

THE STORY OF THE TRANSISTOR

The heart of a transistor is a minute crystal of the rare and costly element germanium, one of a group of materials called "semi conductors." Pam realised from the outset that the peculiar properties of germanium were going to oust the old-fashioned thermionic valve from its dominant position in radio and electronics.

So a brilliant new type of specialist appeared in the Pam factory—the transistor circuit engineer. His was an immensely difficult job, with no published data to guide him in his work. He had to establish his own data as he went along, but by dint of constant research he finally achieved success.

The complex and meticulous manufacturing process, too, presented a tremendous challenge to production ingenuity. Germanium has to be purified to fantastically fine limits in conditions of absolute cleanliness—only operating theatre standards are good enough.

But now the transistor has emerged from the experimental stage to become one of the world's mightiest midgets, and to bring you the greatest portable of all time — the Pam 710.



PRINTED CIRCUITS

Pam radio and television is different. Our superb modern production line is in many respects more like a printing press than an old-fashioned radio works. Yes, by the miracle of automation — automatic production — we actually print the Pam 710 circuit in pure copper. There is no circuit wiring to work loose or become disconnected, no dry joints, no possibility of wrong connections—automation has eliminated human error. It is transistors and the printed circuit which have given the Pam 710 a

performance out of all relation to its compactness, together with greater reliability, longer life and an all over quality impossible with old-fashioned methods of manufacture.



TECHNICAL SPECIFICATION

MODEL 710

Controls	Tuning, Wavechange, Volume, On/Off.
Wavebands	M.W. 176-568 metres. L.W. Fixed tuned to 1500 metres (Light Programme)
Loudspeaker	High Flux Permanent Magnet 6in. x 4in. Elliptical.
Batteries	4—U2 cells.
Consumption	35 milli-amps average at 6 volts.
Dimensions	Unpacked 9½in. x 7½in. x 3½in.
Weight	Unpacked, less batteries: 4lbs. 2oz. with batteries: 5 lbs.
Circuit description	8 transistors are employed as follows:— Frequency changer, local oscillator, two I.F. amplifiers, detector, driver, two power output. An internal ferrite-rod aerial is used for both wavebands. The I.F. amplifier includes four tuned circuits employing high efficiency ferrite cores and operating at 315 kc/s. A.G.C. is applied to the first I.F. amplifier. The driver stage is transformer coupled to the Class B push-pull output stage, which is directly connected to the high impedance loudspeaker coil.

Price 30 gns. tax paid

STURDINESS AND RELIABILITY

The transistor has no fragile or movable parts and will stand far more shock and movement than the traditional valve. This is just one of the reasons why the Pam 710 makes the *perfect* travelling companion, and will cheerfully accompany you wherever you want to go.

Pam

A. J. HILL,
RADIO & TELEVISION ENGINEER,
6, STONE STREET,
GRAVESEND.
PHONE 449

Pam

and now...

TRANSISTORS



The Greatest
PORTABLE of all time!

Pam

Pam is proud to present Britain's first TRANSISTOR RADIO—
the radio of the future. This outstanding portable
WORKS ENTIRELY WITHOUT VALVES

Pam ushers in a new age in radio with **Model 710** . . .

LARGER SPEAKER

The unique space-saving properties of the transistor and the small batteries which are used in the Pam 710 have made it possible to use *the largest loudspeaker that has ever been fitted in a portable of this size.*

What is a TRANSISTOR ?

The transistor is a post-war electronic development minute in size and colossal in potentiality. Little larger than the end of a pencil, it performs in the Pam 710 all the functions of the old-fashioned radio valve. Not only that — it lasts indefinitely, is infinitely more economical, stronger and more reliable in every way — consisting simply of a tiny crystal of the rare element germanium enclosed in a hermetically sealed container. It is the transistor that has made possible the guided missile; it is the transistor that is making possible the launching of artificial satellites around the earth; it is the transistor which has made possible the greatest portable of all time—the Pam 710.

The Greatest Portable of all time !

BEAUTIFUL APPEARANCE
The Pam 710 has a luxury cabinet stoutly constructed in a beautiful ivory and tan cowhide finish, set off with gold metallic strips and a real leather carrying handle.



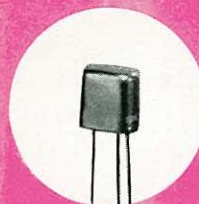
Pam

Gone are the days of burnt-out valves of heavy, expensive batteries and patchy performance. The Pam 710

TRANSISTOR PORTABLE

is the only radio set which gives you these star features:—

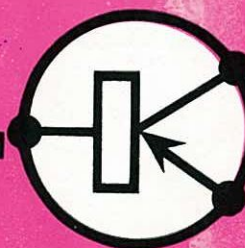
- SENSATIONAL ECONOMY IN RUNNING
- ABSOLUTE RELIABILITY
- OUTSTANDING STURDINESS
- NO VALVE REPLACEMENTS
- PRINTED CIRCUIT
- MAGNIFICENT CABINET



THIS IS A
TRANSISTOR—
ACTUAL SIZE

ECONOMY IN RUNNING

In normal radios, valve filaments have to be kept red hot. There is a severe and constant drain on the H.T. and L.T. batteries (to say nothing of the wear on the valves themselves). Transistors have no filaments to heat and consume so little current that the Pam 710 is run entirely from four tiny torch batteries which cost only a few pence, are universally available and free from purchase tax.



THIS IS THE
ELECTRONIC
SYMBOL FOR A
TRANSISTOR

NO VALVE REPLACEMENTS
As far as is known, the transistor will last indefinitely.