J.F.K. - EXPORT; 120 Ch. AM/FM mobile (uPD2816-PLL).

by Louis Fineberg

Finally, the schematic for J.F.K. has materialized... Believe it or not; ...entire FACTORY SERVICE MANUAL... No, a 'distributor' wasn't the source!

Unit has ± 40 channels, switchable beep, SWR meter, variable transmit power output control, and dual RF Finals. This is a true DELUXE unit....

TEST UNIT, S/N:63003727 gave following at mid Fo range; after tune-up. Modulation was 95%+, after modification of unit by removing Brown wire at main PCB (See partial PCB layout).

Power at max setting was: AM-12.4W deadkey, swing to 17W. FM-13.0W.

Variation across Fo range was about 1.2W

Overall performance is good..... RF Finals are 20W/6A, so push them.

Driver is 2SC2029 (discontinued 10W/2A), use chart in SCB #26 for a replacement choice if needed.

President J.F.K. Line-Up Proceedure

Following is PRESIDENT J.F.K. alignment, re-written for the experienced technician. Courtesy of "Custom Conversions".....

Equipment Suggested: Oscilloscope, D.C. Power Supply, D.C. Voltmeter, Frequency Counter, RF Signal Generator, Audio VTVM, Dummy Load, RF Power Meter, Deviation Meter.

PLL ALIGNMENT

1. Delta Tune to MID position. Adjust VC1 for a reading of 10.24MHz, ± 100Hz at base of TR18.

2. Band-MID, Mode-RX, Ch-1. Adjust L17 for 1.2V, ± 0.1VDC at TP1 (lead of R72).

RECEIVE ALIGNMENT

1. Front controls to be left at following positions throughout RX alignment: RF Gain-MAX, S/RF-SWR-CAL at S/RF Position, NB/ANL-OFF.

2. Band-MID, Volume-MAX, Squelch-MIN, Ch-19, AM/FM to AM. Adjust L7, L6, L5, L4, and L1 for maximum output at Ext Spkr Jack.

3. Change: Band-LOW, Ch-1 and Band-HI, Ch-40. Adjust L2 and L3, in the following manner:
   Adjust L2 for maximum output of noise level in Ch-1, Low Band.
   Adjust L3 for maximum output of noise level in Ch-40, Band High.
   Readjust L2 by turning CW in Ch-1, Low Band, for the same noise level as obtained in adjusting L3.

4. All settings the same as Step 2-Change: Squelch-MAX. Adjust VR2 for 2V reading at Ext Spkr Jack, with Sig Gen input at $1000_{m}V$.

5. All settings the same as Step 2. Adjust VR1 for 'S-9' reading on meter with Sig Gen input at $100_{m}V$.

6. All settings the same as Step 2-Change: AM/FM to FM. Adjust L-801 for maximum with Sig Gen input at $1000_{m}V$.

TRANSMIT ALIGNMENT

1. Front controls to be left at following positions throughout TX alignment: Mic Gain-MAX, S/RF-SWR-CAL at S/RF Position.

2. Band-MID, NO MODULATION, Power-MAX, Ch-19, AM/FM-AM. Turn down the core of L18 before doing any alignment. Scope TP2 (R79), adjust L19, L20, and L18 for max reading in order.

3. Adjust L20, L15, and L14 for max RF output.

4. Change from Ch-1, Low Band; to Ch-40 High Band - adjust L11 for overall TX power balance.

5. All settings the same as Step 2. Adjust VR3 so needle of unit's TX meter points to desired zone.

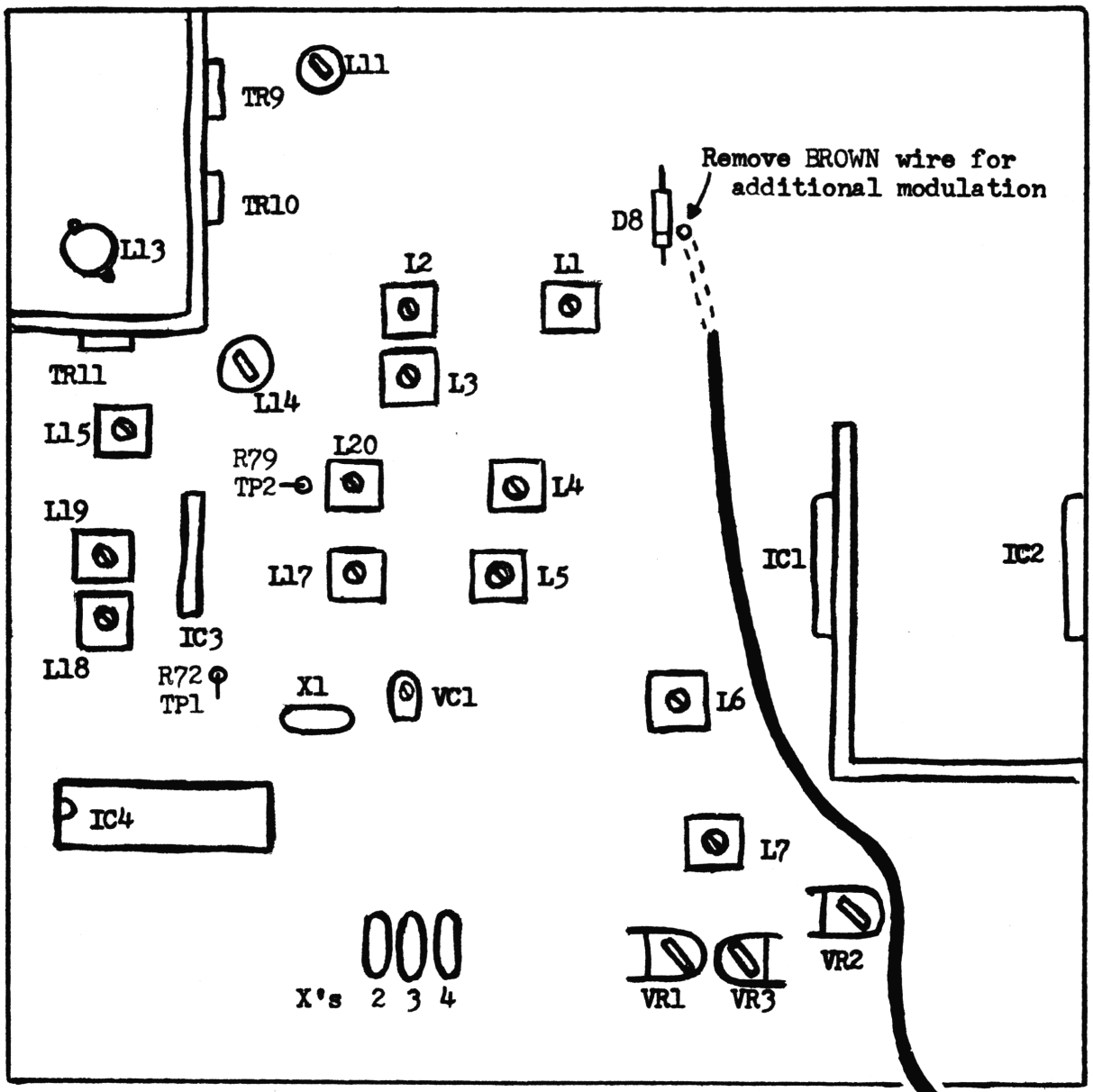
6. Change to Low Power. Adjust VR501 for an output RF power level of between 1.5-4.0W over entire band, or as desired.

7. All settings the same as Step 2; change the following: AM/FM to FM, Ch-1. Adjust VR801 for 4KHz deviation.

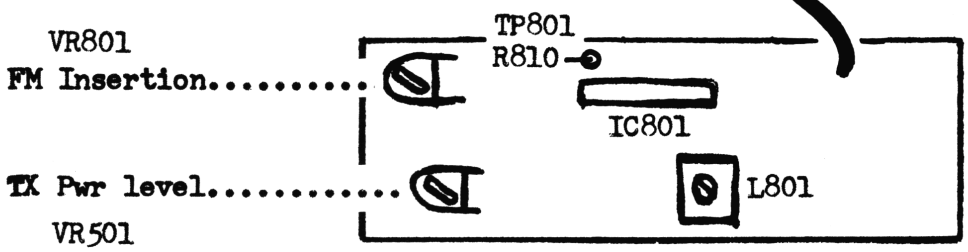
8. All settings the same as Step 2. Readjust VC1 for 27.185MHz at TX jack.

J.F.K. Partial PCB Layout

PC-713

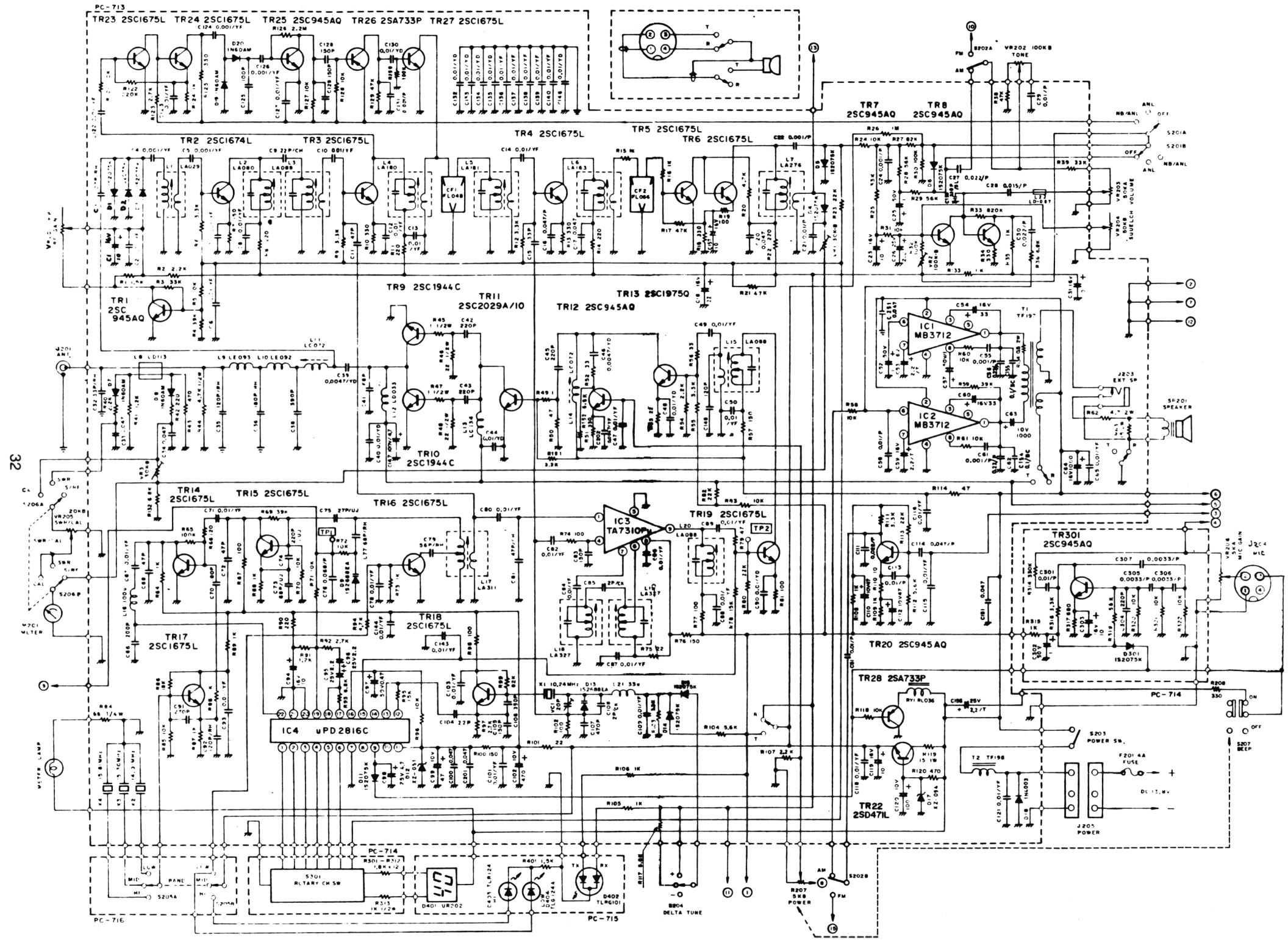


This doesn't WORK ON ALL units so check to MAKE SURE you don't hear motor Noise on TX Audio



PC-904

PRESIDENT J.F.K. - Schematic



PRESIDENT J.F.K. FM/AMC PCB SCHEMATIC