

# Field Engineering Bulletin

**AMPRO  Scully**

Professional Equipment for Broadcasting Professionals  
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TITLE: BIAS OSCILLATOR SET-UP PROCEDURE

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Date: March 12, 1980

Model: All 280B's

Number: 307

PURPOSE: To prevent overheating and destruction of components on Bias OSC. PWA.

APPLICABILITY: All 280B Models

DISCUSSION:

It has come to the factory's attention that many units may be misaligned in the field leading to severe overheating condition and breakdown of certain components on the BIAS OSC. PWA. Excessive examples have also caused destruction of the Erase Head Matching Network as well.

Of key concern and failure are: Q1, Q5 and R1 on the Bias Oscillator/Regulator Board.

Our service manual and related schematics call for a 40 volt P-P reading at TP-1; however, this has been mistakenly interpreted as an RMS voltage indication by some users.

It should be pointed out that most VPM's and VOM's are simply not frequency sensitive in the high region employed (160khz) in our circuits. Therefore, it is mandatory that the Bias Amplitude be set with an oscilloscope as follows:

1. Open the electronics drawer and locate (on the far right side) the Bias OSC. PWA.
2. Locate TP-1 (yellow test point) and R-10 (Bias Gain).
3. Connect scope probe between TP 1 and Ground (chassis sufficient).
4. Adjust R-10 for 40 volts P-P and observe wave form.
5. If unable to obtain a sinusoidal shape with no distortion or ringing, REDUCE THE BIAS GAIN CONTROL until a pure sinewave is obtained.