

## 9. ADJUSTMENTS

### 9.1 AM TUNER

1. Set function switch to AM.
2. Connect AM signal generator through 1k-ohm resistor to AM antenna terminal.
3. Set DUPLICATE switch to OFF and connect an AC voltmeter to TAPE 1 REC jacks.
4. Set AM SG for 400Hz 30% modulation 100dB output.
5. Set SX-950 dial indication and AM SG frequency for 600kHz.
6. Adjust T8 core for maximum reading on AC voltmeter.
7. Set SX-950 dial indication and AM SG frequency for 1,400kHz.
8. Adjust TC5 for maximum reading on AC voltmeter.
9. Set AM SG for 30dB output.
10. Set SX-950 dial indication and AM SG frequency for 600kHz.
11. Adjust T7, T8 and bar antenna core for maximum reading on AC voltmeter.
12. Set SX-950 dial indication and AM SG frequency for 1,400kHz.
13. Adjust TC5, TC6 and TC7 for maximum reading on AC voltmeter.
14. Repeat steps 10~13 to eliminate variations in AC voltmeter readings.

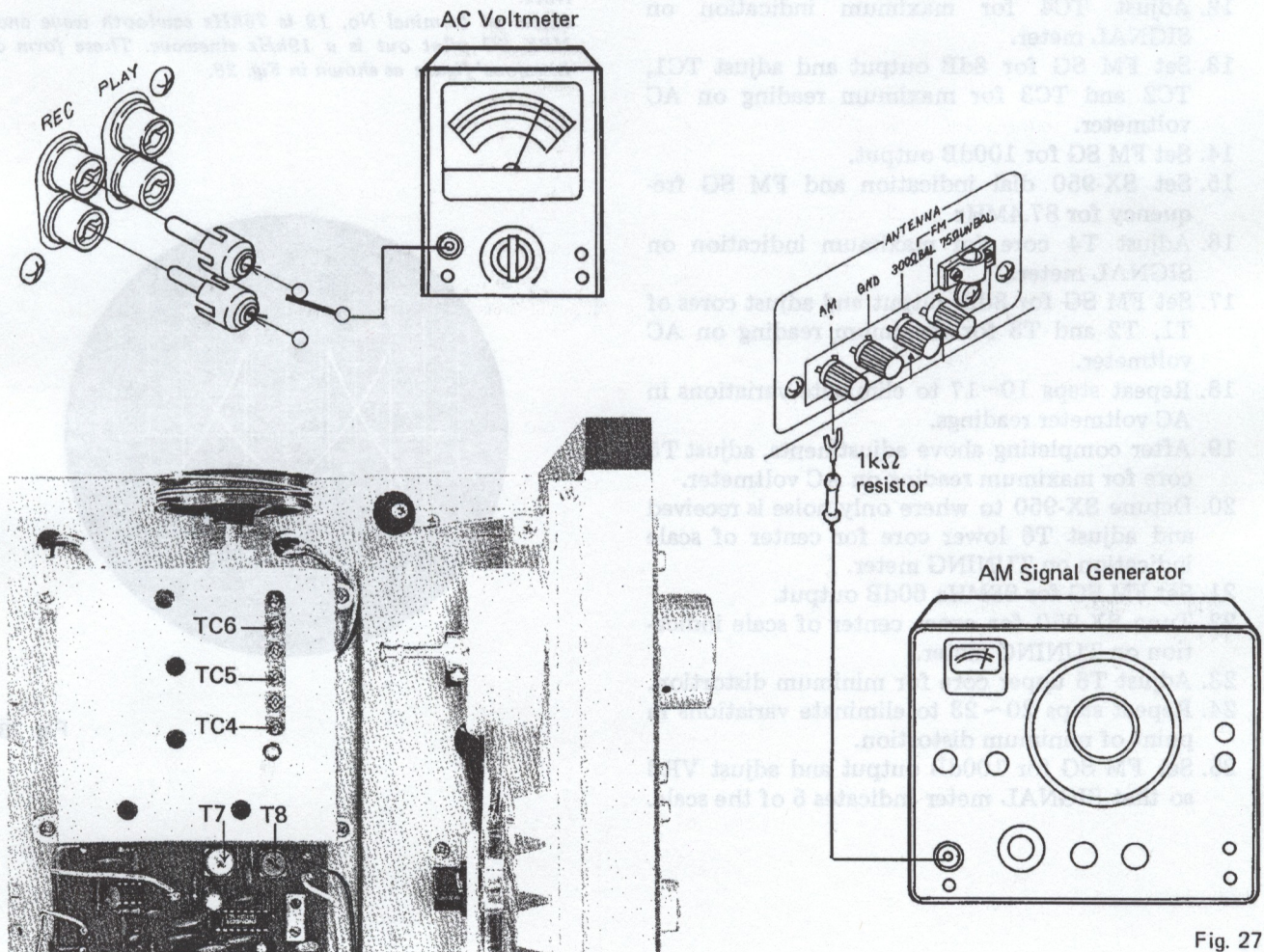


Fig. 27



## 9.2 FM TUNER

1. Set function switch to FM.
2. Set FM MUTING switch to OFF.
3. Connect FM signal generator through 300-ohm dummy load to 300 ohm FM antenna terminals.
4. Set DUPLICATE switch to OFF and connect AC voltmeter to TAPE 1 REC jacks.
5. Set FM SG for 100dB output at 400Hz and 100% modulation.
6. Set SX-950 dial indication and FM SG frequency for 87.4MHz.
7. Adjust T4 core for maximum indication on SIGNAL meter.
8. Adjust T6 lower core for center of scale indication on TUNING meter.
9. Set FM SG for 8dB output and adjust cores of T1, T2, and T3 for maximum reading on AC voltmeter.
10. Set FM SG for 100dB output.
11. Set SX-950 dial indication and FM SG frequency for 106MHz.
12. Adjust TC4 for maximum indication on SIGNAL meter.
13. Set FM SG for 8dB output and adjust TC1, TC2 and TC3 for maximum reading on AC voltmeter.
14. Set FM SG for 100dB output.
15. Set SX-950 dial indication and FM SG frequency for 87.4MHz.
16. Adjust T4 core for maximum indication on SIGNAL meter.
17. Set FM SG for 8dB output and adjust cores of T1, T2 and T3 for maximum reading on AC voltmeter.
18. Repeat steps 10~17 to eliminate variations in AC voltmeter readings.
19. After completing above adjustments, adjust T5 core for maximum reading on AC voltmeter.
20. Detune SX-950 to where only noise is received and adjust T6 lower core for center of scale indication on TUNING meter.
21. Set FM SG for 98MHz 60dB output.
22. Tune SX-950 for exact center of scale indication on TUNING meter.
23. Adjust T6 upper core for minimum distortion.
24. Repeat steps 20~23 to eliminate variations in point of minimum distortion.
25. Set FM SG for 100dB output and adjust VR3 so that SIGNAL meter indicates 5 of the scale.

## Multiplex Decoder

26. Connect MPX SG (multiplex signal generator) to the external modulator terminals of the FM SG and set the FM SG for external modulation.
27. Connect PILOT OUT terminal of MPX SG to horizontal input terminal of oscilloscope.
28. Through probe, connect oscilloscope vertical input terminal to terminal No. 19.
29. Set FM SG for 98MHz 60dB output unmodulated.
30. Tune SX-950 for exact center of scale indication on TUNING meter.
31. Adjust VR1 so that 4 : 1 frequency ratio Lissajous' (see note below) figure becomes stationary.
32. Set FM SG for 1kHz (L or R),  $\pm 67.5\text{kHz}$  deviation, 19kHz (pilot signal) and  $\pm 7.5\text{kHz}$  modulation.
33. Adjust VR2 for minimum L-R crosstalk.

### Note:

Signal at terminal No. 19 is 76kHz sawtooth wave and MPX SG pilot out is a 19kHz sinewave. These form a Lissajous' figure as shown in Fig. 28.

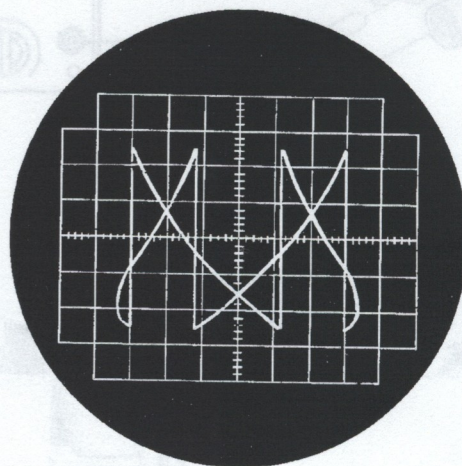


Fig. 28



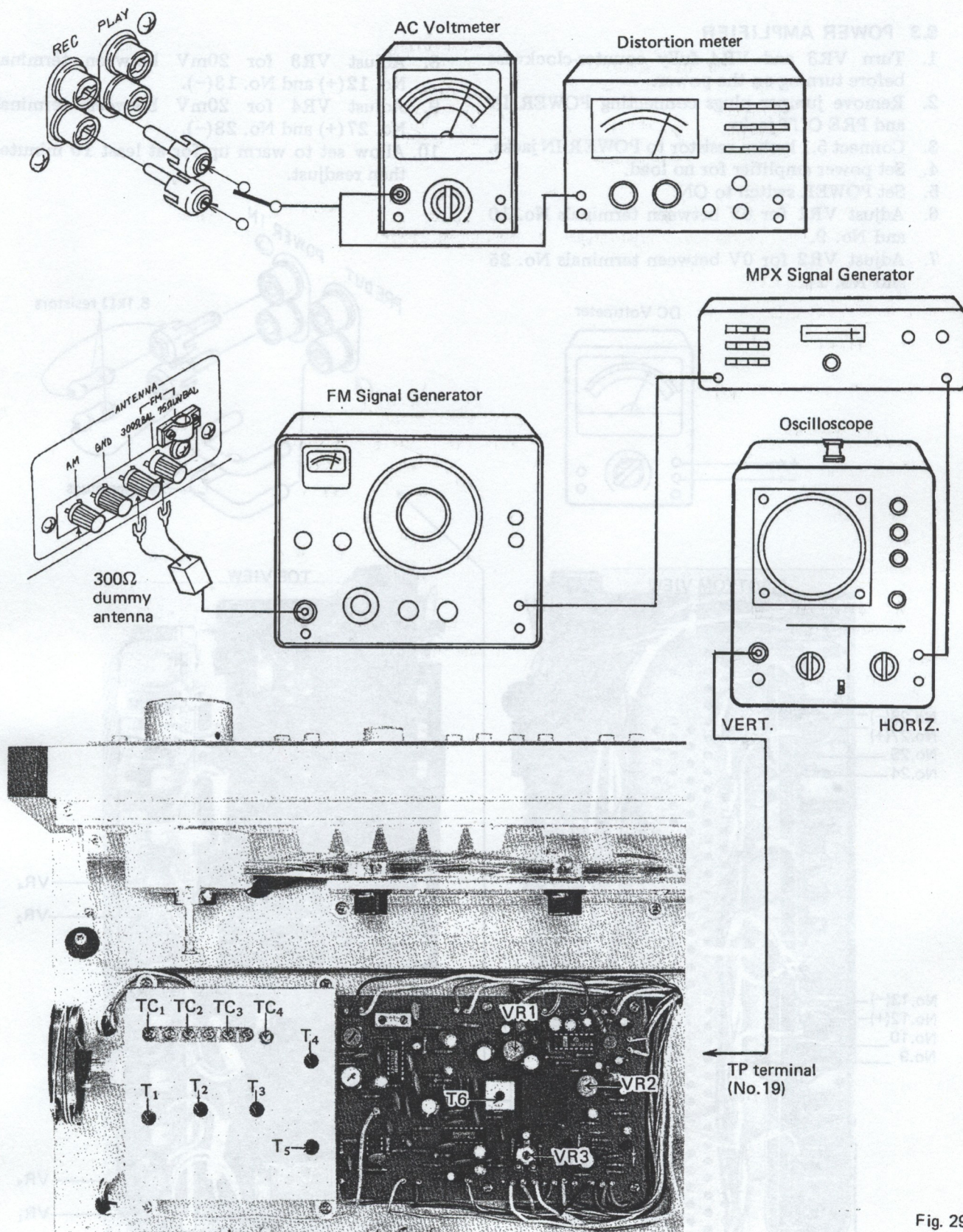


Fig. 29



### 9.3 POWER AMPLIFIER

1. Turn VR3 and VR4 fully counter-clockwise before turning on the power.
2. Remove jumper plugs connecting POWER IN and PRE OUT jacks.
3. Connect 5.1 k-ohm resistor to POWER IN jacks.
4. Set power amplifier for no load.
5. Set POWER switch to ON.
6. Adjust VR1 for 0V between terminals No. 10 and No. 9.
7. Adjust VR2 for 0V between terminals No. 25 and No. 24.
8. Adjust VR3 for 20mV between terminals No. 12(+) and No. 13(-).
9. Adjust VR4 for 20mV between terminals No. 27(+) and No. 28(-).
10. Allow set to warm up for at least 10 minutes, then readjust.

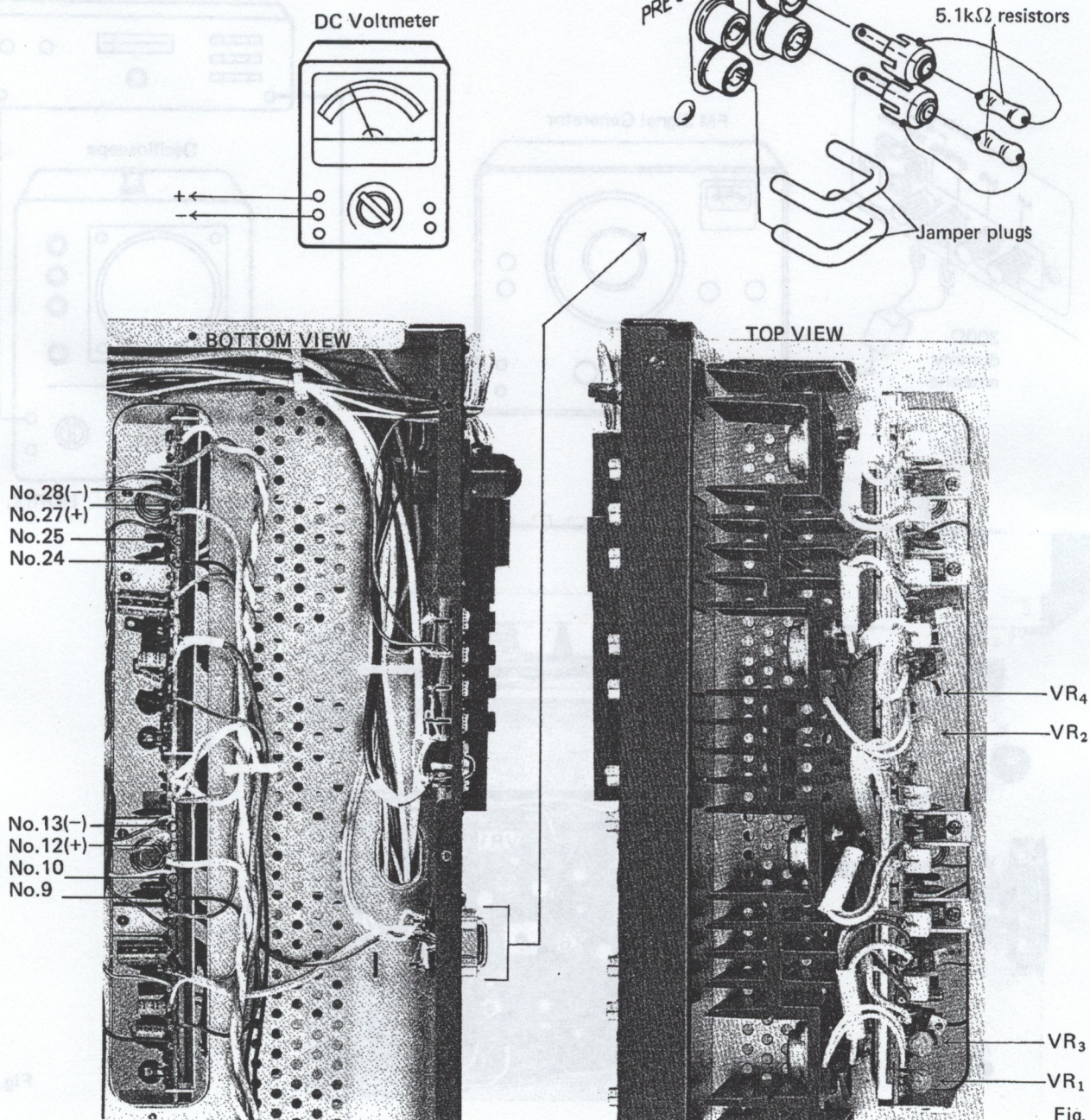


Fig. 30