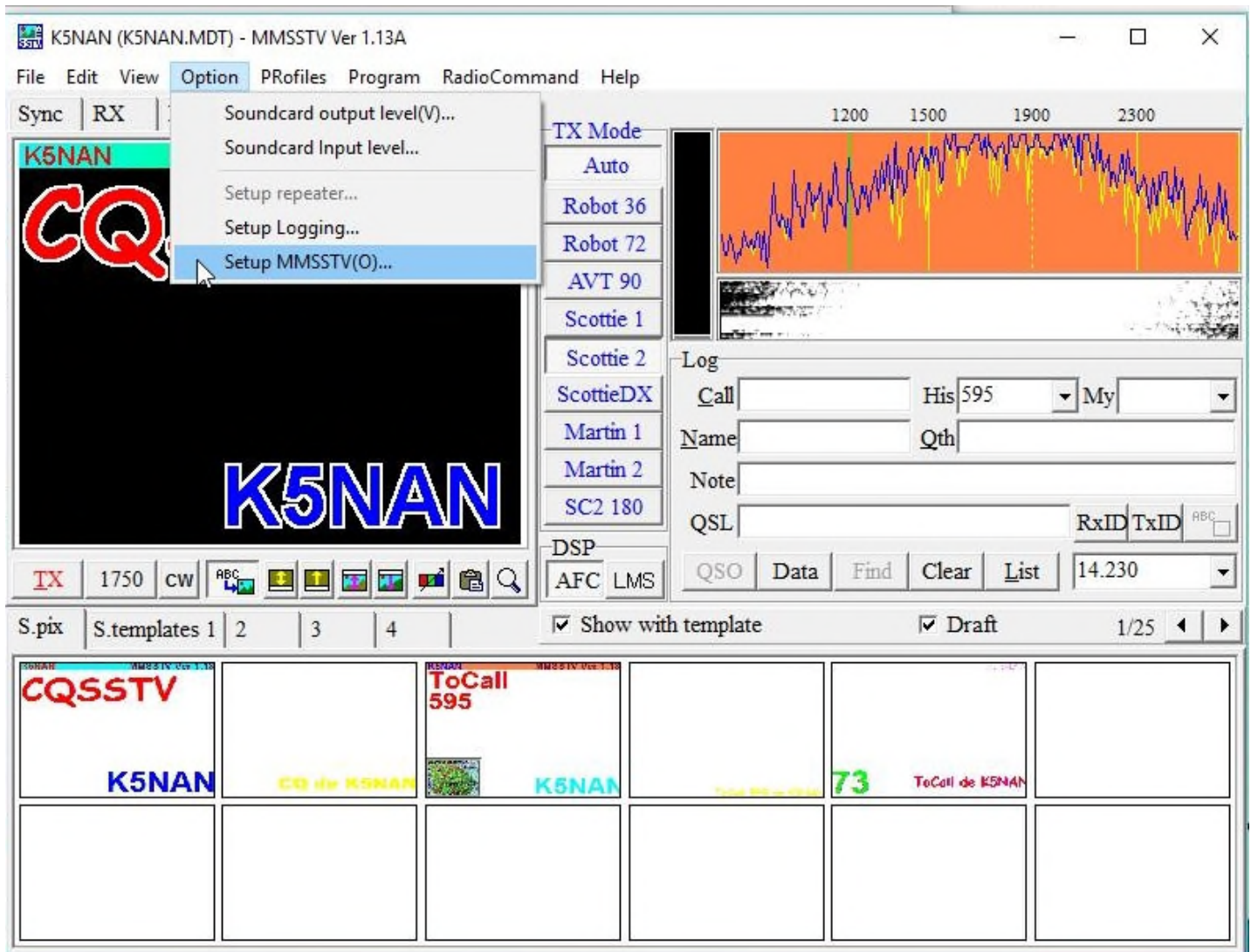


FT991 Set up for MMSSTV

This document provides the information that I used to set up my copy of MMSSTV for use with my FT-991 and the USB cable with internal sound card. Every indication is that it will also work with several versions of Yaesu radios. This is what works for me. I hope it will do the same for you.

From the main screen pull down the options menu and select Setup MMSSTV



You are now given most of your options within these settings. With the exception of a few items I left all as defaults except those that were suggested to be changed in looking at different videos and writings of others.

The first Tab is **RX** and these are the suggested settings:

Setup MMSSTV

RX | TX | Misc

Demodulating method
 PLL Hilbert T.F.
 Zero crossing

PLL
VCO Gain 1.0

LoopLPF (IIR)
Order 1 f
FC 1500 Hz

OutputLPF (IIR)
Order 3 f
FC 900 Hz

Differentiator

Level converter
 Polynomial
Offset 0
1500Hz 16384
2300Hz -16384
Calibration

Auto start
 VIS only
 VIS or Sync

Squelch level
 Lowest Higher
 Lower Highest

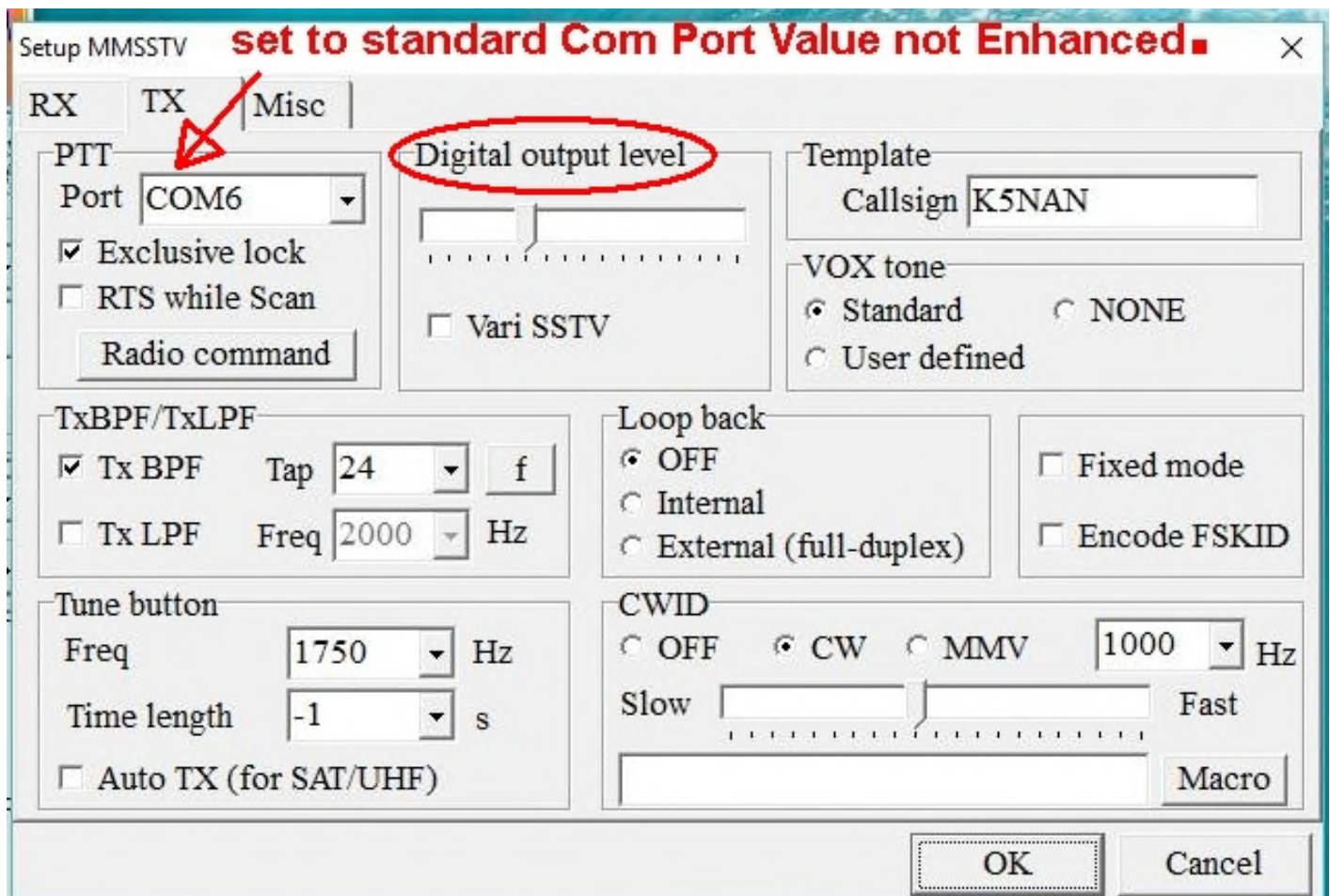
RxBPF
 OFF
 Broad
 Sharp
 Very sharp f

Auto stop
 Auto restart
 Auto resync
 Auto slant
 Decode FSKID

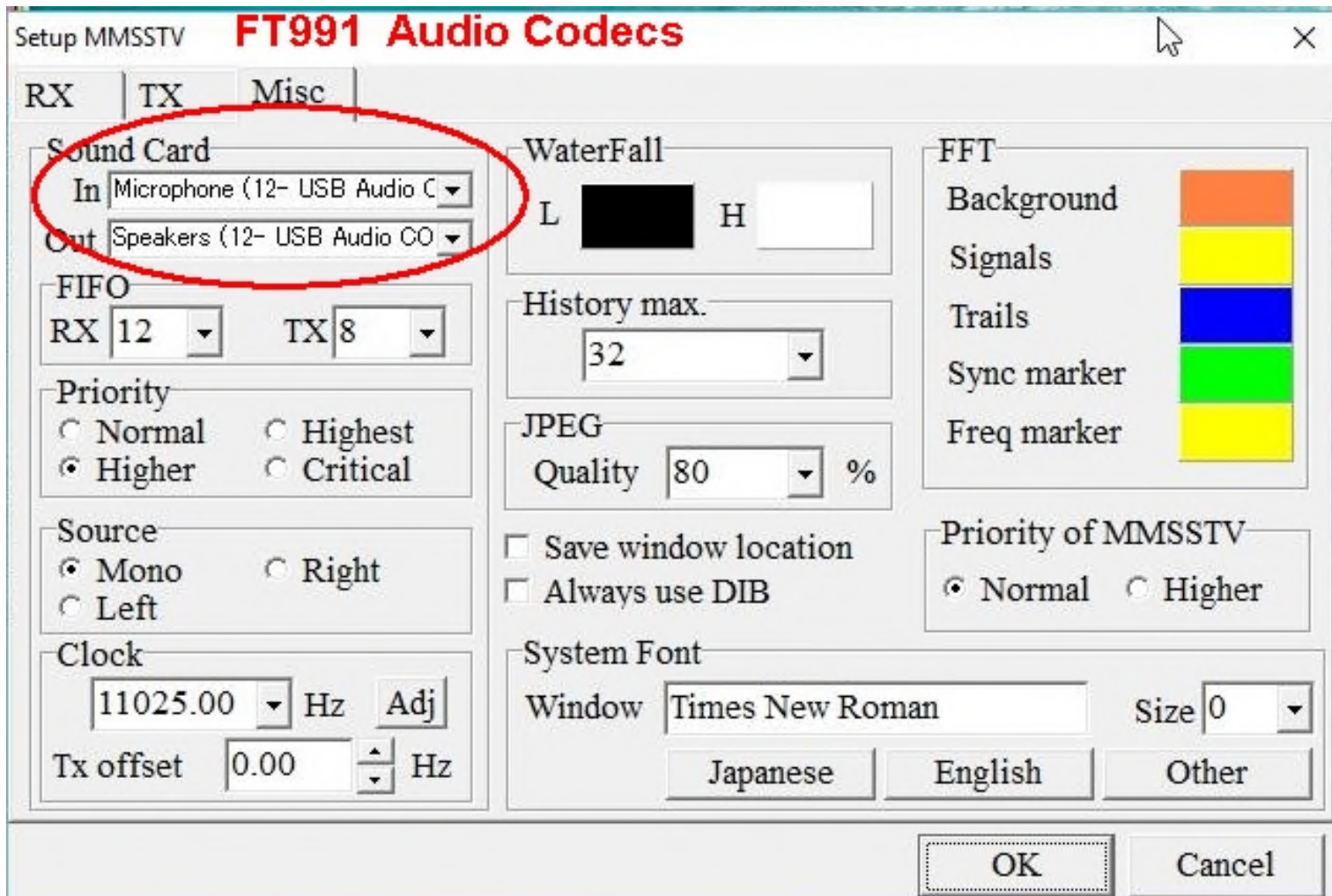
Rx buffer
 NONE FILE
 RAM

OK Cancel

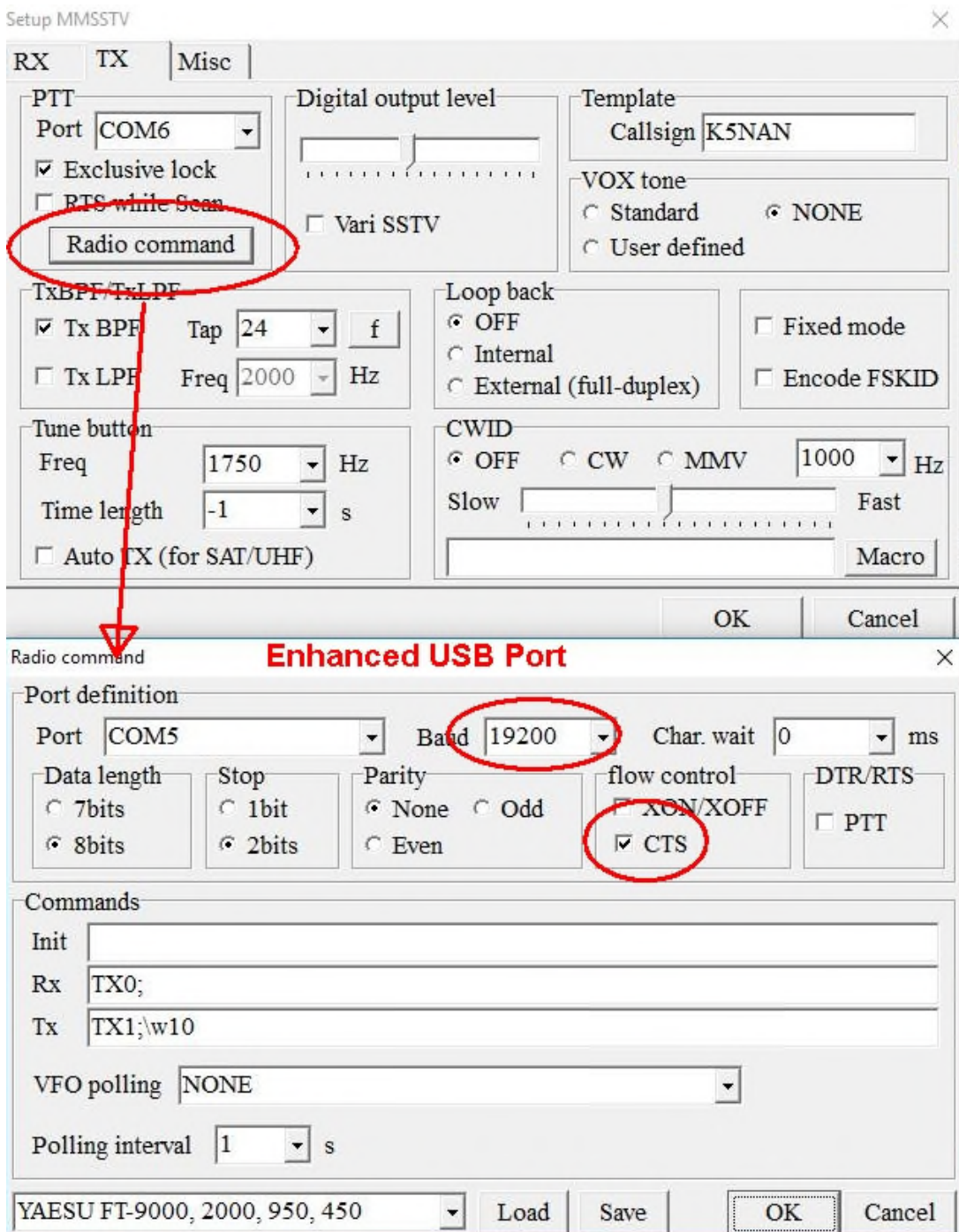
The second Tab is **TX** this is where you will put your **standard** USB port of the port pair generated during the 991 setup. The Digital output level is also adjusted here. For those who run JT65 you have already adjusted your radio menu item 073 down to about 5 or 6. You can then fine tune the ALC to not be visible using the DT gain menu on the radio. This menu slider equates to the Power Slider on WSJTX. Some setups said to put VOX to None. I don't use it or didn't touch it so I just left it alone. I did slow the CW down just a tad. You will come back to this Tab to hit the Radio command button under the Port or you can do it after you finish the **Misc** shown on the next page.



Last tab is **Misc.** Here you select your audio codecs.



After hitting the Radio command button you enter will your Enhanced Port Value. You must also set or reset your baud rate in the radio Menu 032 for CAT rate of 19200. Also check the boxes as marked. The radio will not TX if CTS is not check marked. See next page about Commands. If you choose lower baud rates in your main radio then adjust accordingly.



My 991 would not transmit unless I had the CTS box check marked. I have RTS enabled in my radio 991 menu.

I tried putting the INIT AI; command in the Init box but it seemed to make no difference. I also played with their \w commands and again I could not see a delay but I just left it as is. I also had set the VFO polling at one point and watched the data port fill up with empty data from the poll so I set it to NONE. It was not polling the radio for any specific values. I looked all over the menus and could not find where the poll data to the MMSSTV program used any return data from the rig to populate any menu items. Perhaps it's for a future use? The only thing that setting the menu to Yaesu does is to populate the RX and TX fields. If you chose to you could set it to be "Clear" and then add the two commands to RX and TX by themselves and it would work. At this point it's important that you save all that work you went to the trouble of filling out the other tabs. It will come up with a default My Rig or I just called mine FT991 in case I ever decided to play around with another radio. **Even with this Rig file it seemed to do nothing? I am not totally sure what the file saves as the settings are saved and created in another file. In checking that file I noticed a lot of items not filled out so assume it's for some future configuration? But I saved it anyway just in case.**

One more set up and we are finished. From there I edited all of the frequencies and put in the correct Commands to set the frequencies and to change Modes from D-U to D-L as needed. You can add more bands if you wish just cut and paste those values into another menu and select "insert" and it will create a new line item. I deleted the default FT847 and since the commands for the 450 and the 991 are the same I relabeled to include both. If you use just USB and LSB you could add the appropriate command string from the book.

WARNING: I thought that I could save some of the config files for future use or to share but no matter what I do it does not seem to work. Perhaps some of the options like "initialize all menus as MMSSTV default" mean something else. I thought it would make all of my settings the new defaults but it does not appear to do so.

So it seems as though you have to take the time to do all of your own configuration settings in several of the tabs and the Radio Command menu. It won't take too long to do so but for the radio menus it took a little effort. For the Freq and mode commands I just cut and pasted the same into the appropriate lines and then went back in and changed the values making sure I had 9 digits for the Freq and the appropriate mode command for upper and lower.

Edit menu **Cat Commands for freq and mode set** ✕

Caption 7.1710 LSB D-L (FT 450 and FT991)

Command FA007171000;MD08; ...

This command sends a radio command to the rig. It will work for any rig. Use the following keyword to specify byte data in hexadecimal number.

\\$##...	##=00-FF, Specify the byte data string in the hexadecimal format (Example: \\$FE55AA -> \$FE,\$55,\$AA) ICOM CI-V address can be expressed by xx
\x##	##=00-FF, Specify one byte in the hexadecimal format (Example: \xFE\x55\xAA -> \$FE, \$55, \$AA)
\w##	##=00-99, Specify the delay time (Example: \w05 -> wait 50ms)
\r	Send a carriage return
\n	Send a line feed
\c....	Comment
\	\ send character
Others	Send the character as is

Edit menu ✕

Caption 14.2300 USB D-U (FT 450 and FT991)

Command FA014230000;MD0C; ...

This command sends a radio command to the rig. It will work for any rig. Use the following keyword to specify byte data in hexadecimal number.

\\$##...	##=00-FF, Specify the byte data string in the hexadecimal format (Example: \\$FE55AA -> \$FE,\$55,\$AA) ICOM CI-V address can be expressed by xx
\x##	##=00-FF, Specify one byte in the hexadecimal format (Example: \xFE\x55\xAA -> \$FE, \$55, \$AA)
\w##	##=00-99, Specify the delay time (Example: \w05 -> wait 50ms)
\r	Send a carriage return
\n	Send a line feed
\c....	Comment
\	\ send character
Others	Send the character as is

<i>MD</i>	OPERATING MODE										
Set	1	2	3	4	5	6	7	8	9	10	P1 0: MAIN RX P2 MODE 1: LSB 2: USB 3: CW-U 4: FM 5: AM 6: RTTY-LSB 7: CW-L 8: DATA-LSB 9: RTTY-USB A: DATA-FM B: FM-N C: DATA-USB D: AM-N E: C4FM
	M	D	P1	P2	;						
Read	1	2	3	4	5	6	7	8	9	10	
	M	D	P1	;							
Answer	1	2	3	4	5	6	7	8	9	10	
	M	D	P1	P2	;						

Example: Set the VFO-A frequency to 14.250000 MHz.

FA	014250000	;
↑	↑	↑
Command	Parameter	Terminator

There are three commands for the **FT-991** as shown below:

Set command: Set a particular condition
(to the **FT-991**)

Read command: Reads an answer
(from the **FT-991**)

Answer command: Transmits a condition
(from the **FT-991**)

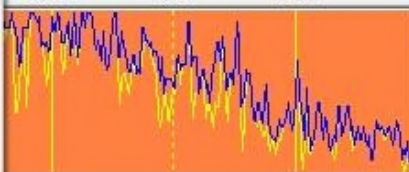
- 3.730 LSB D-L (FT 450 and FT991)
- 7.1710 LSB D-L (FT 450 and FT991)
- 14.2330 USB D-U (FT 450 and FT991)
- 14.2300 USB D-U (FT 450 and FT991)
- 21.3400 USB D-U (FT 450 and FT991)
- 28.6800 USB D-U (FT 450 and FT991)
- 144.450 USB D-U (FT 450 and FT991)

Edit menu >

Load...

Setup...

1500 1900 2300



His 595 My

Qth

Mar 2

SC2 180

Note

QSL

RxID TxID ABC

DSP

AFC LMS

QSO Data Find Clear List 14.230

Lock

ReSync

Auto history



S.pix

S.templates 1 2 3 4

Show with template

Draft

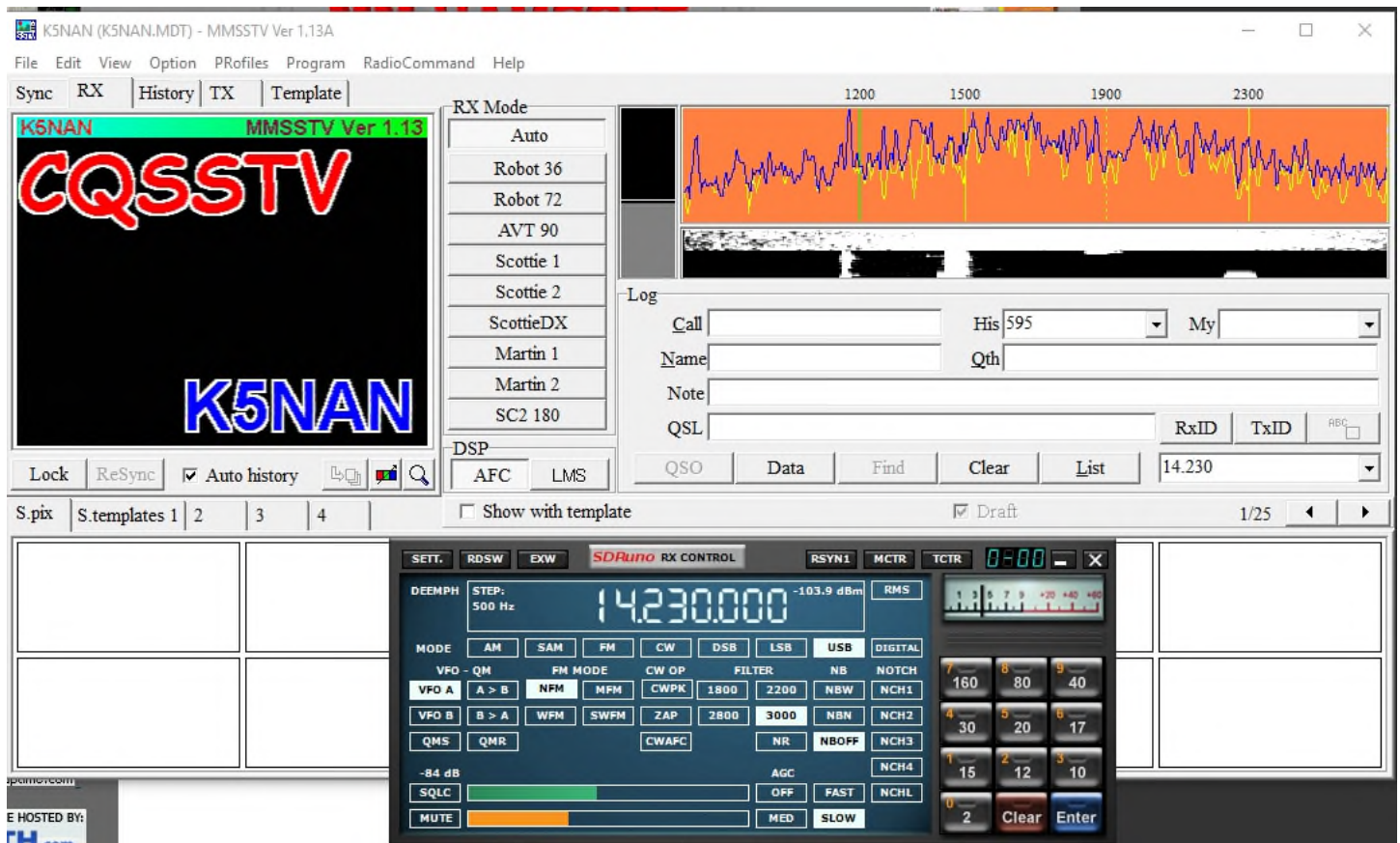
1/25

Just to make sure everything worked I set up another laptop with MMSTV and a SDR and then transmitted into a dummy load with my main computer. Worked like a champ. There was a YouTube video where the person indicated on his rig that the ALC didn't matter and he was running full bars and into the red. I have always been taught to keep my ALC so that no or maybe a bar or two might show up. I have full power output with no ALC visible and if it is I just turn down my DT Gain which I keep accessible on my menu.

Good Luck

Mike K5NAN

Here is my Capture of myself on my laptop



K5NAN (K5NAN.MDT) - MMSSTV Ver 1.13A

File Edit View Option PProfiles Program RadioCommand Help

Sync **RX** History TX Template



Lock ReSync Auto history

S.pix S.templates 1 2 3 4

RX Mode

- Auto
- Robot 36
- Robot 72
- AVT 90
- Scottie 1
- Scottie 2
- ScottieDX
- Martin 1
- Martin 2
- SC2 180

DSP

AFC LMS

Show with t

K5NAN (K5NAN.MDT) - MMSSTV Ver 1.13A

File Edit View Option PProfiles Program RadioCom

Sync **RX** History TX Template



Lock ReSync Auto history

K5NAN (K5NAN.MDT) - MMSSTV Ver 1.13A

File Edit View Option PProfiles Program RadioCommand Help

Sync **RX** History TX Template



Lock ReSync Auto history

RX Mode

- Auto
- Robot 36
- Robot 72
- AVT 90
- Scottie 1
- Scottie 2
- ScottieDX
- Martin 1
- Martin 2
- SC2 180

DSP

AFC LMS