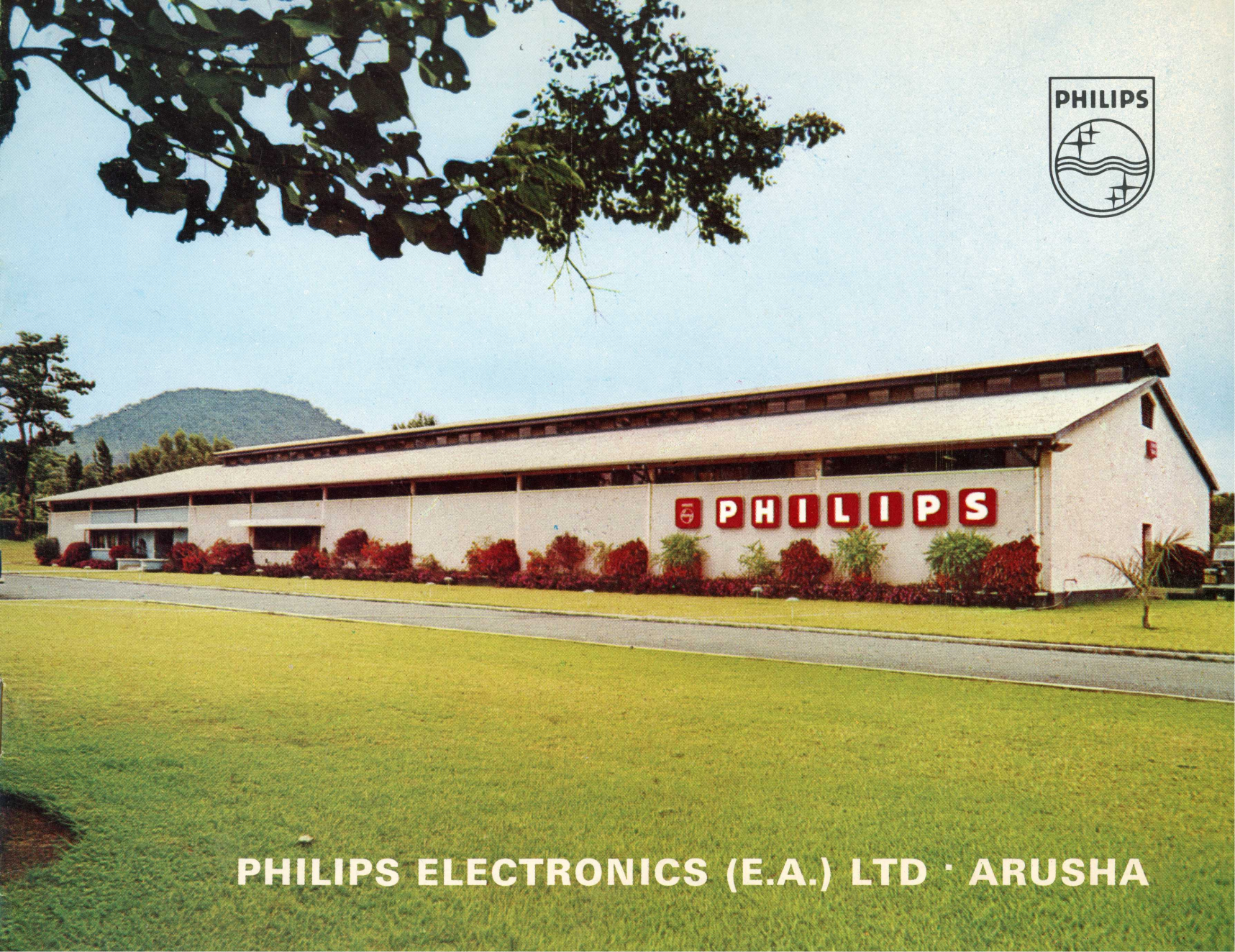


PHILIPS ELECTRONICS (E.A.) LTD · ARUSHA

Facts about the Company

Philips Electronics (E.A.) Ltd. first started production in a soap factory in Arusha in 1965. After three years, the factory was transferred to their own newly built premises in Kijenge, at the foot of Mount Meru.

The historic opening of the Arusha factory was performed by His Excellency Mwalimu Julius Nyerere.

To mark this occasion the then President of Philips', Mr. F. J. Philips, sent the following cable:

> "TO THE PRESIDENT OF THE REPUBLIC OF TANZANIA HIS EXCELLENCY JULIUS NYERERE STOP CONSIDER IT A GREAT HONOUR AND PRIVILEGE THAT YOU HAVE CONSENTED TO INAUGURATE ARUSHA RADIO FACTORY WHICH IS ANOTHER PROOF OF YOUR EXCELLENCY'S INTEREST IN THE ECONOMIC DEVELOPMENT OF YOUR COUNTRY STOP REGRET UNABLE TO PERSONALLY ATTEND THIS MEMORABLE EVENT STOP PLEASE ACCEPT MY FEELING OF GRATITUDE AND RESPECT STOP FREDERICK J. PHILIPS"

The then Minister for Commerce and Industry, the Hon. A. M. Maalim, said, *inter-alia*, in his speech

> ". . . Philips stand out as an example of private enterprise, a lighthouse to those who have misconstrued Tanzania's policy. May I be permitted to quote your words. Mr. President" . . . we believe that investors will find in the United Republic a propitious climate of social peace and stability in which to enjoy the benefits of a sheltered market. The opportunity is theirs to participate in our challenging task and to share fairly the results of our achievements."

Employment

In 1965 the company started with 20 employees. After a seven-year operation the company presently employs some 130 personnel—all Tanzanians.

Production

Since 1968, when the company moved to their new premises, the production of radios has increased from an annual production of 50,000 units—to 150,000! (Radios and gramophones).

Export

Philips Electronics (E.A.) Ltd., now manufacture the following components: coils, loudspeakers, variable condensors, trimmers, dials. The Company is proud of the fact that many of these components are produced for export to Europe. The Company also export more than 60 per cent of all radios and gramophones manufactured in their factory to the countries of the East African Community and occasionally to other African countries. Philips Electronics contribute substantially to the earning of foreign exchange for Tanzania.

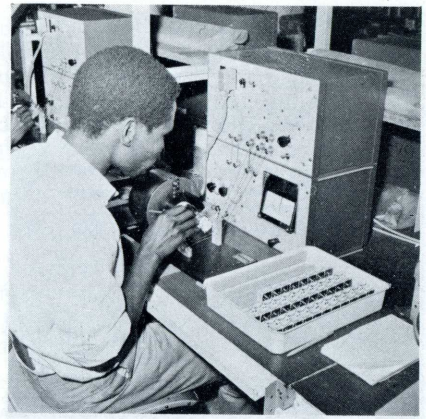
An overall view of our factory: The factory is situated at the foot of Mount Meru. Local production of radios started in 1965 in an old soap factory. In September 1968, production was transferred to the new factory at theKijenge Area, (shown on the photograph). On 9th September 1968, His Excellency Mwalimu Julius Nyerere opened the factory.

The workshop: Since opening in 1968, production has doubled and staff increased from 60 to 130. Almost 600 radios and 100 gramophones are produced each day. Many of the components are manufactured locally: e.g., coils, loudspeakers, variable condensers, trimmers and dials.

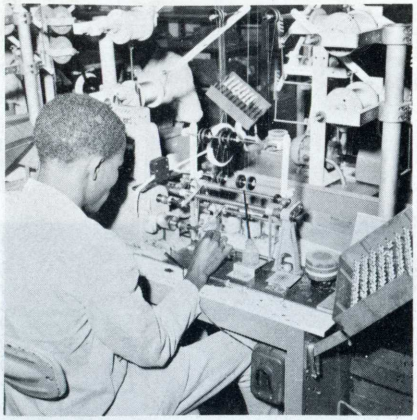
Local manufacture of loudspeakers: A unit of 5 operators, work closely together and produce about 400 speakers each day.

Final control of loudspeakers: Before the loudspeakers are transferred to the assembly line, they are carefully checked and measured.

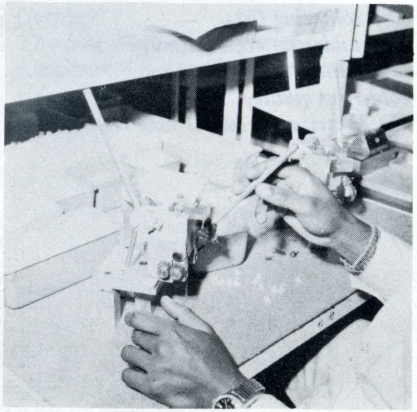
Manufacture of gang condensers: Approximately 150 different parts have to be carefully assembled to build up a gang condenser—a very critical item for tuning radio sets.



Testing gang capacitors: Gang capacitors are adjusted and measured before they are transferred to the production lines.

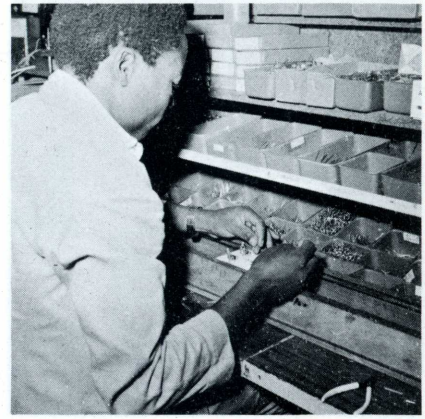


Winding of coils:
Each radio has about five to eight different coils; AF coils, high frequency coils, oscillator coils, IF transformer, etc. All coils are wound on semi-automatic winding machines.

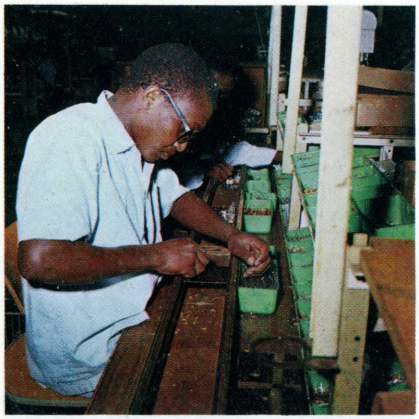


Assembling of coils:
The coils are assembled on a very simple hand-operated tool.

Dial printing:
By means of a silkscreen process, plastic dials (tuning calibration) are printed.

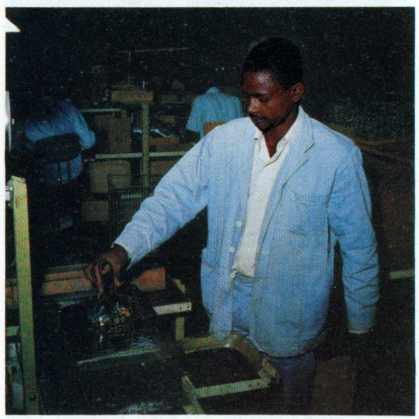


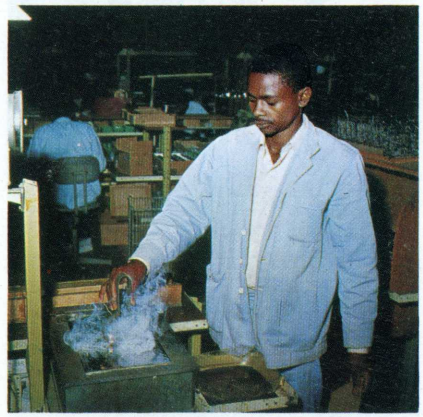
First stage assembly line:
By inserting approximately 60 different components (150 for a 3-band set) on boards, where the wiring is already pre-printed, the electrical circuit is prepared.



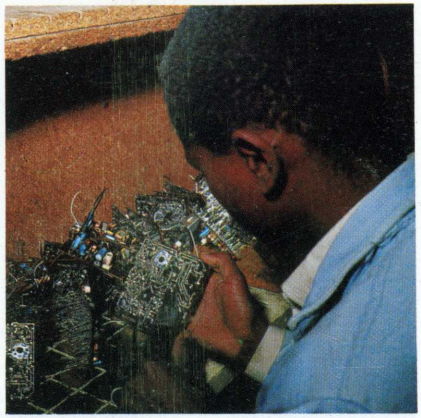
Second stage assembly line:
The insertion of components requires complete concentration. The slightest mistake will cause great difficulties at the end of the production line. The layout of the plant is arranged to combine high speed and superior quality.

Dip soldering (a):
When all the components have been inserted, the printed board is dipped in a soldering bath maintained at a temperature of 280 °C.



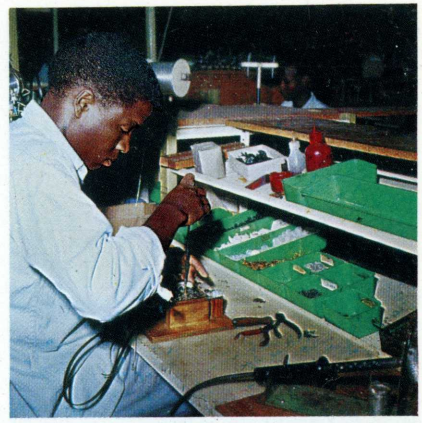


Dip soldering (b):
Dip soldering requires much experience, to obtain a good soldering quality. In principle the electrical circuit is now ready.

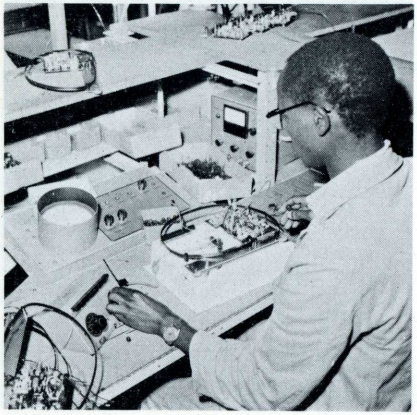


Cutting:
The long leads of the various components are cut by the pneumatic side cutter.

Checking:
Before the printed board is passed on to the next stage, it is carefully checked to make sure that the electrical circuit is correct.

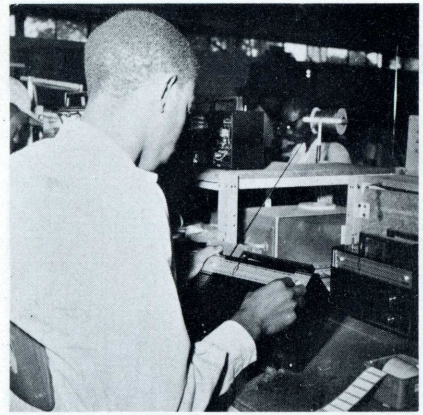


Fixing drive cords:
Before the chassis can be inserted in the cabinet, several mechanical items have to be fixed. The photograph shows the fixing of the drive cord.

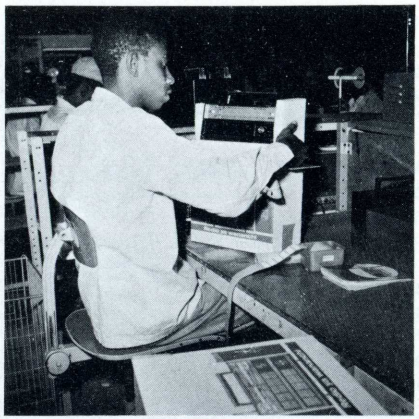


Alignment:
Although, all components have now been assembled, the radio must be attuned to the various components by means of special electrical equipment and the coils and capacitors adjusted. The oscilloscope shows the result obtained.

Casing in:
The chassis is assembled in the cabinet with pneumatic screwdrivers.



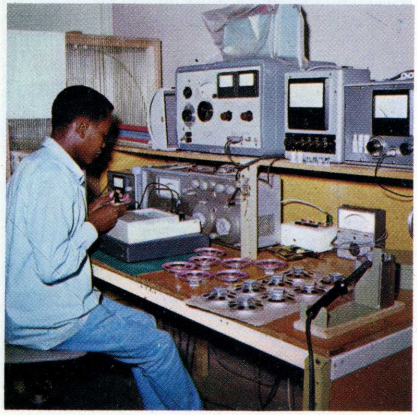
Final control:
Before the radio is packed, it is carefully checked by the final control for good sound, sensitivity, cracking, etc.



Packing:
The last stage is packing the radio after the controller has approved the quality.

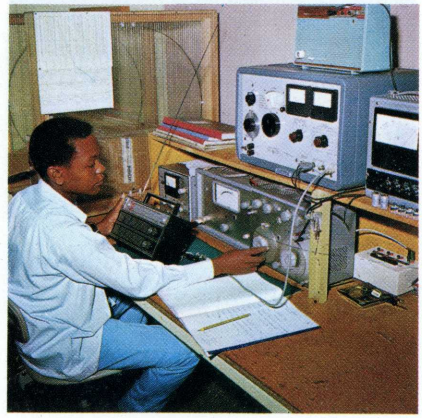
Transport:
All radios leave the factory on pallets, to simplify handling.

Electrophones:
Besides, radios, electrophones are manufactured. The picture shows an operator checking the automatic stop of a player.



Laboratory test (a):
Samples taken at random from each production line, and checked in the laboratory, ensure that all units leaving the factory are in perfect order. The picture shows electrical testing of loudspeakers.

Laboratory Test (b):
The complete product is also measured in the laboratory. Only when the laboratory test proves good quality, can the production of that particular day be forwarded to the customers.



Final products:
A display in the reception hall, shows part of this year's programme; in total, 12 different radios and 5 different gramophones.
Radios in different price classes; 1-band and 2-band, 3-band, and 4-band types.
Gramophones in three different types; record player with battery only, a record player with battery and mains connection, and a record changer with battery and mains supply.

Philips professional activities in Tanzania include:

Large X'Ray Spectrometer and Diffractometer outfit for the Mineral Resources Division of the Ministry of Commerce and Industry, Dodoma. It is used for fast non-destructive analysis of minerals.

Two liquid nitrogen installations supplied to the Ministry of Agriculture in Mpwapwa and Arusha, used for producing liquid nitrogen for the storage of bovine semen.

Several telephone installations for Government Departments, such as 200-line units to the Ministry of Home Affairs, the Ministry of Land & Water Development, a 150-line unit to the Ministry of Education, a 100-line unit to the State House, etc.

Supply of electronic teaching equipment (student trainers) to the Dar es Salaam Technical College.

Radio telephone systems for the Tanzania People's Defence Force, the Dar es Salaam Motor Transport, the Kilombero Sugar Co., etc.

Several public address and music distribution systems for hotels, conference rooms, etc.

Radio frequency paging systems and telephone equipment for Kilimanjaro Christian Medical Centre Hospital, Moshi and the R.C.T. Hospital in Mwanza.

Philips lighting is used in:

National Institute of Banking — Dar es Salaam

New Africa Hotel — Dar es Salaam

General Tire Factory — Arusha

Farmer Co-operative Union — Iringa

National Bank of Commerce — Moshi

National Bank of Commerce — Kigoma

National Bank of Commerce — Dar es Salaam

Ext. Lake Manyara Hotel — Lake Manyara

Streetlighting Projects — Dar es Salaam

Fertilizer Plant — Tanga

Kilimanjaro Airport Terminal (Partly).

PHILIPS

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