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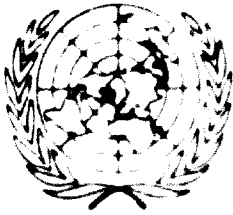
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Development Centre on the Manufacture
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(including low-cost receivers for sound
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THE STATUS OF MANUFACTURE OF
TELECOMMUNICATIONS EQUIPMENT IN NIGERIA

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P R E F A C E

The history of telecommunication equipment manufacture in Nigeria is a short one dating back only to the last ten years.

It was not until six years ago that large-scale plans were made for radio receiver manufacture.

Today facilities are available for the assembly and testing of at least 100,000 radio and television receivers a year.

The staff required to cope with this flow of finished products is also readily available on the market.

E. A. OGUNTAYO

MIKE, MISE

T H A N K S

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THE STATUS OF MANUFACTURE OF
TELECOMMUNICATION EQUIPMENT IN NIGERIA

I (a) FACTORS LEADING TO CHOICE OF EQUIPMENT TO BE MANUFACTURED

There are many media of mass information, education and entertainment. To mention some of them -radio and television, cinema and theatre, newspapers and books. But it is a known fact that of all these media, radio gives the greatest benefits to the greatest number of people. Radio reaches the most places where newspapers, cinema, theatre and television may never reach.

All that is required to try this over present means of information and education, is a radio receiver.

It is therefore, easy to see that if a radio receiver is cheap enough to be within the reach of the greatest number of people, then the spoken word will reach the greatest number. And since radio has a message for both the old and young, educated or illiterate, it is of the greatest benefit to the greatest number.

This will be my reason for choosing radio as my first item to be manufactured.

Therefore, the need for cheap sets (both radio and television) is great considering the population of Nigeria. This need is much more emphasized by the desire for greater education and the lack of means to purchase expensive receivers.

For political reasons also, it is necessary for information to reach the greatest number of people and therefore receivers ought to be sold at a price everyone could afford.

It is impossible to bring every member of the public up to the point of being able to afford the cost of receivers as they are now, but it will be easier to bring down cost of receivers to the level where every household could afford one.

The economy of the country cannot allow the existing manufacturing companies to bring costs so far down without heavy subsidies from the Government. In this case, a means must be found

to produce such utility goods at minimum costs and to sell them at nominal prices, while the companies should still pay its way.

This is not an easy task considering the amount of detailed planning and execution that is necessary.

It is therefore to be hoped that a manufacturing company for utility products of this type will not be established with unnecessary overheads.

On the first consideration, it would appear preferable that such a company be started completely new, borrowing men with technical know-how from industrialized countries which could well afford to loan out such men for short periods. The plan would definitely have to be made by men who should include, right from the start, able and willing Nigerians with some know-how and execution of plan, and would have to include quite a few technicians who are now in Nigeria in large numbers.

POLITICAL INVOLVEMENTS

This does not present many problems considering that many heavy industries, economically viable are existing at the moment in the country, although run on a partnership basis.

Even if an existing company is mandated to produce such utility goods, it will present no difficulty if in planning the project it is ensured that Nigerians as well as expatriates are equally well involved.

Existing companies, most of which are expatriates, may have some difficulties if asked to produce, on contract, radio receivers or other telecommunication equipment which is not designed by their parent companies.

The reason for this is that by virtue of their affiliation to these parent companies they are technically bound to produce equipment which is specified by their parent companies. This would appear to be the only hurdle in this respect and once this difficulty is overcome, any of the companies could take an active part in any planning and/or execution of production for any type of telecommunication equipment.

How this hurdle could be got over will be one of the points to be discussed at this conference.

My suggestion would be to bring together representatives of all the parent companies that are likely to be involved in each developing country's production at the planning stage which also seems to be the theme of this conference.

(b) DETERMINATION OF CAPACITY AND LOCATION FOR STARTING OR EXPANDING PRODUCTION

Assuming a working population in Nigeria of 20 million and 5 million already in possession of radio and/or television receivers arrangements must be made for the remaining 15 million to have the opportunity to purchase receivers.

As it will be cheaper to get these 15 million to procure receivers by producing cheap receivers, I would say that a factory set up to produce 15 million receivers is a very viable proposition.

These figures were arrived at in the following way: The last census shows 25 million people between 21 and 45 years of age. Of this number, 5 million are assumed to have receivers and 10 million will never have receivers. Therefore, 10 million hard-working and willing men have no receivers.

Assuming further that only half a million of these will ever have the opportunity of watching television and only 10% of them will ever have the means of buying television receivers, I still say that a 10 m. utility radio and 50,000 television receiver factory is a worthwhile venture even if these figures are spread over twenty years.

Therefore, in Nigeria, the capacity for consumption is available.

LOCATION

Location of an industry would really depend upon available facilities like road, rail and/or air transport services to site, communication, water supply, electricity and availability of manpower. These are not in short supply in many parts of Nigeria.

It is, therefore, a question of which site to choose in preference to others for one or other prevailing advantage.

All the existing manufacturing companies are situated around Lagos, the Nigerian capital, for these obvious reasons. They are located on the outskirts of the city for possibilities of expansion. It is worthy of note that some of the companies have as much land for expansion as 50 acres.

The existing built-up areas of these factories could cope with an assembly line of from 30 sets a day for the smaller factories and up to 100 sets a day for the larger factories and it is worthy of note that, as claimed by the companies, this rate of production could be kept up the whole year if components were available.

From the size of the buildings and assembly lines these claims appear correct and the buildings could easily be expanded.

The two smaller factories employ a staff of about 30 people each, while the larger ones employ some 150 to 200 workers.

(c) NEGOTIATION WITH GOVERNMENT ON TAXES
AND LICENCE FEES -----

There is no doubt that if Government is involved in the projects on a 50-50 basis right from the commencement and all these details have been carefully spelt out and agreed, there would be no serious problems on importation of materials for manufacture. Tax concessions and protective tariffs are already in force, to help young companies.

Even at the moment, none of the existing companies claim difficulties in capital and profit repatriation.

What they are aware of is that due to the existing state of civil war in the country, the exchange takes a little longer, and this is expected in war time.

Considering the state of development of each of the existing companies and considering that they developed during this civil war into such a state, one could only conclude that there are no restrictions at all. In fact, one manager could not help but say, "But for the fact that importation permits take some time to arrange, we would not have any notion of any war going on in Nigeria. There are no restrictions whatsoever as to how many models should be manufactured. The only reminder of the present state of the country is

the small percentage of excise duties on each finished product. Of course, existing selling prices are low. We can now retail some of the 2-band models for £74 to £90", the manager concluded.

(d) REQUIREMENTS FOR SKILLED MEN

Enough labour is available for training in Nigeria; most of them unskilled to semi-skilled.

There are quite a few young men and boys around, right now who have acquired technical City and Guild Telecommunications theory certificates and who are looking for avenues of practical work to become skilled. Such men are ready and waiting.

Each of the existing companies has its own training programme which varies from the 3-month training of bench manipulative workers in one company to the three years comprehensive training of technicians who perform final testing of equipment and supervisors in another.

By and large, manpower is readily available for training in Nigeria. The length of training will depend on the work involved.

Some companies take 6 weeks to train first school leavers to acquire manipulative dexterity on the assembly line but on the average 3 months would be sufficient time.

II. TECHNICAL MATTERS

(a) SPECIFICATIONS FOR RECEIVERS AND OTHER TELECOMMUNICATION EQUIPMENT

The majority of receivers now being manufactured or assembled in Nigeria are in the 2-wave band model.

It is important to note that while this model will appeal to many people, very many others will want to explore the HF band in greater detail especially as there is greater awakening now towards radio listening. The 2-wave band model extends from 0.5 M.Hz. to 12MHz. As the External Services of most overseas broadcasting agencies extend up to 21 MHz. it is reasonable to expect Nigerians to want to listen to overseas services. This calls for the manufacture of a reasonable quantity of 3-wave band receivers.

The following ratio of production is suggested:

1.	2-wave band transistorised radio Rx.	100%
2.	3-wave band transistorised radio Rx.	25%
3.	Portable radiogrammes	10%
4.	Cabinet radiogrammes	5%
5.	Television receivers	5%

II. (b) DESIGN REQUIREMENTS

These have been simplified to a stage where no problems are presented from the point of view of maintenance. The components are as few as possible and the layout is such as would make for easy maintenance.

The pattern of layout, of course, varies from one model to another but the general pattern is for compact design but easy-to-service layout.

III. MANUFACTURE

(a) DECISIONS TO MAKE OR IMPORT COMPONENTS

So far, all electronic components are imported. Two companies use plastic injection units and mould plastic bodies for all their models including television sets.

Another company which prefers many wooden models of radiogrammes and mains operated radio sets, manufactures all its wooden bodies locally.

All these companies agree that the market for electronic components is not large enough for its local manufacture.

But if a manufacturing company were to be set up for West Africa, Nigeria being the highest consumer, ought to be the producing country.

IV DISTRIBUTION

All the companies started functioning as Servicing Groups and none has lost that service. But rather an efficient maintenance and Service Group has been operating in each company as an after-sales service department.

Each company maintains a packing and storage section. The stores are generally divided into several sections to cater for:

- (a) Valves and tubes
- (b) Electronic components
- (c) Plastic and after body work
- (d) Finished products

Packing materials are made of paper, plastic and foam rubber, and are also locally made by some of the radio manufacturing companies.

However, for some of the companies which cannot manufacture their own packing materials, a packing material and paper company is in Apapa, Lagos, manufacturing and supplying all types of packaging materials.

MARKETING

Each manufacturing company has a register of distributors for its products. These distributors deal in retail sales leaving wholesales to the manufacturing companies.





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