

RADIO ROOM 1  
MAINTENANCE/RESTORATION  
LOG

1992 to 2004

Compiled by  
Jerry Proc VE3FAB

## **SEPTEMBER 26/92**

CM11 S/N 278 (chassis)

Symptom: Won't power up.

- 1) Checked tubes in transmitter. V1 is questionable. V2 is bad. V3 is marginal. Tested some 1619's from CM11 in Radio 2 and installed these into S/N 278.
- 2) Checked 5Y4 in L.T. supply. - Tests OK.
- 3) Checked gate switches in H.T. supply. Both switches defective. By-passed active gate switch. Now unit powers up OK.
- 4) Replaced faulty lamp holder behind front panel.

## **OCTOBER 3/92**

\* CSR5A S/N 494 (case serial)

\* Inserted missing tubes in receiver and attached temporary power supply. Receiver worked OK. Cleaned all switch contacts with tuner spray.

## **OCTOBER 9/92**

- \* Installed 21 MHz dipole antenna. Transmission line is about 100 ft long.
- \* Dipole is 22'4" in total length and is cut for the centre of the 21 MHz band.
- \* Built DC and AC cables for all CSR5 receivers.
- \* Reconditioned existing CSR5 speaker.
- \* Built a second CSR5 speaker from existing parts. Refinished it and mounted it.

\* Identified insulator for PORT FWD OUTER F TOP on port side of the bridge. Attached existing vertical wire antenna to this insulator. Now notice that the 10/40/80 trap antenna is severely detuned and is giving SWR readings of 3:1. Restored everything back to normal. Now SWR readings return to normal. Aerial exchange board needs to be inspected.

## **OCTOBER 17/92**

Received literature about 10/40/80 meter dipole from Telex/Hygain. Compared element lengths of existing antenna with factory lengths. All lengths are cut properly. 15 and 20 meter sections are missing on this antenna.

## **OCTOBER 24/92**

\* Inspected aerial exchange board. Found corroded PL259 connector (male) on FWD PORT OUTER F Top co-ax. This will have to be replaced in the future as the RF leakage is so bad that it trips the prerecorded tape message for the radio room. Maybe co-ax run is also bad.

- \* Checked Antenna Multicoupler S/N 317. Unit checks OK.
- \* Checked Antenna Multicoupler S/N 349.
- \* Reinstalled missing PL259 connector and reconnected RG114 co-ax.
- \* Checked all tubes - all test OK. Installed two missing 6AH6's.
- \* Refinished VP3 power supply S/N 762. Disabled DC circuitry by cutting wire to F1.

## **OCTOBER 31/92**

CM11 S/N 278

Symptom: No operation on R/T.

- 1) Checked microphone. No bias voltage present.
- 2) Found bent LOC pin on CM11 chassis connector SG3. Repaired pin. Now R/T works OK.

\*\*\* HMCS HAIDA CLOSSES FOR THE SEASON \*\*\*

## **NOVEMBER 9/92**

Completed construction of two replica speakers for CSR5's. To be installed during 1993 opening.

## **NOVEMBER 10, 1992**

CSR5A S/N 350 (Marconi chassis number)

Symptom: Missing Parts; non-operational

- 1) Installed missing AC (P1) & DC (P2) power connectors on rear of receiver.
- 2) Installed missing Line (J1) and Speaker (J2) jacks on chassis.
- 3) Replaced broken R58 (10K) on J2.
- 4) Installed missing C77 (.1 uf) on volume control.
- 5) Installed missing lamp holder over vernier control.
- 6) Replaced missing wire on the Band C capacitor assembly in the oscillator compartment.
- 7) Replaced broken R61 (1.5 k) on antenna input circuit.
- 8) Installed missing discharge gap for antenna input.
- 9) Found C72 (100 uf) with bent clamp. Upon closer examination it was found to have a missing ground wire. Replaced with a Sanyo 100uf @ 100V.
- 10) Repaired broken solder joint in mixer compartment. This was causing intermittent operation.
- 11) Installed better looking tone knob.
- 12) Replaced missing dial lamps. Used 1819's (28V) in "vernier" and "band" positions rather than #57 in order to extend bulb life.
- 13) Removed stopping pin for band selection knob. It was binding against the back of the knob.
- 14) Installed female PL259 co-ax connector for new antenna input.
- 15) Tested all tubes. Installed 6SK7's with best emission in descending magnitude starting from V1.
- 16) Sprayed all controls with tuner spray.

## **NOVEMBER 16/92**

CSR5A S/N 921116 (chassis, assigned)

Symptom: Missing Parts; non-operational

- 1) Replaced missing C78 (.1 uf).
- 2) Replaced Limiter Switch with proper "toggle" type.
- 3) Repaired broken solder joint in oscillator compartment. Joint located on S9-S7 wafer segment for Band A. Also notice a piggyback capacitor is missing where the solder joint was broken. Unable to identify capacitor. This may explain why Band A won't work.
- 4) Built a special power cable for this receiver.
- 5) Installed missing 6SK7 tubes and substituted 6SH7 for V9 BFO tube.
- 6) Installed missing lamps.
- 7) Replaced missing C84 (.004uf) capacitor for Tone Low position.
- 8) Replaced red RF and VOL knobs with black plastic units.
- 9) Assigned chassis serial number 921116 for maintenance purposes.
- 10) Could not locate a missing discharge gap.
- 11) Replaced some of the cord lacing on the wire harnesses.
- 12) Replaced missing P3 socket.
- 13) Lubricated all controls with tuner spray.
- 14) Tested all tubes and arranged so best 6SK7's are in most critical positions.

## **NOVEMBER 19/92**

VP3 Power Unit (S/N 921119 assigned)

Symptom: Totally deteriorated and inoperative.

- 1) Removed all components to bare metal and polished the copper cladding.
- 2) Found transformer T1 and choke L4 defective.
- 3) Rewired chassis using easy to find/economical components that would produce 250VDC @ 110 ma output; 12.5 VAC @ 3Amps

## **NOVEMBER 21/92**

Purchased 5 surplus crystals : one at 8155.714 kHz four at 6450 kHz

One of the 6450 crystals worked; one was successfully repaired. The 8155 was defective.

## **DECEMBER 7/92**

FR12 S/N 582 on case

Symptom: Condition unknown.

- 1) Notice #398 on chassis. Suspect this is the real serial number.
- 2) Notice that there is an undocumented remote control relay behind the co-ax connector. The relay coil is 6VDC and connects to the front panel connector labelled relay. When energized, one set of contacts shorts out the RF ammeter connections, while the other contacts switch the audio.
- 3) Refinished the case.
- 4) Fabricated lamp hood for P2 from metal tube shield. Installed #52 lamps.
- 5) Removed porcelain Johnson insulator from front panel and replaced with SO239 connector.
- 6) Repaired broken solder joint on R20 connecting to E1.
- 7) Attached temporary power. (12VDC to filaments, B+ of 250VDC with Dynamotor disabled from circuit). Could not get any audio. Repaired defective joint on grounded side of speaker.
- 8) Removed 250VDC power supply. Attached 180V "breadboard" power supply in order to test operation of standby mode. Receiver was dead. Discovered that someone mislabelled the polarity on the standby power leads. Terminated leads with spade lugs and colour coded. Receiver draws 32 ma when supply loads down to 155V. At 240V in, the receiver draws 25 ma.
- 9) Reconnected Dynamotor and applied normal 12VDC power. Seen smoke coming from unit and quickly powered down. Smoke was coming from RF choke L13. Choke is very risky to replace, so it was left alone. Discovered that someone had mislabelled the polarity of the main power leads ! Relabelled leads correctly and was able to get the unit to power up normally.
- 10) Notice reception is always better when my hand touched the bare wire between the RF ammeter and Tx/Rx relay. Discovered that the RF ammeter is defective. Bypassed the meter with copper bus wire. Called Sparton of Canada in London Ontario. They are no longer in the meter business. Unable to find exact replacement at Electronic Surplus Industries.
- 11) Installed 1.832 MHz crystal in position 3 and 3.690 MHz in position 4. Was able to get transmitter to illuminate a small dummy load. Notice that high frequency crystals do not work in positions 1 and 2. The FR12 on the Haida is not described as a variant in the documentation. The frequency coverage of this unit is also different than the documentation.

For the record, the unit on hand is a:

FR12 case serial 582, (chassis #398 ?)

Variant 85161PH according to case.

The frequency coverage as measured with an RF generator is:

LW - 268 kHz to 750 kHz

MW - 585 kHz to 1640 kHz

SW - 1560 kHz to 3500 kHz

- 12) Lubricated Dynamotor bearings.

13) Purchased a surplus handset and high impedance headphone for this unit. Need to locate a 4 pin connector for handset.

### **DECEMBER 9/92**

Constructed an 180VDC 70 ma power supply for use with the FR12 in standby mode. Assigned serial number 921209.

### **DECEMBER 10/92**

CSR5A S/N 921210 (chassis, assigned)

Symptom: Needs modification and inspection

- 1) Installed antenna co-axial 259 connector.
- 2) Fixed twisted wiring on Volume control. Lock nut was loose.
- 3) Lubricated all controls.
- 4) Arranged 6SK7 tubes so best emissions are in the front end.
- 5) Bottom cover plate over turret assembly is missing.
- 6) For historical reasons, recorded the following hand typed frequency tuning aid from the front panel:

R1(A)..3261....D..19..64.5

R1(B)..5172....C..12..11

R1(C)..5190....C..12..18

R1(E)..7985....B..05..59.8

### **DECEMBER 14/92**

CSR5A S/N 494 (serial believed to be Marconi original)

Status: Operational - perform preventative maintenance.

- 1) Replaced broken contact in crystal socket.
- 2) Removed externally mounted R61 resistor (100 ohm wirewound) and replaced with proper 100 ohm carbon resistor. Mounted where it was originally placed by Marconi.
- 3) Arranged 6SK7 tubes so best emissions are in the front end.
- 4) Sprayed all controls with tuner spray.

## **DECEMBER 15/92**

CSR5A S/N 466

Status: Operational - perform preventative maintenance.

- 1) Removed existing shock mounts from receiver case.
- 2) Chassis is missing both bottom covers.
- 3) Antenna coax connector is connected to ANT lug on barrier strip instead of Line lug. Moved wire to line lug.
- 4) Notice that R61 (100 ohm 1 watt) is burnt but still reading 100 ohms. Replaced R61.
- 5) Repaired non-soldered joint on volume control (R37/C77).
- 6) Replaced missing lamp holder over vernier indicator.
- 7) Notice type 6006 tube in V5 position. Unable to identify this type. It must be a 6SK7 substitute.
- 8) Tested all 6SK7's for emission. Did not shuffle tubes in this receiver.

## **DECEMBER 18/92**

Constructed replica VP3 Power unit. Assigned serial number 921218.

## **DECEMBER 22/92**

- 1) Refinished three CSR5 cases with paint matched to original Marconi colour. Used the following paint:

Base: CIL Exterior Gloss Super Alkyd  
Tint Name: Silver Lace  
Formula: 10GY49/081-7  
Retailer: Eatons (\$11.99)

- 2) Fabricated and painted shock mount assemblies for three CSR5 cases.

## **DECEMBER 23/92**

Teletype Model 15 S/N 236655

Task: Determine operating condition.

- 1) Removed CN logo from case and painted missing keycaps with green paint.
- 2) Glued loose noise baffling on left side of case. Baffling on top of case is deteriorated.
- 3) Applied 120VAC to BLK/GRN wires on power cable with largest plug. These connect to pins 21 and 22 of the terminal block shown below. Motor turns and TTY runs "open" which is normal when the current loop is absent.

4) Attached current loop to terminals 45 & 46. Hold relay works OK.

5) Unit is missing Send/Rec/Break assembly at left front and the platen knobs are missing too.

5) Did some research and find this unit operates at 45 baud. If it was made operational, there might not be anything running slow enough to run the Teletype !

### **DECEMBER 24/92**

Teletype Model 15 S/N 211379

Task: Evaluate unit

1) Unit is missing the following pieces:

Send/Rcv/Break assembly at left front.

Major assembly at left rear.

Paper roll bar.

Platen knobs and a few keycaps.

Front of cover.

2) Power cord is completely deteriorated. Unit could be suitable for display purposes.

3) Removed CN logo from front of case.

4) Removed existing viewing hood and replaced with clear plastic.

### **DECEMBER 31/92**

Rebuilt all of the defective crystals by removing the internal arts and installing HC6/U crystals of various frequencies into the empty cases.

### **JANUARY 1/93**

Completed an article on radio restoration aboard Haida for The Canadian Amateur magazine. This will be a follow up to the story which appeared in the Jan /92 issue.

### **JANUARY 2/93**

Constructed replica VP3 Power Unit. Assigned serial number 930102.

### **JANUARY 24/93**

Constructed replica WE11 Power Unit. Assigned serial number 930124.

## **JANUARY 31/93**

Heathkit HW 101 SSB Transceiver  
S/N 930131 (assigned)

Task: Repair all problems

Symptom # 1 - Audio "motorboats" when AF control is in most CW position.

Repair #1 - Found that C304 had been replaced with an outboard triple section 20/20/30 uf @ 20/350/350 VDC electrolytic capacitor. The screen (pin 3) of V14B audio output, had been attached to the 20uf/20VDC section of the capacitor thus damaging it. Reattached pin 3 to the 20uf @350VDC section and clipped off the pin for the damaged cap.

Symptom # 2 - Load control operates poorly.

Repair # 2 - Find pulley on shaft of load control coupled to pulley of the load capacitor with a very deteriorated square rubber band. Removed rubber band and replaced with dial cord assembly. Since the assembly manual was not available, installed a dial cord scheme that would work.

Symptom # 3 - Cooling fan on separate AC switch.

Repair # 3 - Rewired power supply so that the externally mounted cooling fan is controlled by the HW101 front panel AC switch. Removed DPDT switch from power supply chassis.

Symptom # 4 - Lacks full power output in SSB mode 14 MHz and up.

Repair # 4 - Studied symptom and concluded that a re-alignment might be in order. Performed receiver alignment OK but notice, that the "driver grid" and "driver plate" adjustments appear in the receiver section instead of the transmitter section. Not only that, but the procedure is incorrect. Tuned up driver grid and plate coils by placing the transmitter in tune mode. Adjusted coils so they produce a peak power reading. Noticed that the HW101 requires neutralization. Tried rotating the neutralizing capacitor in the output compartment but nothing happens. Did not pursue this adjustment. Did not perform carrier null or VFO adjustments at this time.

Symptom # 5 - Intermittent operation on 14 MHz.

Repair # 5 - Re-soldered all suspect joints on band switch Assembly that were tied to 14 MHz operation. Did not see fault reoccur after many hours of testing.

Symptom # 6 - Some components have abnormality.

Repair #6 -

C12 (20uf @350V) did not appear to be soldered to the board. Replaced with 22uf 450V unit. After examining the old cap, it was found to be OK. Left new cap in circuit.

R106 - This resistor is 20K instead of 22K. This is the screen dropping resistor for the 1st I.F. amp. Did not replace it as it is in series with the "Meter Zero" potentiometer.

C924 is the LOAD capacitor. It shorts when the load control is in the 3 o'clock position. Did not correct this problem as the control is never used in this position during normal operation. The short could be problematic when doing the neutralization check.

Replaced defective #47 meter lamp.

General Comment - Transceiver and power supply cases to be refinished in HMCS Haida compatible radio room colour.

### **FEBRUARY 1/93**

Refinished Mark XVI sound powered telephone. To be mounted in Radio 1 above wooden desk.

### **FEBRUARY 13/93**

Constructed handset for FR12. Purchased surplus Stromberg-Carlson unit. Re-engineered push-to-talk switch so that contacts are normally open instead of normally closed. Attached 4 conductor computer keyboard cable with Amphenol 91MC4 connector. To be tested on FR12.

### **FEBRUARY 18/93**

Refinished dual speaker panel for rack in Message Centre. Speakers are coupled via a 500 ohm audio transformer.

### **FEBRUARY 21/93**

- Installed black coiled cord on Marconi microphone for the HW101.
- Refurbished the 8 ohm HW101 speaker - installed knob, coiled cord and repainted.

### **FEBRUARY 28/93**

- Refinished the 4th CSR5 case.
- Refinished HW101 case.
- Finished building a crystal stowage rack for Radio 1.
- Acquired World Map from Ontario Science Centre. To be mounted in Radio 1.

### **MARCH 7/93**

HW101 S/N 930131

- Replaced worn out AF gain Control.

### **MARCH 13/93**

Built special test cable for CSR5. It has indicators and test jacks for 250 VDC and 12.6 VAC.

### **MARCH 21/93**

Started development on a document known as " Radio Systems Aboard HMCS Haida". Completion date is open.

\*\*\* 1993 SEASON OPENING \*\*\*

### **APRIL 3/93**

- Tested all CSR5's. S/N's 466, 494 and 921210 work OK. Serial 350 produces a bad hum in the speaker. Troubleshooting reveals one side of AC control wiring shorted to ground. Removed unit from ship. Fault cleared itself when wiring disturbed !

- Installed crystal storage rack.

- Connected power wiring to FR12 S/N 582. Installed 180 volt receiver standby power supply in desk. FR12 works OK on receive. Did not test transmit.

- Installed Mark XVI telephone in Radio 1 above desk.

### **APRIL 4/93**

- Constructed one 10" speaker for the CM11 in Radio 1.

### **APRIL 11/93**

- Constructed 3 port co-ax switch for Radio 1. This will allow up to 3 transmitters to be switched to one antenna.

### **APRIL 12/93**

- Refurbished receiver CRV-46044 (RAK5) S/N 112.
- Sprayed all controls and removed tarnish from all front panel decal plates. Coated plates with acrylic finish.
- Checked all tubes - test OK.

#### *RAK5 POWER CONNECTIONS*

- 1 Ground

2 6.3 Volts AC Centre tapped to ground.

3 N/C

4 N/C

5 90 VDC regulated (not essential)

6 180 VDC at 40 ma.

7 Audio Output to Speaker

8

### **APRIL 17/93**

- Installed antenna switching unit, transmitter switching unit, AC power strip and dummy load at the right side of the desk in Radio 1.

- Cleaned out the Message Centre in preparation of making it an exhibit area.

- CSR5A S/N 350. Tested unit on ship. Still hear a lot of hum. No time to troubleshoot.

### **APRIL 24/93**

- CSR5A S/N 921116 - Installed missing antenna discharge gap and then installed receiver in the rack in the Message Centre.

- Installed HW101 transmitter for the season.

- Installed co-ax between CM11 and transmitter switch box.

- Installed co-ax between FR12 and transmitter box.

- Mounted World Map in Radio 1.

- Re-organized storage of equipment in Coding Office.

- Connected Port Outer Vertical to antenna switch box.

### **MAY 1/93**

\* CSR5A S/N 350 - Installed missing connector on antenna co-ax. Got rid of hum on receiver by converting the VP3 power supply (S/N 921119) from a choke input filter to a capacitor input.

\* FR12 S/N 582

\* Checked 12 volt cable connection to Russell & Stoll connector. Polarity is correct as Dynamotor rotates in correct direction.

\* Re-configured crystal frequencies. Position 3 is now 3650 kHz while position 4 is 3800 kHz.

\* Retuned receiver but performance is disappointing.

\* Replaced defective R.F. Ammeter.

\* The battery pack for the FR12 has deteriorated and there is insufficient power to tune the transmitter.

\* Installed bookshelf in Radio 1.

\* Installed antenna discharge tube assembly for RAK5 receiver.

### **MAY 8/93**

- Teletype Model 15 S/N 236655

\* Stripped out two AC power cables and one cable terminated with a 6 pin Cinch Jones plug.

\* Connected 180 Volt power supply to TTY and eventually was able to get the unit to print something when a key is struck. Unfortunately, characters are being transposed.

- Measured SWR on 80-40-10 multiband dipole. On 40 meters, something has changed. The antenna is no longer narrow in resonance. The SWR is now 1:1.5 around 7345 kHz and nearly 1:1 at the bottom of 40 meters. The 80 and 10 metre segments are resonant at the very bottom of their respective bands. Suspect that a piece of bad co-ax between the antenna exchange board and the HW101 was responsible for the problem.

- The antenna and transmitter selector switches are introducing high SWR. De-installed both of them in order to analyze at home.

- Installed RAK5 S/N 112 in Message Centre. Attached breadboard power supply. Unit works fine.

### **MAY 15/93**

- Teletype 15 S/N 211379

Attached power cord to unit. It seems to print but there is an bad noise coming from the main shaft. Needs further investigation.

- Teletype 15 S/N 236655

Tried RY test. R's and Y's will print if the same key is struck successively. If struck alternately, then character transposition occurs and the pattern is not consistent. Most commonly, becomes Y becomes an E and R becomes a T. Tried to adjust the rangefinder. This did not change matters. Checked the current loop. Get either 20 or 60 ma at 190V from breadboard supply. Also notice bad sound coming from paper platen whenever a line feed is issued. Not able to determine cause.

- CM11 S/N 278

Attached 10" speaker to connecting posts. Changed audio output line from a 500 ohm jack to high impedance jack on CSR5.

### **JUNE 12/93**

- Installed an additional Mark XV sound powered telephone in Radio 1.

- Installed a Mark XV sound powered telephone in the Message Centre.

### **JUNE 15/93**

- Received shipment of RCU1's, CSU's and CAU's.

### **JUNE 17/93**

- Re-finished Antenna Multicoupler cabinet and CSR5 style cabinet for Radio 4.

### **JUNE 19/93**

- Constructed CRV20131X replica power supply for the RAK5 receiver. Assigned serial number 930619.

- CAU's, CSU's and RCU's installed in Radio 1. Connector for RCU handset is Amphenol 97-3106A-14S-5P.

### **JUNE 26/93**

- Developed short talk on Cryptography for Sea Cadets.

- Installed RAK5 power supply.

- Sorted all spare tubes into respective categories.
- Refinished 3 more voice operated telephones.

**JUNE 27/93**

- Acquired desktop RCK (CZC-46222) receiver S/N 2725 from Dennis Chappel, Guelph Ont. Unit was manufactured by E.H. Scott Ltd. And was accepted by the US Navy on 11/8/44. Reconditioned by RCA Victor in Montreal on Nov 8/60. Appears to have been used to monitor VHF aeronautical frequencies in the Quebec City area at some later point in its life. Frequency coverage 110 to 160 MHz, employing 4 pre-selected crystal controlled channels. Tested receiver with RF Generator. Unit operates properly on selected channels, however, there is nothing to receive ! RAK came equipped with crystals in X106 and X107 positions. There were 3 additional crystals in the auxiliary holder. Added an additional crystal to the pool. Left the following crystal configuration in place:

Position Frequency Socket

| Position | Frequency | Socket |
|----------|-----------|--------|
| 1        | 119.50    | X106   |
| 2        | 120.30    | X107   |
| 3        | 150.00    | X108   |
| 4        | 114.33    | X109   |

Spare crystals are for 116.49 and 117.20 MHz. By selecting Crystal 1 and tuning for 160 MHz, the unit will receive a taxi dispatcher. Crystal 3 receives National Pagette.

Crystal frequencies can be found with following formula:

$$F_c = \frac{F_r + 12 \text{ MHz}}{9}$$

Where:  $f_c$  is the crystal frequency  
 $f_r$  is the frequency to be received

Crystal specs:

Holders with 0.5 " pin spacing  
 Crystals with .486 " pin spacing

Crystals with .093 " pin diameter

If crystals between 13.555 and 19.111 MHz are available, the received frequency can be predicted with the following formula:

$$Fr = (Fc \times 9) - 12 \text{ MHz}$$

Removed manufacturers nameplate from case and affixed it to the chassis since unit is to be rack mounted.

### **JULY 3/93**

- AID microphone installed by Frank Moore.
- Installed RCK receiver into rack.

### **JULY 6/93**

- Acquired Model 15 teletype, Model 14 reperforator and TD Distributor from John Langtry VE3NEC, 46 Joycelyn Cres Georgetown. Positioned equipment in Message Centre.

### **AUGUST 14/93**

- Trimmed the port outer sloping wire antenna for 20 meter operation. SWR is very flat across the band.

### **AUGUST 21/93**

- Connected power and antenna to RCK receiver. Can barely hear the Paging Service around 150 MHz.

### **AUGUST 25/93**

## **CF3CGJ - SUMMARY OF OPERATIONS**

The special call sign of CF3CGJ was authorized for use by our amateur radio station during the period of August 23, 1993 to Sept 6, 1993 by the Department of Communications. During that period, the station was manned by the following operators:

| DATE       | WHO           | CALLSIGN |
|------------|---------------|----------|
| -----      |               |          |
| Wed Aug 25 | Doug Card     | VE3CKX   |
| Fri Aug 27 | Doug Card     | VE3CKX   |
|            | Steve Parsons | VE3SMP   |
| Sat Aug 28 | Jerry Proc    | VE3FAB   |
| Mon Aug 30 | Jerry Proc    | VE3FAB   |
|            | Al Cronin     | VE3RIH   |

Tom Godden VE3TWG

Wed Sept 1 Doug Card VE3CKX

Sat Sept 4 Jerry Proc VE3FAB  
Bernie Marchand VE3XMB

Total number of stations contacted = 320

Total number of Canadian stations contacted = 47

### GENERAL COMMENTS

From a view point of effort and organization, the special event station was a complete success. We were not able to contact as many stations as we could have due to the nasty atmospheric noise encountered between August September 30 and September 4.

As a result of the amount of contacts made, HMCS Haida has been given much exposure to many amateurs in the North East United States. Hopefully a certain percentage of these contacts will result in a visit to Ontario Place.

### SEPT 4/93

- Removed florescent light fixture on clerks desk and replaced it with an original fixture.

### SEPT 18/93

- Refinished voice powered telephone next to the Message Centre door on the Radio 1 side of the wall. This phone came from another position in the ship. Found the following markings on the brass plate:

TAS6  
A.C.R. 144 DirectG Gear & Inst Space  
147 F DirectG Gear & Inst Space

On the phone, there was a label with a ringing code:

S.C.R. .... 1 Ring  
Inst Space..... 2 Rings  
164 D.G.....3 Rings  
147 Space.....4 Rings

- Connected all telephones in Radio 1 to their respective circuits. Unable to communicate to any other phones on same party line. Telephone drawings do not agree with each other. There are five

phones shown in Radio 1, but only four are present. The drawings show one phone in Radio 4 but two were present.

### **OCT 2/93**

- Installed a voice powered telephone in the OPS Room near the RCU's. Unable to communicate with anything else .
- Connected Morse key cables to KEY jacks of the four RCU's mounted between the CSR5's. Still trying to find Morse keys.

### **OCT 9/93**

- Identified telephone wire run D10. According to documentation plate on Junction Box 2 cover, this cable run connects Radio 1 (Message Centre), Radio 2 and Radio 3. Drawings say otherwise. Tested Radio 1 to Radio 2 connection. Ringers work both ways. Radio 1 can talk to Radio 2 but unable to hear Radio 2.

Teletype 15 S/N 211379

- Tried to find out what is causing noise on main shaft. Removed bail assembly. Oiled all clutches. Reassembled bail. Noise is gone from main shaft. It worked for about 1 minute, then the keyboard gear seized up. Unit declared unserviceable.

Teletype 15 S/N 236655

- Oiled up unit and played with rangefinder. Unable to fix problem with R's and Y's not printing when struck alternately. Unit declared unserviceable.

Teletype 15 (donated by VE3NEC)

- Lubricated unit. Notice that the type carriage fails to return occasionally when a carriage return character is received. Tried rangefinder adjustment. Improved on, but did not completely cure the problem.

### **OCT 16/93**

- Was able to have a three way conversation between the phone over the desk in Radio 1, the phone in Radio 4 and the phone on the starboard side of the OPS room. (Wiring run D23). Not able to ring phone in Radio 1 from Radio 4 or OPS room, but it rings fine the other way. Suspect that a multi line phone operating on a single line might be the problem.

### **TELEPHONE CONNECTIONS**

D23 connects Radio 1 to Radio 4 to Ops Room to Bridge  
D10 connects Message Centre to Radio 3 to Radio 2.

### **OCT 23/93**

- Attached paper tape reader to Teletype 15. Was able to read tapes and print them. **FIRST TIME THAT TELETYPE SOUNDS ARE HEARD IN THIRTY YEARS !**
- Tested Model 14 tape punch. Mechanism advances tape and perforates sprocket holes, but bail does not print nor does tape punch work.
- Operated UHF (444 MHz) from Bridge with Doug Card. Made 18 contacts.

**\*\*\* HAIDA CLOSES FOR 1993 SEASON \*\*\***

### **OCT 25 /93**

- Received equipment donation of one J38 key from Murray Willer, VE3FRX, 557 Spadina Rd., Toronto, M5P 2W9

### **OCT 27/93**

- Received an equipment donation of 1 Teletype Distortion Test Set S/N 55603 from Joe Blanchette, VE3BAD, 2104 Kender Ave. Ottawa K1J 6J9.

### **NOV 9/93**

- Purchased a Flesher Model TU170 RTTY terminal unit from Brian Summers VE3JKZ, Ottawa. This unit will be installed on Haida to see if RTTY reception is practical.

### **NOV 11/93**

- Received the following equipment donation from Hazen Marr, VE3HAZ, 854 Marinet Cr., Pickering Ont, L1W 2M1 :

- 2 each Model 15 Teletypes
- 2 each Transmitter-Distributors
- 2 each Model 14 Reperforators
- 1 each Model ED51 Portable Teletype Tester
- 1 set assorted Teletype manuals and rolls of blank tape
- 1 set assorted period tubes

### **NOV 20/93**

- Constructed REC10-V Teletype 60 ma power source. S/N 931120

**NOV 22/93**

Model 14 Reperforator S/N 931122

- Installed stereo jack on signal cord.
- Lubricated and cleaned unit.
- Tested OK.

**NOV 26/93**

Model 15 Teletype S/N 931126

- Replaced AC power cord and signal cord.
- Performed minor lubrication on unit.

**NOV 27/93**

Model 14 Transmitter Distributor S/N 931127

- Unit has some undocumented wiring modifications.
- Installed AC power switch and stereo jack on signal cord.
- Lubricated and cleaned unit.

**NOV 28/93**

Model 15 Teletype S/N 931128

- Adjusted sticky dashpot by increasing tension on carriage pulley.
- Replaced AC power cord and signal cord.
- Performed minor lubrication on unit.

**NOV 28/93**

Model 14 Transmitter Distributor S/N M8087

- Unit has some undocumented wiring modifications.
- Replaced power cord and current loop cable.
- Installed AC power switch.
- Lubricated and cleaned unit.
- Test OK

**DEC 1/93**

Received a donation of a WT8 AMP #2 telegraph key from Keith Kennedy VE7KWK, 14995 88A Ave. Surrey B.C. V3R 6Y4

**JAN 17/94**

Constructed battery eliminator for the FR12. (Model BE-FR12 S/N 940117).

**JAN 31/94**

Developed frequency/dial reading graphs for the RAK5 receiver S/N 112. Used an RF generator as a signal input and plotted dial readings versus frequency. Data was processed via Lotus Print Graph.

**FEB 6/94**

Constructed audio oscillator Model OSC-1 S/N 940206 for the Morse key sounding system in Radio 1.

**FEB 7/94**

Received donation of one WT8 AMP #2 Morse key from Dan Bujas, 34 Lorne Ave., Grimbsy, Ont. L3M 2H7.

**FEB 16/94**

Received donation of one J38 key from Robert Dick, VE3BD, 23 Eldora Ave., North York Ont. M2M 1R3

**MAR 17/94**

Received three AN/SGC1 teletype sets (purchase) from David Morgan, WO4S, 117 West City Hall, Suite 701, Norfolk VA. 23510. Two units are useable, one is suitable as parts only.

Received one TDQ transmitter from Bob Wilson, K1GVA, 61 Warwick St. Portland Maine, 04102

**APR 6/94**

Received one donation of a TT23D/SG teletype distribution panel S/N 182 from CFB Esquimalt. Shipment was arranged by Darcy Bens, VE7GCK, 5944 Lakes Rd., Duncan B.C. V9L 3G1.

**APR 7/94**

Purchased one CRT/CPRC26 S/N 27277 transceiver from Fair Radio Sales, Lima Ohio. Arrived with antenna, less handset and crystals.

#### **APR 16/94**

Refinished TT/23 teletype panel and added filler plates to block unused cable clamp holes. Installed in Message Centre. Performed inventory with Carla Morse.

#### **APR 22/94**

Restored AN/SGC1A S/N 384. Installed "dummy" AC front panel receptacle. Refinished front panel lettering and adjusted mark/space frequencies using audio oscillator/oscilloscope method.

#### **APR 23/94**

- \* Installed AN/SGC1A in Message Centre.
- \* Installed Morse keys in Radio 1 and connected to OSC-1 audio oscillator.
- \* Installed lamp over clerk's desk.
- \* Installed battery eliminator power supply for FR12.
- \* Interconnected two TTY15's, one Model T-D and one Model 14 reperforator using REC10-V.

#### **APR 29/94**

- \* Completed wiring of TT23/SG panel.
- \* Installed a functionally equivalent rectifier for the REC10.  
Electronic Controls Model EC1001 S/N 427. Output is 120VDC @ 0.2 amps.
- \* Powered up TDQ transmitter. Used small lamp as a dummy load. Looks OK except for noisy fan.

#### **MAY 7/94**

- \* Repainted white marker lines on upper left most CSU.
- \* Installed Teletype loop for Flesher TU170. Using a CSR5, I was able to copy IK4ISY calling CQ on RTTY.
- \* Tested Mariner V108 marine radio telephone. Could not power up unit. Replaced defective fuse holder and missing polarity reversal protection diode. Could not get dial lamp to work. There is no voltage being applied to the leads. Otherwise, set works OK.

#### **MAY 13/94**

AN/SGC1A S/N 383

- \* Replaced missing V101 and V102 (12AU7's) and defective receive lamp.
- \* Replaced damaged meter.
- \* Installed missing K101 relay and made hold down clamps for K101,102 and the spare relay.

- \* Replaced defective current loop pot with a 'not so defective' 5 k pot. (Found original 3.5 k ohm pot had been replaced with a 5k ohm unit).
- \* Restored front panel markings.
- \* Unable to repair seized receive lamp lens.
- \* Could not locate suitable connector for front panel 115 VAC receptacle.

AN/SGC1A S/N 1461

- \* Unit is unserviceable due to the amount of missing parts.

#### **MAY 14/94**

- \* Installed a monitoring speaker for the AN/SGC1A.
- \* Installed Mariner V108 marine radiotelephone on clerk's desk. Unit draws 150 ma on receive and 1.0 amps on transmit each at 13.8 volts DC.
- \* Using a borrowed Yaesu FT220, and the TU170 unit, copied the Teleprinter bulletin from W1AW on 7.095 KHz at 1800 hrs. This is the first complete, off-the air, message copied via RTTY since de-commissioning.
- \* Tested SBE marine radiotelephone. Unit has a thermal fault. Works OK for an hour or so then quits - no volume, and channel changing function does not work.

#### **MAY 17/94**

Repaired Instructograph Morse trainer - ascension # 993.059.006.

- \* Fabricated missing contactor assembly and re-attached peeling case covering at right front corner.
- \* Camouflaged white paint drops on top cover.
- \* Someone has installed a wire wound pot which has no connection to anything.

#### **MAY 21/94**

- \* Connected UHF (440 MHz) hand held amateur transceiver to one of the UHF antennas. All of the major repeaters could be accessed.

#### **MAY 28/94**

- \* Added air core inductor to the forward port whip antenna. On-the-air testing indicates good performance with low SWR.
- \* Installed duplex receptacle behind rack in Message Centre.
- \* Installed duplex receptacle above KWR37 rack.
- \* Replaced telephone above clerk's desk with single line unit.
- \* Attached the Teletype Distortion Test set to the REC10V box.
- \* Used the CI3CGJ special call for the first time. Band conditions on 40 meters were extremely noisy. Had difficulty in maintaining "special call momentum" on 20 meters. 15 meters was dead.

## **JUNE 4/94**

Received donation - Marconi MSL5 S/N 472 from Mark Gibson, VE3MWH, 1496 Upper Sherman Ave., Hamilton, Ont. L8W 1C5

## **JUNE 5/94**

Used call sign CI3CGJ for the last time. Band conditions on 40 meters were very noisy during the two weeks the call was in force. Unable to get volunteer operators during this period.

## **JUNE 11/94**

Purchased vintage Remington typewriter for Radio 1 at a garage sale.

## **JULY 17/94**

MSL5 Receiver S/N 472

- Added power cable and strain relief clamp.
- Added binding posts for antenna (valve) and ground connections.
- Did not provision binding post for antenna (crystal).
- Refinished faded white markings on knobs where possible.
- Tested all tubes (4) ; all appear to be good.
- Tested crystal radio section of MSL5; works fine but performs poorly.
- Constructed power supply for MSL5 - Model MSL5BE; S/N 940710

## **AUG 13/94**

CM11 S/N 278

- Removed output standoff insulator and installed SO-239 connector.
  - Recorded crystal frequencies :
    - A - 3530 kHz
    - B - 3600 kHz
    - C - 7040 kHz
    - D - 7105 kHz
    - E - 7120 kHz
    - F - 7195 kHz

- The transmitter will not power up. To be repaired at a later date.

## **AUG 30/94**

Transceiver - Heathkit SB104A S/N 1505

Symptom - No output on transmit.

\* Tested unit. Cannot see fault. The SB104 illuminates a 100 watt light bulb to full brilliance on CW.

\* Notice that the displays indicates 34 MHz on the 14 MHz band. Found that pins A and C on the display board had never been soldered by the original builder. Pin X had a cold solder joint. Fault is fixed.

\* Repaired defective headphone jack.

\* Notice some of the push buttons are noisy when pushed. Sprayed with Tuner spray. Now 13.8 switch produces a steady reading.

\* Made up cable and connector assembly for temporary external S meter. (The internal S meter has an open coil).

\* Added plastic insulators to keep wiring the harness away from the Driver and Antenna jacks.

\* Added strain relief to speaker cable in power supply.

\* Adjusted power supply voltage so it reads 13.8 volts at accessory socket. It was reading 0.4 volts low.

\* Masked out VE2MF call sign on display.

\* The AGC switch detent was installed incorrectly and the switch has an extra position to the left of 'OFF'. Did not correct this at this time.

\* Did not check transmitter alignment since there is a dependency on using the internal meter.

### **SEPT 3/94**

CM11 S/N 278

Symptom - Transmitter doesn't complete power up cycle.

\* Swapped the oscillator and modulator tube. Now unit powers up OK. Had Doug Card use R/T mode while monitoring signal from Radio 2. The signal sounded clean. Made first ever R/T contact on 7290 KHz with K1HXA using this CM11, however, he reported distorted audio with feedback. Need to do further tests.

\* Received a donation of a frequency measuring meter, model BC221AK S/N 1860 from Tom Brent, Box 150, Dewdney B.C. V0M 1H0 along with a TDQ and TBS manual.

**SEPT 24/94**

\* Measured distance between RCK receiver and first teardrop on foremast - 86 feet without slack. Lower yardarm is approx 6" in diameter. Support pipes for this yardarm are 2" in diameter.

**OCT 15/94**

\* Connected CM11 in Radio 1 to CAU #2. RCU #13 was connected to CSU's using cable RCC65. When the RCU power-on switch is enabled, it blows the 12 VDC fuse in the CAU. Found that cable RCC65 was connected as a mirror image at the CSU end (i.e. instead of a 1 to 12 connection, it was 12 to 1). Now able to run the CM11 in CW and AM mode from the RCU. Shown below is the wiring diagram.

\* Operating tips for CM11 remote control operation:

The normal position for the CM11 mode switch should be the OFF/REMOTE position. When the CAU is powered up, it will automatically power up the CM11 and vice versa. If the mode switch is left in the CW, MCW, or phone positions, the CAU will power up the CM11, but will not power it down.

The default mode for the CM11 is phone when the mode switch is left in the OFF/REMOTE position, however, the mode can be changed to CW or MCW by rotating the mode switch. If left in CW or MCW, the CM11 will not power down when the CAU is powered down. When powered up, the CM11 output level will be set to either high or low depending upon the position of the power level switch. The CM11 is keyed from the RCU, the CM11 provides full CW break-in operation. In phone mode, the local handset may be used anytime to make a transmission.

| CM11<br>Signal | CM11<br>SC7 | CAU #2<br>Terminal Board     |
|----------------|-------------|------------------------------|
| Gnd            | A _____     | 24 Gnd                       |
|                |             | _____ 25 Audio O/P to Xmtr   |
|                |             | _____ 14 Audio I/P from Rcvr |
| + 24VDC        | B _____     | 19 } Stby/Ready/start        |
| Start          | C _____     | 20 }                         |
| Rcvr audio     | D _____     | 30 Audio I/P from Rcvr       |
| Key I/P        | E _____     | 17 Keying Control            |
| Key I/P        | F _____     | 18 Keying Control            |
| Remote Mike    | G _____     | 26 Audio O/P to Xmtr         |

**OCT 22/94**

\* Connected TDQ transmitter and RCK receiver to CAU #1. Able to control and modulate the TDQ from RCU #13. Shown below is the correct wiring diagram. Nothing unusual was noted in remote operation of the TDQ/RCK from the CAU.

**CAUTION**

The wiring diagram for the TDQ/CAU interconnect shown in BRCN 2613(68) is not correct for the version of the TDQ fitted on Haida. See below

| TDQ Signal  | TDQ TB-A                  | CAU #1 Terminal Board       |
|-------------|---------------------------|-----------------------------|
| Start }     | 1 _____                   | 19 }Stby                    |
| Stop }      | 2 _____                   | 20 }Ready                   |
| Circuits }  | 3 _____                   | 21 }Start                   |
| Key I/P     | 5 _____                   | 17 Keying Control           |
| Key I/P     | 6 _____                   | 18 Keying Control           |
| -12 VDC     | 7 _____                   | 28 -12V from Rcvr           |
| +12 VDC     | 8 _____                   | 24 Gnd                      |
| Audio I/P   | 9 _____ Blk/Blk tracer    | 25 Audio to Xmtr            |
| Audio I/P   | 10 _____ Clr/Blk tracer   | 26 Audio to Xmtr            |
| Control     | 11 _____                  | 27 VHF Control              |
| Rcvr Audio1 | 14 _____ Clear/Wht tracer | 14 Audio to Rcvr            |
| Rcvr Audio  | 13 _____ Blk /Wht tracer  | 30 Audio to Rcvr            |
|             |                           | _____ To RCK Audio          |
|             |                           | _____ To RCK Audio          |
| <b>TB-A</b> |                           |                             |
| AC Mains    | 19                        | AC safety ground to Chassis |
| AC Mains    | 20                        |                             |

Comment from Jim Brewer, April 17/13: Its wired correctly but terminals 5-6 under normal operation do not have any voltage. With the CAU contact closed, it operates a relay in the TDQ that puts it into transmit mode. When you switch from Local to Remote on the TDQ it goes in to transmit mode.

Drawing change .Just one. On the Haida TDQ drawing it show the receiver power comes from terminals 15-16. It also shows jumpers from 15 to 17 and 16 to 18. Take the jumpers out. On the TDQ drawing 17-18 are receiver cut off. Its a relay with NC contacts. So when you turn on the TX it shorts the fuses and of course the receiver never gets a chance to light up. The relay in the CAU was cooked so bad that the plastic contact cap had started to melt. The relay I took out of the tube type CAU had a good coil but the contact was dirty and would not close properly. A little clean

with 800 emery fixed that. I check one of the relays in a TED CAU. It also was burned out.

When you use the key on the TDQ it puts an audio tone on the speaker so you can hear what you are doing.

JB

#### CAU ANOMALIES

\* Note - The solid state version of the CAU's have been modified to incorporate voice compression.

- It is not possible to modulate the transmitter when the hand set is plugged into the CAU.

\* Received a donation of a URR504 receiver S/N 431, XFK frequency shift keyer S/N 893 and SCR522-C S/N D2180 from Jim Fleming VE3PBJ, RR #1 , Douro Ont., K0L 1S0

The following is the color coding scheme for the RCU and CSU wiring.

#### SINGLE CHANNEL RCU CONNECTIONS

| RCU- E101 | Tracer Colour | Wire Colour | Ground Req'd |
|-----------|---------------|-------------|--------------|
| 1         | White         | Black       | Yes          |
| 2         | Red           | Black       |              |
| 3         | Red           | Clear       |              |
| 4         | Green         | Black       |              |
| 5         | Green         | Clear       |              |
| 6         | Orange        | Black       |              |
| 7         | N/C           |             |              |
| 8         | Orange        | Clear       | Yes          |
| 9         | Black         | Black       |              |
| 10        | Black         | Clear       |              |
| 11        | Blue          | Black       |              |
| 12        | White         | Clear       |              |

#### OCT 29/94

\* Wired up RCU #12, cable R-RC64 to CSU.

\* Made first ever AM contact with WA4WRJ using the CM11 and the RCU.

\* Bulbs for remote control system are type 1139B but these are obsolete (12 V @.1 amp). Substitute is #1815 or #1488.

\* Haida closes for 1994 season.

**CAUTION**

The wiring diagram for the TED3/URR35 interconnect shown in BRCN 2613(68) is not correct.

| <b>TED3 SIGNAL</b> | <b>TED3 T.B. E101</b>  | <b>CAU #3 T.B.</b>              |
|--------------------|------------------------|---------------------------------|
| -12 VDC ----- 7    | 1 -----                | 19 ) Start/Stop                 |
|                    | 2 -----                | 20 ) Standby                    |
|                    | 3 -----                | 21 )                            |
|                    | 5 -----                | 17 Keying Control               |
|                    | 6 -----                | 18 Keying Control               |
|                    | 7 -----                | 28 -12 VDC from Rcvr            |
|                    | 8 -----                | +----- 23 Rx Mute or Tx Control |
|                    |                        | +----- 24 GND                   |
|                    | 9 -----                | 25 Audio Out to Rcvr            |
|                    | <b>TED 3 T.B. E102</b> | <b>CAU #3 T.B.</b>              |
| SW Gnd             | 10 -----               | 26 Audio Output to Xmtr         |
|                    | 11 -----               | 22 RX Muting or TX Ctl          |
|                    | 12 -----               | 3 Green Light Return            |
|                    | 20 -----               | 14 Audio I/P from Rcvr          |
|                    | 19 -----               | 30 Audio I/P from Rcvr          |
|                    | 17 )                   | To AC Mains                     |
|                    | 18 )                   | To AC Mains                     |

**DEC 9/94**

URR35 crystal formulae

To calculate crystal frequency:

$$f_c = f_r + 18.6 \quad (\text{in MHz})$$

To calculate received frequency:

$$fr = 12fc - 18.6 \quad (\text{in MHz})$$

TED3 (URT502) crystal formula

$$ft = fc \times 12 \quad (\text{in MHz})$$

where  $fc$  = crystal frequency

$fr$  = received frequency

$ft$  = transmitting frequency

Have two CR24U crystals: 26.608 and 29.833

**DEC 24/94**

- Completed repairs to TED3 terminal box. Replaced defective TypeN bulkhead connector and fabricated plastic cover plate. Added five BX clamps.

**DEC 26/94**

- Built a brand new, near-replica TED3 terminal box with five BX clamps. Did not include line filter as this item was not available in the 'junk box'.

Here are the 'hardwired' connections in the TT23-SG Teletype distribution panel.

| CHANNEL # | LOOP JACK | SET JACK  | CONNECTS TO   |
|-----------|-----------|-----------|---|
| 1         | 11- & 12+ |           | Teletype Plug Box To<br>107 Frequency Shift Conv        |
|           |           | 13- & 14+ |   |
| 2         | 21- & 22+ |           | Teletype Plug Box To<br>AN/SGC1A                        |
|           |           | 23- & 24+ |   |
| 3         | 31- & 32+ |           | N/C<br>Model 14 Reperforator                            |
|           |           | 33- & 34+ |   |
| 4         | 41- & 42+ |           | 107 Frequency Shift Keyer<br>To Transmitter-Distributor |
|           |           | 43- & 44+ |   |
| 5         | N/C       | N/C       | N/C   |
| 6         |           |           | 67- & 69+ Connect To<br>REC10 Loop Supply               |

There are no connections to any of the MISC jacks.

## CONCLUSIONS BASED ON ABOVE CONNECTIONS

### HF AND LF RATT RECEIVE

The input of the 107 FS converter unit was switchable between the CSR5 (HF input) and the RAK5 (LF input). In addition, the 107 could optionally receive input from RCU #9 if cable R-RTT7 was plugged into the 'phones' jack. If this was done, it precluded the use of UHF RATT. (See UHF RATT section).

The output of the 107 was hardwired to a teletype plug box which would have been patched to a KWR37 crypto receiver. The KWR37 output would drive the Model 15 Teleprinter exclusively on Channel 1 of the TT23-SG teletype panel.

### UHF RATT

Normally, the AN/SGC1 terminal unit was used for UHF RATT. The receive input of the SCG1A was normally connected to the Phones Jack of RCU #9 via cable R-RTT19. RCU#9 would normally be switched to one of the UHF circuits.

The teletype loop of the SGC1A was hardwired to a teletype plug box which would have been patched to a KWR37 crypto receiver. The KWR37 output would drive the Model 15 Teleprinter exclusively on Channel 2 of the TT23-SG teletype panel.

For transmitting, the CONTROL lines and TRANSMIT of the SGC1A were hardwired to terminals 8,9,10, and 11 of RCU#9. This arrangement made the SGC1A look like a microphone with a push-to-talk switch. When it came time to transmit, the operator would hit the space bar on the Teletype. The SGC1A would interpret this character and close the contacts on the RCU CONTROL line and place the UHF transmitter on the air. Subsequent characters would tone modulate the SGC1A and the audio output would appear at the TRANSMIT connector.

### REPERFORATOR

The Model 14 reperforator was a standalone unit and only required a current loop source for operation.

### HF RATT TRANSMIT

The Transmitter-Distributor would read paper tapes, and the output was attached to the Model 107 Frequency shift exciter in Radio 2. This would key the PV500 in the HF bands. It is not known if there was any LF RATT.

**JAN 4/95**

Received B28 receiver manual donation from: RJ Henville, G3TPH, 67 Salisbury Rd., Blandford, Dorset, DT11 7LW, England

### **JAN 13/95**

Constructed internal power supply for BC221 frequency meter S/N 1860; labelled power supply as Model BC221-PS, S/N 950113.

### **MAR 3/95**

Received one CPRC26 S/N 27291 donation c/w handset, antenna and handbook from: Don Armstrong, VE3DBA, 28 O'Neil St., Chatham Ont. N7M 3A3.

Crystal lineup : Ch 1 - 45.7 MHz    Ch 4 - 46.5 MHz  
                  Ch 2 - 45.9 MHz    Ch 5 - 46.7 MHz  
                  Ch 3 - 46.1 MHz    Ch 6 - Empty

### **MAR 24/95**

Received one AN/UPA24A Video Controller S/N 459 donation from Tom Bryan, 1013 Rosemere Ave., Silver Spring MD. 20904. Added 6.3V 1 amp power transformer to make the front panel lights illuminate.

SB104A S/N 1505                    Symptom: S Meter defective.

Tried to fix old S meter. Coil is open. A replacement S meter from Heath would cost \$31 to import. Purchased Japanese 100 micro amp movement for \$3.95 and retrofitted the old scale to the new meter. The angular position of the needle doesn't quite match up with the scale but it's close enough.

Purchased marine style clock from Electronic Surplus Industries for \$25. The mechanics were replaced with a quartz movement which works in itself, but doesn't move the hands of the clock. Clock is tagged with Canadian Forces part no. 6646-21-558-0013; District #AE0133. On the back of the unit someone has scrawled 6H #34180. Installed in the Message Centre.

### **APR 8 /95**

- Wired up RCU #11 in Radio 1.

### **APR 10/95**

Received one headphone donation from : Gerry Sherman, VE3KDS, Suite 1403, 33 King St. Weston M9N 3R7.

### **APR 15/95**

E886 transmission line tuner replica donated by Jerry Proc. Installed in Radio 2.

- Wired up RCU #10 in Radio 1.

**APR 19/95**

SB104A S/N 1505

Found CW level control operating erratically. Applied tuner spray. Now power level is full and unadjustable. Discovered open connection on pot. Since this was a dual assembly port on a common shaft, a replacement part would be difficult to find. Installed a separate CW level control internally and pre-adjusted it for full output.

**APR 22/95**

Wired up RCU #9 in Message Centre.

**APR 29/95**

Wired up TED #7 to remote control system.

**MAY 6/95**

- Connected AN/SCG1A to RCU9.

- Completed wiring and testing of TED7. Note, that when P512 is moved from the HF to VHF socket, it precludes the use of CW. This is only valid for the solid state version of the CAU.

**MAY 20/95**

- Completed the wiring of TED #5. Works properly into dummy load.

- Discovered a fundamental difference between the tube and solid state versions of the CAU. The tube version was designed to handle a mixture of CW and phone in the HF and VHF bands. The solid state version, when used with TED3's, only permits CW on HF and phone on VHF.

- Found out that the TDQ is being keyed with resultant constant carrier when operating in remote control. No time to troubleshoot.

- Rewired the T-D, the AN/SGC1A and one teletype so they use the original wiring. Retired the REC10-V power supply.

- Received a donation of a vintage tube tester from Jim Brewer. Stark Model #9-11 S/N 4-4648. Since it can operate on 25 cycle power it must be older than 1950 vintage.

For the record, the connectors which attach to the URR35 chassis are as follows:

AUDIO 4 pin female 3106 14S 2S  
POWER 3 pin female 3106A 14S 7S

### **MAY 30/95**

SB104A S/N 1505

Symptom - High noise level on all bands only when used with the 80/40/10 meter dipole on Haida. Works normally if antenna is connected to Rx input and used in separate mode. COMMON mode works fine at home.

Resolderd many connections on ALC/filter board. Replaced RCA type ANT jack with BNC type. Replaced OUT coax cable between ALC/filter card and ANT common connector. Needs more testing. Also repaired frayed wiring on microphone connector. It was causing the xcvr to turn on when the cord was moved.

### **JUNE 3/95**

- Wired up TU170 terminal controller and DXD teletype tester to TT23 teletype distribution panel.

### **JUNE 17/95**

- Completed wiring and testing of TED#6. All gear in Radio 1 is now functional.

### **JUNE 24/95**

- Mounted three 4 channel RCU's on the bridge. In the process discovered that the navy removed the audio transformers from the batch of four channel RCU's shipped to Haida.

- Installed marine band transceiver under CM11 and attached an audio feed to the CAU connecting to TED5.

- Installed VE0NV QSL card on ducting.

### **JULY 5/95**

Acquired one crystal set (dated 6-58) for the URR35 receiver from Dale Richardson, AA5XE, 10320 Rushing Rd, El Paso Texas, 79924-2623 Paid \$55 US which worked out to around \$86 by the time it was delivered to Toronto.

### **JULY 20/95**

SB104 S/N 1505

- Did visual inspection of HP1144 power supply. Found and repaired broken solder joints on bridge rectifier positive and one of the pass transistors. Installed EMI filter on AC mains and replaced deteriorating power cord. Updated HP1144 manual with change.  
Did further troubleshooting on noise problem. Discovered that COMMON mode works normally if the SB104 is connected to the Antenna multicoupler. All antennas overload the receiver front end except the 15 meter dipole.

- Completed labelling of CSU's.

### **AUG 24/95**

- Purchased SCR522 antenna cable from Henry Engstrom of Santa Clara, CA.

### **SEPT 1/95**

- Received a Marconi B28 receiver donation from Bill Legg at HMS Collingwood Naval Museum, Fareham, Hampshire, PO141AS, England.

### **SEPT 16/95**

Recorded all of the RCN tags removed from various pieces of equipment.

| Model   | Description                    | Serial | Date      |
|---------|--------------------------------|--------|-----------|
| CM11    | Xmtr/rcvr<br>(from HMCS Queen) | ?      |           |
| RCU1    | RCU                            | ?      | Aug 11/54 |
| RCU1    | RCU                            | 465    | Aug 13/54 |
| RCU1    | RCU                            | 708    | Sep 9/54  |
| URR35A  | Receiver<br>(from Restigouche) | 361    | Jan 21/77 |
| URR35A  | Receiver                       | 353    | Mar 28/89 |
| URA 501 | CAU                            | 100    | Apr 24/80 |
| URA 501 | CAU                            | 850386 | Mar 12/87 |
| URA 501 | CAU                            | 850388 | Mar 18/87 |
| URA 501 | CAU                            | 850430 | Jun 16/87 |
| URA 501 | CAU                            | 850391 | Mar 26/87 |
| URA 501 | CAU                            | 850385 | Mar 12/87 |
| URA 501 | CAU                            | 850363 | Jan 23/87 |
| URA 501 | CAU                            | 850362 | Jan 23/87 |

URA 501 CAU 850383 Mar 06/87

URT 502 (TED3) Transmitter 1275 May 1/85

URT 502 (TED3) Transmitter CN456 Jun 23/88

**OCT 5/95**

-Received one box of CM11 crystals (119) and one box (629) of URR35/TED crystals from HMCS York.

-Received one set RCK crystals from Dexter Francis of Colorado Springs CO.

**OCT 21/95**

- SB104 is now working. Requires the use of an antenna tuner to block out noise induced in the antenna.

- Cable splicing of all CSU's completed by Jim Brewer.

\*\*\*\*\* 1995 SEASON CLOSE \*\*\*\*\*

**DEC 3/95**

TE236 Receiver S/N 303

- Checked all tubes; test OK.

- Removed the lamp socket installed in place of the OSC test assembly. Since the previous owner discarded the shaft and knob, I installed a dummy switch to fill up the vacant hole.

- Constructed power and antenna cable.

- Replaced R101 (560 ohm). Was slightly out of spec.

- Replaced missing audio wires between the phone jack and terminals 7 & 8 of the terminal strip.

Power Cable connections:

| TE236 TERM STRIP             | SIGNAL    | COLOUR CODE             | TO PWR SUPPLY P306 |
|------------------------------|-----------|-------------------------|--------------------|
| 1                            | Ground    | Blk & Wht/Blk & Wht/Blk | 1                  |
| 6                            | B +       | Red & Red/Wht           | 6                  |
| 2                            | Filaments | Grn & Grn/Wht           | 2                  |
| 3                            | Filaments | Org & Org/Wht           | 3                  |
| 7                            | Speaker   | Blu & Blu/Wht           | 4                  |
| 8                            | Speaker   | Wht & Blu/Wht           | 5                  |
| (Conductors are in parallel) |           |                         |                    |

The conductors in the cable have been wired in parallel.

#### **DEC 4/95**

- Built a power supply for TE236 S/N 303.
- Acquired PE98-E dynamotor (power supply) S/N 3469 for SCR 522 receiver/transmitter from: Frank Deluca, 135 Gibson St., Parry Sound Ont; P2A 1X8. Cost \$35

#### **DEC 28/95**

- Acquired IE-36 Test Equipment Set for the SCR522 receiver transmitter. Circa - Feb 10, 1944. Received from: Terry O'Laughlin, 514 Elmside Blvd. Madison WI,53704. Cost \$27.43 . Contains following components: CH-234 Chest; Control unit BC-1303; Phantom Antenna A-29; Cord CD-1169; Cord CD-1170; Lamp Extractor; Instruction book IE36. Missing was the type 471 spanner wrench.

Also received the following:

- Revision to IE36 Rest Equipment Book dated July 13,1944.
- SCR522 Training Projects Book; dated January 1945. Truax Field. Madison Wisconsin.

#### **JAN 6/96**

- Acquired a Receiver Switching Unit (RSU) S/N 025 from: Electronic Surplus Industries, 1191 Lawrence W., Toronto; Cost was \$25 plus 15% taxes. The RSU was part of the radio remote control system but Haida was not fitted with this unit.
- Also acquired a missing handset for one CPRC26 walkie-talkie from Electronic Surplus Industries (\$10 plus taxes).

#### **FEB 1/96**

- Received a donation of two BC-631 junction boxes and two PL170 connectors for the SCR 522 set. Donated by: Michael Hanz, 1539 Kingstream Circle, Heradon VA, 22070

#### **MAR 4/96**

- Built cable for SCR522 (SCR rack 420 to JB29-801).

JB29        SCR522

1 ----- 1    GND (Used drain wire of shielded cables)  
2 ----- 2    + Low Voltage

3 <----- 3 Audio Output  
 4 ----- 4 'A' Channel switch  
 5 ----- 5 'B' Channel switch  
 6 -----> 6} Pilot Microphone (shielded pair) Red  
 7 -----> 7} Pilot Microphone (shielded pair) Blk  
 8 ----- 8 'C' Channel switch  
 9 ----- 9 'D' Channel switch  
 10 -----> 10} Crew Microphone (shielded pair) Grn  
 11 -----> 11} Crew Microphone (shielded pair) Wht  
 12 ----- 12 Contactor  
 13 ----- 13 + Low Voltage  
 14 ----- 14 Switched Return for motor  
 15 ----- 15 Transmit  
 16 ----- 16 Channel selector common  
 17 ----- 17 Transmit lamp on  
 18 -----> 18

\*\*\*\*\* 1996 SEASON OPENING \*\*\*\*\*

#### **APR 8/96**

Constructed coax reducer box for CM11. Reduces UG154/U (Amphenol 91836) to SO239.

#### **APR 9/96**

Acquired Northern Radio Model 107 Frequency Shift Converter S/N 27 from: Don Smith, 3400 Midland Ave., Unit 10 , Scarborough Ont. M1V 4V6. Paid \$40

#### **APR 16/96**

Frequency Shift Converter Model 107 S/N 27

- Replaced defective 100000 uuf Micamold capacitors across pins 3 and 8 on sockets for V16 and V17.
- Replaced defective polarity reverse switch (DPDT) and defective Slow/Key/Fast (SPDT) on rear chassis apron.
- Replaced missing horizontal and vertical centering knobs.
- Unit blew the line fuse on power up. Discover leaky capacitor C19. This is a 4 uf, 600v oil filled, non-polarized capacitor originally made by Capacitrons Inc of Chicago. p/n 481080-10. Replaced with outboard capacitor assembly. Wired two 10 uf 450 volt electrolytic caps in series to give 5 uf @900 volts. Added 100 kohm equalizing resistor to each cap. Also replaced shorted 5W3 rectifier (V8) with 5Y3 type.
- Replaced defective two 2000 ohm resistor connecting to pin 3 of V16 and V17.
- Added plastic guard to output terminals.
  - Replaced V2 (6SN7) with 6SL7.

This diagram shows the tube layout (approximately).

TOP VIEW

| CHANNEL 2 |            | CHANNEL 1  |           |
|-----------|------------|------------|-----------|
|           | V2 - 6SL7  | V1 - 6SL7  |           |
|           | V3 - 6SL7  | V5 - 6SL7  |           |
|           | V19 - 5W4  | V8 - 5W4   |           |
|           | V12 - 6H6  |            |           |
|           | V14 - 6SL7 | V15 - 6SL7 | V9 - 5W4  |
| V4 - 6H6  | V10 - 6H6  |            | V17- 6L6  |
| V6 - 6H6  | V1 - 6H6   |            | V16 - 6L6 |
| V18 - 5W4 |            |            |           |

- Replaced open 15 Kohm resistor connecting to pin 1 of V3.
- Replaced open 15 Kohm resistor connecting to pin 6 of V2.
- Applied bathtub sealer to bottom of all five of the 4 uf 600V filter caps in order to arrest oil seepage.
- Constructed missing bottom cover.
- Installed U ground line cord.
- Replaced 2AP1 CRT. The original tube was very dim.

**APR 24/96**

Received book donation from: Bob Fugard VE3DUF, 138 Hampton Heath Rd., Burlington Ont., L7L 4N9. Received:

Naval Electrical Pocket Book BR157 (53) (996.012.001)  
Radio Fundamentals - RCN BRCN 5422

**MAY 4/96**

- Installed rear hold down bracket for TDQ.
- Installed FSC107 in Message Centre. Able to copy transmission from W1AW

**MAY 11/96**

Received equipment donation from Tom Brent, P.O. Box 150, Dewdney B.C. V0M 1H0

RA62 Rectifier S/N 142 (120 VAC power supply for SCR522)

**JUN 1/96**

- Affixed 'shorted' phone plug next to RCU #9. This will be used to turn on the PV500 during RATT transmission by simply inserting it in the key jack. Not sure if this is the method used when the ship was in service, but it will certainly accomplish the desired results.

- Repaired broken table in Coding office.

## **JUN 8/96**

RA62C Rectifier S/N 142 - Rebuild details.

- Found original selenium bridge rectifier missing and replaced with a stud diode bridge (1N2156) which was left floating above the chassis. Constructed a bracket and mounted the diode assembly under the chassis.
- Rewired unit. In the process, all of the original cable lacing had to be removed and new lacing installed.
- C103 and C104 (6000 uf @40VDC) were found to be leaky. Leakage current was 15 to 20 ma. Removed C103 and replaced with 12,000 uf 40VDC capacitor of equivalent dimensions. Left C104 out of the circuit.
- Repaired three broken fuse holder clips on chassis fuse box.
- Replaced original 2 pole Hubble twist lock chassis power connector with male 'U' ground type. Mounted original connector under the chassis in case this mod needs to be restored.
- Repositioned 16uf 'add-on' capacitor so that one end connects to unused pin 6 of V103 (6X5).
- Repainted unit with gloss black paint as the chassis and cover has severe scratches.

## **JUN 14/96**

REC10 Power Supply S/N 14463

- Found this power supply in stores in 1993 and didn't know what it was at the time. It was left in storage in Radio 4 until now. This is the loop supply for the radioteletype equipment in the Message Centre.
- Replaced frayed AC and DC power cords.
- Refinished case with light coat of black gloss enamel.
- Adjusted for ~120 VDC output.

## **JUL 1/96**

- Received a donation of a CSR5 receiver S/N 588 from:

Jim Croll, VE3JIC, 242 Douglas Ave., Oakville, Ont. L6J 3S3  
(Issue income tax receipt for \$150).

Unit did not come with Marconi VP3 power supply. Also picked up a

BC-348 receiver.

### **JUL 2/96**

CM11 S/N 278

Symptom - Blows 15 amp fuse, second from left on LV power supply.

Fix - Replaced one faulty 816 rectifier in HV supply. A second 816 may be failing shortly.

### **JUL 14/96**

- Constructed replica VHF antenna for TDQ/RCK. Tested from bridge using 2 meter handheld. Works OK. Awaiting installation on foremast lower yardarm.

- Repaired one AT-150 'hammerhead' UHF antenna. Awaiting installation on foremast lower yardarm.

### **JUL 16/96**

CSR5 S/N ? (Reconditioned by RCN, Montreal)

Symptom: Detect buzz on signal whenever CW mode is used.

- Installed bushings for XTAL and VOL control shafts.
- Installed gas discharge tube.
- Installed new R62 (100 ohms)
- Measured R49 at 114 kohms. Should be 100 kohms. After replacement, there was no change.
- Removed 47k resistor between V5 pin 6 to ground. This is not on the schematic.
- Replaced R45. Was 228 kohms. Should be 150 kohms +/- 5%. Symptom did not change.
- Replaced leaky 10 uf capacitor on the board containing the three power resistors (15k,3k, 400 ohm). This is the two section capacitor nearest the chassis. No change in symptom. Not able to properly identify these due to bad documentation.
- Disconnecting one the other 10 uf capacitor on same board fixed the fault. Adding a new part did not necessarily prevent the appearance of the fault. Left capacitor disconnected. Not a good fix, but it worked.

### **JUL 20/96**

Refinished Crypto Office

### **AUG 11/96**

Refinished clerk's desk.

### **AUG 31/96**

Listed below is radio specific equipment which arrived aboard HMCS Toronto:

| Description        | Model         | Serial No. |
|--------------------|---------------|------------|
| -----              |               |            |
| Gunnar Unit Tester | 977154        | ----       |
| Transmitter        | TED3 (URT502) | CN307      |
| Transmitter        | TED3 (URT502) | 1302       |
| Transmitter        | TED3 (URT502) | CN135      |
| Transmitter        | TED3 (URT502) | CN387      |
| Receiver           | AN/URR35      | CN504      |
| Receiver           | AN/URR35      | CN511      |
| Receiver           | AN/URR35      | CN446      |
| Receiver           | AN/UPD501     | ?          |
| Power Supply       | for UPD501    | 15         |

SPA4

\* Received the following donation from Tom Brent, P.O. Box 150 Dewdney, B.C. :

AN/UPD501 Centimetric D/F Receiver S/N 129 plus spare connectors.

### SEP 14/96

- Tested TED 3's: S/N's CN307, CN135 and CN387. All test good. Moved and installed in Radio 3.

TED3 S/N 1302 has a fault. One of the two 3B38 rectifiers in the power supply will not light up. Suspect a bad connection in filament wiring. Needs more work.

URR35's S/N CN504, CN511, CN446 were tested and all were found to have faults of one type or another.

UPD501 S/N 129 has been moved to Radio 4. Unit was stripped of all capacitors by the RCN and is likely beyond repair.

UPD501 S/N ? received from the RCN was also stripped of all capacitors by the RCN and is likely beyond repair. CRT is also missing.

FSC107 S/N 27 now blows the line fuse. Needs work.

### SEP 21/96

Received a donation of a VK5 radar indicator S/N 5069 from: Andy Guibert, Apt 710, 333 Riverside Dr, St. Lambert P.Q. J4P 1A9

### **OCT 7/96**

Received a donation of a Mark 1 AA Range Indicator from: Andy Guibert, Apt 710, 333 Riverside Dr, St. Lambert P.Q. J4P 1A9 . It turns out this was only a loaner and was returned.

### **OCT 19/96**

Two 28 foot whip antennas welded by Sam Jones of Georgetown.

### **NOV/96**

Received a donation of one oscilloscope from the Naval Museum of Alberta. Model OS-8C/U S/N 4071. Unit was used aboard the USS Ranger, an attack aircraft carrier. Left in care of Bill Johnstone 921-9535. Picked by Bob Willson in March 97.

### **JUN 7/97**

Frequency Shift Converter Model 107 S/N 27

Symptom: Unit flows line fuse.

Determined that the power transformer has two shorted H.V secondaries. Made arrangements with Fred Hammond to have the transformer repaired at no charge to Haida. After the transformer was installed, one half of the chassis is now running 239 V B+ instead of 376 V. Did some testing and conclude that the power transformer may have been rebuilt incorrectly. Both HV secondaries are providing 100 ma of current. One of them should be at least 200 ma.

### **AUG 97**

Received donation of Drake TR7 transceiver from John Wilson VE3WIL

### **JUN 16/98**

Completed testing of SCR522. The following items are noted:

- \* The gain control was removed and replaced by a fixed resistance divider. This appear to be a factory mod.
- \* The audio output transformer in the receiver is set to tap position #7 which yields the highest audio output.

\* Using the BC1303 test box, there are two things that do not work as stated in the manual. Unable to modulate the signal when placed in transmit mode. The audio comes through the speaker. In fact with a PTT type microphone in the CAR jack, the audio comes out of the receiver without having to go into transmit mode. Secondly, the unit does not switch to Channel D when the CONT switch is flipped to the On position.

\* The homebrew cable connecting the SCR522 to the power supply has a bad connection at the power supply end. Can't tell if it's the RA62 connector or the connector on the power supply cable.

\* Ordered 8169.2307 KHz crystal in order to receive Toronto Island airport on 118.2 KHz.

#### CPRC26 Frequencies

S/N 27291 45.7, 45.9, 46.1, 46.5, 46.7 MHz

Other set 44.6

All crystals are CR23/U type

#### **OCT 10/98**

SCR522

Received crystal for Toronto Island Airport. Unit is now functional.

#### **NOV 12/98**

The Toronto Fire Dept erected the TDQ antenna and the missing "hammerhead" antenna on the foremast, lower yardarm.

#### **JAN 2/99**

In November 1998, received a donation from:

Jack Antonio  
646 Ibis Lane  
Reno, Nevada 89503

Received a I-139 test meter S/N 3384 for SCR522 test set IE-36.

#### **APR 8/99**

- J. Proc donated a AN/URM32 frequency meter for display.
- Purchased working I-139 test meter at flea market.

#### **APR 28/99**

AMC-6 Antenna Multicoupler S/N 317

Symptom: Blows line fuse.

Fix: Replaced defective 5U4 rectifier tube V111.  
Replaced open phantom antenna resistor R101.  
Replace intermittent lamp holder.

AMC-6 Antenna Multicoupler S/N 349

Replaced broken fuse holder.

### **MAY 8/99**

Received Marconi VP3 power supply S/N 167 from Alistair Cummings plus a CSR5 receiver. The receiver will be dispatched to HMCS Star in Hamilton for their museum section.

### **MAY 23/99**

Installed State Board in Ops Room. Need to make transformer assembly to provide power source for low voltage bulbs. Original bulb type is #1810 (T3 1/4, bayonet, 6.3 volts, 1.4 candlepower).

### **MAY 24/99**

VP3 Power Supply S/N 167

- Removed solid state diodes from both tube sockets.
- Installed original 6X5 rectifier tubes.
- Installed missing power off/on switch.
- Installed new two wire line cord.
- Removed circular power connector and replaced with original Cinch Jones three pin socket.
- Replaced all missing chassis screws.
- Tested unit using 12 VDC - works fine; spare vibrator missing.

### **JUN 19/99**

Installed three station IC/KAA intercom system. It provides communications between the bridge and foremast portside; bridge to foremast starboard side. It was necessary to splice and reconnect approximately 150 wires. This included the unused conductors. Additional appreciation is extended to Ernie Wall of the RCN who arranged for the donation of the intercoms from the RCN to HAIDA. To Pat Barnhouse of Ottawa who provided me with the IC/KAA documentation. Jim Brewer rebuilt the deteriorated system power off/on switch which is fitted on HAIDA'S open bridge.

Cable routing information for power and twisted pair analog cabling:

Source: Bridge (Station #3) to Foremast Port (Station #2) to Foremast Starboard (Station #1).  
The power switch is located on the port side of the bridge. The power source is in the Ops Room.

### **AUG 9/99**

Removed marine radio under CM11 and replaced with Radio Shack scanner crystallized for the marine band. More channels are now available over the remote control system.

### **AUG 28/99**

Completed the refurbishment project of the forward whips. Added missing section to port whip and arranged to have a loose joint repaired.

Both antennas stripped to bare metal; bonding straps applied to each joint; primed with zinc chromate. Additional bonding straps added to interconnect the base to the lowest section of the whip. Around 80 man-hours of work.

Measured the SWR of the Starboard whip:

|         |       |
|---------|-------|
| 7.0 MHz | 2.5:1 |
| 6.8 MHz | 2.1:1 |
| 6.5 MHz | 1.3:1 |
| 6.3 MHz | 1.7:1 |
| 6.0 MHz | 4.3:1 |

The SWR of the Port whip was not measured. It is intended to change the tap on the loading coil to make this antenna resonant on the 80 meter band.

On a separate note, measure SWR of the 80/40/10 trap dipole. On the 40 Meter band:

|         |       |
|---------|-------|
| 7.3 MHz | 1.6:1 |
| 7.2 MHz | 1.3:1 |
| 7.1 MHz | 1.3:1 |
| 7.0 MHz | 1.8:1 |

SWR on the 80 meter band is far beyond 3:1, so the use of an antenna tuner is required.

### **Sept 2/00**

Made the FR12 operational on 3.585 MHz. Unable to tune output if crystal is in socket #4 position. Left it in position 3. After leaving the set on for the day, a fault developed. The panel meter reads a steady 30 ma.

### **Sept 24/00**

Installed new starboard outer flattop antenna

**Sept 30/00**

Repaired broken coax terminator box, flag deck aft port side.

**Oct 7/00**

Received SPS12 antenna.

TBS-8 receiver/transmitter donation from John Forrester is now sitting At the C&E Museum in Kingston.

**March 31/01**

A proper radio room clock was donated by,

VE3OUN  
Gale Moore  
57 Prince St. PO Box 518  
Cannington On L0E 1E0

This clock is made by Chelsea Clock CO. Boston, MA.

For reasons known only to Bruce Baillie, the clock was returned.

**April 21/01**

TBS radio arrives aboard ship. Donated by:

T.A. John Forster  
PO Box 397048  
Cambridge, MA 02139-7048

One TBS radio consisting of: a) Model CRV-46068-B receiver S/N 306  
b) Model CRV-52093A transmitter S/N 306

Manufacturer: RCA Victor, Camden N.J. Contract # NX sr51552 for US Navy Bureau of Ships

This type of radio was used aboard HAIDA during WWII.

**Jun 21/01**

Received a donation of 18 TBS receiver/transmitter crystals from:

Hue Miller

Apt 204  
1555 Waverly S.E.  
Albany , Oregon  
97321

**June 30/01**

Repainted SPS 12 pedestal . Used custom matched paint.

Canadian Tire – Premier Brand; External Flat Acrylic Latex  
Base 48-2613-8  
Colorant BLU 4  
MAG 5  
YELL 3

**July 5/01**

TBS Receiver S/N 306.

Replaced defective caps C442,C455, C456, C439  
Replaced defective V1 (6C6). This tube had no emission thus causing no audio form the receiver.

**July 24/01**

Installed SPS12 antenna.

**Aug 17/01**

Completed the project to display the 293 antenna on the jetty.

////////~::~::~::~~**HAIDA to Port Weller Dec 02/Aug 03**~::~::~::~////////

**Apr/03**

Arrangements made by Bruce Baillie to have the Drake TR-7 repaired

**Sept 1/03** – The 293 antenna returns with HAIDA.

**Sept 20/03**

Commenced refurbishment of Electronics Maintenance Room.

**Jan 14/04**

Completed EMR refurbishment.

**April 13/04**

CSR5A S/N 921210 (chassis, assigned)

Unit totally dead. Replaced open wirewound resistors R53 (3K 10W) and R54 (1K 10W).  
Sprayed turret assembly with tuner clear to make HF bands operative.

**July 1/ 04**

Ordered new crystals for RCK receiver from West Crystal.

|                        |            |                     |        |
|------------------------|------------|---------------------|--------|
| Hamilton Airport Tower | 125.00 MHz | Crystal 15.2222 MHz | HC-48U |
| Pearson Arrivals 1     | 132.80 MHz | Crystal 16.0888 MHz | HC-48U |