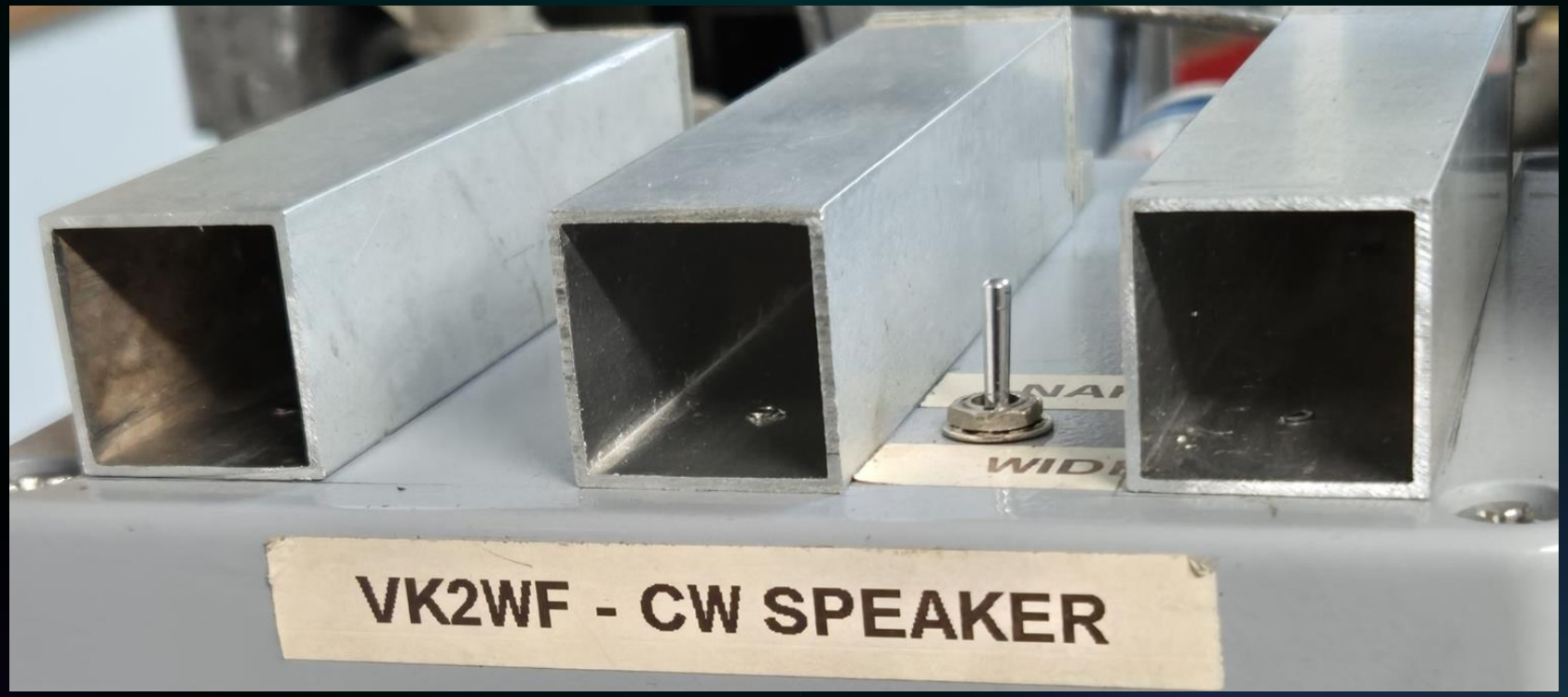


VK2WF CW Speakers

CW OPERATION WITH GOOD EARS

Being able to hear a Dx station before the others gives you a competitive advantage

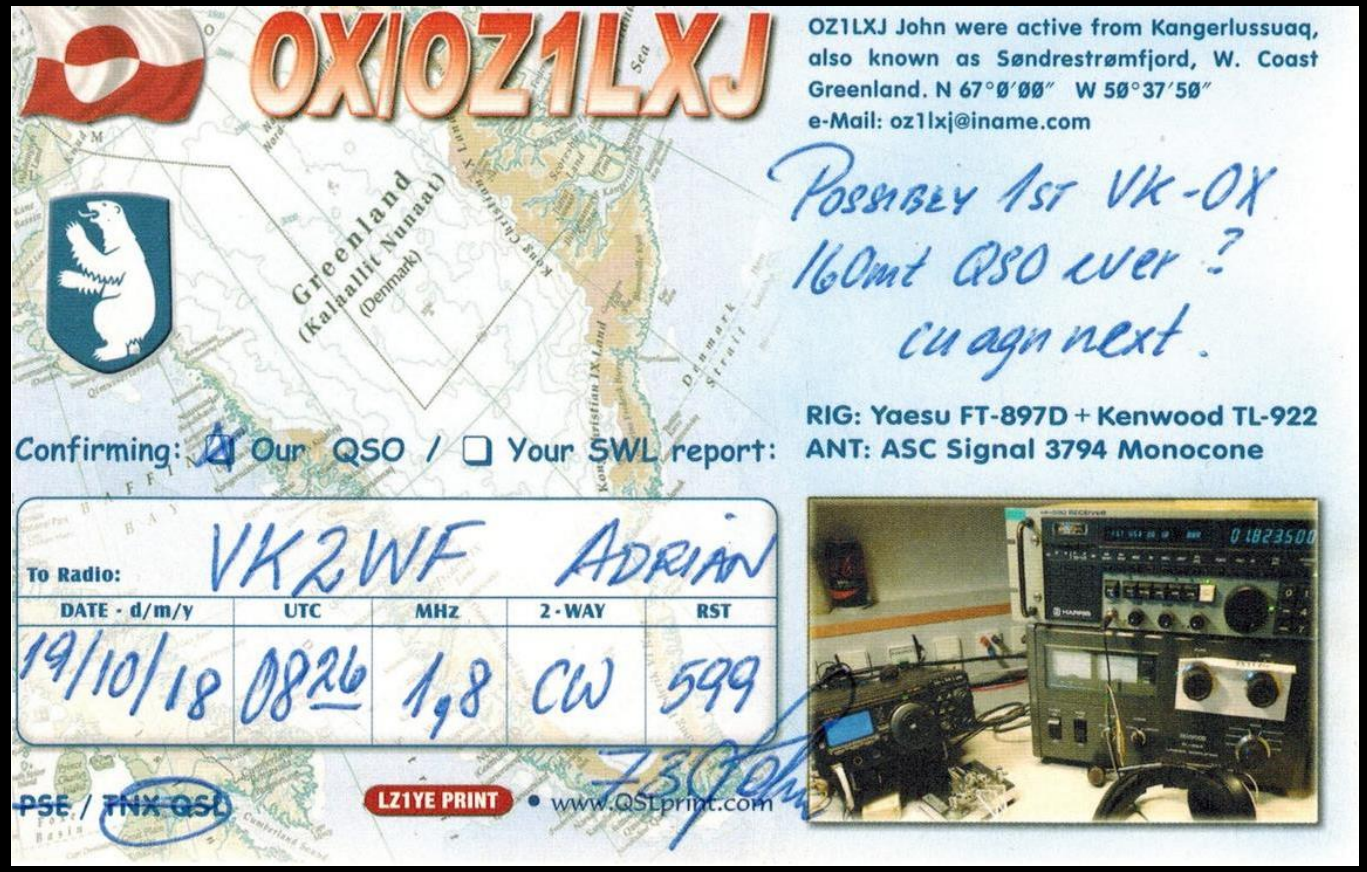
- At sunspot cycle peak, Top Band conditions are poor, Acoustic Filtering still makes ATNO CW QSOs a possibility.
- 9M6NA is a recent example
- Signal strength mostly below noise floor

LOTW Record →

Station	
Call Sign	9M6NA
DXCC	EAST MALAYSIA (46)
CQ Zone	28
ITU Zone	54
IOTA	OC-133
Grid	OJ75OI
Worked Station	
Worked	VK2WF
DXCC	AUSTRALIA (150)
CQ Zone	30
ITU Zone	59
Grid	QF55BG
State	New South Wales (NSW)
Date/Time	2025-03-26 10:59:06
Mode	CW (CW)
Band	160M
Frequency	1.82150
QSL	2025-03-26 12:21:10

Record ID 2068280021 **Received:** 2025-03-26 12:21:10

Another QSO made possible with Acoustic Filtering at Sunset



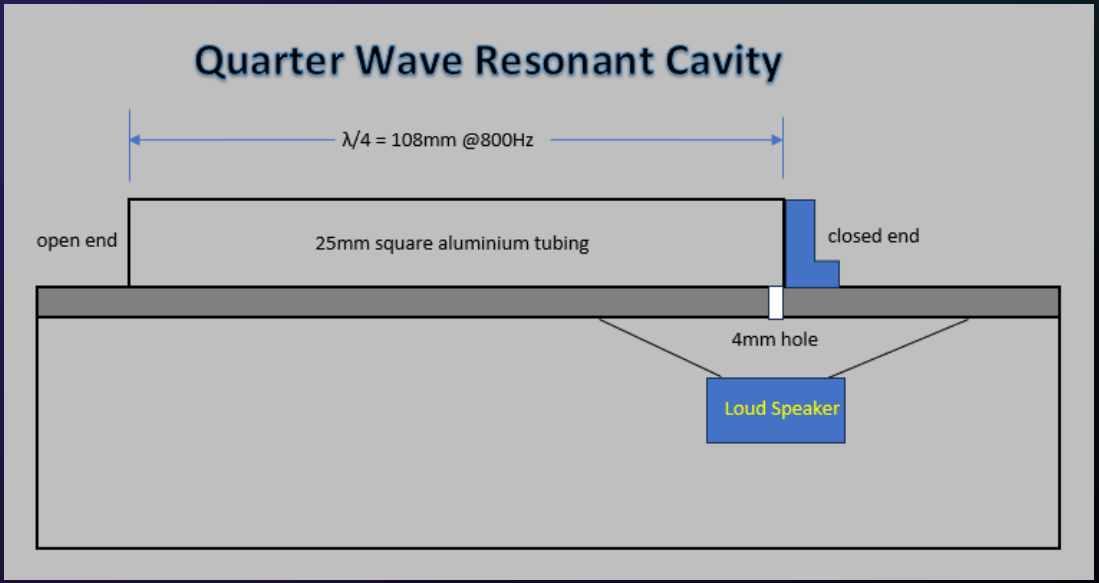
- One of my few claims to fame: 1st VK station to work Greenland on Top Band.

CW Speaker Advantages

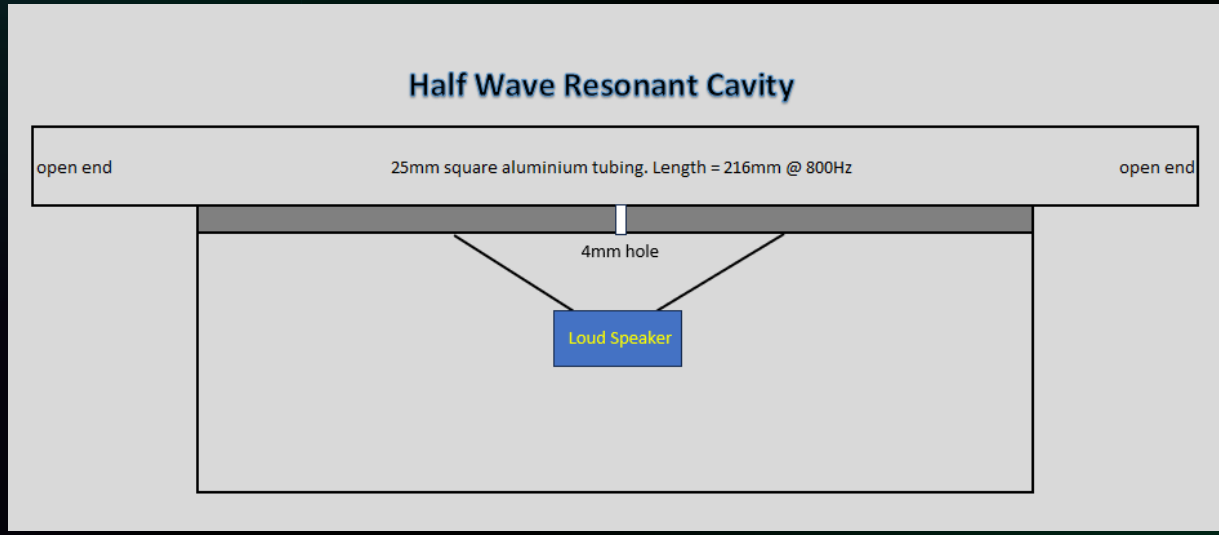
- No Headphones
- Copy signals not seen on a SDR receiver water-fall or heard on a conventional receiver, even at 50Hz BW
- Reduced Ringing as heard with narrow bandwidth filtering
- Less QRN tedium

Acoustic Filter Types Used at VK2WF

QUARTER WAVE RESONANT CAVITY



HALF WAVE RESONANT CAVITY



Cavity wavelength ≈ (V/F) = 343m per sec / Freq in Hz @ 20 deg C

- The centre cavity is driven by one loud- speaker
- A second speaker is employed to compare tuned and broadband operation
- The outer 2 cavities are parasitic, giving increased noise reduction

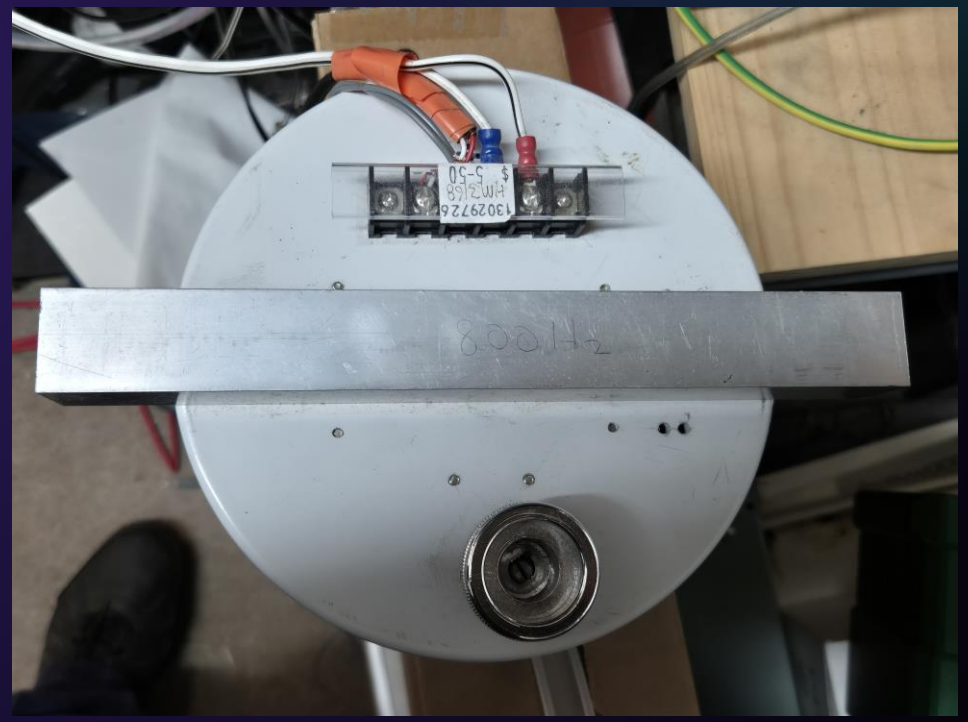
Quarter Wave Cavities

Internal view of the quarter wave 2 speaker version

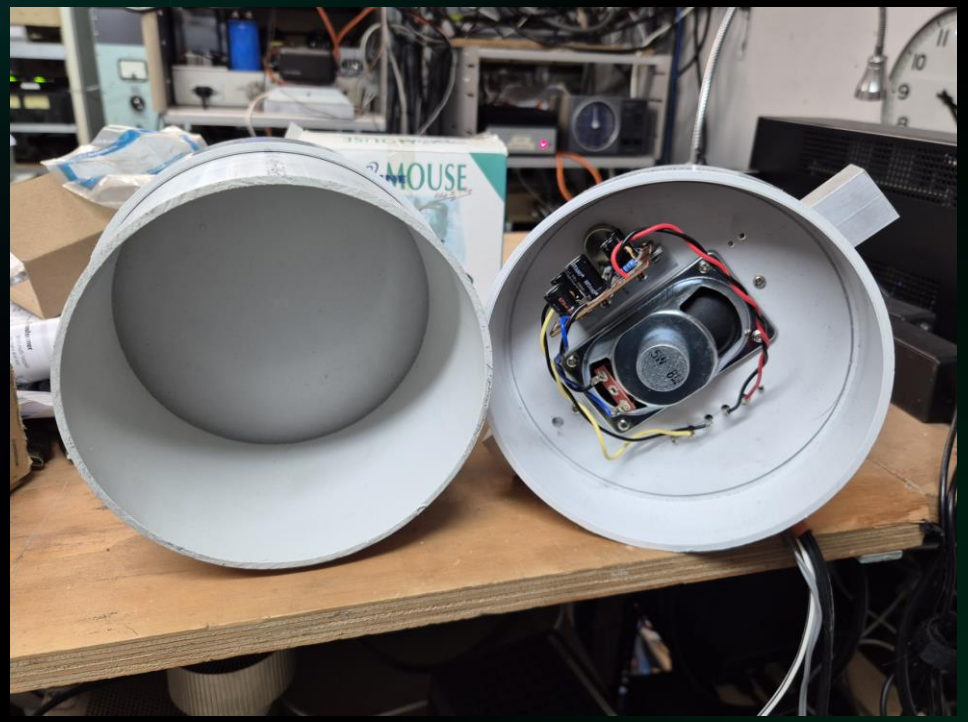
THE CLOTH IS INSERTED TO DAMPEN INTERNAL RESONANCES.

Half Wave Cavity

TOP VIEW - EXCITED IN THE CENTRE



INTERIOR - SHOWING SPEAKER + AMP



Rack Mounted Half Wave Cavities

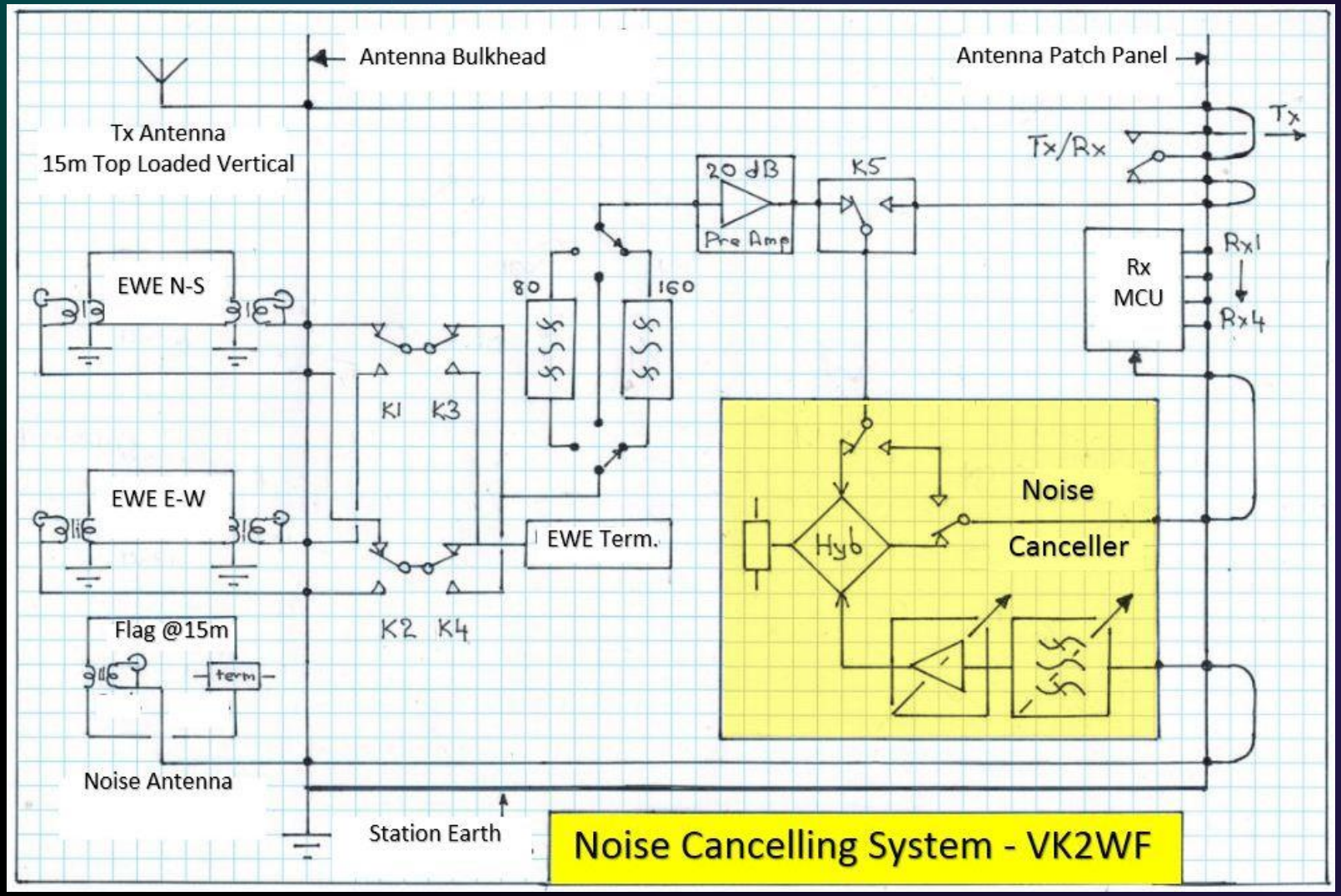
SPEAKERS REAR MOUNTED ON BAFFLE BOARD

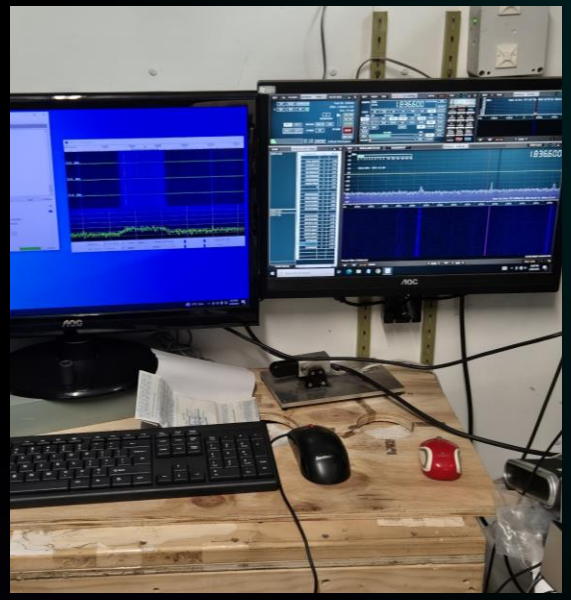
Station Receive Overview

VK2WF Antenna System

RX 1-4 INCLUDE

1. HAGENUK RX1001M
2. ALINCO
3. VINTAGE AIRCRAFT RX
4. SDR PLAY





Present Receiving Setup on 160m

- 2 REVERSIBLE EWE ANTENNAS
- FOLLOWED BY A 20DB PREAMP TO A RECEIVE MULTICOUPLER WHICH FEEDS FOUR DIFFERENT RECEIVERS
- ALL FOUR RECEIVERS ARE USED ON A TYPICAL 160M SESSION
- THE ALINCO AND THE HAGENUK RECEIVERS BOTH EMPLOY ACOUSTIC FILTERING

VK2WF EWE Antennas

EAST WEST AND NORTH SOUTH RECEIVE ANTENNAS WITH UNDERGROUND CABLE RETICULATION.

Thanks for Watching

73

Adrian, VK2WF