SERVICE MANUAL SUPPLEMENT

FM/AM TUNER 2083-5

Use this supplement together with the 30, 35A, 50 Service Manual for maintenance and repair of units using FM/AM Tuner 2083-5.

The Fisher
30 35A 50

WORLD LEADER IN HIGH QUALITY STEREO

identification of 2083-5 tuner

Tuning gang VC1 - VC5 is mounted on its side. AM trimmers TC4 and TC5 are at the top of the gang. See illustration. (On the 2083-3 tuner, the trimmers are on the side.)

1. Remove motorboard and dress panel. Refer to REMOVING MOTORBOARD and REMOVING DRESS PANEL procedures.
2. Remove dial pointer from old dial cord.
3. Prop unit on its left side. Remove the right wood side-panel by removing the two slotted screws near the feet.
4. Rotate tuning capacitor drum fully CCW. Loosen machine screws in drum and remove old dial cord.
5. Tie end of new cord to end of spring. Fasten spring to START screw. See illustration.
6. Cross the cord to inside of drum, then run cord through slot in rim and wrap 1 turn CCW around drum. Guide cord around pulley "A" and wrap 2 full turns (CCW viewed from back) around tuning shaft.
7. Guide cord over pulley "B" and around pulleys "C" and "D". Rotate drum fully CW allowing cord to wind on drum.
8. Run cord under drum and around the other side into the rim slot. Wrap cord around FINISH screw.
9. Pull cord taut and tighten screws. Turn tuning shaft CW and CCW to distribute tensioning.
10. Repeat (8) until spring is tensioned.
11. Place pointer on rail and slip cord under tab. Turn tuning shaft fully CCW. Slide pointer to (0) mark and cement to cord.
12. Check dial calibration.
13. Reinstall dress panel, side panel, and motorboard.

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PB2083-5
Turn TUNING knob fully CCW. If pointer is not centered on (B), repack and cement pointer. Except as noted, maintain generator level as low as possible during alignment.

**FM ALIGNMENT**

1. Set SELECTOR switch to FM. Turn VOLUME control to minimum.
2. (Connect 10.7MHz sweep generator to P2B. Connect scope through 220kΩ to P2B. Open wire loop at P24.
4. (Connect wire loop at P24. Disconnect scope to P5. Adjust top and bottom cores of L9 for maximum linear amplitude.
5. (Connect LVDT to PS. Readjust top core of L9 for OVDC. Disconnect sweep generator and DC LVDT and connect scope to RCOR OUT jack. Connect FM HF generator through 1200Ω carbon composition resistors to FM ANT. terminals.
6. Set generator frequency and dial pointer accurately to 50MHz. Modulate generator with 400 Hz, ±75kHz deviation. Adjust core of antenna coil L1 and bend oscillator coil L3 and RF coil L2 for maximum amplitude on scope.
7. Set generator frequency and dial pointer accurately to 100MHz. Adjust antenna trimmer TCI, oscillator trimmer TC3, and RF trimmer TC2 for maximum amplitude on scope.
8. (Connect LVDT to PS. Set generator level to 1mV. Tune receiver to generator frequency 1100kHz for OVDC at PS. (Connect an AC LVDT to the RIGHT RCOR OUT jack, and another AC LVDT to the LEFT RCOR OUT jack.
9. (Connect MPX generator composite output to FM generator EXTERNAL MODULATION input. Modulate left and right channels with 400kHz (±75kHz deviation)/50Hz, and 19kHz pilot (±75kHz deviation)/10kHz.
10. Adjust top cores of L17 and L18 for maximum audio.
11. Modulate left channel only. Right channel AC LVDT should indicate at least 2000 below left channel output.
12. Modulate right channel only. Left channel AC LVDT should indicate at least 2000 below right channel output.
13. Disconnect MPX generator. Set RF generator output to 20mV, and modulate with 400kHz, ±75kHz deviation.
14. Detune generator frequency for 0.5VDC at PS. Disconnect jumper between P3 and P4 to turn AFC on. DC LVDT should indicate OVDC ±200mV.
15. Reconnect jumper between P3 and P4 and detune generator for −0.5VDC at P5. Remove jumper. Meter should indicate OVDC ±200mV. Disconnect test equipment.

**AM ALIGNMENT**

1. Set SELECTOR switch to AM. Turn VOLUME control to minimum.
2. (Connect 455kHz sweep generator through 0.1μF to P19. Connect scope through 220kΩ to P6.
3. Adjust cores of L14, L13, L11, and L10 for maximum gain and symmetry.
4. Disconnect sweep generator. Connect AM signal generator through 220kΩ to P19. Connect scope and AC LVDT to RIGHT RCOR OUT jack.
5. Set generator frequency and dial pointer accurately to 800kHz. Modulate generator with 400kHz, 30% modulation. Connect a short jumper between P21 and chassis. Adjust oscillator coil L12 for maximum amplitude.
6. Set generator frequency and dial pointer accurately to 1400kHz. Adjust oscillator trimmer TCS for maximum amplitude.
7. Repeat (A) and (B) for accurate dial calibration and maximum gain.
8. Disconnect jumper connection P21 and chassis. Disconnect AM signal generator to AM ANT. terminal. Open GND link. Tune receiver to generator frequency at 800kHz. Modulate generator with 400kHz, 30% modulation.
9. Blend the wax. Holding the coil to the ferrite antenna, shift the coil for maximum audio indication. To secure coil in position, remelt wax. (Connect LVDT to PS. Tune receiver to generator frequency at 1400kHz. Adjust antenna trimmer TC4 for maximum audio.

**Diagram:**

- [Diagram Image]