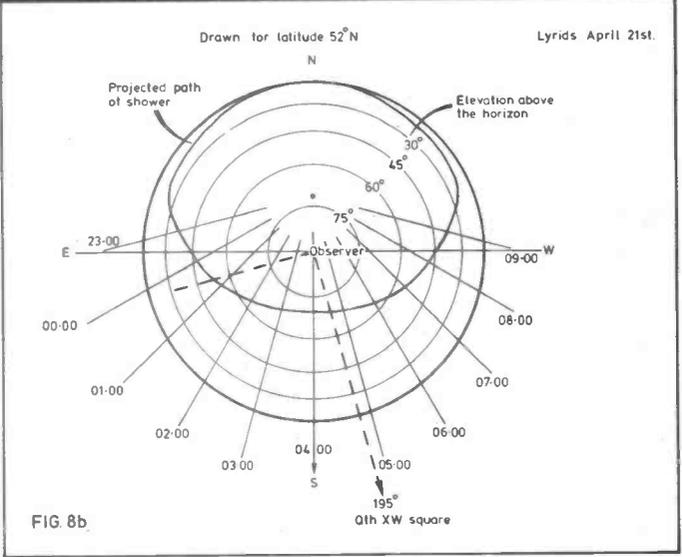
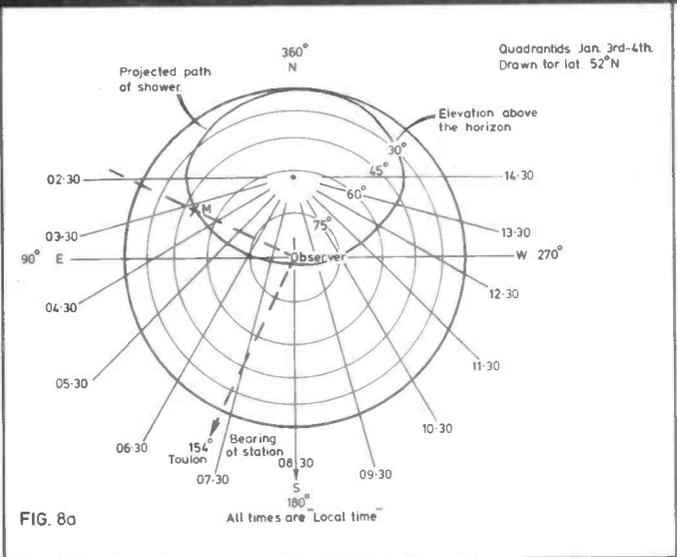


GEORSCATTER



quency meters at signal frequency quite large errors may exist (1-2kHz) which is not adequate for ms operation. An accuracy of 500Hz for CW operation and 100Hz for SSB should be aimed for. The most satisfactory and simple way to ensure frequency accuracy is by using a quartz crystal in a proportionally controlled oven with frequency dividers giving markers down to 5kHz. This will also provide sufficient accuracy for those stations without the facility of digital frequency readout.

Most commercially manufactured transceivers for 2m exhibit noise figures which are rarely better than 5dB; although results will be obtained with these values it is wise

to improve performance by the addition of a low noise pre-amplifier, preferably mounted at the mast-head. Using readily available devices noise figures of 1.5dB should be achieved without difficulty. The addition of a pre-amplifier will of course degrade the strong signal handling capability of the receiver but in the context of meteor scatter this is of secondary importance. (Please see 0.7dB NF pre-amp article in January's Ham Radio Today).

RECEIVER BANDWIDTH

Although a reduction in bandwidth will provide improved signal to

noise ratios there are certain limitations due to the high speed of the CW and the need to decode it at reduced speeds. For example a tone of 1.6kHz recorded at 19cms/second tape speed will be only 200Hz when played back at 2.4cms/second. This makes weak signals very difficult to read, particularly if accompanied by severe fading. A means of eliminating this problem and enabling reduced bandwidth to be used if required is mentioned in the section dealing with CW decoding. It is always wise to commence a QSO using maximum bandwidth; this will improve the chance of hearing signals that are not exactly on the designated frequency.

