



Typical of the seventy-centimetre ATV transmitters on the market is this model from Fortop Ltd.. It

delivers 15 watts output and costs £148.50 including VAT.

67, RG-8 or RG-213 types of cable are the minimum standard of cable, with BNC or N-type connectors. New prices for these are high, but you will find very good prices at rallies and W.H. Westlake does some excellent bargains in the cable line. A good aerial means something like the Jaybeam MBM48/70 which is used worldwide and is ideal. Alternatives are the Tonna ATV aerial or the Jaybeam 8 over 8 design. Their 88 element design has more gain but this is offset by the larger size, higher price and narrower forward beamwidth; it's not for the beginner. A masthead preamplifier is a great help, but unless you use separate transmit and receive aerials (extravagant) you'll need some kind of relay or RF switching mechanism to put it out of circuit when you are transmitting through the aerial. For watching transmission you will need either a TV which tunes 70cm (a lot of modern ones do, particularly Japanese ones) or else a receive converter which transfers the incoming ATV signals to channel 38 or 40 so you can watch them on a normal TV (ideal if it is rented). Use a decent TV of course, not some old wreck which may be totally insensitive.

For producing video signals you are bound to want a camera. If you are satisfied with monochrome, there are a lot of Japanese home video cameras being dumped at silly prices (£75 or less) or you can

pick up secondhand examples for less (see Exchange and Mart). Used surveillance cameras can be picked up at amateur radio rallies for prices of £35 upwards and can be good bargains, though you should make sure a lens is supplied otherwise you can end up spending more on the lens than on the camera if you buy new. Cameras and other equipment are often advertised in *CQ-TV*, the magazine of the BATC, another reason for joining. Construction kits for cameras are seldom good value. Colour cameras seem to be coming more common in ATV shacks nowadays and you may find a good bargain in home video shops. Of course, if you are already into home video production you may have this sort of thing to hand anyway.

### The right equipment

You will want a monitor for watching and checking your video. One is essential two are nice but more than two may prove to be an embarrassment. If you have more than one source of video a switchable 'preview' monitor is handy. Compact small-screen monitors are pricey, say £50 upwards new, but if space is not a premium you can usually find old valve monitors for £15 or £20. These are an excellent substitute for central heating in the winter as well. But they do take up a lot of room. Test patterns, produced electronically, can be useful and can look very professional if, for in-

stance you build the BATC design of colour testcard. They save using (and getting out) the camera, and the simple designs are cheap to build using TTL chips. The BATC Handbook volume 1 has some excellent designs, and you can get this book from the BATC or the RSGB. A video recorder is also a great advantage in the shack: you can use to capture on tape those rare DX contacts and to prepare demo tapes of a conducted tour of the shack. If you get, say, a Beta or VHS machine, even a cheap secondhand or obsolete model, you will be able to swap tapes with others — and record programmes off normal TV. Buying an old black and white reel to reel recorder may not turn out to be a bargain. Prices start at £50 but spares and tapes may be hard to find, and some are 405 line machines (but the seller doesn't tell you). Try and get a written guarantee if you buy an old machine.

When you start transmitting you will need a transmitter (that's pretty obvious) plus some other gadgets (which are not so obvious). Commercially made transmitters, although a newish phenomenon, are quite easy to pick up nowadays and this has made it possible for a lot of new ATVers to get on the air. There is nothing wrong in using off-the-shelf gear when it comes to transmitting ATV: UHF construction techniques are not easily learned from books, and you can spend a lot of time and/or money building a project which in the end still does not work. (I did.) Ten watt TV transmitters for 70cm are made commercially by Microwave Modules and Fortop Ltd.: both are good and cost around the same price. Their features are slightly different so it is worth checking out both. If you want to reduce the initial outlay you might consider the Wood and Douglas 3 watt transmitter, though you will have only local contacts with 3 watts. You can of course add a linear amplifier later to bring up the power to the normal 10 watts. Depending on how you wire up the station you may need a transmit/receive switch to connect either the transmitter or the receive converter to the aerial, but some transmitter designs have this built-in. What you will also need is an in-line video detector and oscilloscope to monitor and adjust your transmit-