

More Gremlins

SIR:

I have found Mr. Bosselaers' article, "Designing a transistorized preamp," (January, 1961), both interesting and informative. However, there appear to be several errors which need correction. They are as follows:

Page 26, third column—

$$N = \sqrt{\frac{10 V}{d_f}} \text{ should read } N = \sqrt{\frac{10 V}{d_s}}$$

$$R_s = (N - 1)r_e = (N - 1)(2/I_e) \text{ should read } R_s = (N - 1)r_e = (N - 1)(26/I_e)$$

$$\frac{R_s + I_e}{2200} \times 100 \text{ } \mu\text{sec} = \frac{680 + 52}{2200} \times 100 \text{ } \mu\text{sec} = 33 \text{ } \mu\text{sec}$$

$$\text{should read } \frac{R_s + r_e}{2200} \times 100 \text{ } \mu\text{sec} = \text{etc.}$$

$$T_e R_s + 180 \text{ } \mu\text{sec} = 460 \text{ } \mu\text{sec} \text{ should read}$$

$$I_e R_s + 120 \text{ } \mu\text{sec} = 460 \text{ } \mu\text{sec.}$$

$$R_s = 6.6 R_e \text{ should read } R_s = 6.6 R_1$$

Resistors should have been marked on the drawing in Fig. 3. R_1 is 56k and R_2 is 9100 in base circuit of upper left transistor. R_3 is 680-ohm resistor in emitter circuit. R_4 is 680k resistor from ceramic input. Capacitor values associated with the ceramic input and with the two high-level inputs should be in micro-microfarads (picofarads) instead of in farads as shown.

Page 62, second column—

In the second line, the equation should read

$$\left(\frac{2}{0.1} - 1 \right) 36,000 = 684,000$$

In the appendix,

$$kT(m \cos \alpha t - \frac{1}{4} m' \cos \beta_1 t)$$

should be divided by "q".

The last formula on the page should read

$$d_s = \frac{qV}{kT} \times \frac{I}{IN^2} = \frac{10V}{N^2}$$

I am also puzzled by the author's high-frequency corrections at the ceramic and high-level inputs. He states that $R_1C = 7$ microseconds; and thus he gets $C = 10$ picofarads for $R_1 = 680,000$ ohms. Since 7 microseconds corresponds to about 23,000 cps, I fail to see a reason for making $R_1C = 7$ microseconds.

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(We agree that 23,000 cps seems like too high a frequency to compensate for, and we have asked Mr. Boasclaw for further comment. Ed.)