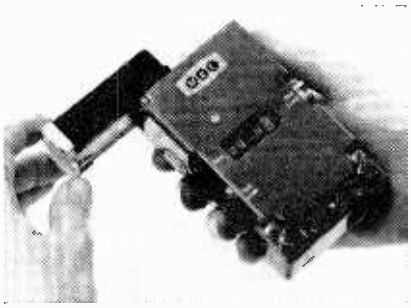
NEW PRODUCTS

POCKET RECEIVER

INTEGRATED and thin film circuits have been employed in the design and development of an M.E.L. pocket-sized communications receiver L.662 measuring $6 \times 3\frac{1}{4} \times 1\frac{1}{2}$in. Intended for a.m. and c.w. reception over the frequency range 40 kc/s to 30 Mc/s it can also be employed for s.s.b. Tuning is carried out by a digital frequency display, possessing the equivalent scale length of 300 inches over the above-mentioned range. Fine tuning is achieved with a continuously variable control knob. The first local oscillator is crystal locked at 1 Mc/s, the required harmonic being selected by an indexing mechanism geared to a precision variable capacitor in the oscillator circuit. The 1 Mc/s control also carries cams which by operating microswitches, automatically selects the necessary filters. The 100 kc/s steps are crystal controlled and selected by switching in one of ten crystals. Both the 1 Mc/s and 100 kc/s steps are selected by two indexing knobs. A crystal controlled b.f.o. is also built into this set. In addition to its function as a b.f.o. it can be used for calibrating the receiver. This is done



by setting all controls to zero, disengaging a clutch on the fine tuning wheel, and tuning the oscillator for zero beat. The receiver is powered by two mercury cell batteries housed in a detachable plastic compartment which in very cold conditions can be placed in the operator's pocket. In addition to sockets for wire aerials, a telescopic rod aerial is provided, and high impedance dynamic earphones of the "hearing aid" type are employed. The set is housed in a sealed aluminium case with flush controls and terminals. M.E.L. Equipment Cc. Ltd., Manor Royal, Crawley, Sussex.

WW 301 for further details

Miniature Audiometer

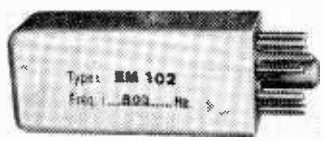
FOR screening tests of patients' hearing, the United Kingdom Atomic Energy Authority have produced a small, cheap, audiometer based on an idea from the Audiology Research Unit at the Royal Berkshire Hospital. The main unit is small enough ($5 \times 2\frac{3}{8} \times 1\frac{3}{8}$ in) to slip into the operator's pocket. The speaker unit is $2\frac{3}{8} \times 2\frac{1}{2} \times 1\frac{1}{4}$ in, and can be concealed in one of the operator's hands, thus fulfilling the requirements that a patient, especially a child, should not be distracted by the sight of the instrument. Three pure tones of 500 c/s, 2 kc/s, and 4 kc/s are generated. The intensity of each tone can be selected at levels of either 70 or 40 dB above normal threshold one foot from the patient's ear. Growth and decay rates of the tones are controllable, and these rates, frequency accuracy, harmonic content, and intensity levels conform to British Standard 2980. The unit is powered by two 3·9 V Mallory batteries. Patents Licensing Officer, U.K.A.E.A., 11 Charles II Street, London, S.W.1.

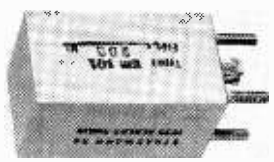
WW 302 for further details

TUNING FORK OSCILLATORS

AS an alternative to the crystal oscillator and divider, the Straumann precision tuning fork oscillator can provide reliability and temperature stability at low frequencies. Manufactured in Switzerland, as the EM101 series, they are available from 1 to 5 kc/s, with associated circuitry in a sealed steel can, overall dimensions 30 mm square by 51 mm above chassis, and 13 mm below chassis projection. Series EM102 oscillators are also enclosed in a steel can with international octal plug-in base. Frequencies available are 2 c/s to 5 kc/s. Both the above series contain associated electronic circuitry and provide an output of 4 V minimum pk-to-pk square waveform into a 10 kΩ load. The supply voltage required is 12 V d.c. The EM103 series are basic oscillators without electronics, mounted in crystal cans with solder spill connections. Available from 500 to 5 kc/s with dimensions of 18 mm × 8 mm, height 45 mm for 500-800 c/s units, and height 38 mm for units above 800 c/s. Prices start at £13 8s. Claude Lyons Ltd., Instruments Division, Hoddesdon, Herts.

WW 303 for further details





Carbon Film Resistors

MINIATURE carbon film resistors manufactured by ISKRA, Yugoslavia, are available in the U.K. from Guest Electronics, Ltd., of 78-86 Brigstock Road, Thornton Heath, Surrey. These resistors of the type UPM comply with IEC (Publication 115) 55/125/21 type IB. Offered in the range 4.7 Ω to 10 MΩ, in two tolerances 5% and 10%, these resistors are available in 0.25, 0.5, 1 and 2 W ratings. The 0.25 and 0.5 W types are rated at 70°C and the 1 and 2 W types at 40°C. Body colour is red-brown, and the ohmic values are marked according to the colour code system. Noise level measured in the 0.25 W type rises to 0.6 μV/V at 10^7 Ω, is less than 0.8 μV/V at 10^7 Ω for the 0.5 W type, and is less than 1.2 μV/V at 10^7 Ω for the 2 W resistors. Prices per 100, range from 7s 9d to £1 3s 6d.

WW 304 for further details