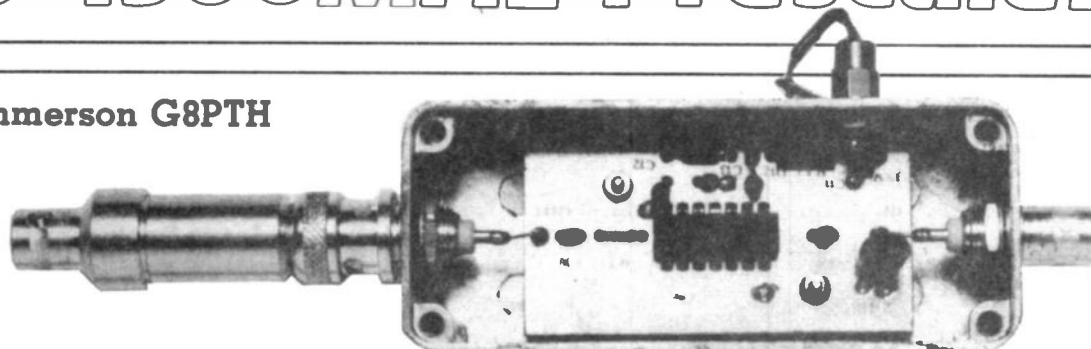


REVIEW:

Research Communications 9056 1500MHz Prescaler

By Andrew Emmerson G8PTH



Many people are exploring the delights of 23 centimetres and higher bands these days, and sooner or later the need for some kind of frequency counter crops up. For some purposes a cavity wavemeter will suffice, though even these are becoming less easy to find these days. However, for tuning up transistor oscillators, checking small signals and so on an electronic frequency counter is not a luxury, it is essential.

Frequency counters covering a Gigahertz and beyond do not come cheap, however, nor are they to be found in the average ham store. So the resourceful amateur has to find a cheaper means to the end, which has to be a prescaler. This is an add-on device connected between the frequency source to be measured and the actual counter and divides the frequency by a factor of 10, 64, 100 or whatever. Until now prescalers have been awkward things to build: although there are some integrated circuits around (particularly some Plessey devices) they have not been cheap. Things may change now that more and more TV tuners use synthesiser techniques, and in fact some lower cost divider ICs are now available. The snag is that they divide by 'silly' factors such as 64, so that to use them with an existing counter you have to break into your counter's timebase and make that switchable.

Life seems too short for that so the search was on for a genuine divide-by-ten prescaler which needed no alterations to the counter.

The quest ended when I discovered Research Communications Ltd. This is a small specialist firm which makes a number of amplifiers and preamps to very high specifications, the proprietor being ex-G3JXK. The type 9056 prescaler is described as a 1500MHz divide by ten device: it is guaranteed to work over a range from 100 to 1500MHz and in fact should normally work up to 1.8GHz. It costs £59.50 plus £2 for postage and packing; VAT is extra.

So a cheque for £70.73 went off and back came a tiny diecast box containing a Plessey IC and a few voltage regulation and protection components. The finish and construction is extremely neat, the box being finished in a pale grey sand paint. BNC connectors are fitted and an external 12 volt supply is required. The sensitivity is quoted as 100mV and max-

imum input signal 1.0 volt. I have had my unit in regular use for several months now with excellent results. I use a Thandar 200MHz counter, so this prescaler is very useful for checking 70cm and its harmonics as well as 23cm. No problems have been experienced, although the unit does get quite hot (I am told this is normal and a unit has been on soak test for over a month at the factory).

The manufacturer recommends connecting a 50 ohm through termination (available from RS Components) between the prescaler and the counter. For a probe he suggests a metre length of 50 ohm coax terminated in a single turn loop of insulated bell-wire about 5mm diameter. These arrangements work well for me and I can recommend this prescaler without reservation.

Research Communications Ltd., Unit 3, Dane John Works, Gordon Road, Canterbury, Kent, CT1 3PP. Telephone Canterbury (0227) 56489.

