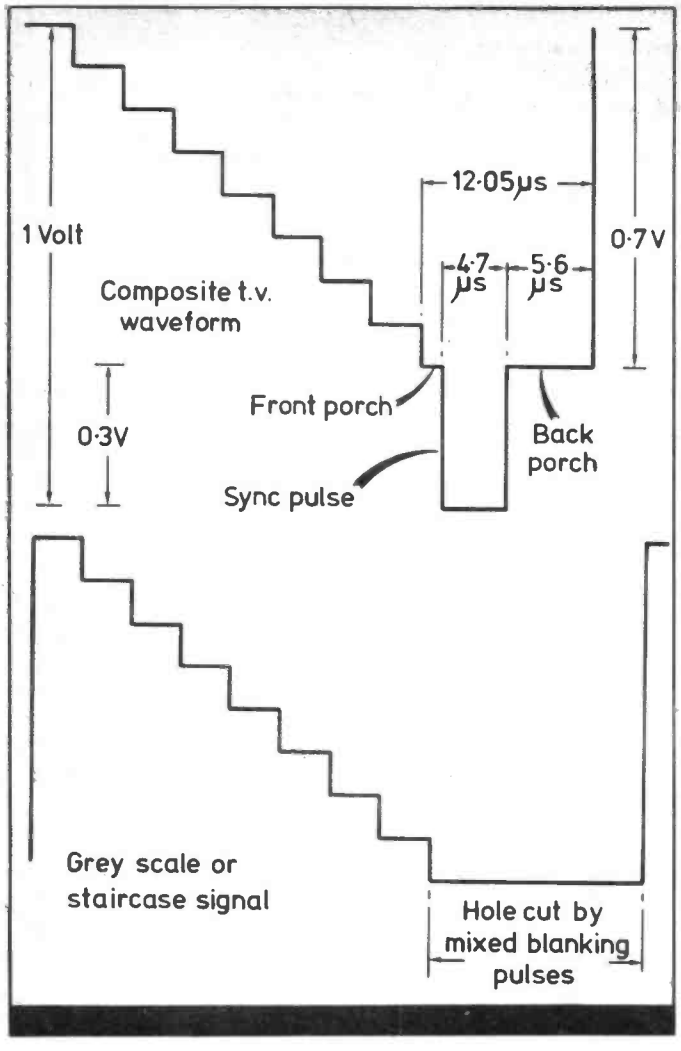

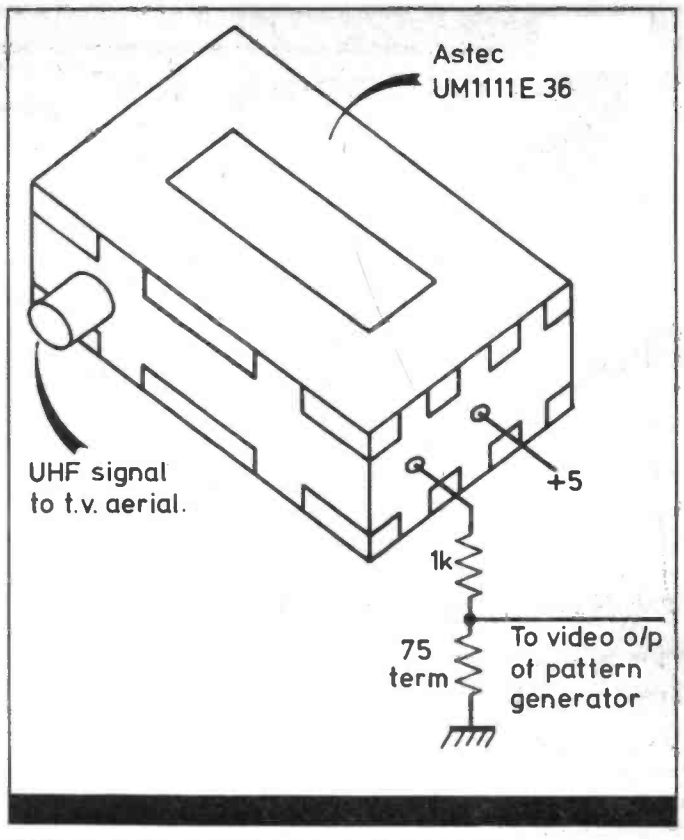

Although the module shown here in many ways forms the basis of an ATV station – the sync function is fundamental to operation – it can be used as an independent piece of test gear by hooking the video output into a UHF modulator of the home computer type. It also enables testing of the board with a domestic TV

picture, one before the sync pulse, called Front Porch and one after called Back Porch. I have included timings and levels for checking the video output should an oscilloscope be available for viewing the video signal. The output of TR2 is low impedance, and a series resistor is included to restore the output impedance to 75 ohm. The output must be terminated in a 75 ohm resistor before any measurements can be taken. C2 C3 R4 and R5 are part of a low pass filter to stop any out of band transients reaching the video output. If the generator is only required for TV service work and not to drive a transmitter then they can be omitted.

IC2 is not necessary to the working of the pattern generator, its only purpose is to provide blanking and sync pulses at a standard level of 2V P to P when terminated in 75 ohm. These pulses will be used by modules yet to be described. If the pattern generator is not to be part of a TV station then IC2 can be omitted.

The two inputs marked X and Y are where next months electronic callsign generator connect to, for now just leave them floating.

One way to check your pattern generator is to couple it up to an ASTEC UHF modulator and view the result on your TV set. The UM 1111 E36 is the most commonly available of a whole range of modules supplied by ASTEC. These units are fairly inexpensive and seem to be quite widely used by the home computer manufacturers as a way of interfacing their machines to your TV set in order to display their little green men etc.

The UM 1111 E36 is a module about 1½" × 1" × ¾", the metal-can is connected to earth. The module has two other input Pins, the one in the centre connects to +5, the other being video input.

The level often needs adjusting to this and I have included a small resistor about 1K in series with the video input pin. If white crushing occurs when viewing grey scale then the 1K resistor needs its value increasing. If no white crushing is evident then you may be able to reduce the resistor which may increase your contrast slightly.

I have deliberately not gone in to too much depth in my circuit description or explanation to Television in general. If you feel Television engineering appeals to you, in particular amateur television, the British Amateur Television Club produce an excellent quarterly magazine called CQ-TV which is sent to all members. The annual subscription is £4 per year and details can be obtained from Mr. B. Summers G8GQS, 13 Church Street, Gainsborough, Lincs. The British Amateur Television Club also have published two Handbooks called Amateur Television Volume 1 and Volume 2. Volume 1 has an excellent introductory chapter for the beginner. Please enclose S.A.E. to Mr. I. Pawson G8IQU for further details.

In next months issue I show the construction of an electronic callsign generator and will be showing you how to superimpose its output across the test pattern generator. ●