# Copying BULLETINS

NFARC / ARES® Tech Nite

June 2024

# Bulletins

- Bulletins may be issued  by local authorities to provide information or instructions

- Addressed to large group of people

- Often issued in voice

- May also be issued as "text" – better for detailed informations such as locations, etc.

# Amateur Radio Bulletins

- ARRL issues bulletins frequently

- Allows practice at copying bulletins

- Issued on standard frequencies and times

- Voice, CW and multiple digital techniques

# Data Techniques

- Because digital techniques on single side band enjoy a HUGE signal-to-noise advantage, DATA on HF is easier to copy than voice.

- (This is not true for FM – voice has same advantage as data over FM)

# 1-to-Many

- Digital techniques used are "broadcast" techniques

- NOT ARQ (acknowledge/request) – so more difficult to get error-free copy

- Typical techniques include PSK31, RTTY (Baudot) and MFSK-16. SHARES uses MT63-1K-Long (which may be easier to copy without an electrical connection.)

# FLDGI

- Basic FLDGI (free) works FINE to copy these bulletins, whether on HF (single side band) or even on VHF/UHF FM.

- FLDGI offers DOZENS of techniques.

- Two major obstacles:

  - Getting correct frequency

  - Getting correct modulation technique

# Getting Correct Frequency

- ARRL publishes their "center" frequency, not their "dial" frequency – because their bulletins can be received lots of different ways.  (Different from voice bulletins)

- It is traditional to use UPPER side band to receive, but some techniques actually don't care.
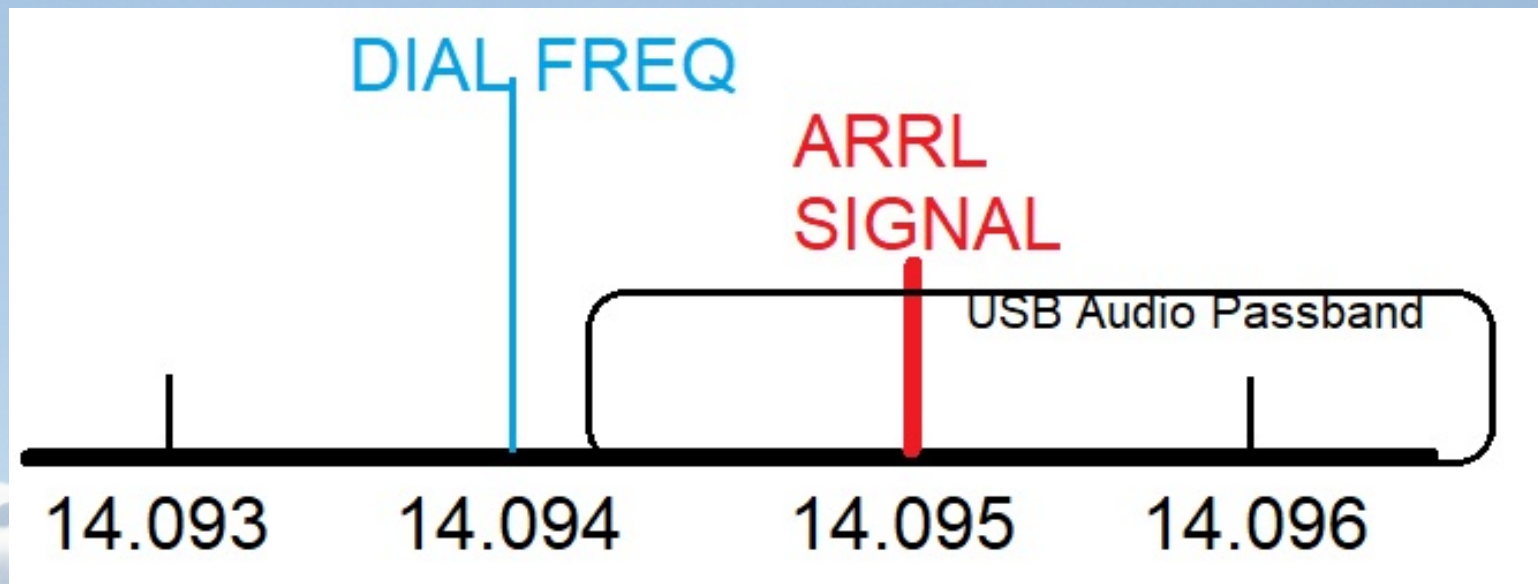
# ARRL

- Frequencies are 3.5975, 7.095, 14.095, 18.1025, 21.095, 28.095, 50350 kHz, and 147.555 MHz.

- Bulletins are sent at 45.45-baud Baudot, PSK31 in BPSK mode and MFSK16 in a daily, revolving schedule.

- The regular callup will be made using the mode that is transmitted first.  The digital bulletin times remain at 6 PM and 9 PM Eastern Day;ight Time - currently 2200 UTC and 0100 UTC, respectively - daily
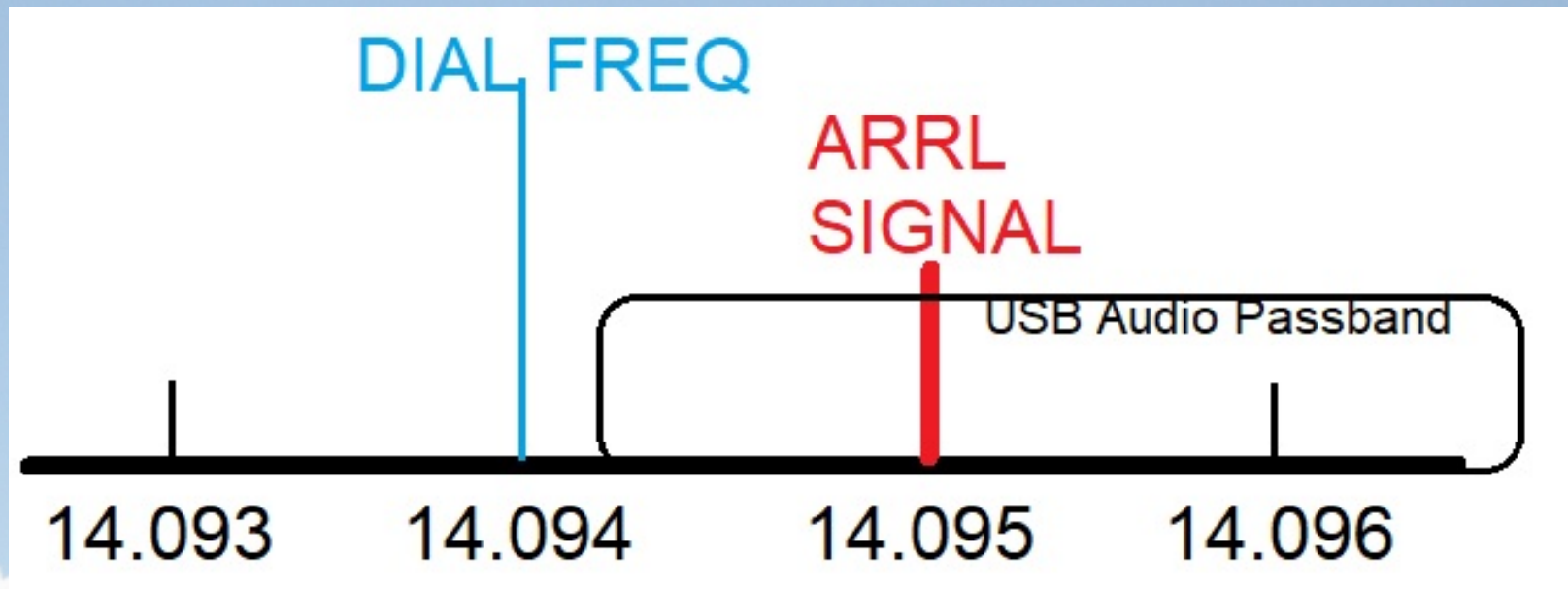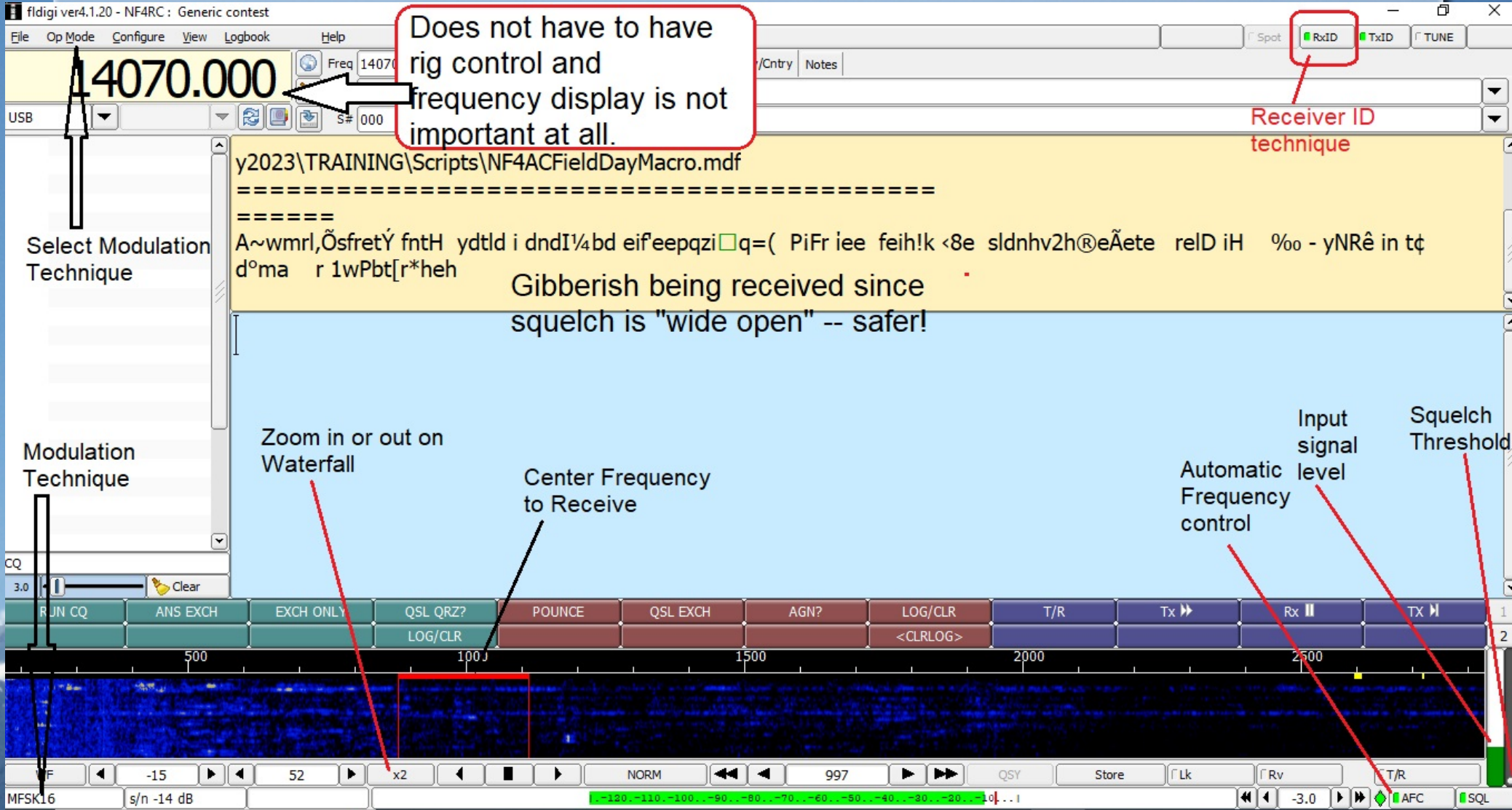
# Receiving ARRL

- Typically 7.095 and 14.095 are the best frequencies in Alachua County at NIGHT.

- Audio will be centered around 1kHz

This is a screenshot of the fldigi ver4.1.20 - NF4RC : Generic contest software with annotations.

**Title bar:** fldigi ver4.1.20 - NF4RC : Generic contest

**Menu:** File  Op Mode  Configure  View  Logbook  Help

**Frequency display:** 14070.000

**Annotations:**

- Does not have to have rig control and frequency display is not important at all.
- Receiver ID technique (pointing to RxID)
- Select Modulation Technique
- Modulation Technique (MFSK16)
- Zoom in or out on Waterfall
- Center Frequency to Receive
- Input signal level
- Squelch Threshold
- Automatic Frequency control

Received text area:
y2023\TRAINING\Scripts\NF4ACFieldDayMacro.mdf
=============================================
======
A~wmrl,ÕsfretÝ fntH  ydtld i dndI¼bd eif'eepqzi□q=(  PiFr ïee  feih!k <8e  sldnhv2h®eÃete   relD iH    ‰o - yNRê in t¢
d°ma    r 1wPbt[r*heh

Gibberish being received since squelch is "wide open" -- safer!

**Buttons:**
RUN CQ | ANS EXCH | EXCH ONLY | QSL QRZ? | POUNCE | QSL EXCH | AGN? | LOG/CLR | T/R | Tx ▶▶ | Rx ▮▮ | RUN TX ▶▮  (1)
LOG/CLR | <CLRLOG> (2)

Waterfall scale: 500   1000   1500   2000   2500

**Bottom controls:**
WF | -15 | 52 | x2 | NORM | 997 | QSY | Store | Lk | Rv | T/R
MFSK16 | s/n -14 dB | .-120..-110..-100..-90..-80..-70..-60..-50..-40..-30..-20..-10..
-3.0 | AFC | SQL

# Setting up SoundCard

- CONFIGURE | CONFIG DIALOG

- Soundcard | Devices

# LIVE PRACTICE

- FREQUENCY
    - CENTER FREQ
    - DIAL FREQ  (use 1kHz for the Audio)
- TECHNIQUE