in tuning, this control may be pre-set to the previously determined position.

**Note** Up to now the transmitter has been "idling," and there has been no particular time limit involved. The following steps apply grid drive, and require caution. Observe, the recommended 30 second time limit.

(4) With the function switch still in REC. position, again press the Mic. button and:

a. Set the CAR. BAL. control to 3 o'clock or 9 o'clock.

b. Rotate the DRIVER control for maximum meter reading.

c. *Immediately* rotate the P.A. TUNE control for minimum meter reading, or "dip." This is the critical "resonating" adjustment which *must be done quickly* to preserve P.A. tube life!

d. Re-adjust CAR. BAL. for minimum meter reading.

(5.) Switch to TUNE position and observe meter reading. Begin advancing the P.A. LOAD control clockwise in small steps, each time "dipping" the P.A. TUNE control for minimum meter reading. As P.A. LOAD is turned further clockwise, the P.A. TUNE "dip" will become more shallow, until finally it may be difficult to see the dip.

The proper degree of loading is when the dip is about 10 per cent down from the maximum off-resonance reading. In other words, if the meter reads 200 Ma. when P.A. TUNE is off resonance, it should dip to about 180 Ma. at resonance. Or, if the meter reads 250 Ma. off resonance, then adjust P.A. LOAD so that P.A. TUNE dips to 225 Ma. at resonance. Refer to chart below for additional clarification.

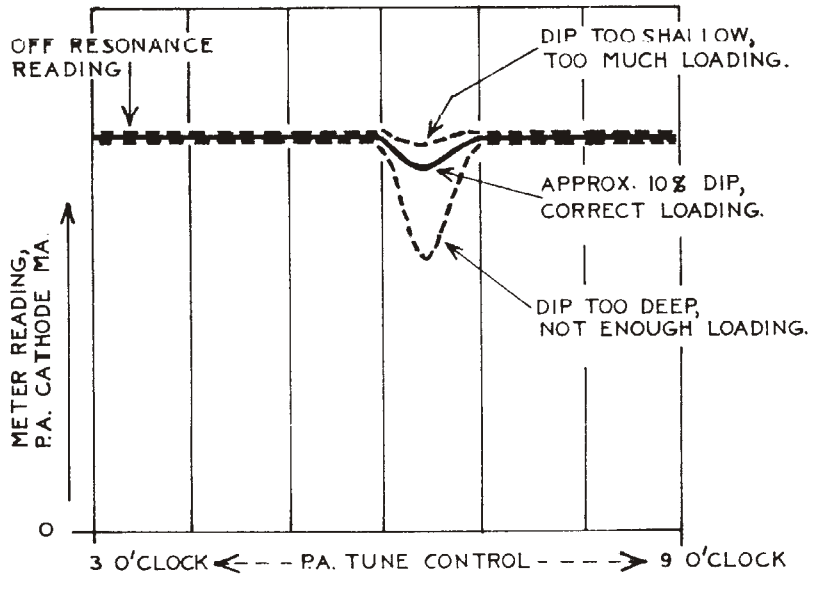
The specific meter reading is not vitally important, and may vary considerably, being less on 10 meters than on 80 meters. Also, tube condition and line voltage can affect the meter reading. It will normally read 200 Ma. or more when off resonance. With high line voltage and new tubes it may be as high as 300 Ma. Remember, the P.A. should never be held out of resonance for more than a second or two, just long enough to observe the meter reading and tune for the dip.

(6.) The preceding Step completes Transmitter Tuning procedure. Return the function Switch to REC. position.

Note that the 270B operates at reduced power in TUNE-CW mode. The P.A. cathode bias resistor, R. . . . . is in the circuit during TUNE and CW operation. In voice mode the bias resistor is shorted out, and the 270B operates at full P.E.P. input rating.

## VOICE TRANSMISSION

After tuning up as outlined above, switch to REC. position. Press the microphone switch and then carefully




ILLUSTRATING PROPER P.A. LOAD ADJUSTMENT AS INDICATED BY "DIP" IN P.A. CATHODE CURRENT WHEN TURNING P.A. TUNE CONTROL THROUGH RESONANCE.