

ceiver is nearby. Separate aerials are also necessary, but these difficulties could be easily overcome.

Often two amateurs who have special experimental or personal traffic (messages) to put over, will arrange to work each other at fixed times. They establish what is known as a schedule, or "sked," and in America, where mes-

QRN caused by hundreds of stations being squeezed into a narrow channel only 300 k.c. wide. It is rare to conclude a DX QSO on "40" without experiencing QRN, more or less severe, from some station or other.

The best DX band is the 20-metre band, but only in one season. From April to December there may be no

becomes more critical. It becomes harder to maintain a good note and stability of signals. In a single valve, or "Self-excited" transmitter, there are several factors which sometimes cause the signal to vary slightly in frequency.

If the valve is at all overloaded (i.e. the input is too great for the valve) heating of the elements will cause them to expand, thus changing the capacity between them, and making the signal "creep" in frequency. Also, swinging antennas or fluctuations in the plate or filament power supply will wobble the signal. These difficulties are not great in a sensibly-designed and operated transmitter, but to overcome them and secure absolute frequency stability there has arisen in recent years a type of transmitter known as "crystal-controlled."

The basis of this type is a small quartz plate, ground to a definite thickness, which entirely controls the frequency of the oscillating tube circuit in which it is connected. Only changes in temperature will cause its frequency to change. The power to this "crystal-oscillator" is very low and is kept con-

Tabloid News

A LONDON scientist, Mr. J. H. Thompson, is reported to have discovered that human blood pressure is definitely affected by music. He claims to have established by experiment that the repetition of one piece of music or of the same type of music lowers the blood pressure, and that a change raises it. Further research may therefore reveal the means by which broadcasting companies can improve the health and spirits of their listeners by planning programmes scientifically, giving items specially beneficial for those whose blood pressure is normally too high.

APPARENTLY the announcer of the radio station at Lyons, France, is a very busy man. To save time (writes a French contemporary) his barber calls upon him once weekly, and while trimming his hair, giving him the usual shampoo and dry wash, tells him all the local news. Recently the station director conceived the brilliant idea of keeping the "mike" alive on these oc-

"Q" SIGNALS

QRA—Location of station.
QRH—Wavelength.
QRI—Tone of signals.
QRK—Strength of signals.
QRM—Interference.
QRN—Static.
QRO—Higher power.
QRP—Low power.

QRS—Sending slower.
QRT—Stop sending.
QRU—Nothing further.
QRE—Waiting.
QSA—Readability.
QSB—Fading.
QST—Acknowledgment.
QSO—Contact.

sage handling is unrestricted, thousands of skeds are maintained all over the country.

The amateur is always the leader in radio exploration. After discovering the capabilities of the present-day short-waves, he is now experimenting on the ultra-short wavelengths of 10 and 5 metres. Test transmissions on these frequencies are regularly taking place, and although little encouragement has been obtained from the results so far, those responsible are persevering.

The Amateur Wavebands.

OF the amateur wavebands, there are three chiefly used, each having definite characteristics. The 80-metre band is not good for DX, but is less subject to variations in reception conditions, and is used for most contacts within New Zealand. Beginners must stay on this band for the first few months, and all the year round they and many older hams can be heard chatting to each other on Morse and phone. On 40 metres the DX is moderate most of the year, and good between the months of December to March, when contacts with Europe are easily made with only medium power. The disadvantage of this band is the

stations heard but locals, but thereafter the signals come rolling in at good strength from the four corners of the earth. Static is not as a rule so troublesome, but a curious effect known as "skip-distance" is felt on this band. A high-power station 100 miles off may come in at much less strength than a similar one 1000 miles away, because of the reflection of the waves by the Heavyside layer. Fading is occasionally bad on this band. Daylight is better for reception, as signals begin to fade out with the approach of darkness.

It may puzzle some readers as to the procedure of making contacts between amateurs speaking a different language. However, all amateurs use their international abbreviation language with English as a basis, and all foreign hams know this. Another interesting point is the time difference between countries. It is quite common for the amateur at one end of a contact to be about to go to bed, and the other to work, as in the case of N.Z. and U.S.A.

Securing Stability.

On the higher frequencies (shorter wavelengths) the adjusting and tuning of the transmitter and receiver

stant, thus avoiding heating. The output of the oscillator is then fed into a graduated series of R.F. amplifiers, each "exciting" the next one. Each amplifier is simply a transmitting valve, arranged to amplify, and the final one couples the power into the antenna. Nearly all broadcast stations are crystal-controlled, and many amateurs use this method on a smaller scale, but it is too complicated for beginners to touch.

There are dozens of other interesting factors in the amateur game besides those mentioned here. Space does not permit of more being described, but they will all be met with when one gets on the air. In all phases of radio it is experience that counts, and especially

casions, so that listeners are now treated to a running commentary on the petty incidents and scandals of high (and probably low) life in the city of Lyons. Why not carry the idea a step further? Why not invite a chiroprapist to the studio, and if the listeners really do require "pep," an interview with the dentist before the microphone should give them all the thrills required. Just imagine hearing that drill in somebody else's tooth!

with the ham. For a really live hobby there is none to better amateur transmitting, for metaphorically "His is the world, and all that's in it." To all followers of these articles, the writer wishes good luck and 73.

ABBREVIATIONS

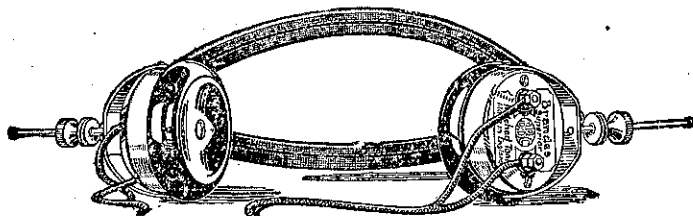
sked—schedule
sri—sorry
TOA—to-day
tis, tnx—thanks
U—you
ur—your
vy—very
wen—when
wkd—worked
wl—will
wx—weather
Xmitr—transmitter
YL—young lady
73—Best wishes
abt—about
agn—again
amt—amount
ani—any
BCL—broadcast
listener

B4—before
BK—break
BN—been
CK—check
CKT—circuit
cond—conditions
cud—could
cul—see you later
cum—come
em—them
es—and
FR—fine business
FM—from
GA—go ahead
GB—good-bye
GE—good evening
gud—good
Hi—laughter
hr—here
hrd—heard

hy—have
hw—how
mani—many
nd—nothing doing
ng—no good
nite—night
NM—no more
nw—now
OB—old boy
OM—old man
op, opr—operator
OW—old woman
(wife)
pse—please
pwr—power
R—O.K.
Rpt—report, repeat
sa—say
sed—said
sigs—signals

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