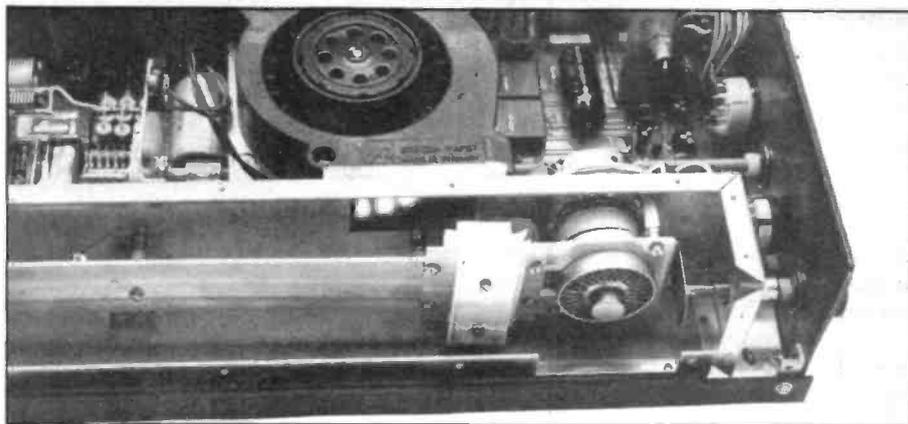


can be used in the coaxial feed to the antenna instead of using the 15V from the Dressler rig. This interface box requires connection from the main rig's PTT line, or voltage on TX line, 13V DC input, high power RF in and out on 'N' sockets, and a PTT line from the box to the Dressler. This allows the mast head pre-amp to be used when the linear is switched off and when you want to use just the exciter. When the Dressler is in circuit and switched on, its switching to TX is delayed for a few milliseconds to give the masthead pre-amp adequate time to change over. All this circuitry worked extremely well and is strongly recommended, as it is all too easy to make a mistake and blow up an expensive GaAsFET, so inaccessible at the masthead!

Extremely good protection is provided against 'wally' problems. First of all, when switching the rig to standby the 'ready for operation' light is held off for 80 seconds, by which time the valve is well and truly ready for giving of its best. In the operate position everything is normal, whilst when switched to the preamp position 15V is put onto the antenna line on RX. Three LEDs show the operational state, a green one indicating that the linear is ready to operate, a red one showing the linear is on TX, and a flashing red one indicating that the safety cutout circuits are in operation because of excessive heat, too high a current is being drawn, or something that is clearly not right that is being monitored by the protection circuits.

Instructions and operation

The instruction book is very badly translated from German to English and this is totally ridiculous since only about 2 hours work would have been required for a knowledgeable British amateur to have re-written it. There are many points about the instructions that are either over optimistic or not optimum, and I feel a few examples might be of interest: On SSB, the rig is claimed to have a good intermodulation performance at up to 700/750W PEP output. It also infers that it can give short bursts at up to 1kW with degraded IM performance. I feel these specifications are ludicrous, for whilst you might get the amount of power stated, you will finish off the valve remarkably quickly. What really matters is the performance of the equipment within



Air from the fan goes through the anode fins and a chimney (not shown)

the licence regulations established in the UK, allowing for a small loss in the coax feed to the antenna of up to a dB or so. The instructions state that the low gain input should always be used, together with the attenuation facility, unless very high output powers are required, ie up to 1kW. I totally disagree with this, since the whole idea of the Dressler is to develop a really good clean signal at high level. If you drive your exciter black box, or transverter, at 10W or so to get 500W output PEP, thus giving 400W (26dBW) at the antenna, you will be working your driver flat out with relatively high IM products. I have been using for almost all the subjective tests a Microwave Modules transverter, cut down to only just above 1W drive, feeding into the high gain input straight onto the grid circuitry of the 350A for maximum power transfer. By operating the transverter at such a low level, IM products are at very low levels indeed into the linear, which therefore works at its best. I would, therefore, strongly advise Dressler owners to do likewise, and if necessary fit a control into their main driver rig to cut its power right down and operate the driver PA more linearly.

There is insufficient detail in the instruction book concerning the linear's electronic circuitry, which is a pity since space precludes discussing this in too much detail here. The instructions claim that the valve is not covered by the Dressler warranty but by Eimac's own one. Clearly Dressler is not conversant with British law, for the purchaser has his main claim, when things go wrong, on the dealer who sold the rig to him. If it can be shown that in the opinion of the Trading Standards Organisation Dressler's instructions and specifications could lead to the

valve being overrun, and thus its life greatly shortened, there could be a claim on the dealer. My own advice is to use the linear at not more than 550W PEP under all circumstances, and keep normal output down to around 400W PEP on SSB. On FM, you cannot run more than 100W at the antenna, and so if you have a 3dB cable loss, then you might run the Dressler at 200W quite safely on FM, but I would not advise much more. If you are using a compressor or clipper, then you will have to remember that the average width of the transmission may increase and so I suggest keeping the PEP down to around 400W. When using the compressor, you will be increasing the duty cycle very appreciably, and it is under these circumstances that the blower proves to be insufficient, blowing out very hot air indeed.

In tuning up I found it best to get an approximate tune position at a low level for maximum gain, and then go up to a power level above that which you would want to use, and tune up as rapidly as possible for maximum 'smoke'. I suggest that whilst doing this you watch anode current very carefully, and avoid transmitting carrier for more than five seconds in 15 seconds. If this is done for an output carrier of 550W for example, you will then find the rig to be very linear indeed at lower levels, although it may not be operating at maximum gain. Such gain, if attempted, often leads to insufficient loading.

Subjective comments

When I first received this linear, several weeks before writing this review, I ran it at about 300W PEP output for some considerable time, driving it with around 5W PEP from my Microwave Modules transverter