

## 106A AMPLIFIER — DESCRIPTION

### 1. GENERAL

1.00 This addendum to Issue 1 of Section 024-102-100 is issued to advise that the 3A Noise Measuring Set may be used in place of the 2B Noise Measuring Set, for the measurements outlined in this practice. It also discusses the relationship between dbrn and dba and shows how to express in terms of dbrn (3A NMS readings), the noise requirements given in this practice.

1.01 Noise measured with a 2B NMS, using F1A Weighting, is expressed in dba. Noise measured with the 3A NMS is expressed in dbrn. The numerical values of the readings on the two sets will not be the same because of the differences in the frequency response of the two weighting networks. Hence, there is no fixed conversion from dba to dbrn. Where readings on both sets are available, those taken on the 3A set give a more accurate indication of the circuit noise.

1.02 In general terms, the numerical value of metallic circuit noise rated in dbrn, as measured on the 3A NMS with C-Message

Weighting, will be about 6 db higher than the numerical value of the same noise in dba, when measured with a 2B NMS F1A Weighting. Expressed in terms of *meter readings*, the 3A NMS (C-Mess.) will read about 13 db higher than the 2B NMS, F1A Weighting. Table I indicates how the noise requirements, objectives, meter readings, or dba (associated with the 2B NMS) as given in the practice may be adjusted to obtain the equivalent in dbrn associated with the 3A NMS.

1.03 The 3A NMS (C-Message Weighting) may be used for voice frequency crosstalk measurements. Use Table C in Section E40.465/A702.644 to separate the noise and crosstalk in dbrn.

1.04 The 3A NMS and its operating features are described in Section E40.465/A702.644. The 2B NMS is covered in the E40.459 Series. Frequency Weighting curves for each of the sets are included in the respective practices.

TABLE I  
Equivalent Noise Requirements and Network Weightings  
Using the 3A NMS in Place of the 2B NMS

EQUIVALENT WEIGHTING		TO CHANGE NOISE REQUIREMENT, ETC., STATED IN THE PRACTICE, FROM:	
2B NMS	3A NMS	DBA (F1A) TO DBRN	METER READING* (2B NMS) TO DBRN
F1A	C-Message	Add 6	Add 13
Flat	3 KC Flat	—	Subtract 16
Prog	Prog	— See Note	—

\* Uncorrected

**Note:** Where the requirement in the Practice is stated in db above Reference Noise, no change is necessary.