

## THE MINI-MICRO TRANSMITTER

by PETER LANKSHEAR

Have you ever wished, when demonstrating your old radios, that the programmes were from the same era? How much more appropriate would be some of the classic programmes of the 30's and 40s now available on tape, featuring your favourite old-time recordings.

The Mini-Micro Transmitter provides the answer. It is a high quality transmitter of strictly limited range which can be fed from a tape or cassette player and tuned in on a chosen frequency like a regular transmission. As a bonus your tapes, your tapes will sound much better than when hears the speaker of the usual small cassette player.

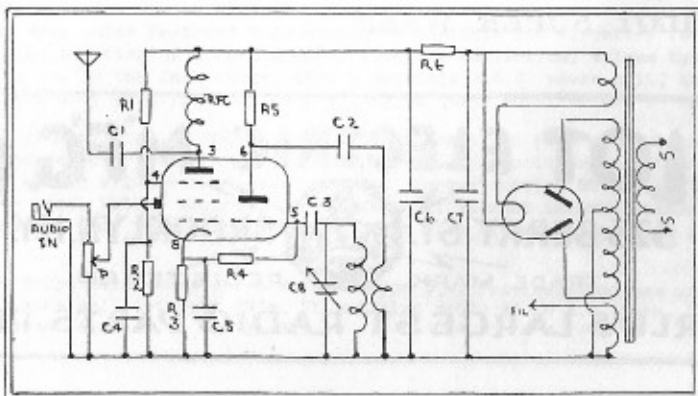
Service signal generators with external audio inputs can be used, but because the installation has to be dismantled whenever the generator is used for servicing, this method is not always satisfactory. Furthermore, not all generators have provision for external modulation and results from those that do can be quite unacceptable. The writer's generator, a popular Japanese model, required 10 volts of audio to achieve only 20% modulation, above which distortion becomes quite intolerable.

The Mini-micro is a simple device, producing a stable signal capable of up to 70% modulation with low distortion over the entire audio spectrum. One volt of audio, easily obtainable from the external output of a tape or cassette player, is sufficient to modulate it. The Mini-micro avoids the shortcomings of a simple modulated oscillator by using a frequency converter tube. The oscillator section generates a low powered carrier, and modulation is applied to the normal control grid of the mixer section. A combined signal without undesirable interaction results and is sufficient strength to cover a display area when using a yard or so of antenna.

Just about any converter tube with a separate oscillator anode can be used, the type 6K8 being very satisfactory. If a different tube is used the anode dropping resistor should be reduced to 22K ohms. It is a good idea to use an oscillator coil appropriate to the tube selected. The older pentagrid types of the 2A7/6A8 family needed more turns on the feedback winding than did later types.

Construction is not complicated and chassis layout, dimensions and component values are not critical. Setting up is quite simple. Connect a yard or so of wire to the aerial terminal and then check with a nearby receiver that there is an unmodulated carrier somewhere on the broadcast band. If there isn't, reverse the connections to one of the oscillator coil windings. Now adjust the variable capacitor to tune the carrier to a locally vacant channel (check from the low frequency end of the dial upwards to avoid confusion with harmonics). Finally, connect the tape player to the audio input socket and adjust the audio control so that the modulation is at a good level without distortion.

**WARNING** If you are at all unsure about the mains wiring get it checked out. Also, although the RF output is very small, don't use a large aerial or you may be in trouble with your local Radio Inspector.



R1=33K, R2=22K, R3=270 ohms, R4=47K, R5=39K, R6 is a 5watt W/W type which should be 6.8K for 250 volt AC secondary voltage, 8.2K for 270V, 12K for 300V, 18K for 350V, 22K for 380V. P=100K to 1Meg volume control. C1=100 to 1000pF, C2=100 to 500pF, C3=50 to 250pF, C4, C5=.01 to .1mF, 400V polyester, C6, C7=8 to 19mF, 450V, C8=variable padder about 600pF, RFC=1 to 10 millihenry, coil= B.C. osc coil.



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### NOTICES

#### MEMBERSHIP LIST

At a recent meeting of Auckland members it was unanimously agreed that a membership list should be made available for general distribution. It is therefore the intention to publish such a list in the near future.

If you do not wish your name to appear on this list then please advise the Secretary immediately. In the absence of a reply it will be assumed that you have no objection to having your name included on the list.

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#### CALLING ALL HAMS

Members of the NZVRS who are also amateur radio operators - would you be interested in taking part in regular 'skeds' on the 80 metre band with the object of furthering the hobby of vintage radio and getting to know other members with similar interests? If interested please contact: Phil McGhie, 14 Auckland Road, Warkworth. Ph WW 8864

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#### SUPPLY OF CIRCUIT DIAGRAMS

Members requiring copies of circuit diagrams are advised that the charge is \$1 for the first page, plus 25cents per page for any additional material pertaining to the same model. Add 40cents to cover handling and postage for up to 5 pages. Don't forget to quote the model number of the receiver, or where this is not known, send a sketch of the chassis lay-out, valve used and other relevant information. Enquiries to:

Bill Farmer, 26 Iriangi Rd, Auckland. Ph 665-549