My Favorite HAM Radio Software

Hamfesters Radio Club
Gregory D. Rosenberg (AB9MZ)
Presented 2017-02-04
Updated 2017-03-12
Software for ...

- Antenna Design and Control
- Station Management
- Radio Control, Programming, and SDR
- Operating Modes
- Propagation, Beacons, and the Solar Cycle
- Logging, Log Analysis, Conversion
- Electronics and Circuit Design
- iOS and Android Applications
- Mobile Operation, APRS, and GPS
Antenna Design and Control
Antenna Design and Control

- **EZNEC**
  QST September 2000, p. 66A quick review of this software.
  Software: minihttps://www.eznec.com/
  Tutorials: http://www.hamradiodeals.co.uk/forums/viewforum.php?f=46

- **NEC2Go**
  Simplified Nec2 modeling for amateurs and professionals.
  http://www.nec2go.com

- **MiniNEC Pro**
  QST February 1991, pp. 18-22 MININEC software is powerful, but you need to know its limitations.

- **PstRotator**
  QST February 1991, pp. 18-22 MININEC software is powerful, but you need to know its limitations.

The ARRL in the past has offered online classes on antenna modeling and antenna design. Watch http://www.arrl.org/online-course-catalog for future class offerings.
Station & Time Management
A quiet room
Good lighting
A very comfortable chair
A small refrigerator to keep you hydrated
A map of the world
Clocks set to GMT and your local time
A timer
Station Operation

- Grey Line software and a good time base.
  
  [http://dx.qsl.net/propagation/greyline.html](http://dx.qsl.net/propagation/greyline.html)

- ARRL, ICOM, and other offer nice band plan and related resources.
  
  [http://www.arrl.org/band-plan](http://www.arrl.org/band-plan)

- Grid Square Locators
  

- DX Zone Maps
  
Radio control software is often provided by its manufacturer.

Ham Radio Deluxe gives you radio control, logging, and digital modes all in one package.
http://www.hrdsoftwarellc.com

Commander is a free application that controls up to 3 transceivers, switching between them manually or automatically based on frequency, and displaying frequency-dependent settings for devices like tuners and amplifiers.
http://www.dxzone.com/cgi-bin/dir/jump2.cgi?ID=4541
Radio Programming software is often provided by its manufacturer.

**CHIRP** is a decent free programmer

**RT Systems** is the best commercial software
https://www.rtsystemsinc.com
Radio Frequency Resources

- The ARRL offers Travel Plus for Repeaters
  http://www.rtsystemsinc.com/TravelPlus-s/2181.htm

- The ARRL offers the Net Directory in print, as well as an online searchable version.
  http://www.arrl.org/arrl-net-directory-search

- Radio Reference is one of my favorite resources for finding frequencies to scan.
  https://www.radioreference.com

- Chicago Area Radio Monitoring Associations (aka CARMA) is another great resource.
  http://www.carmachicago.com/
Operating Modes

**DigiPan**: stands for "Digital Panoramic Tuning" and brings the ease and simplicity of PANORAMIC reception and transmission to PSK31 and PSK63 operation.  
[http://www.digipan.net/](http://www.digipan.net/)


**TRUTTY**: A program for amateur radio digital communications via a sound card. Supported modes are RTTY (Baudot code), ASCII (7 or 8 bits), PSK31 (BPSK and QPSK), BPSK63, QPSK63, BPSK125, AMTOR-FEC (SITOR-B, NAVTEX), MultiFSK-16, MultiFSK-8. HF-PACKET and UHF-PACKET (AX25) are supported in KISS-TNC emulation mode. SELFEC SITOR, AMTOR-ARQ (SITOR-A) and DTMF-code decoding is also possible.  

**MMSSTV By JE3HHT Makoto Mori**: Slow Scan TV with Windows and Soundcard. For WinXP - Vista - Win7  

**MultiPSK 4.31.4 / Clock 1.11 / Multicom 1.1 / Multidem 2.5.1**  
The Swiss-Army-Knife of multi-mode software! Operating screen very congested! Practice is needed to use efficiently.  
[http://f6cte.free.fr/index_anglais.htm](http://f6cte.free.fr/index_anglais.htm)

**MixW**: MixW is a multi mode multi functional software for every day logging and Contests. It has many useful features that make your QSO logging process almost a 100% automatic procedure.  
[http://mixw.net](http://mixw.net)
Phase Shift Keying modes:


On-Off Keying Modes:

- CW / CCW-OOK / CCW-FSK / QRSS

Amplitude modulation mode:

- APT faxes (NOAA satellites)

Frequency Shift Keying modes:


Multi Frequency Shift Keying modes:


Base band modes:

- POCSAG, AIS, Packet 9600 bauds (G3RUH)

Hellschreiber modes:

- FELD HELL / FM HELL(105-245) / PSK HELL / HELL 80

Graphic modes:

- HF FAX / SSTV / PSK SSTV modes (mentioned above) / MFSK16 SSTV (mentioned above), PPM (by positioned pulses) modes: mode S (ADS-B included)

DSP modes:

- Filters / Analysis / Binaural CW reception, RTTY, CW, BPSK31, BPSK63 and PSKFEC31 Panoramics,

Identifiers:

- Video ID / RS ID / Call ID, TCP/IP digital modem, Integrated SDR demodulator/modulator
WSPR implements a protocol designed for probing potential propagation paths with low-power transmissions. Normal transmissions carry a station's callsign, Maidenhead grid locator, and transmitter power in dBm.

http://physics.princeton.edu/pulsar/K1JT/wspr.html

JT65-HF Amateur Radio software for reception/transmission of JT65A protocol w/ an emphasis upon its usage in the HF Amateur Bands.

http://sourceforge.net/projects/jt65-hf

WSJT ("Weak Signal Communication, by K1JT") offers specific digital protocols optimized for meteor scatter, ionospheric scatter, and EME (moonbounce) at VHF/UHF, as well as HF skywave propagation. The program can decode fraction-of-a-second signals reflected from ionized meteor trails and steady signals 10 dB below the audible threshold.

http://physics.princeton.edu/pulsar/K1JT
Most modern logging software can log QSOs and export in many formats, making the need for log conversion utilities less important. Most even integrate with computer control of radios and antenna rotators.

We all know and love N3FJP’s logging software (see next slide).
See: [http://www.n3fjp.com](http://www.n3fjp.com)

N1MM’s is another very popular logger. (see slide after that)
See: [https://n1mm.hamdocs.com/tiki-index.php](https://n1mm.hamdocs.com/tiki-index.php)

ARRL’s Logbook of the World is a must. See: [http://www.arrl.org/logbook-of-the-world](http://www.arrl.org/logbook-of-the-world)

There are a number of programs for analyzing logs from ARRL and other contests See: [http://tinyurl.com/39pjxtx](http://tinyurl.com/39pjxtx)

Here is a quick start video I created that will give you a whirlwind tour of some of the main features of Amateur Contact Log:

From that first program, our software library has grown to more than 100 applications! Amateur Contact Log is an easy to use general logging program that has many great features including tracking of worked all states, counties and countries. The rest of our programs are easy to use "contest specific" applications. You can see what we've been up to lately on our recent news and announcements page.

73, Scott & Kimberly
N3FJP & KA3SEQ

Tom N1MM (and other developers) have created N1MM Logger+, which is a world class ham radio contest logging software package. It is used by a big majority of DX’ers and contesters. It supports CW, phone and digital modes. The program can be used with all versions of Windows.

The program’s features are continually changing, and the manual may sometimes lag a little behind the code. When this happens you should consult the release notes for information on the newest features of the program that may not be in the manual quite yet.
Logging Programs (DXKeeper)

DXKeeper by Dave Bernstein AA6YQ logs QSOs, tracks award status, generates QSL cards & labels, addresses envelopes, uploads QSOs to eQSL.cc & LotW, and downloads progress info from eQSL.cc and LotW. It can reference the RAC, Hamcall, and QRZ callbooks as well as the QRZ.com web site to fill in data when logging, or to update already-logged QSOs. DXKeeper automatically interoperates with all members of the DXLab Suite, including Commander (transceiver control and bandspread for Alinco, Elecraft, FlexRadio, Icom, Kachina, Kenwood, TenTec, Yaesu), DXView (world map, rotator control), WinWarbler (PSK, RTTY, CW, Phone) and SpotCollector (DX and WWV spots). It also interoperates w/ MMTTY, MMVARI, MMSSTV, MultiPSK, MixW, DX Atlas, and Ham Radio Deluxe.
iOS and Android Applications

- Echolink (All)
- Ham Radio Reference (iOS & Windows mobile)
- Ham Square (All)
- HF Beacon (iPhone)
- Morse Code Trainer (Android)
- MUF Predictor (Android)
- QRZ Call Sign Search (All)
- Shortwave Radio Schedule (Android)
- ShortWave Broadcast Schedule (iOS)
Mobile Operation, APRS, and GPS

**MacAPRS** - Macintosh automatic position reporting system, developed by Bob Bruninga, WB4APR, to track boats and vehicles using GPS and packet radio. MacAPRS was written by Keith Sproul, WU2Z and Mark Sproul, KB2ICI

**UI-VIEW** - UI-View is an APRS client that runs on Windows. This application differs from most APRS software in that it isn't designed just to be used with TNCs in terminal mode. UI-View also supports TNCs in KISS mode, AGWPE host mode and BPQ host mode

**UI-Point 32** - Add-on for UI-View32 that allows you to plot APRS stations on Microsoft MapPoint 2002 maps.

**D-PRS** - D-PRS converts these position reports from remote D-STAR radios to an APRS format. Windows .net application

http://www.aprs.org
“So What is Your Favorite Software”

??? Questions ???