volume)

•   Do not over-drive with your audio.  You want a clean signal, so keep an eye on the ALC.
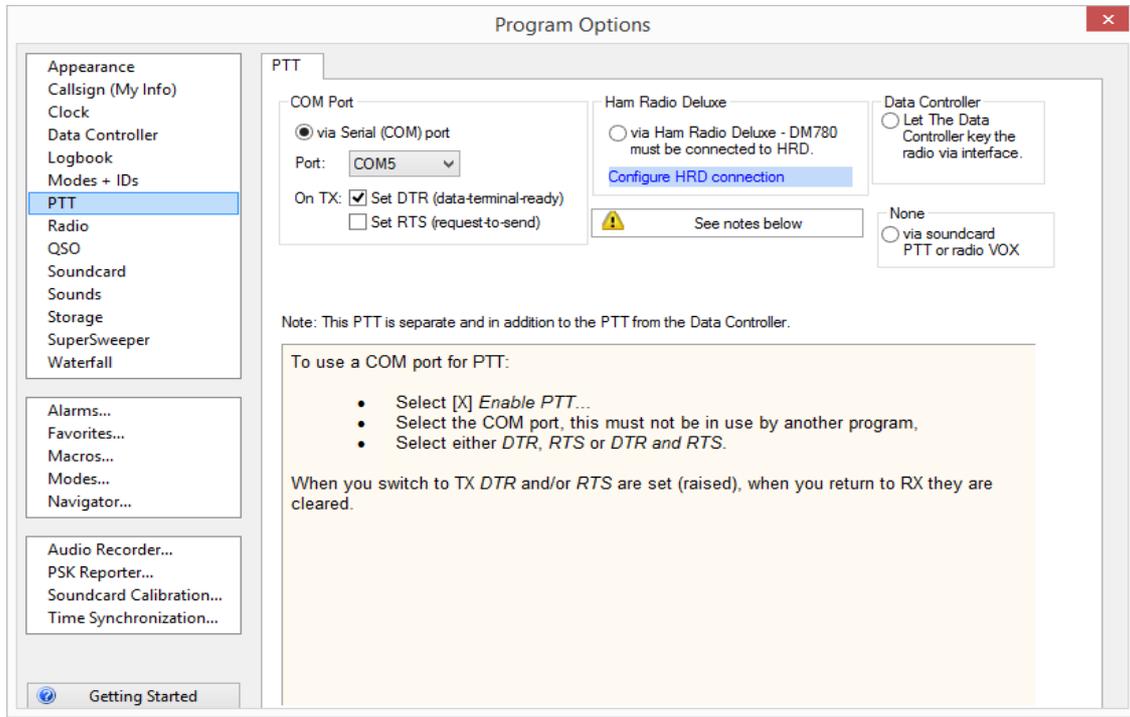

## *Configuring for Digital Master for CW*


The following configuration has only been tested on Windows 7 with Ham Radio Deluxe version 6.3.400 on a Yaesu FT-991 with Main Firmware version 02:08.

It is assumed you have followed the Windows 7 configuration for Ham Radio Deluxe and Digital Master 780 and your setup is working for PSK.  Select CW mode on Yaesu FT-991, next , select and set the following MENU parameter on the Yaesu FT-991
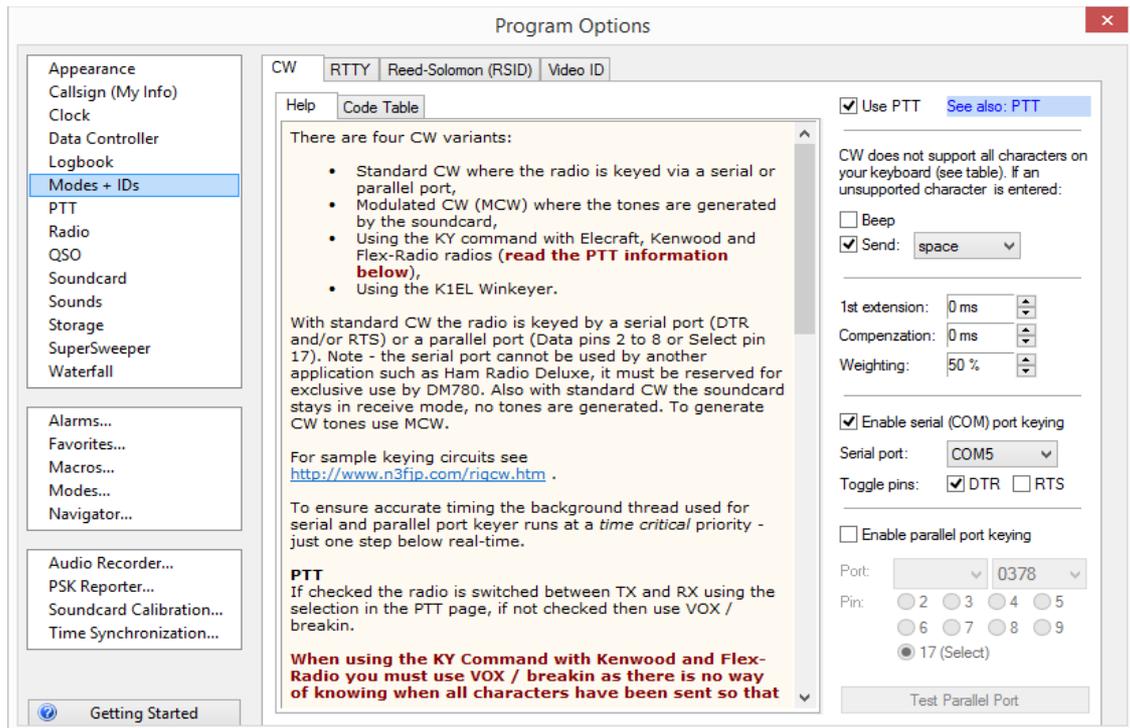
060 PC Keying  Set to value to DTR

Next change the following Digital Master 780 options as follows

- Under option for PTT
- Set On TX to DTR



Under option Modes + ID's
Set Toggle pins to DTR

In Digital Master 780 select CW, CW

Note: I have found that after using CW mode, a restart of Ham Radio Deluxe, Digital Master 780 and HRD Logbook is necessary to again use PSK.  Before restarting all the applications select PSK31.  I have as yet been able to determine the issue requiring the restart, but had a similar experience on earlier version of Ham Radio Deluxe under Windows XP and using an FT-897.

73 DE ZS1JEN (Andre)