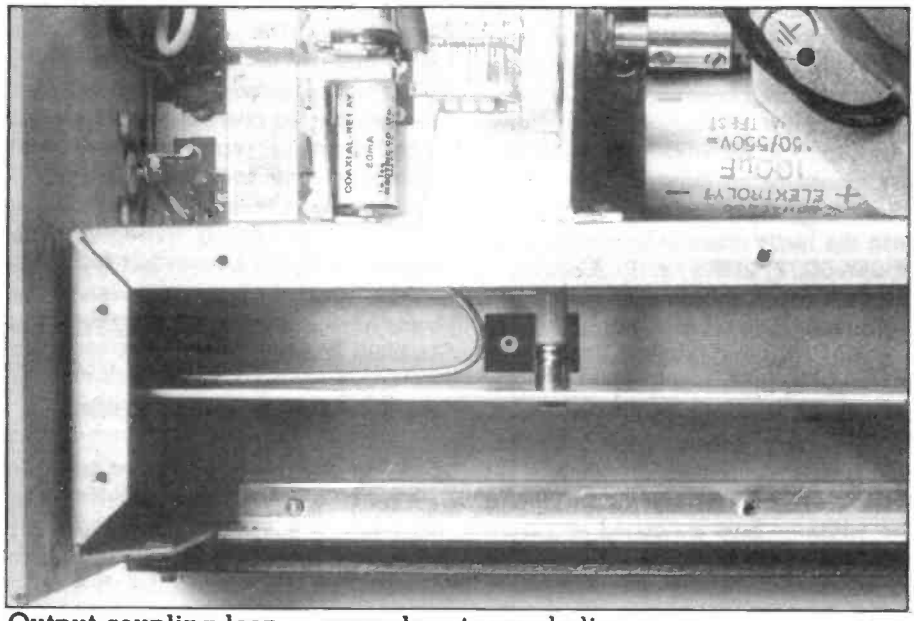
into its low gain input. RF sensing was used initially, and the attack was not always sufficiently positive, suggesting inadequate RF sensing sensitivity. This was later confirmed in the laboratory. I, therefore, connected up the PTT line in the normal way and this worked admirably. I received in general very good reports indeed on the quality of the transmission, other than from locals who complained that it was just slightly wide, although no worse than my normal transmissions with the Fischer linear at the same power level, which is reasonable, and itself far better than any transistor linear that I have used or tested. Having got to know the beast, I decided to change my style of assessment, and run the Microwave Modules transverter at the lowest level possible, and use the high gain input on the Dressler. At the same power level as before, at 300W PEP, there were unanimous comments, even from locals, that the transmissions were extremely narrow, other than from one amateur who had a rig with a diabolically bad front end, from memory, a *Liner 2*! At this power level the fan coped excellently, and the air never became too hot from the exhaust port. I then altered the drive from the transverter so as to set up the linear to give between 500 and 550W PEP into the antenna coax, equivalent to +26dBW at the radiator of my 17 element Tonna. The rig ran decidedly hotter, but was still just tolerable after a long over. The air cooled down quite rapidly during a reception period, which is a gained after much fiddling. Approximately 0.4A seemed to be the limit for reasonable output performance. At maximum output and with clipping the exhaust air temperature was alarmingly high, and continued to be hot for a minute or so after the beginning of the reception period, and it is this that makes me feel that the fan is slightly inadequate. Even so, I much enjoyed being given remarkably good reports from EI, GI, GM, and GW on an almost flat band!

reasonable sign. Reports were generally again very favourable indeed, as far as bandwidth is concerned, from all but the very closest stations, ie. stations receiving my transmissions at more than '30dB over 9' or so. Local stations receiving me very strongly said that it was not bad for the signal strength, and that it was tolerable, but perhaps that it should have been slightly better. When compression and clipping were also used, spreading became decidedly worse, and approached that of the average 100W transistor linear being driven correctly at 5W input. Accuracy of tuning at this stage was found to be critical, and a slight maladjustment made spreading worse, but no improvement could be



Output coupling loop – very close to anode line

Fault

After around 12 hours of use over a fortnight of operating, mainly at weekends, the linear suddenly developed a fault in that no more than 40W output could be reached. I was totally perplexed since indications were very strange on the metering, the DC conditions were completely normal, this suggesting that it was an RF output problem. On opening up the linear (taking off the top lid is very simple — only 4 screws to be unscrewed) the whole of the inside is revealed. We opened up the anode cavity, thus revealing a half wave line, one end of which is very solidly earthed to the back chassis, whilst the other end is firmly connected to the anode ring clamp via a very high voltage capacitor element. The secondary pick-up loop is connected at one end to the printed circuit board, whilst the other end feeds through the cavity wall onto the output loading capacitor, which is tweaked by a long insulated rod running from the back of the linear to the front panel. The loop was actually touching the anode line, which seemed very odd indeed, and on releasing this contact, where there had been some arcing, normal operation was restored. We positioned the loop with a gap of around 2mm from the anode line, and it is clear that it had been set so close to the line at the factory that the slightest temperature increase eventually caused contact, and Dressler should take a little bit more trouble in assembly here. In any case, I have more than a hunch that the coupling loop is not quite good enough at loading the anode line, for the indications of two tone intermodulation tests seem to suggest that heavier loading would give improved results.

I also tried the Dressler with an *IC251* multi-mode rig, having a Mutek front end. The combination worked excellently and again comments were very favourable provided the output power was held to below 500W PEP.

Finally, whilst looking at the subjective performance, I should comment that not only was the linear superb ergonomically in every way, but that the fan noise was so much quieter than most other heavy duty fans that I have encountered on big linears. The Dressler's size (320 × 110 × 390mm) should make it very easy to fit into an installation, and even its weight is not too bad at just over 8kg. Perhaps the omission of an ALC line for interconnection with many external rigs is unfortunate, but it should be easy to fit one in for yourself as there is plenty of room inside for small modifications. Incidentally, the anode tuning control was excessively stiff, the capacitor actually tuning the anode ring against earth within the cavity most effectively.