

HARC's New Exhibit at the Maritime Museum of the Atlantic (MMA)



**MMA Focus: history of ships, small craft, sailing,
and sailors in the Maritimes**

MMA's main exhibition hall. HARC exhibit is on balcony facing hall.



HARC's Permanent MMA Exhibit

A large, new “Radio Office” with:

- **Part A. A working modern amateur radio station**
 - -CW/SSB/Digital
 - HF + 2m
- **Part B. A working 1940s-1960s ship-board commercial/navy “radio office”**
 - CW/AM/MCW
 - 375 kc to 14.0 Mc

Antennas: -80/40 m doublet

-40-10 m multiband vertical

-2 m vertical

The radio office's story for MMA visitors

Radio at Sea: ended age-old isolation of ships out of sight of land

- Greatly aided navigation:
 - accurate time for longitudes
 - coastal beacons, RDF
 - WX forecasts
- RX and TX distress calls
- Coordination of ships at sea
- Links with land



What Type of Ship's Radio Office Should Be Displayed?

Varied with: -time period,
-ship type and size,
-radio equipment used

1940s Marconi gear



1950s RCA Radiomarine gear



Heart of the HARC 1940-1960s ship radio office display: The Canadian Marconi CM-11 Ship Transmitter-Receiver

Why the CM-11??

- all Canadian design and manufacture
- widely used 1942-1970s on ships + shore
- uses available tubes and 115 VAC
- I found two for free!!

CM-11 “vital statistics”

- TX + RX: 375-515 kc, 1.5-14.0 Mc
- RX ONLY: 78-550 kc, 14-30 Mc
- 23 tubes, Xtal or VFO frequency control
- AM, CW, MCW, RTTY
- OUTPUT: 30W AM, 70 W MCW, 100W CW
- WEIGHT: 479 lbs

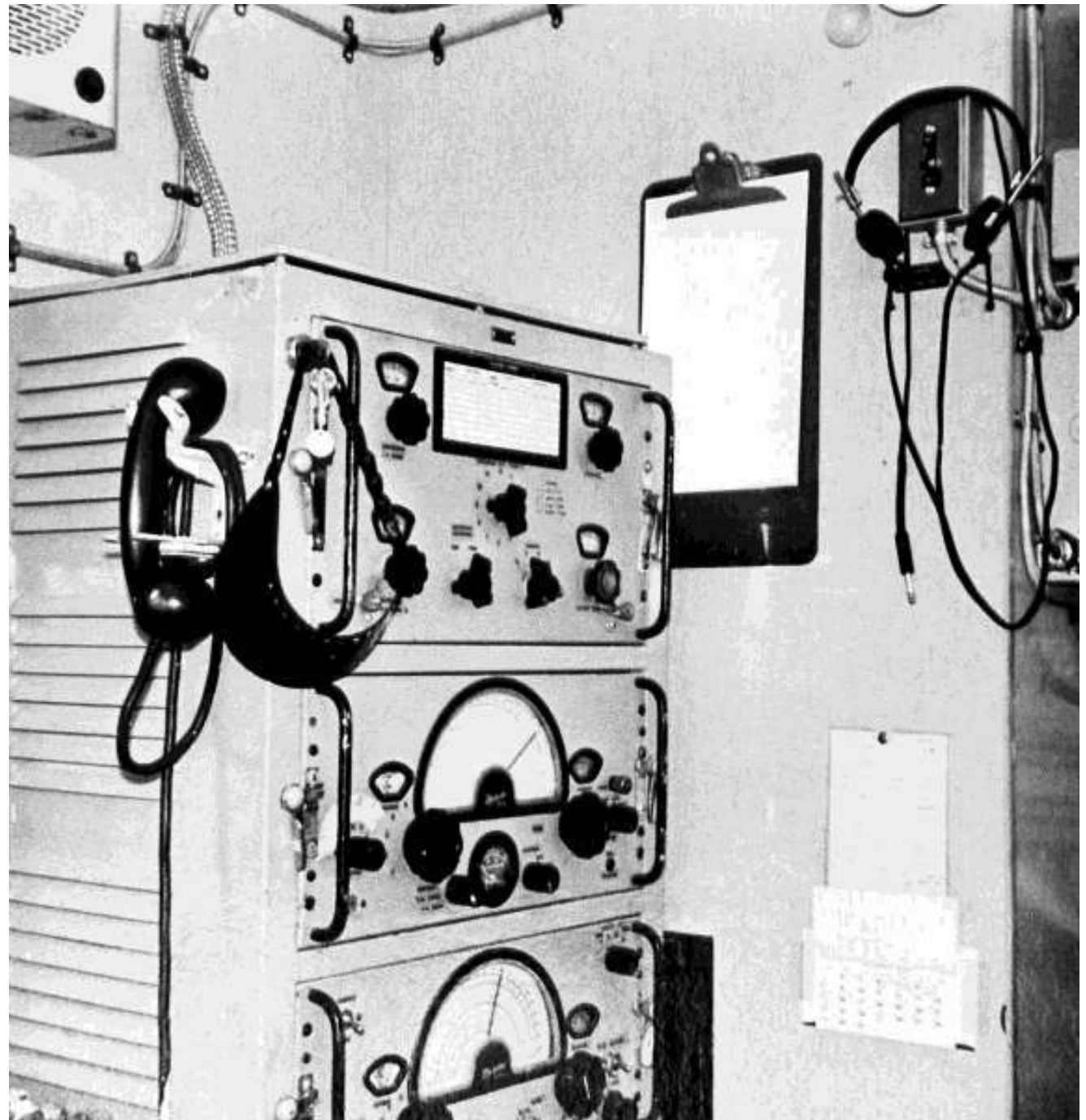


1960s Radio #1 in RCN destroyer *Haida*: multiple listening posts with CSR-5s, and remote units to operate CM-11s in Radio #2



Sackville's radio
office (1940s):
locally operated
CM-11

Tnx, Spud!



HMCS *Swansea* (1960)

De Spud!



Quebec Radio Museum storage: CM-11A (left), CM-11 (right)



72 years old

73 years old

“As received” finish on the power supply



May 2015: two CM-11s arrive in Canard!



Goal:

CM-11 Restoration

- to good working order
- to original appearance
- with “period” accessories
- with clear description of
uses



The CM-11 Restoration:

1. Diasassemble (12 subunits)
2. Choose units to restore, cannibalize
3. Strip down, clean, re-paint
4. Obtain missing parts + accessories
5. Overhaul mechanically
6. Ohmmeter, tube + capacitor tester checks
7. Overhaul electrically
8. Assemble subunits (TX, RX, Tuner, + 3 P/S sections)
9. Apply power to subunits
10. Test/Troubleshoot and Align subunits
11. Apply power to complete CM-11 + Test

CSR-5A in original paint color



CM-11A Power Supply: 250 lbs!









MAN SAFE TO
ALOFT TRANSMIT

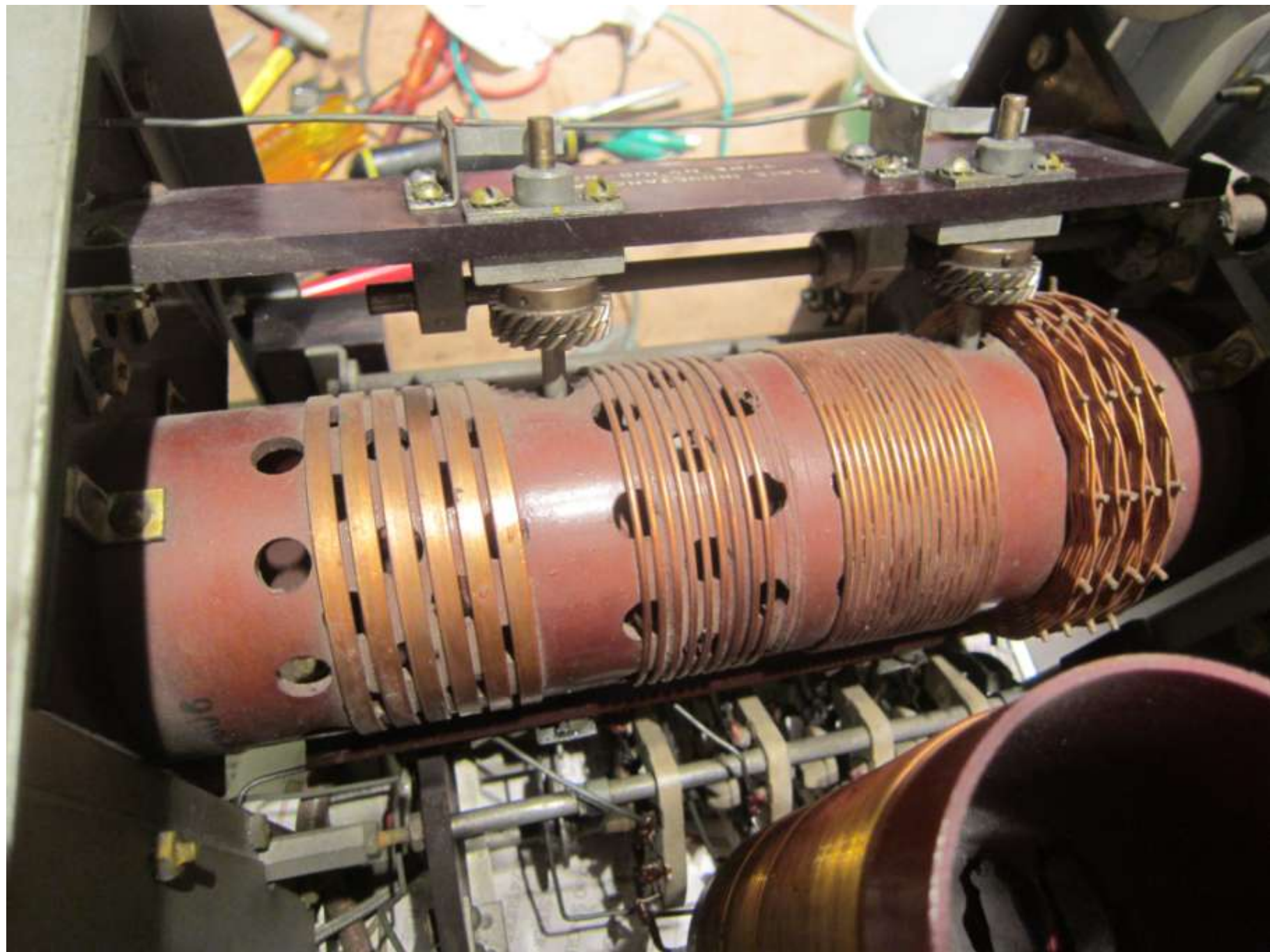




TUNING CHART									
FREQ. K.C.	DRIVER			OUTPUT			ANTENNA		
	DIAG.	RANGE	TUBE	RANGE	SPD.	GRY.	L.F. TUNE	H.F. TUNE	H.F. TUNE
1630	2	5.30	2	2.5	2.5	2	2	2	2
1710	2	5.30	2	2.5	2.5	2	2	2	2
1810	2	5.30	2	2.5	2.5	2	2	2	2
1910	2	5.30	2	2.5	2.5	2	2	2	2
2010	2	5.30	2	2.5	2.5	2	2	2	2
2110	2	5.30	2	2.5	2.5	2	2	2	2
2210	2	5.30	2	2.5	2.5	2	2	2	2
2310	2	5.30	2	2.5	2.5	2	2	2	2
2410	2	5.30	2	2.5	2.5	2	2	2	2
2510	2	5.30	2	2.5	2.5	2	2	2	2
2610	2	5.30	2	2.5	2.5	2	2	2	2
2710	2	5.30	2	2.5	2.5	2	2	2	2
2810	2	5.30	2	2.5	2.5	2	2	2	2
2910	2	5.30	2	2.5	2.5	2	2	2	2
3010	2	5.30	2	2.5	2.5	2	2	2	2
3110	2	5.30	2	2.5	2.5	2	2	2	2
3210	2	5.30	2	2.5	2.5	2	2	2	2
3310	2	5.30	2	2.5	2.5	2	2	2	2
3410	2	5.30	2	2.5	2.5	2	2	2	2
3510	2	5.30	2	2.5	2.5	2	2	2	2
3610	2	5.30	2	2.5	2.5	2	2	2	2
3710	2	5.30	2	2.5	2.5	2	2	2	2
3810	2	5.30	2	2.5	2.5	2	2	2	2
3910	2	5.30	2	2.5	2.5	2	2	2	2
4010	2	5.30	2	2.5	2.5	2	2	2	2
4110	2	5.30	2	2.5	2.5	2	2	2	2
4210	2	5.30	2	2.5	2.5	2	2	2	2
4310	2	5.30	2	2.5	2.5	2	2	2	2
4410	2	5.30	2	2.5	2.5	2	2	2	2
4510	2	5.30	2	2.5	2.5	2	2	2	2
4610	2	5.30	2	2.5	2.5	2	2	2	2
4710	2	5.30	2	2.5	2.5	2	2	2	2
4810	2	5.30	2	2.5	2.5	2	2	2	2
4910	2	5.30	2	2.5	2.5	2	2	2	2
5010	2	5.30	2	2.5	2.5	2	2	2	2
5110	2	5.30	2	2.5	2.5	2	2	2	2
5210	2	5.30	2	2.5	2.5	2	2	2	2
5310	2	5.30	2	2.5	2.5	2	2	2	2
5410	2	5.30	2	2.5	2.5	2	2	2	2
5510	2	5.30	2	2.5	2.5	2	2	2	2
5610	2	5.30	2	2.5	2.5	2	2	2	2
5710	2	5.30	2	2.5	2.5	2	2	2	2
5810	2	5.30	2	2.5	2.5	2	2	2	2
5910	2	5.30	2	2.5	2.5	2	2	2	2
6010	2	5.30	2	2.5	2.5	2	2	2	2
6110	2	5.30	2	2.5	2.5	2	2	2	2
6210	2	5.30	2	2.5	2.5	2	2	2	2
6310	2	5.30	2	2.5	2.5	2	2	2	2
6410	2	5.30	2	2.5	2.5	2	2	2	2
6510	2	5.30	2	2.5	2.5	2	2	2	2
6610	2	5.30	2	2.5	2.5	2	2	2	2
6710	2	5.30	2	2.5	2.5	2	2	2	2
6810	2	5.30	2	2.5	2.5	2	2	2	2
6910	2	5.30	2	2.5	2.5	2	2	2	2
7010	2	5.30	2	2.5	2.5	2	2	2	2
7110	2	5.30	2	2.5	2.5	2	2	2	2
7210	2	5.30	2	2.5	2.5	2	2	2	2
7310	2	5.30	2	2.5	2.5	2	2	2	2
7410	2	5.30	2	2.5	2.5	2	2	2	2
7510	2	5.30	2	2.5	2.5	2	2	2	2
7610	2	5.30	2	2.5	2.5	2	2	2	2
7710	2	5.30	2	2.5	2.5	2	2	2	2
7810	2	5.30	2	2.5	2.5	2	2	2	2
7910	2	5.30	2	2.5	2.5	2	2	2	2
8010	2	5.30	2	2.5	2.5	2	2	2	2
8110	2	5.30	2	2.5	2.5	2	2	2	2
8210	2	5.30	2	2.5	2.5	2	2	2	2
8310	2	5.30	2	2.5	2.5	2	2	2	2
8410	2	5.30	2	2.5	2.5	2	2	2	2
8510	2	5.30	2	2.5	2.5	2	2	2	2
8610	2	5.30	2	2.5	2.5	2	2	2	2
8710	2	5.30	2	2.5	2.5	2	2	2	2
8810	2	5.30	2	2.5	2.5	2	2	2	2
8910	2	5.30	2	2.5	2.5	2	2	2	2
9010	2	5.30	2	2.5	2.5	2	2	2	2
9110	2	5.30	2	2.5	2.5	2	2	2	2
9210	2	5.30	2	2.5	2.5	2	2	2	2
9310	2	5.30	2	2.5	2.5	2	2	2	2
9410	2	5.30	2	2.5	2.5	2	2	2	2
9510	2	5.30	2	2.5	2.5	2	2	2	2
9610	2	5.30	2	2.5	2.5	2	2	2	2
9710	2	5.30	2	2.5	2.5	2	2	2	2
9810	2	5.30	2	2.5	2.5	2	2	2	2
9910	2	5.30	2	2.5	2.5	2	2	2	2
10010	2	5.30	2	2.5	2.5	2	2	2	2

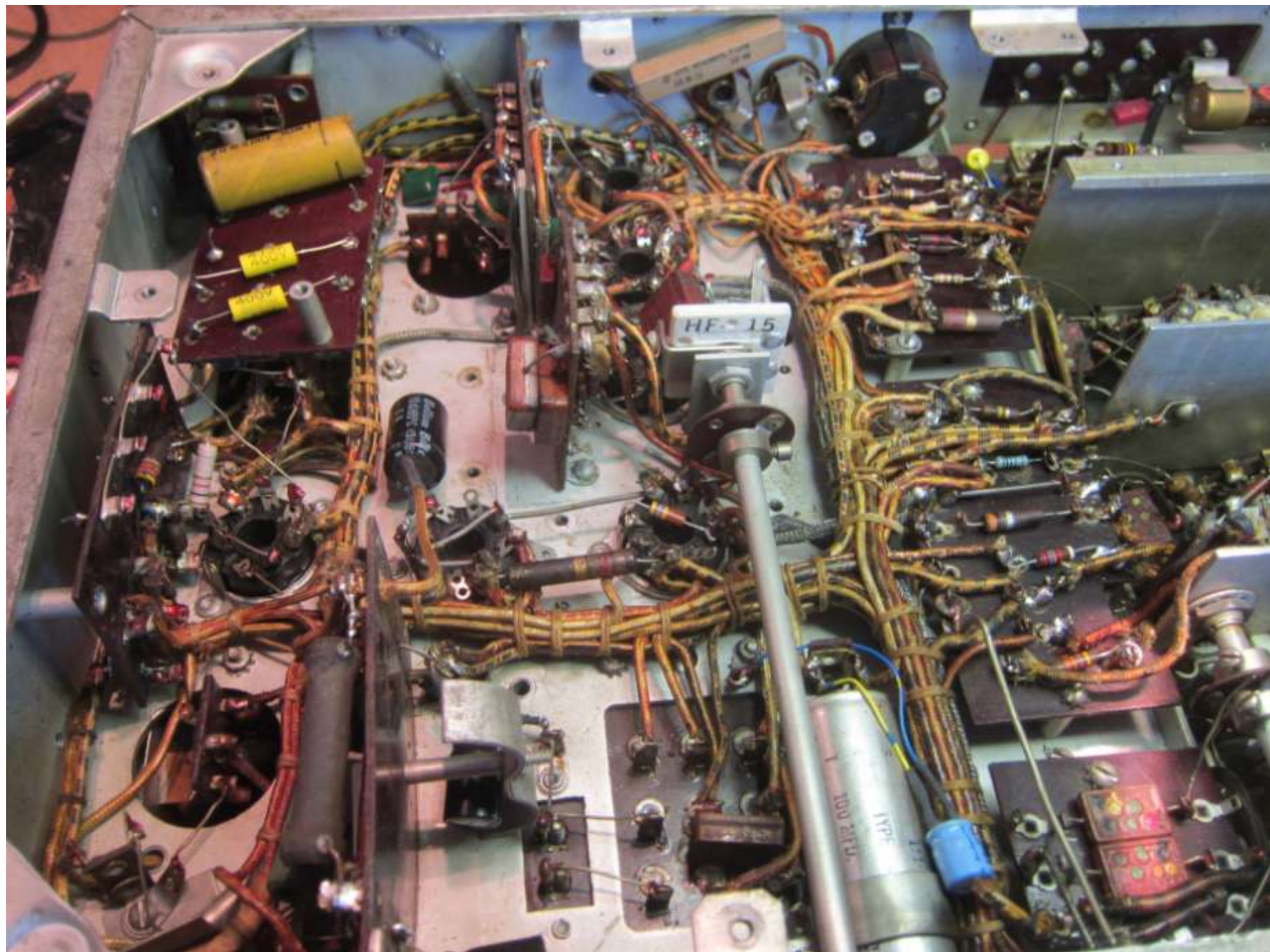
RANGE MC
1 0.5-0.55
2 0.55-0.60
3 0.60-0.65
4 0.65-0.70



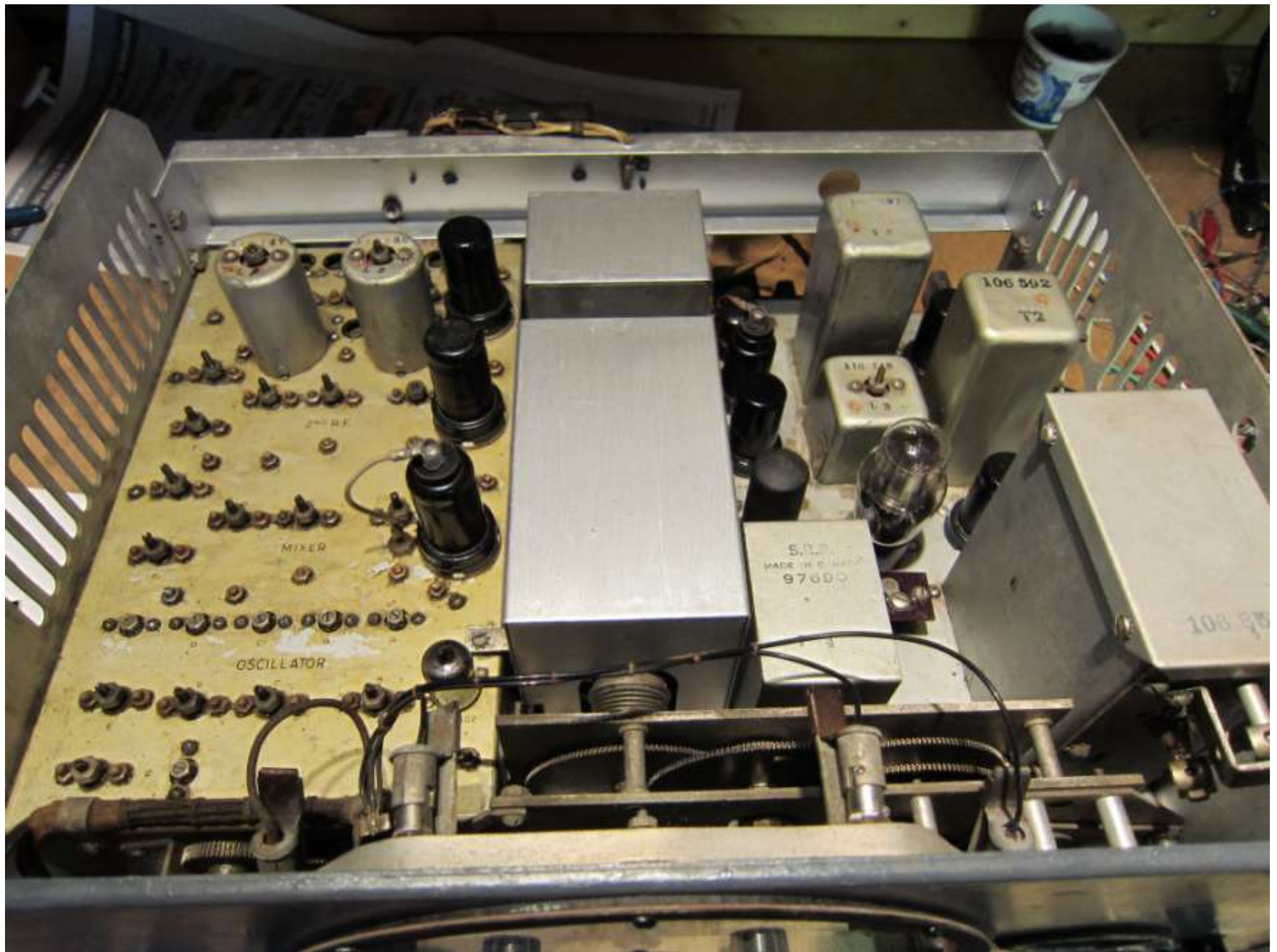




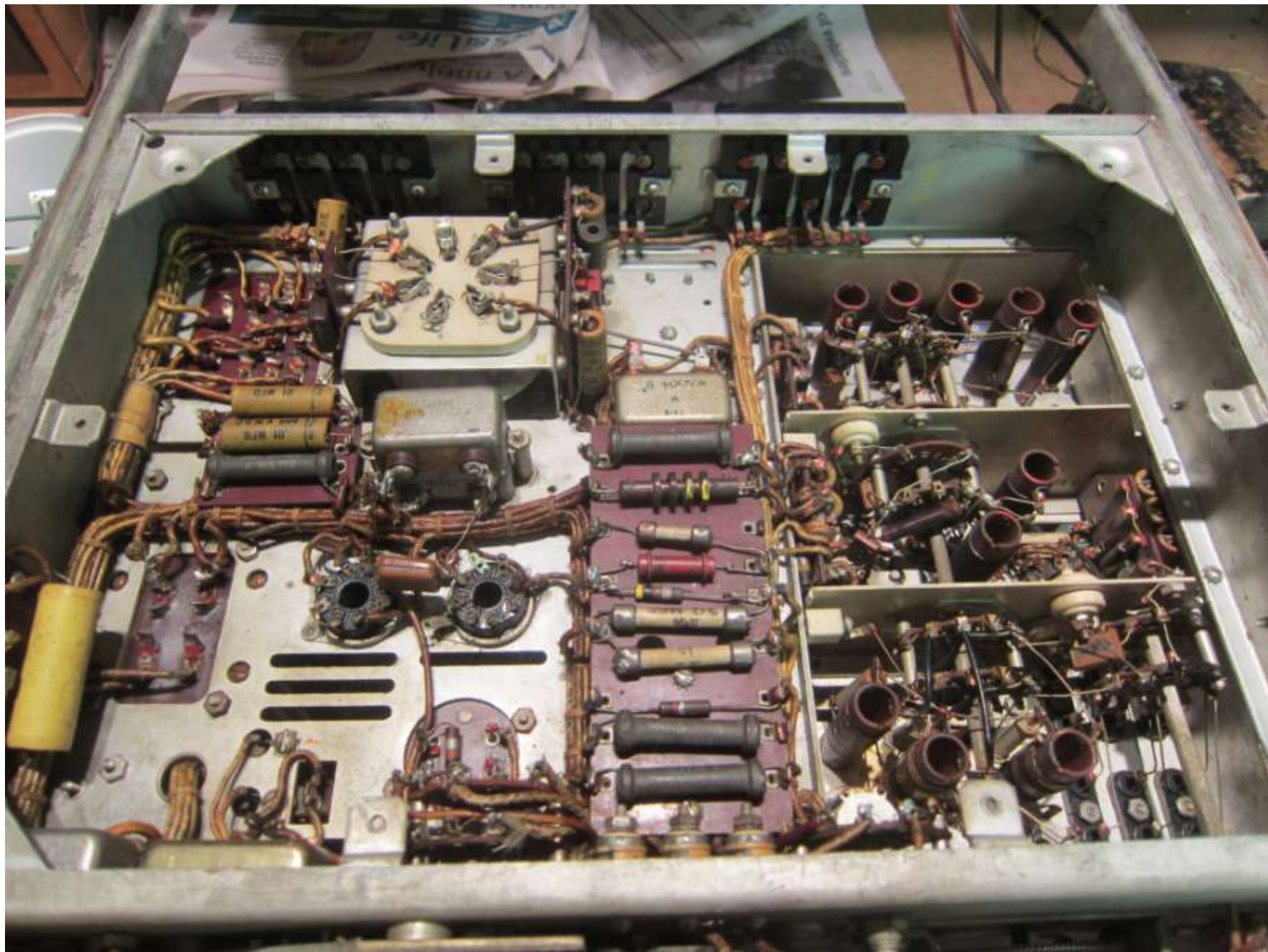




















The missing “Test Cable” and its snatch plugs

















Room built for HARC radio displays





Amateur Station

Ship's Radio Office



1940s remote unit for CM-11
(for bridge, etc.)



Not quite finished.....







Tnx!

- **Musee Quebequois de la Radio**

- Jacques Hamel: VE2DJQ Gave us two CM-11s
- Donald Courcy: VE1SS Lots of moving muscle for CM-11s

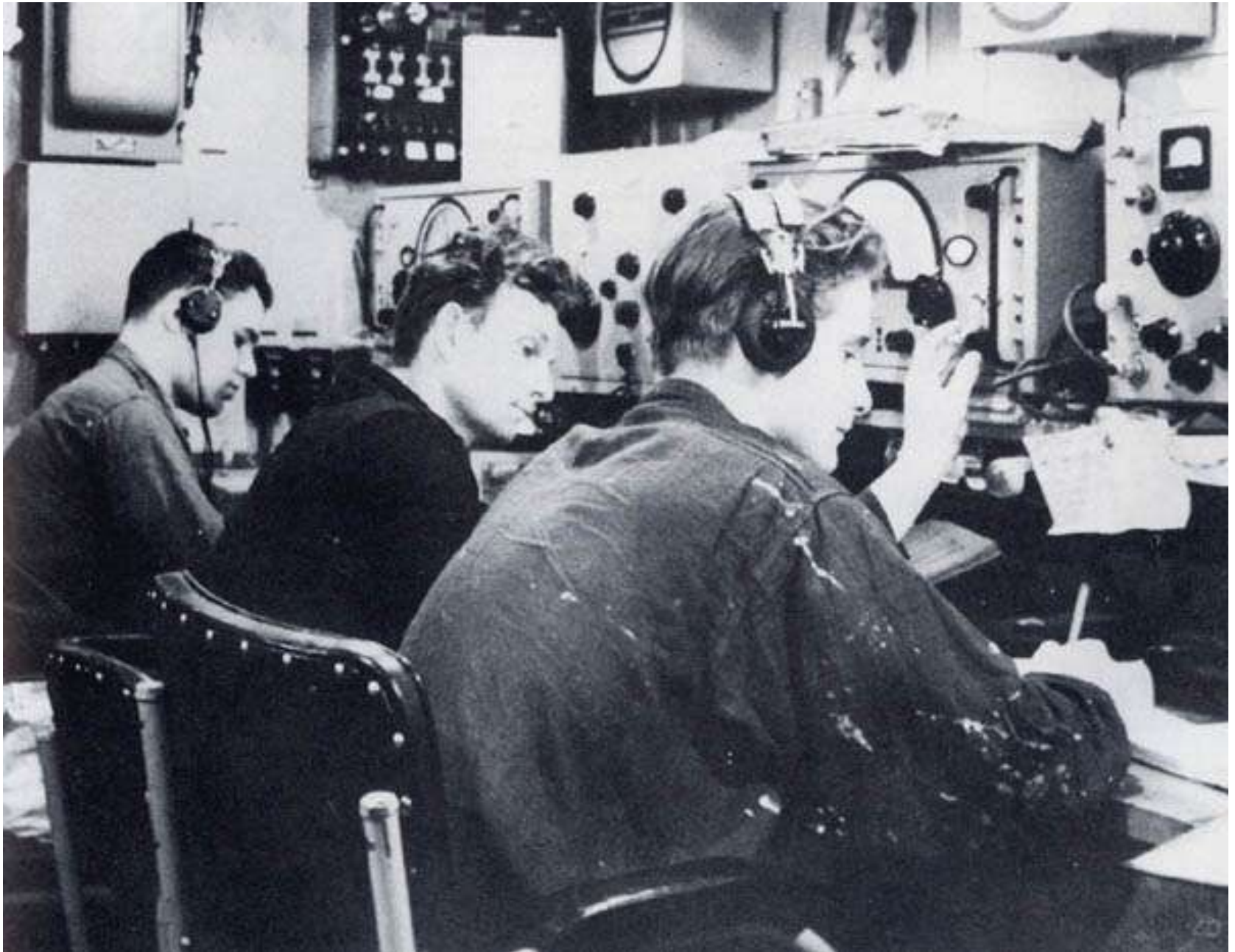
HARC

- Erik Hein VE1JEH Transported the brutes from Sorel, QC to Canard, NS!

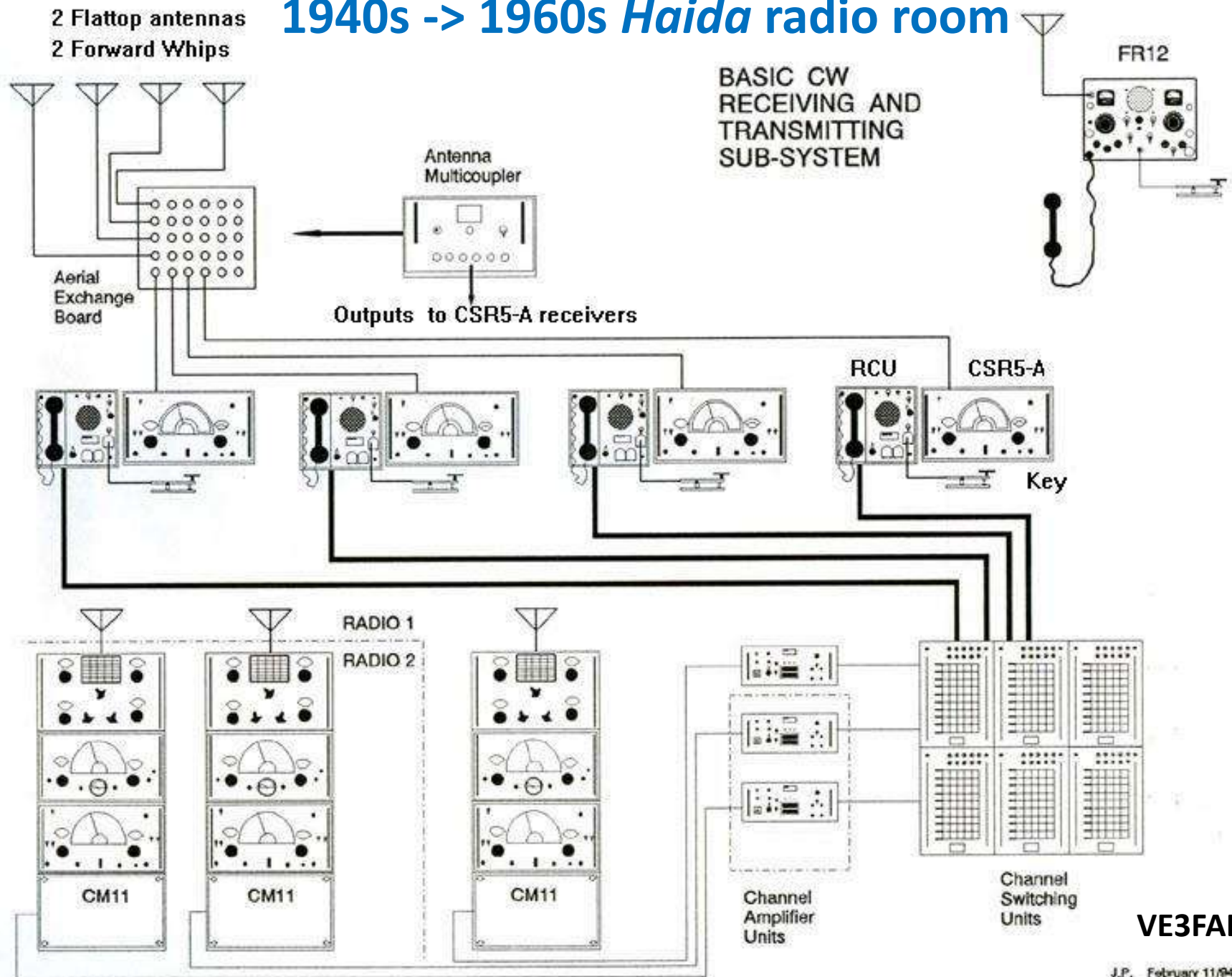
OTHER

- Tom Brent: CM-11 aficionado –575 kHz XTAL Filter
- Jerry Proc: VE3FAB -*HAIDA* Radio Room restorer/info + manual source
- Bill Perry: Mr. Amphenol connector
- Wayne Blenkhorn: VE1BAB: key, decals, advice (former CM-11 operator)
- Corey Mullins: MMA tech who built the Radio Office!

Listening in a ship's radio office with the CM-11's CSR-5 receiver



1940s -> 1960s *Haida* radio room



VE3FAB

Radio office #1 on *Haida*. Remote units control CM-11s



Radio Office #2 on *Haida*

You can tell these CM-11s are
mainly run in remote:

-no mill (typewriter)

-no key



CM-11 and second CSR-5 RX often used together



CM-11-->
TX-RX

Combined Morse and radio training on the CSR-5 in WW2

