Further notes on the self-setting time code clock

The following list of corrections and explanations will be helpful to readers of the time code clock articles in the August, September and October issues.

Receiver Fig. 1.
The ten turn potentiometer can be a 200 or 500 ohm cermet type. Signal strength meter movement should be 100μA .f.s.d. The capacitor across T_1 primary should be 4,700pF not 47n.

Decoder Fig. 4.
The capacitor across pins 10 and 11 of IC_7, and C_2 should be non polarized types. IC_{12b} is half of a 7420 and not a 7470 also, pin 11 should be pin 13. Emitter resistor of Tr_5 should be 4k7 and not 47kΩ as shown. The resistor on pin 2 of IC_{9d} is 1kΩ.

Seconds counter Fig. 6.
The transistor on pin 5 of IC_{15}, and Tr_9 are both BC182 types. IC_{17} is a 7400. Two gates are marked IC_{17a}, but pins 11, 12 and 13 should be 17d. C_4 and the capacitor between pins 10 and 11 of IC_{15} are both tantalum. On the last-mentioned the positive end goes to pin 11. The pin numbering of the 747 displays is incorrect. Connections as shown in Fig. 11 should be followed.

GMT to BST converter Fig. 9.
The i.c. numbering does not follow on from previous diagrams. IC_{23} is a 7400, IC_{24} a 7408, IC_{25} a 7432, IC_{26} a 7486, and IC_{27} is a 7240.

Components list
IC marked SN7412N should be 74121.

Because the op-amps in the receiver are used with an unconventional supply it is possible that IC_3 will not fall below 2V in the no signal condition. This produces a permanent a.g.c. voltage on the emitter of Tr_1 and, hence, a reduction in gain. Several popular brands have been tried successfully in the design but Texas types are recommended throughout. Alternatively, the bias on Tr_1 can be altered to increase the base voltage to around 3V.