FAX

Fax mode is commonly used to decode weather maps, this is also referred to as HFFAX mode. It is also possible to decode pictures directly from weather satellites. Since this two modes use different modulation methods, it is necessary to select which mode should be decoded.

Two buttons, called HF and SAT, select the mode. Satellite mode has recently been added, so I would be interested in reports of how well this mode works.

ext, the correct speed must be selected. The speed is measured in lines per minute (LPM), and possible selections are 60, 90, 120, 240 LPM. For HFFAX, 120 LPM is almost always used. For satellites, 240 is always used.

ou may select whether to display gray scale, or line mode (black and white). Gray scale should be used for satellite images (which are also sent via HFFAX stations) and other images where shades of gray are sent. Line mode is useful when weather maps are sent that have no shading information. It is possible to display these in gray mode, but improper tuning and noise may affect the picture quality. In these cases, line mode may provide a better image quality.

inally, is also an AUTO mode, this attempts to use the phasing and start/stop tones sent by HFFAX stations to properly synchronize to the fax signal. When a start tone is detected, a blue circle is displayed under the tuning display (described below), on the left side. MultiMode will now clear the display, lock onto the fax signal, and properly align the image. When a stop tone is detected, a red circle will light up under the tuning display. If auto-save is enabled in the Preferences, the fax image will automatically be saved to disk with a unique filename based on the date and time of day. This mode can be useful for unattended reception of weather fax.

When you start decoding in fax mode, a window (titled Fax Window appropriately enough) appears, showing the decoded fax document in real time. Proper tuning of your receiver is necessary to correctly decode and view the fax. If the image appears negative (white on black) you may want to change from LSB to USB mode, or vice-versa. You need to very carefully tune the radio to achieve proper reception. Note that proper tuning for FAX decoding may NOT mean tuning your radio to the actual frequency of the station, an offset may be necessary. For most fax stations, you must tune 1.9 kHz below the carrier frequency. For example, the USCG in Boston uses a carrier frequency of 6340.5 kHz. Tune your radio to 6338.6 kHz (in USB mode) for proper reception.

o aid this process a tuning display is available (shown above) located in the information window near the buttons. This displays a spectrum of the received signal. Two small tick marks appear on the bottom of this display, the one on the left represents the audio tone for black, the one on the right for white. A typical fax consists mostly of white. So, you can quickly tune in the station by aligning the peak tone (representing white) to the right mark. If the fax also contains a lot of black, you'll see a second (usually shorter) peak over the left mark.

If you find that the picture is slanted, then the Timing Delta in the General window of the Preferences will have to be adjusted. This can be done manually, or with the Calibration mode. If you wish to do it manually, then here's the procedure: If you find that vertical lines slant to the left as they go down, then the Timing Delta must be made more negative. If vertical lines slant to the right as they go down, then the Timing Delta must be made more positive. Once you set this, you should not need to change it, unless you get a new computer, which may have slightly different timing in the audio input circuitry.

hances are, when you start to decode a fax, you won't be correctly aligned in the horizontal direction. Pressing the << or >> button (located in the lower left corner of the fax display window) will slightly shift the decoding to the left or the right.

When you reach the bottom of the window, no new image information is displayed. You can click the clear button to clear the display, and start decoding new information at top of the display..

The + and - buttons in the lower left corner of the fax window zoom the display out and in. This can be helpful if you're trying to fit a large fax onto a small monitor.

It is possible to scroll around the fax window using the scroll bars. The fax window size may also be changed to suit your display. It may be possible to screw up alignment on a slower computer by moving around too much, this was a problem with the 680x0 version. (presumably because too much time is spent sloshing pixels around).

Please note that if insufficient memory is available, the maximum number of shades displayed will be decreased, with only black and white possible as the worst case. Less memory than that will probably cause a crash!