

THE HBR ENHANCEMENT MEMORANDA

MEMO INDEX: 14 May 2011

Lettered Enhancement Memos are those presenting 20th Century information created by W6TC or other builders of the Crosby HBR designs, and not available for inclusion in "Recollections" at the time the book was published.

A. W6TC letters to various HBR builders from June 1958 to June 1969, and addressing a variety of matters specific to the HBR-14, -15 and -16. **Available in 3Q11**, this lettered memo is of value to builders of other HBR models for background and intent of design in the more advanced models **Not presently available for overseas locations.**

Price \$4.50 delivered by First Class Mail

Note: This revised availability date is due to the author's health problems earlier in the year and only now resolved. My apologies for any resulting confusion or inconvenience.

Numbered Enhancement Memos are those presenting 21st Century information created by W6HHT on his HBR-XX and applicable to other HBR models.

1. Dis-assembly, cleaning, re-lubrication and re-assembly of a "frozen solid" Eddystone 898 dial part of the HBR-XX
2. Results of an incremental power-up of the HBR-XX, replacement of out-of-spec components, re-alignment, and digital measurement of key voltages within the receiver for comparison with 1976 values made with analog instruments and as recorded in "Recollections".
3. General cleaning of chassis surfaces, addition of dial thermometer to measure internal cabinet temperatures, installation of a digital frequency counter (typical of NorCalQRP FCC-1), all to provide digital readout of tuned frequencies 80-meters through 6-meters.
4. Re-run of 1976 temperature stability tests to confirm present adequacy of temperature compensation and establish more accurate thermal balance temperature and frequency shift. Temporarily disconnect fixed-value N750 temp comp capacitors on each L3 coil, repeat temperature stability tests to establish thermal balance temperature and frequency shift when in un-compensated condition. Identify methods of improving cabinet ventilation to lower thermal balance points.
5. Evaluate contemporary variable temperature compensation capacitors as a substitute for fixed-value N750 capacitors. Evaluate methods of providing pre-heat to HBR-XX for purpose of shortening time to reach thermal balance, and/or eliminate need for temperature compensation of L3 coils.
6. Identify improvement of ventilation methods to shorten the time for reaching thermal balance, in both the N750 temperature compensated and pre-heat situations.
7. Complete design of home-brew 5-pin coil forms as substitutes for the original Amphenol forms. Home brew forms will use brass tubing for pin substitutes, polycarbonate telescoping tube for coil winding and "innards support, and a p.c. board assembly for mounting the APC capacitor, fixed padder, and temp compensating cap at the coil top.
8. Run comparative tests between the original Amphenol forms against coils wound on substitute home-brew, Baker, and Meissner coil forms.
9. Develop coil construction specifications for the WRC bands at 30- 17- and 12-meters.
10. Evaluate existing AGC performance, investigate performance improvements, and modify existing AGC circuitry. as appropriate.
11. Install a passive 3-pole toroid audio slot passband filter for CW service, augmenting the W0SX toroid filter used in the original design.