

AC and LINE TOPICS

- safety issues
- AC grounds
- house wiring
- power line noise
- GFI outlets
- ground loops

ANTENNAS

- UNBAL vs BAL input
- modifications to UNBAL jack
- specific book and articles
- optimal SWL antenna
- types in use
- the active antenna
- Fort Deven's Training Manual
- wire and feedline options
- computer RFI
- role of antenna tuners
- antenna relay and its repair
- break-in issues
- multicouplers and diversity reception
- grounding the tower and safety issues
- physics of ground rods
- lightning strikes and sequelae
- CAD welding

AUDIO DECK

- diode load usage and connections
- squelch circuitry
- limiter circuitry and problems
- refurbishing the audio deck module
- tantalum C609 electrolytic replacement
- the 6AQ5 output
- the Kleronomos 6922/6360 circuit
- 600 to 8 ohm transformers
- use of a 70.7 volt line transformer
- LS-166 and other speaker options

BALLAST TUBE

- rationale for its use
- physics behind 3TF7 and its cousins
- substitutes for the 3FTF7
- replacement SS circuits

CAPACITORS

important caps to replace first
problem capacitors in the R390A
Vitamin Q caps
Orange drop caps: pros and cons
minimal vs wholesale replacement practices
how to test a paper capacitor for leakage
polyester vs polypropylene
molded mica, silver mica, and ceramic cap experiences
C275 mis-value
cap removal and replacement practical tips

DEAD UNITS

common causes
work sequences

HISTORY

active duty experiences
Ft Devens R390 classes
serial numbers
SWL targets
EAC and Fowler units
depot *dawgs*
MWO's
R-648
R-1247
Racal RA 17

IF DECK

noise
stuck IF slug
coax shorts
trimmer repair
AGC theory and repair
Rippel on alignment
stagger-tuned IF strip
Q-spoiling resistors
Z-503 repair
E20-E211 test points
bandwidth switch repair
BFO microdial
BFO neutralization
Xtal deck issues
R-725 decks
R-390 deck conversion to 390A chassis
synchronous AM detector

DSP IF

IF DECK FILTERS

- alignment of the mechanical filters
- testing a mechanical filter
- rebuilding a mechanical filter
- Clevite ceramic filters
- Dave Curry filters
- question of a notch filter
- trim capacitors

MODS AND FC'S

- Production mods
- misc users modifications

PAINTING AND KNOBS

- chassis disassembly
- metal prep
- cleaning chemicals
- silk-screening and engraving
- paint options and formulae
- Bristol wrenches
- alodine
- powder coating
- ID plates

PANADAPTORS

- Heath SB-620
- BC-1031A

PANEL METERS

- specifications
- calibration
- disassembly
- repair
- substitutes
- carrier pot
- radioactivity
- back-light

PTO

manufacturers

lubrication

adjusting end-points

adjusting linearity

mechanical alignment

setting over-travel

Oldham coupler alignment

coil modification

failure modes

rebuilding

effects of FC 7

dessicants

Conversion of 390A PTO to a 390

R392 PTO

R388 PTO

R389 PTO

PWR SUPPLY_SWITCH

F101 line filter

solid state rectifiers

inrush current considerations

CR801 selenium rectifier

microswitch repair

rebuilding C603/6

C603/6 replacements

ovens

fuse holders

use of STDBY

low heater voltages

use of bucking transformers and Variacs

R390/URR voltage regulator

fuses

12BW4 as substitute for 26Z5

physics behind the OA2

RACKS AND CASES

sources

rails

nuts

RESISTORS

carbon vs metal film in the 390A

failure modes

pot cleaning

RESTORATION_GENERAL

buying a R390A

overhaul tips

a hamfest shopping list

reference and parts resources

manufacturers listing

specialty R390A models

the *Blue-Striper*

restoration sequence

restoration techniques

special tools needed

dial lamps: OEM and LED

manual listing

expert restoration resources

mini-BNC connectors and coax

contact cleaners

how to clean chassis and coils

soldering

hardware employed

module swaps

cabinets

clutch and the zero adjust

tube extenders

rack mounting

solid-state the R390A

crystal ovens

RF DECK_ELECTRICAL

deck testing: noise and gain
HR-202 issues
S206 bandswitch tips
sync the bandswitch
ant trimmer tips
RF deck slugs and coil problems
100KC calibrator function
missing components C-252
using the Xtal calibrator
dead below 8MC
low Xtal osc output
the Green Gear
effects of FC 7
break-in function
reception below 500KC
digital frequency readouts
R391 and autotunes
Nuvistaplug possibilities
function of C227
17MC Xtals
roofing filters

RF DECK_MECHANICAL

cleaning the RF deck and gear train
band switch
how to remove this deck
gear train
gear clamp repairs
stuck RF slug
busted RF slug
RF slug coding
lubrication
the Oldham coupler
the Green Gear in R390's
zero adjust
autotune in R390's
Veeder-Root

SENSITIVITY_ALIGNMENT

tutorials

"octave" tuning methodology

Rippel on alignment articles

sensitivity measurements

preselectors

MDS measurements

SINPO explained

sweep gen alignment

aligning the BAL input

generator leakage

using the GR1001A

SSB_CONVERSION

Capt Lee article using a 6BE6

Lankford diode method

CV-157 and CV-591A

other outboard add-ones

6U8 addition

Sherwood SE-3

STORAGE_SHIPPING

packing heavy gear

commercial carriers

horror stories

storing stuff at home

TEST_GEAR

scopes and their probes

TS 505 and its relatives

Simpson 260's

HP-410 family

DMM's

HP 600 and 8600 family

repairing moving vanes in meters

URM-25D and URM-25F and others

testing Xtals with sig gens

meggors

tube testers

impedance matching

capacitor *analyzer*

spectrum analyzers

TUBES

characteristics

equivalent substitutes

gas and Zippo

IERC shields

in situ performance tests

cleaning a tube socket

tube organizing

gettering old tubes

TUBE SHIELDS AND HEATING

IERC heat issues

effect of cabinets on heat buildup

fans