

John R. B...

UNIT PROBLEMS

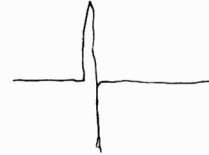
NO RAMP AVAILABLE @ M2 input check for missing or miswired program plug, or wrong one.

MINIMUM POWER WON'T SET Can be either caused by monitor diode or TD101 in leveller amplifier.

BAD ZERO Looks Like

Instead of

NOT FLAT TO
1MHz output



Usually caused
by faulty monitor
diode, but can be
caused by the M10

HORIZONTAL OUTPUT OFFSET Usually caused by deposits of some kind underneath the output plug of the PSG or PST. Usually a good shot of Blue Shower sprayed between the PC board and the plug will cure the problem.

OUTPUT NORMAL ON SCOPE, ERRATIC ON POWER METER Caused by open choke on output of M19H, G, m M95.

M5 SWEEP SAMPLE DISTORTED
choke (L1 or L2) in M5.

Look Like....

Caused by open



BASELINE OSCILLATION Can sometimes be eliminated by putting a very short cable between the M10 and the M19 on multiband units. On single band units, the M10 will have to be repaired. Problem is most often seen in the 75 units.

20 VOLTS INTERMITTENT Caused by improper crimp on -20V line at power supply output plug. Also check band switch wiring.

M1H DOUBLE TRIGGERS AT SLOW RATES Replace Q10 in M1H. Does not always fix the problem though.

UNIT PROBLEMS

OUTPUT GLITCH AND WEAK MARKERS Caused by output resistor in M5. Shield not grounded, or lead too close to shield.

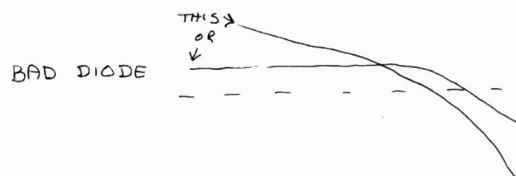
VERY UNFLAT SWEEP SAMPLE OUT OF M5—Check sweep sample out of appropriate oscillator. This condition can be induced by overdriving or underdriving the input of the M5. Band 3 is most sensitive to this.

LOW END JITTER BAND 2 or 3 Caused by leaky linearity diodes in M2. Any one diode can cause it. Check the knee point for each diode in question.

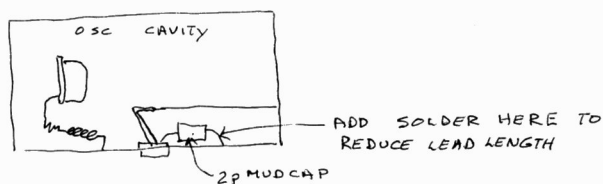
Good diode



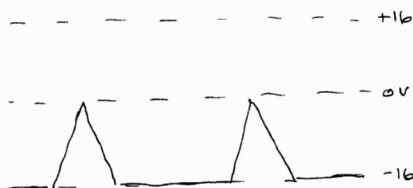
BAD DIODE



HARMONIC BAND 2 AT VERY HIGH END Bridge Solder on 2pf mudcap in tank from side of tank to body of mudcap. M19



M1H SET UP WRONG Sets up like this @ pin 12



Caused by 2 green wires on sweep time switch being reversed. One of which goes to Pin 5 of M1H.

JITTER BAND 2 ALL OVER Replace Q3 (2N5461 FET) in M19

BAND 1 COMES ON ONLY AFTER 1 MINUTE WARMUP Replace C14 (10pf) in M10.

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MINIMUM POWER SETTING CREEPS Possible bad monitor diode. Probably a weak TD101 in leveler amp in M10.

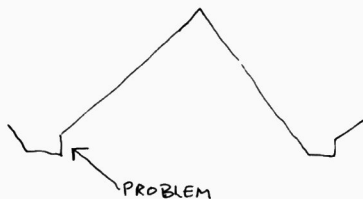
1060 SERIES -HORIZONTAL OUTPUT OFFSET IN LINE RATE Replace CR4 on rate card.

CLAMP LEVEL DRIFT (M1H) replace Q9 in M1H, it is leaky.

EXT ALC WILL NOT WORK (INPUT JACK) Coax Reversed on ALC Jack.

M1H CLAMP DISTORTED IN LINE RATE

Caused by green wire on sweep time switch going to wrong wafer



POWER SUPPLY DOES NOT REGULATE Voltages are available but change drastically when any change in load is made such as switching bands or adjusting sweep time switch. Caused by leaky filter caps in power supply. If less than x 25 volts is available at PS -6(7) bridge. This is a good indication of bad filter caps.

MARKER BIRD DISTORTED Looks like...



In band 1, usually indicates a malfunction in the -15 volt circuit in the M9. In other bands has been almost always linked to a power supply problem.

1801B DOUBLE TRIGGER ON SLOW SWEEP RATE Replace CR3, CR5, or P12, 13, or 14 in M1H. All of these can cause this.

UNIT PROBLEMS

2001 INVERTED RAMP OSCILLATION - Almost any part in the sweep (inverted)

M2H

amplifier seems to be able to cause this. Try moving the 2N4250's (Q2 and Q3) closer to the PC board. Have cured this by replacing Q1 or CR1. Also placing almost any type of capacitance on Pin 11 (inv. output) will cure it.

POWER SUPPLY ACCURACY If -18 Volts stays just enough out of spec. to be annoying, short +18 and/or -18 to ground momentarily (not together). Don't know why this works, but once done (if it works) it doesn't ever happen again. May be just a warm up problem.

MINIMUM POWER WON'T SET If changing the TD101 in the leveler amp doesn't

M10G

work - change R42 to 510K or 470K

(too low)

1504 LINE SPIKE ON OUTPUT (Detected) Caused by wire from auto frequency switch to M2E Pin 12 being too close to wires feeding power switch. If possible, move wire, if not have wire changed to coax.