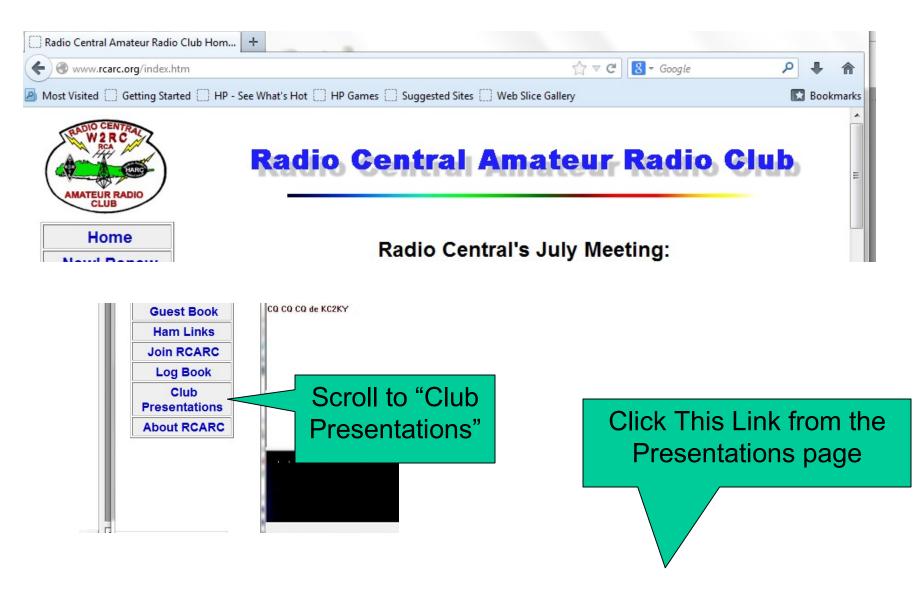
Getting Started with HF Digital Modes



This presentation is Available on the Radio Central Web Page: www.rcarc.org



Getting Started with Digital Modes by Neil KC2KY View with Adobe Acrobat...

Getting Started with HF Digital Modes

- What we Mean by HF Digital Modes
- Why Run Digital Modes
- What You will Need
- Hardware Setup
- Functionality of Interface Box
- Interface Box Options
- Some Popular Software Programs
- Commonly Used Digital Modes
- Hands-On Demo
- Questions and Feedback

VHF/UHF Digital Modes

D-STAR WIRES DMR ECHOLINK IRLP HF Digital Modes RTTY PSK-31 SSTV HELLSCHREIBER CW



WHY Digital Modes ?

It's always fun to try new things

You probably already have most or all of the hardware you need

Most modes are implemented in software that you can download for free from the Internet

Your PC becomes an extension of your radio

New digital modes are coming out all the time

What You Will Need

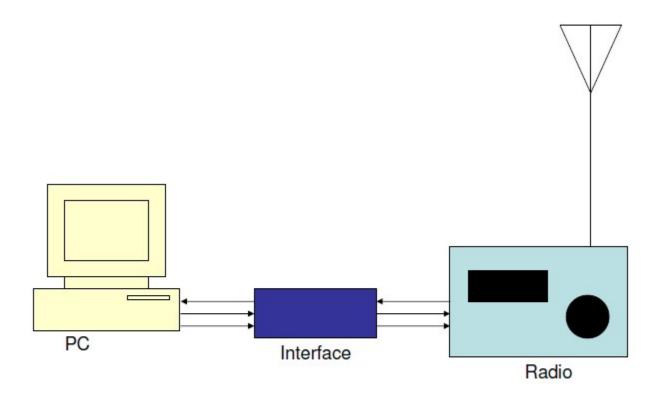
HF Rig (and Antenna!)

PC, Windows XP and up are OK

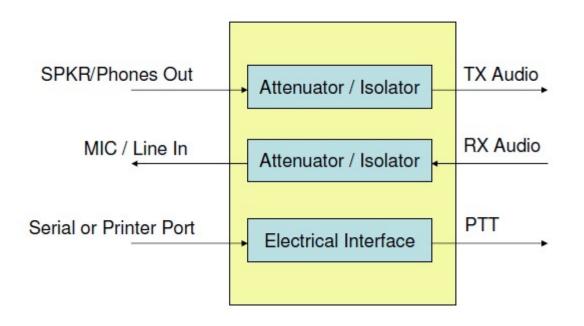
Interface Box

Software

Typical Station Setup for Digital Modes

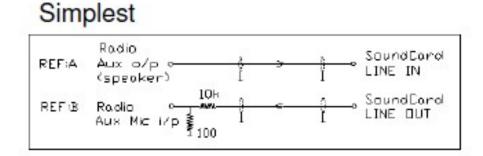


Interface Box

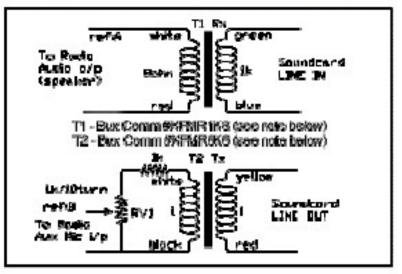


Digital Mode Interface Box – Easy to homebrew Several "Store Bought" Units Available Can be used for just about all HF digital modes

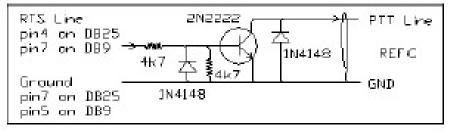
Circuits for Homebrew Interface Boxes



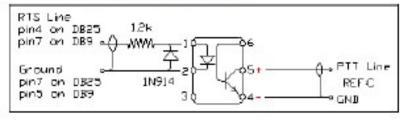
Isolation Transformers for Audio



Add Serial Port PTT Control







Credit goes to WM2U's PSK-31 Web Page http://www.qsl.net/wm2u/psk31.html

Commercial Digital Mode Interfaces



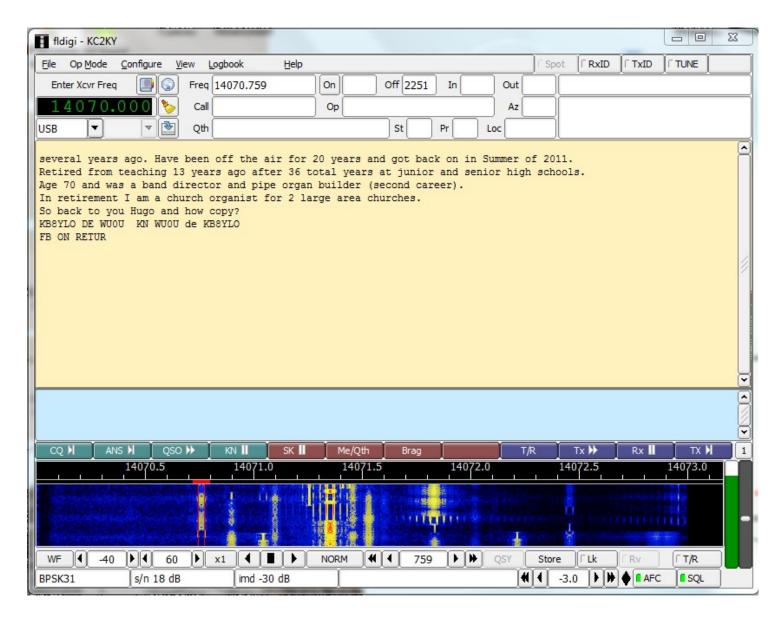








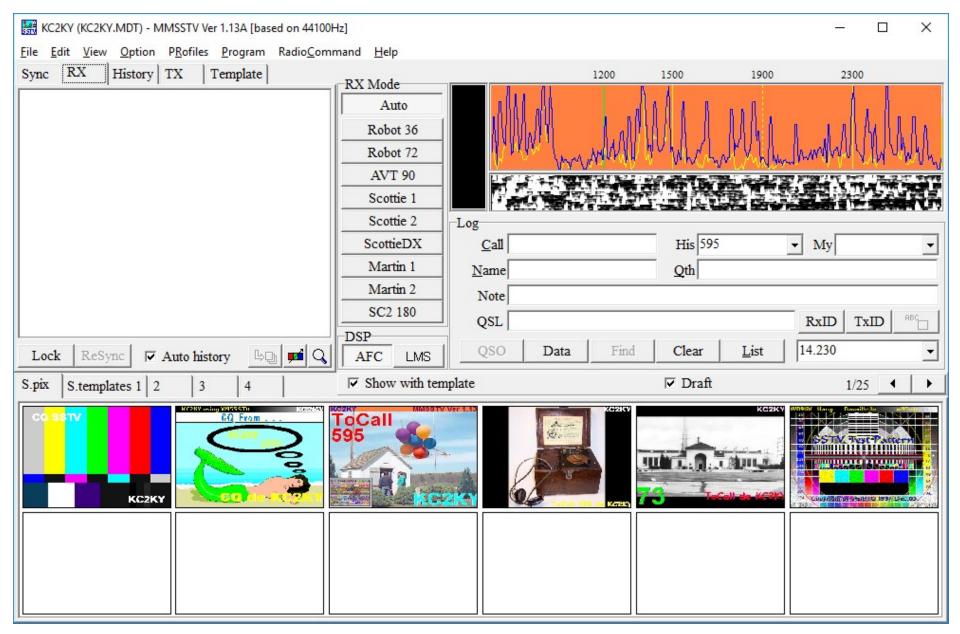
FLDigi – Introduced in 2004, Latest Version 2017



HamScope – Introduced in 2001, Latest Version 2007

HamScope 1.56 KC2KY				
File Edit View Settings Rig Control	Clear Rcv Clear Xmit Den	noMode Help		
Call Clear CQDX	CQ CALL 3 CALL			
Name Signoff E	quip Undefined Undefine			
NØBIV de KAØADZ fb Don got most of	it-e some drop out but t		5 6 9 {6 9 nut nice al c	
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Spectrum Waterfall Input Data Sync	Options HAM Def	🔲 Reverse Polarity		
Receiving CPU = 1% Clk ppm = 1000	29 Jul 2013	23:00:14 UTC		11.

MMSSTV – Send and Receive Pictures!



RIG Basics

Increase TX drive until RF output power stops increasing, then back off a little Maximum power – 50% of rig's "rated" power (wattmeters rarely show peak power) Speech Processor – OFF! Leave RIT and XIT turned off Use rig's Freq LOCK function if available – let the PC take care of frequency control Start with widest filter

AGC – Slow or OFF

For very weak signals, go to narrow filter. You may need to adjust the IF Shift to center the filter over the station of interest

A Few Useful Web Resources

http://wb8nut.com/digital/

http://n1su.com/digital.html

http://www.qsl.net/k3asi/freqli.html