MixW Quickstart Manual

Overview

This document will provide information for starting MixW for the first time. It will cover the initial setup and configuration of MixW.

First let's define the MixW Environment; below is a cut of the MixW screen.

The MixW Operational Screen
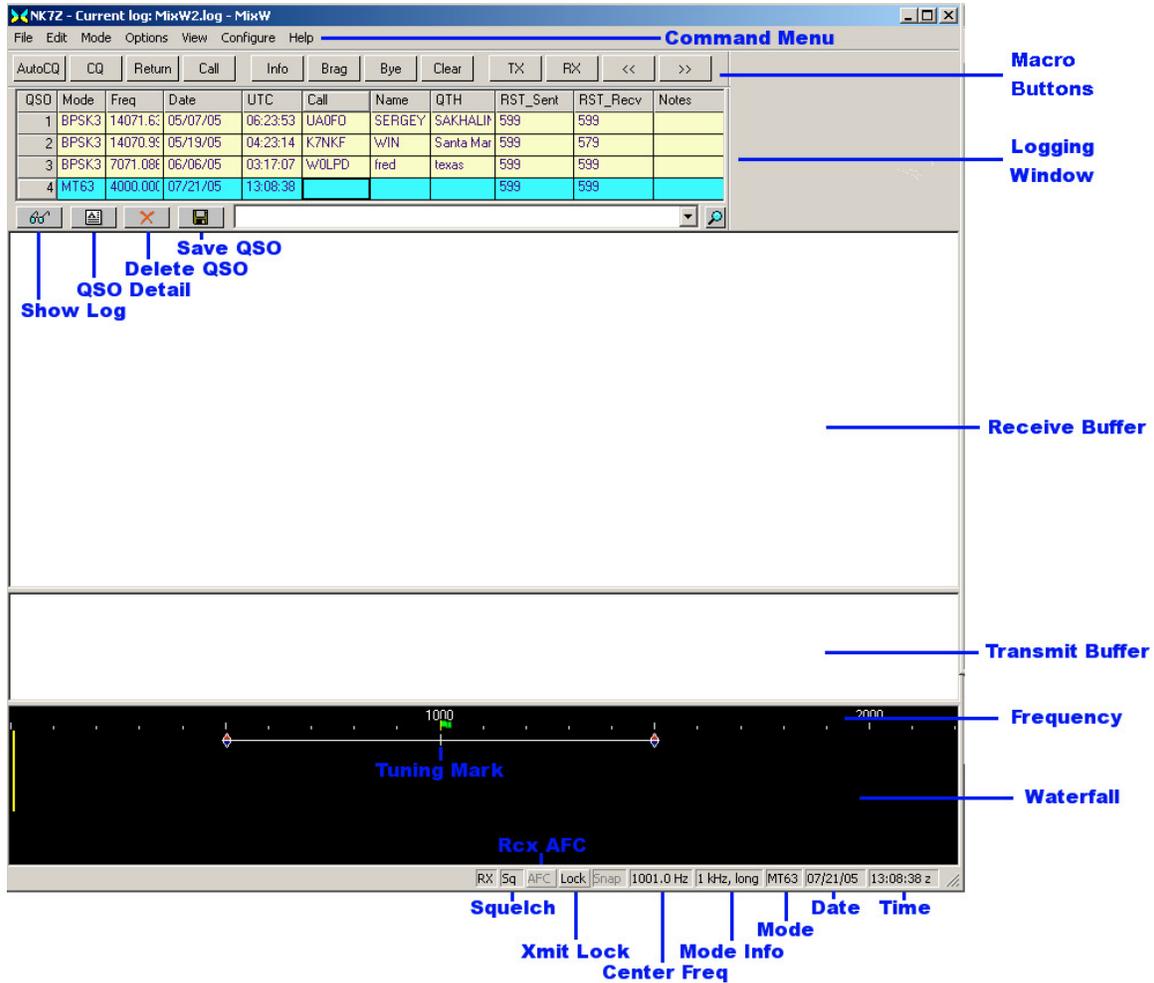
Below you will find an explanation for every control noted above, and some that are not noted. Keep this as a reference for later sections of this document.

Command Menu Structure
This set of menu options is used to control the program, select modes, configure, and initial setup. They operate much like any Windows program.

Macro Button
The Macro buttons are a set of user controllable commands than can be sent to the transmit buffer. For instance, you could preprogram the sequence:

DE NNN0XBV
NNN0ALS NNN0ALS NNN0ALS DE NNN0XBV NNN0XBV NNN0XBV 0W1B 0W1B 0W1B

To be added as a single button press, this will allow you to simplify the repetitive portions of a message that does not really change from message to message.

Logging Window
I do not use this window for MARS. I keep all of my logging separate. For normal Ham radio however, I do use this window. I use it to keep a running data log, and then periodically I export it into my regular ham radio-logging program

Show Log, QSO Detail, Delete QSO, and Save QSO
These buttons are used to control how the logging software functions, and allow you to do some editing of the content.

Receive buffer
The receive buffer is where MixW puts the text it decodes. You can cut from this area, and paste directly into Word or Notepad.

Transmit Buffer
This is what MixW will transmit. This area also has special marks for starting or ending transmitting.

Frequency
This is where MixW updates the actual frequency your radio feeds it. You can drag the frequency display and the entire waterfall by placing your mouse on the actual frequency readout, left clicking and dragging left or right.

Waterfall
This is basic a display of frequency across the horizontal, and time running vertically. You move the "Tuning Mark" with your mouse to place the decoding software on frequency.

Squelch
Operates much like the squelch on your two-meter rig. If you turn it on, it will suppress random entries from noise being displayed in the "Receive Buffer" area.

Transmit Lock
This will local the transmit frequency in various modes, and allow you to drag the received frequency around with your mouse.

Center Frequency
This is the offset from the center frequency.

Mode Info
Mode info is used as a quick display of the current settings you have for the currently active mode. I.e. if using MT63, it can show if you are in 1K or 2K mode, etc.

Mode
The mode you are currently using in the master receive window.

The File Menu

Print…	Ctrl+P	— **Prints Receive buffer, cursor MUST be in RX window.**
Print Preview		— **See the Printer Page before Printing**
Print Setup…		— **Setup the printer etc.**
Add QSL to print queue	Ctrl-Shift-P	— **Print a QSL Card**
Send file…		— **Load a file from disk and place it in the transmit buffer**
Send Picture…	▶	— **Send a picture, only in MFSK Mode**
YAPP	▶	— **YAPP file transfer support for PACKET mode.**
Run script…		
Search in logfile…	Alt+R	— **Searches the built in log file for a call sign**
QSO details	Alt+D	— **Display more information on a selected QSO**
Remove QSO	Alt+O	— **Removes a QSO from the built in log**
Restore removed QSO		
Save QSO	Alt+S	— **Saves the contents of the active log entry.**
Lookup call	Alt-K	
Import ADIF…		— **Imports an ADIF format Log file**
Export ADIF…		— **Exports the log as an ADIF file**
Merge..		
Rx Log	▶	— **Opens or closes a file saving receive window text data.**
Sound	▶	— **Saves the last twenty seconds of audio to a wave file**
Exit		— **Quits the program**

Print… (Ctrl-P)
Prints the contents of the Receive window to the printer. **Note:** The cursor MUST be in the RX window.

Print Preview
Displays an image of the printed page.

Print Setup…
Displays a dialog for setting printer parameters.

Add QSL to print Queue
Will print a QSL card based on the currently selected QSO from the log

Send File
Transmits the contents of a specified text file. **This must be text only!** Be sure to always "close" your file by saving it to disk.

Send Picture
Displays a dialog to send a picture in MFSK

YAPP
Send file in YAPP mode during packet connects…

Search in log file (Alt-R)
Displays the "Search in Logfile" dialog allowing you to search for any string in the log.

QSO Details (Alt-D)
Displays a dialog showing all fields in the log for the selected Log bar QSO. This dialog also allows adding a new call area, or sending an eQSL.

Remove QSO (Alt-O)
Deletes the selected QSO.

Restore Removed QSO
Restore the last deleted QSO.

Save QSO data (Alt-A)
Saves the contents of the active log entry.

Lookup call (Alt-K)
Looks up the active call in the log and display all previous contacts.

Import ADIF
Imports a log in ADIF format. The ADIF format is common to many log programs, and can be used to exchange logs between different programs.

Export ADIF
Exports a log in ADIF format for import to another program.

Merge
Will merge two MixW2 logs together.

RX Log
Opens or closes a file saving the received window data as text.

Sound
You can save the last twenty seconds of audio to a wave file. This is useful in cases were you want to demonstrate certain audio characteristics. Files can be saved, and later played back for reception and display.

Exit
Exits the MixW program

The Configuration Menu

AFC		— **Automatic Frequency COntrol**
Lock		— **Lock Transmit Frequency**
✓ Snap		— **Hunt and lock**
✓ Squelch		— **Squelch Control On/Off**
Squelch threshold...		— **Squelch Control adjustment**
✓ RX		— **Selected places program in RX mode**
TX		
Continuous Seek		— **Scans the Waterfall for stations, does not lock on its own**
Arrows for Seek		— **Defines limits for seek**
Scan	▶	— **Scan and lock on first station**
Scheduler...		— **Schedule Events**
Auto CQ	▶	— **Control and setup for Auto CQ**
Set transceiver Fq	Alt+F	— **Manually set transmitter frequency**
Memory		— **Memory for Mode setup**
Tune transmitter		— **Key transmitter**
Stop tuning	Esc	— **Unkey transmitter**
Single Click		— **Single or double click on spots**
Clear Call on Fq change		— **Remove callsign on frequency change**
✓ Clear QSO on new call		— **Remove QSO from log on new callsign being entered**
✓ Auto search in logfile		— **Search logfile upon entry of callsign**
Auto search in callbook		
Beep on QSO before		
Freeze on mouse move		

AFC
When AFC is checked, MixW will keep a station tuned even if it drifts. It is recommended that you keep AFC checked unless it prevents you from tuning to a desired station. Uncheck AFC if a nearby strong station makes it impossible to tune to a weaker station.

Lock
Lock allows you to transmit on one frequency and receive on another. When Lock is selected, the TX frequency is fixed at the position of the active cursor, and the flag above the cursor changes to red. When LOCK is NOT selected, transmission will occur on the same frequency as receive, as indicated by the diamond cursor, and the flag above the cursor will be green.

Snap
When Snap is checked, MixW will automatically find the correct tuning point for a station.
Uncheck Snap if a nearby strong station makes it impossible to tune to a weaker station.

Squelch
When squelch is checked, only signals above the Squelch threshold will be printed. This can be used to prevent random characters created by noise from being printed.

Squelch Threshold
Displays a level control for the Squelch threshold. The threshold can be adjusted as high as possible to prevent noise from printing as random characters but still allows print of a desired station. Selecting Mode | Squelch threshold...will display a mode specific dialog in which AFC, Lock, and Snap can also be set.

When the screen-printing is "squelched", or not printing, because the signal is below the squelch threshold, the "Sq" shows on the status bar without the " * ". If MixW appears to stop decoding, be sure the squelch threshold is not set too high. For reception of weak signals, it is usually best to turn the squelch completely off. This will result in "garbage" print some of the time, but whenever the signal becomes strong enough that copy is possible, the text will appear on the screen along with the garbage characters.

RX
Selecting RX places MixW in the receive mode.

TX
Selecting TX places MixW in the transmit mode.

TX and RX can also be toggled by using the pause/break key on the computer keyboard, by clicking on the RX/TX box in the Status Bar, by using the TX and RX Macro buttons, or by using the <TX> or <RX> Macros in a Macro script.

Continuous Seek
When Continuous seek is checked, Seek will continuously look for a station until one is found and stop on that station. To stop Seek, just press any Seek button. If a station fades below the Seek threshold, Continuous Seek does not start seeking for another station. This is so you can stay on the station's frequency and continue to copy whatever you can, even though it is fading. To restart Continuous Seek, just press one of the Seek keys or buttons.

Arrows for Seek
When Arrows for Seek is checked, the left and right arrow keys can be used for Seek, but the arrow keys are then NOT available for editing the RX and TX window. Uncheck Arrows for Seek to make the left and right arrow keys available for RX and TX window editing.

Scan | Start Scan
When selected, Scan will cause MixW to Seek out a station, stop on that station, record the time and tone frequency of the station, and print that station on the screen for a determined amount of time (dwell). After printing for the selected dwell time, MixW will proceed to the next detectable signal and repeat the process.

Scan | Stop Scan
Selecting stop scan will stop the Scan process. Selecting a station or frequency with the mouse may also stop scan. Clicking Scan | Start Scan again will start the scan from the current location.

Start Scan and Stop Scan can also be controlled by macros, so <STARTSCAN> and <STOPSCAN> may be assigned to function keys or put into a macro script.

Scan | Scan properties
Selecting Scan properties will bring up a dialog for setting the way Scan behaves. "Only once" will stop Scan after encountering the first detectable signal. Dwell sets the staying (to print) time in seconds. Continue on squelch resumes scanning when the signal level falls below the squelch threshold. Checking Time Marks or Frequency Marks, tells MixW to display the time of the station print or the frequency of the station print, or both.

Quickstart

This section will cover the initial setup of MixW which will allow transmitting text and receiving text.

MixW needs at least two things to work, audio from your radio, and an input to your transmitter. Given that MixW runs on your computer, and your computer is using a sound card, you will need to either use an interface, or construct one. I will assume a "Rigblaster Pro", as that is the Interface I use. I will further assume that you have it wired correctly, and if not, that you will wire it correctly before proceeding.

Setup, Step by Step

The first set of options you will need to setup are the "Personal Data" items. This option box is located via the *Configure>Personal Data…* menu across the top of MixW.

Personal Data

Call
This is where you add your callsign. Assuming you have purchased this program, you can request a file from the author, which will support two call signs. By pressing the downward point arrow to the right of the call sign you can select a second call sign for MixW to use.

Name
Type your name here

Log File
This entry is used to point MixW's log generation facility at a set directory. In other words, this entry points at a directory on your computer in which MixW will save the log file.

QTH
Your QTH

Lat
Your Latitude

Long
Your Longitude

Locator
Your grid locator. It can be found at the ARRL web site, http://www.arrl.org

Use CWID
If you are using MixW for Amateur work, you will want this checked, and your call sign filled in. If you are using MixW for MARS work, you will want this unchecked to avoid using CW.

Rig Control

This menu is reached via the *Configure>TRCVR CAT/PTT…* menu. It is used to select the radio, model of radio, and COM port used to talk to the radio.

CAT
Select the radio you use from this menu.

Model
Select the model of radio you use.

PTT & CAT Interface
Pressing the Details button using the left mouse button gets you this menu:
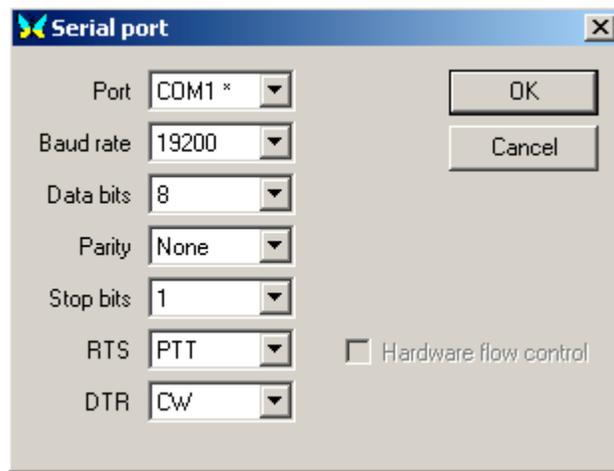
Port
The Com port your computer will be using to talk to the radio interface

Baud Rate
How fast the radio and the computer will talk to each other. If you are using a Logging program and it talks to the radio to get the frequency, then see what rate that is going at, and set MixW to that rate. If not, set the rate to the highest the radio will support.

Data Bits
Normally set to 8

Parity
Normally set to none

Stop Bits
Normally set to 1

RTS
Set to PTT for an Icom 756 PRO II, may be different for your radio.

DTR
Used for CW control on the 756 PRO II

Disabled
Disables auto PTT via CAT mode.

PTT via CAT
Tells MixW to use the CAT controls to trigger the radio PTT.

CW via CAT
Tells MixW to use the CAT lines to simulate a CW key.

CW out via Sound Card
Sends CW out the audio output of the Sound Card

CW is LSB
Tells MixW what mode your radio is in for CW.

AFSK in place of FSK
Tells MixW to use the sound card and not use the CAT interface as a Morse Code Key.

CW Pitch
If MixW is generating the CW via the sound card this assists in netting your CW signal.

Default Digi Mode
Tells MixW what mode is the mode you want as your default transmitter mode for Digital modes

Mouse wheel for tuning
This is without a doubt the nicest little add on I have found… Select it and then get on line and move the wheel on your mouse…

Display Zero Beat Frequency
Unknown untested at this point.

Cat Corrections
I believe this will also allow you to create offsets in the output audio for netting reasons. Untested at this point.

MixW Soundcard Calibration Procedure

Receive Calibration

1. Tune your radio to 5, 10 or 15 MHz.
2. Select SSTV from the modem menu.
3. In the Mode window, select "WWV"
4. Make sure "Autoslant is NOT checked.
5. In the upper right of the SSTV window select the RX button.
6. Wait while MixW draws a vertical or near vertical bar.
7. Tap the left or right slant keys '//' or '\\' to force the bar to be as close to vertical as possible. If you left click the vertical bar you can move it around, move it close to an edge to assist in defining vertical.
8. Once you have the line vertical, click "STOP" at the top of the SSTV window.
9. Then click "SSTV along the bottom, and then click "Mode Setting". This will allow you to press the "Go" button. This sets the new frequency in the sound card.

Transmit Calibration
Be sure that you have calibrated the Receive clock BEFORE you perform this procedure.

1. Remove audio input from the computer.
2. Under *Configure>Sound Device Settings…*, select the "full duplex" box.
3. Sample Rate set to 11025. (Remember the number here. In the event things break you can return it to the original value.)
4. Press the CNTL, the SHIFT and the "T" keys all at the same time. A dialog box should appear.
5. You should see a vertical line being drawn in this new dialog box; this is the tone you are hearing if you have speakers connected to your computer. Adjust the slider in the pop up window so that the sidebands are reduced or removed. Make sure you still have the original red line when finished. You may not be able to remove all sidebands, so just reduce the number and intensity of them. You are adjusting the output level of MixW. If you have been transmitting before this adjustment, you will most likely have to readjust the transmitter for the new input level.
6. In the upper right of the window that popped up you will see a number that is changing, write that number down including the sign. I.e. if it is negative, then be sure to add the negative sign in your notes.
7. Now select "*Sound Device Settings*" from the "*Configure*" menu.
8. About the middle of that popup box you will see a section called "Clock Adjustment PPM".
9. In that section there are two windows, RX and TX. Take the number in the RX window, and algebraically add it to the number you wrote down. I.e. if the number in the RX window is 20 and the number you wrote down is –5, then you would put 15 in the TX window. Another example might be; if the number in the RX window were 20 and the number you wrote down was –50 then you would put down –30. Another example would be if the RX number were –20, and you got a –40, then you would put down a –60.
10. Press OK.

You are finished calibrating MixW and the sound card.

Reference

1. MixW Help Files, created by K6IX, portions used with permission for this document. http://k6ix.net/MixW.html
2. Yahoo MixW Mail list http://groups.yahoo.com look for MixW.