

Amateur HF Digital Modes Wayne Amateur Radio Club – Dave Balint, N8IW – 3/16/2006

How To Monitor

All you need is a computer with a sound card that has a microphone input or preferably a line level input. If you only have a microphone input an attenuating cable (available at Radio Shack) may be helpful. Run the audio out from the radio to the microphone/line input on the computer sound card

How To Transmit

The easiest way is to use one of the sound card interface devices. These devices allow you to interface the audio out from your computer sound card into the microphone or data mode input on your transceiver. They can be set so that either the interface device keys your radio, or you can simply let the VOX circuit do it.

Rig Blaster Nomic, Plus and Pro: <http://www.westmountainradio.com/RIGblaster.htm>
MFJ model MFJ-1275: <http://www.mfjenterprises.com/products.php?prodid=MFJ-1275>
Signalink SL-1 and SL-1+: http://www.tigertronics.com/sl_main.htm
RigExpert (including Tiny and Plus) <http://www.mixw.net/RigExpertPlus/index.html>
<http://www.mixw.net/RigExpert/index.html>
<http://www.mixw.net/RigExpertTiny/index.html>

Some of the newer TNCs support the traditional modes such as RTTY and also now include PSK31

Timewave PK-232 DSP: <http://www.timewave.com/PK232PSK.html>
Kantronics KAM-XL: <http://www.kantronics.com/products/kamxl.html>

A common problem when transmitting is overdriving the audio. Use the ALC meter if available, or try increasing mic gain just to the point where the transmitter power doesn't increase any more.

Currently Used HF Digital Modes

Look at <http://www.teleport.com/~nb6z/> and <http://www.storm.ca/~ve3iay/digital.html> for more info on these:

Most popular: RTTY, PSK31
Less popular: MFSK16, Hellschreiber, MT63, PSK63
Newer modes: Olivia, Domino
BBS: Pactor and Packet

Software

<i>MixW</i> (\$50) Supports most digital modes http://www.mixw.net/	<i>MuliPSK</i> (FREE) Supports most digital modes http://f6cte.free.fr/index_anglais.htm
<i>Digipan</i> (FREE) PSK31 and PSK63 http://www.digipan.net/	<i>Hamscope</i> (FREE) RTTY, PSK31, MFSK16, ASCII, PACKET, CW http://www.qsl.net/hamscope/HamScope.html
<i>WinWarbler</i> (FREE) RTTY, PSK31, PSK63 http://www.qsl.net/winwarbler/	<i>MMTTY</i> (FREE) RTTY http://mmhamsoft.ham-radio.ch/mmtty/index.html

Stream

MFSK16
<http://xoomer.virgilio.it/aporcino/Stream/index.htm>

Frequencies (in MHz)

PSK31
3.580 – 3.620, 7.070, 10.140, 14.070, 18.100, 21.070,
24.920, 28.120

Olivia, Domino, MT63
3.580 – 3.620, 7.070 – 7.100, 10.130 – 10.140,
14.100 – 14.110, 18.100 – 18.110, 21.060 – 21.100,
24.920 – 24.930, 28.060 – 28.120

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Contests

See the 12 month contest calendar at <http://www.hornucopia.com/contestcal/contestcal.html> for details:

RTTY

DL-DX RTTY Contest	Russian RTTY WW Contest
CQ Worldwide DX Contest, RTTY	Makrothen RTTY Contest
North American Sprint, RTTY	JARTS WW RTTY Contest
WAE DX Contest, RTTY	TARA RTTY Melee
OK DX RTTY Contest	ARRL RTTY Roundup
BARTG RTTY Sprint	CQ WW RTTY WPX Contest
North American QSO Party, RTTY	EA RTTY Contest

PSK31

EU PSK DX Contest	ARCI End of Summer PSK31 Sprint
TARA PSK Rumble Contest	YO International PSK31 Contest
EU-PSK-QRP Contest	MDXA PSK DeathMatch
070 Club PSKFest	Russian PSK WW Contest
EA PSK31 Contest	

Web URL Resources

Excellent overviews of all HF Digital Modes

http://www.teleport.com/~nb6z/	http://www.storm.ca/~ve3iay/digital.html
http://www.w2blc.com/linkdigi.htm	http://www.arrl.org/tis/info/digital.html (somewhat dated)

PSK31, "The official homepage for PSK31"

<http://aintel.bi.ehu.es/psk31.html>

MFSK16, "The official MFSK website"

<http://www.qsl.net/z11bpu/MFSK/>

For all the "Fuzzy Modes", such as Hellschreiber

<http://www.qsl.net/z11bpu/>

RTTY

<http://www.rtty.com/>

<http://www.ok1rr.com/view.php?cisloclanku=2005021501>

RTTY Contesting

<http://www.rtty-contest-scene.com/>

<http://www.rttycontesting.com/>

DXCluster Type Spots for Digital Modes

<http://data.w6rk.com/>

IZ8BLY's Site For MFSK16, Hellschreiber, MT63 And Chip64 Software

<http://xoomer.virgilio.it/aporcino/>

Additional Information

QuickMix is a free Windows program that will save your sound card settings so that they can be reloaded later. This is useful so that after you have your playback and record volume controls set just right, you can save them and then whenever you want to operate digital modes just reload the saved settings first.

<http://www.ptpart.co.uk/quickmix/>