

Addendum
for
Frequency Amplifier
Model CHG-2B

With the exception of remote B+ switching for the r-f amplifier stages (V2706, V2707, and V2708) and the i-f balanced modulator stages (2704 and V2705), the CHG-2B is similar to Frequency Amplifier CHG-2A. The CHG-2A Instruction Manual will apply as written with the following exceptions:

- a. Figures III(A)-4-5b, III(A)-4-6b, and III(A)-8-1b should be changed in accordance with the information provided in figure 1 of this addendum.
- b. Operating instructions for the CHG-2 must be changed to indicate that the B+ switch should be set at OFF if remote B+ switching is to be accomplished.

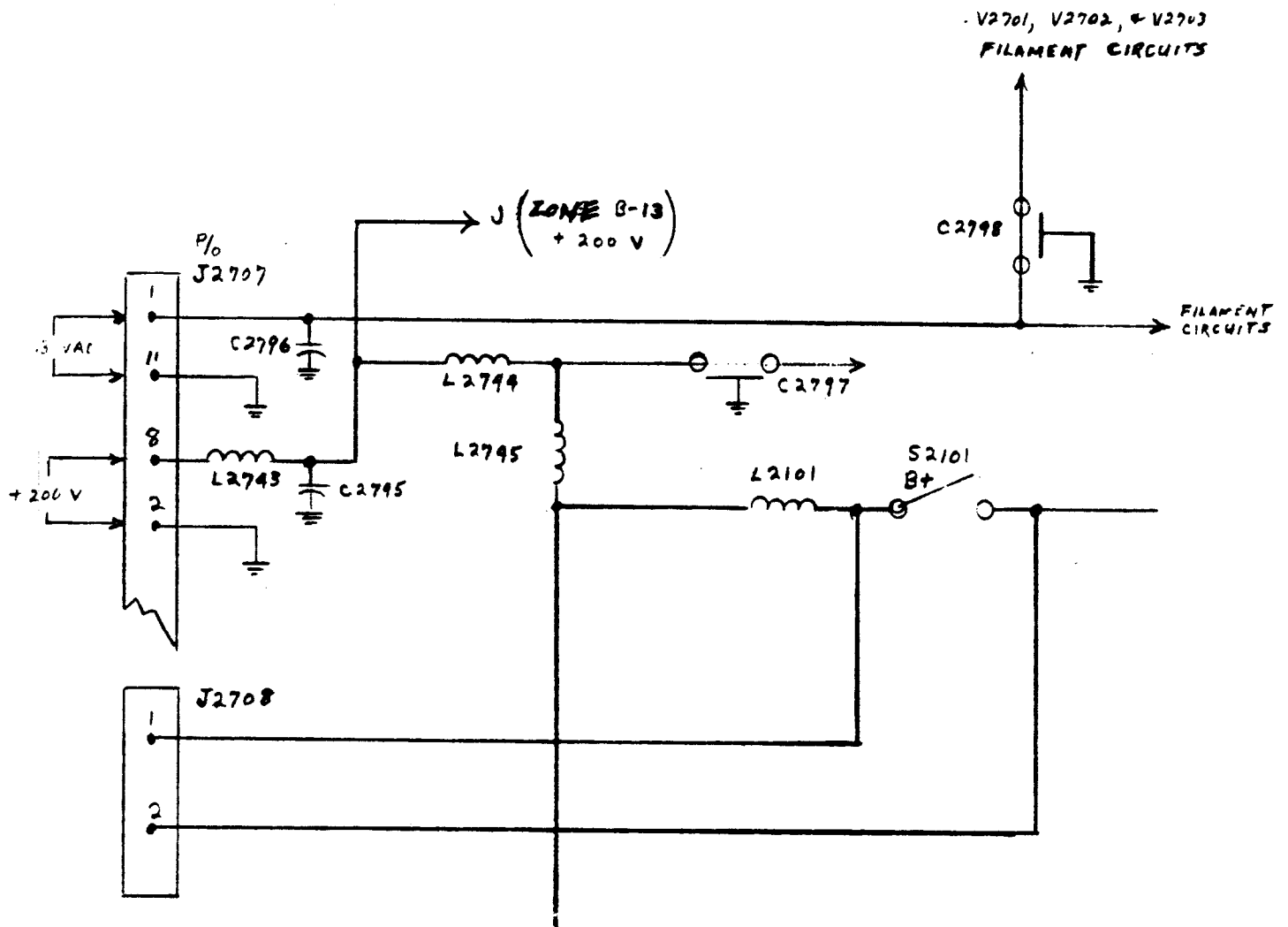


FIGURE 1

CHG-2B

At start, oven light on, stand by light on - B+ switch on stand-by light on - sync light may be on or off. Inspect unit.

All trimmers at mid-cap except C2538 which is set at 2/3.

1Mc Standard

2. Set S W 2301 to St. Ext CSS out to J2303. VTVM HP to

W2504-W2506 stand-off near XV2505. Adj L2306 for max. (1.8v)

Load (70Ω) to 1Mc out (J2304). HPVTVM to 70Ω load. Adj L2304

1.3 vrf. Switch to Int (Xtal) St Output - 2v (usually 1.8v) Adj C2307 for 1mc. Switch

② For 18mc scope adjust T.L.T Non preset TR slope T-M-CM .1 Int HF sync Horiz display Int sw Mult 1

to Standard 1Mc (Ext) B+ volts at T2702 (red dot) = 185 vdc

II Synthesizer chassis

Scope ac to unused lug of T2501.

Tune T2501 (45upp) usually 40v.

(13v rms to 12.5v rms), (4.5 being

450 at 100v calibrations)

Disconnect J2305 (synth cable) Set

bal. adj on T2501 fully CCW.

Connect S6 at 18mc to W2504-W2506

stand-off at 1v (10000 Ω). Connect

scope to T2502 (top of coax cable)

Tune T2502 bottom. Align top of T2502

for 1111 output, (5 to 25pp or

2 to 4v rms) Disconnect signal

generator.

10 mc	0.2, 10, 20
11 mc	4, 22
12 mc	6, 12, 24
13 mc	5, 26
14 mc	4, 28

8 mc	16
9 mc	18
15 mc	30

Xtal Output Check

(a) HPVTVM 30 range ac at stand-off near C2581. Switch in all bands

+ frequencies. Output 15v r.f or higher. 1Mc input coming in and 70Ω load in place.

(b) Connect scope ac to jct R2524 R2525 (orange dot of T2501.

Tune C2501 (Band 2) for sine waves. Tune L2502 for max

waves to NUB. Tune T2501 top to improve

Output should be 15v or more (12 rms) usually 3.4 or more (16+18mc excepted)

Band 4	Tune C2503
---	6 --- C2505
---	8 --- C2512

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Band 14	C2507	if center
Band 16	C2515	1st tube as f.b.
Band 18	C2513	adjust
Band 30	C2510	coils near C2531

Reconnect J2305

III. H.F. Inj. Use for Sync

HPVTVM dc or Simpson 260 at black dot of T2501 - 4vdc.

Same meter to T2501 orange dot - 3.2vdc. Adjust T2501 top to

equalize voltage at black dot - 4 volts dc.

Scope dc (dc meter) to T2501 black dot and adj. vertical

position of scope until horz line appears in middle.

Move scope dc or dc meter to

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the other side of rocke res near T2501. Set to Band 2. Adj. C2401 (4 f.b. Adj. till signal comes to horz line on mid-screen.

To check sync light. Put on B+ switch and adj. sync control till light appears. Stop as soon as light appears.

In case of difficulty, carry C2538 and replace tube

6C56.

9 f.b. Band 4 Adj. C2403

4 f.t. --- 6 --- C2405

3 f.t. --- 8 --- C2411

2 f.t. --- 14 --- C2407

1 f.b. --- 16 --- C2415

2 f.b. --- 18 --- C2413

1 f.t. --- 30 --- C2409

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⑥ Sync light check

Bulb should light on frequencies and die out between frequencies. It should not die out between band 1 and band 2.

IV H.F. Amplifier. V2704

(6AH6) CSS on. 70Ω load connected to J2304.

HPVTVM to JNC C2777+C2776 C2776 to mid-cap. C2776

HPVTVM to meter output at least .5v r.f

(usually .6 to 1.2v r.f)

Band 14 Tune L2731

--- 30 --- L2729

--- 28 --- L2725

--- 26 --- L2727

ETC. Make note of voltages on test sheet.

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V. Mid-Frequency

Output pot to min. S6 to J2702 70Ω load and CSS connected,

tuned to 1.75 mc with output all the way on. CH G mft 1.75

Tune T2703, L2705, L2702, L2703 for max.

S6 3.75 mc, mft 3.75 mc

Tune C2710, C2712, C2717 + C2718. Tune for max. Retune

coils and lock them. Balance MF meter by adj. bal. pot,

R2703 for min output (dip on mf meter).

Generator output does not have to be killed for this

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 ⑧ 250K Check
 Load at J2706. HPVTVM at Load.
 250Kc output signal should be
 1.3mf. Switch B on and read
 voltage divider for stable,
 firm output. Shut off B.
 Switch load to J2704. SG
 4mc at J2702. Coax cable
 connecting J2701 and J2706
 together. Mft mes at 3.75mc.
 check peaking and adjust
 mf meter pointer, to a spot
 between white and red on dial
 Peak 2701 (very little peak)
 on mf meter. SG output
 all the way. Reduce SG out
 as you tune. Output should

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 ⑨
 be obtained with generator
 output control set below 100k
 microvolts (its coming in).
 VI. RF section
 Low end
 Load at 2704. CSS on. SG at
 2mc. Band CA. Mf 1.75 mc
 Mes 1.75mc (three coils). Output
 control on. Tune coils of
 Section A. Reduce output
 of SG as tuning increases
 output. Check peaking.
 Try to keep rf output steadily
 at spot between white + red.
 RF meter must read at least
 10 for all frequencies (8.4volts).
 Sg 2mc. Band 2B Mft 1.75mc 3.75

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 ⑩
 Sg 2mc Band 6C Mft 1.75 mes 2.75
 Sg 2mc Band 14D --- 1.75 --- 15.75
 Balance RF Meter
 Kill SG out. Mes 10mc - mft
 not necessary. Band 10C.
 Dip rf meter by turning R2722
 Balancing is done when
 output is fairly low.
 Balancing is done only at
 10 mc.
 High End
 Sg J2702 mft 3.75. Band 30D
 mes 33.75. Tune Trimmers
 for max. RF meter pointer
 at spot between white + red.
 Generator all the way and reduce
 to effect an adequate indication

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 ⑪
 on rf meter.
 SG at 4mc
 Band CA mes 3.75 mft 3.75
 --- 4B --- 2.75 --- 3.75
 --- 12C --- 15.75 --- 3.75
 Repeat adjustment as many
 times as necessary. Have cover
 put on and realign. Check for
 peaks and calibration. Check
 for take-off (Don't forget load).
 VII. Inject 225 mc with SG
 at J2702 mft 2mc. Check
 all bands. SG dial reading
 is band number 2. Note calibration.
 It should not be more than one
 division at any frequency.
 VIII. ALDC check

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 ⑫
 Connect extension cable to
 ALDC. Put on wide across
 its terminals. Output of
 CHG should drop.
 Simpson meter batteries can
 be used for this service on
 the 1000 ohm scale.
 IX. Ro check Syne
 Connect HPVTVM at the
 other side of 100k resistor
 T2501. Adj. 4vdc as reference
 pointer. Check Band 0, 2, 4, 6
 8, 10, 12, 14, 16, 18, 20, 22, 24,
 26, 28 and 30 (See pp 4)
 X. Reset 1Mc Standard
 with Counter.
 XI. Check alternate B+ switch
 Normal output IF strip with
 generator tuned to 18 mc and

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 ⑬
 for mix. output taken at switch
 and output of strip = 2v rf.
 Normal input from RF for
 8 on output meter is 1v rf
 (blue check point)
 of T2703