TRANSMITTER

As with the receiver, the most important factor is that of stability and the ability to set to a desired transmission frequency. On CW the latter point is easily achieved with the aid of a calibrated frequency meter.

When using a transceiver for SSB operation it is safe to assume that both the RX and TX are on the same frequency. It is then a simple case of zero-beating the VFO onto the chosen frequency using a calitrator. This method should not be used on CW as transmit errors of 800Hz-1kHz may exist due to the in-built shift between TX and RX on most commercially manufactured transceivers.

POWER OUTPUT

There is no doubt that the maximum permissible power levels produce the most effective results, but the operator with only 25 watts output power should not be put off as many successful meteor scatter QSO's have been accomplished using only 10-20 watts. Contacts using lower power levels will normally take longer to complete and require additional patience on the part of the operator, but the end results can be very rewarding.

HIGH SPEED CW KEYING

Many people have their own pet requirements for producing the high keying speeds necessary for ms commications. Speeds generally used are between 400 and 1000 letters per minute although 600-800 LPM are the limits generally accepted unless other specific arrangements have been made.

One popular means of producing CW at these speeds, with the ability to alter the message content rapidly is to use one of the many home computers available, interfaced with the TX.

For those without this facility there are numerous designs for digital memory keyers, published, giving a wide range of facilities. One of the better designs which also incorporates an excellent Iambic Keyer with dot and dash store is the *KM4000*, published in the February 1982 edition of *Radio Communication*. This keyer has more than adequate memory but like many other memory keyers suffers from the inability to re-circulate the

TABLE 2 MINOR SHOWERS

SHOWER & DATE	NORMAL LIMITS	CELESTIAL CO-ORDINATES RA°	DEC°	HOURLY RATE	CULMINATION (LOCAL TIME)
KAPPA CYGNIDS JAN 17		295	+ 53	10	12 Hours
GAMMA LEONIDS FEB 5		152	+ 20	5	01.3 h
ALPHA AURIGIDS FEB 7-8		74	+ 43	10	20 h
ZETA BOOTIDS MARCH 11		218	+ 12	10	03.2 h
URSAE MAJORIDS APRIL 1-2		160	+ 55	10-20	12h
PISCIDS MAY 7		26	+ 25	30	10.7 h
NU PISCIDS MAY 12		17	+ 26	16	09.8 h
54 PERSEIDS JUNE 26	PERIODIC SHOWER	68	+ 34	30	10.3 h
BETA TAURIDS JUNE 29		88	+ 17	25	11.4 h
JUNE DRACONIDS JUNE 29	24 hours	231	+ 54	?	21 h
ALPHA ORIONIDS JULY 12	PERIODIC SHOWER	87	+ 11	50	10.5 h
NU-GEMINIDS JULY 12	PERIODIC SHOWER	98	+ 21	60	11.2 h
LAMBDA-GEMINIDS—JULY 12	PERIODIC SHOWER	111	+ 15	32	12 h
ALPHA CYGNIDS		314	+ 47	15	01.5 h
THETA AURIGIDS JULY 25		86	+ 38	20	09.6 h
DELTA CASSIOPEDS AUG 10		18	+ 63	15	04. h
ALPHA AURIGIDS AUG 28		74	+ 43	12	06.5 h
BETA CASSSIOPEIDS SEPT 7-15		358	+ 60	10	0.6 h
EPSILON PERSEIDS SEPT 7		62	+37	10	05.1 h
50 CASSIOPEIDS OCT 13		29	+ 72	20	0.5 h
EPSILON ARIETIDS OCT 14		40	+ 20	12	01.2 h
PEGASIDS, OCT 19-20		349	+ 27	18	21.4 h
AURIGIDS NOV 2		90	+ 40	10	03.2 h
ZETA TAURIDS DEC 10		83	+ 22	10	0.3 h