

**PARLIAMENT LIST**

( *Ground Floor* )

**B. C. No. 124**

# **ESTIMATES COMMITTEE**

**1958-59**

## **FIFTY-NINTH REPORT**

(SECOND LOK SABHA)

### **MINISTRY OF DEFENCE**

**BHARAT ELECTRONICS (PRIVATE) LIMITED, BANGALORE**



**LOK SABHA SECRETARIAT**

**NEW DELHI**

**April, 1959**

---

**Vaisakha, 1881 (S)**

**Price: Rs. 0.55 nP.**

### CORRIGENDA

Fifty-Ninth Report (Second Lok Sabha).

----

<u>Page</u>	<u>Para</u>	
3	6	For existing headings of Cols. 7 & 8 read : 'Percentage of (6) to (2)' and 'Percentage of (6) to (3)'.
5	11; line 7	: For 'manuacture' read 'manufacture'
7	15 "	6 : For 'recommended' read 'recommend'
8	20 "	11 : For 'para 6' read 'para 16'
9	22 "	15 : For 'EL' read 'BEL'
19	23 "	21 : For 'effotive' read 'effective'
16	38 "	7 : For 'partcular' read 'particular'
16	38 "	16 : For 'inoiury' read 'inquiry'
18	41 "	20 : For 'faulsy' read 'faulty'
28	41 "	22 : For 'scrunity' read 'scrutiny'
23, col. 8	of table	: line 1 : For '16.88' read '16.18'.

## CONTENTS

	PAGES
Composition of the Committee . . . . .	(iii)
Introduction . . . . .	(v)
<b>I. Introductory</b> . . . . .	<b>1</b>
<b>II. Production :</b> . . . . .	<b>2—10</b>
<b>A. Programmes</b> . . . . .	<b>2—3</b>
<b>B. Actual Production</b> . . . . .	<b>3</b>
<b>C. Reasons for Shortfall</b> . . . . .	<b>3—5</b>
<b>D. Outlook for future and suggestions</b> . . . . .	<b>5—9</b>
<b>E. Analysis of Imports and their Production</b> . . . . .	<b>9—10</b>
<b>III. Manufacture of Components</b> . . . . .	<b>11—12</b>
<b>IV. Manufacture of Valves</b> . . . . .	<b>13—14</b>
<b>[ V. Purchases of Plant &amp; Machinery</b> . . . . .	<b>15—16</b>
<b>VI. Construction of Buildings</b> . . . . .	<b>17</b>
<b>VII. Conclusion</b> . . . . .	<b>18</b>
<b>APPENDICES</b>	
<b>I. Starred Question Nos. 1056 &amp; 1075 dated 10-3-1959</b> . . . . .	<b>19—22</b>
<b>II. Value of Plant &amp; Machinery not fully in use during 1958-59.</b>	<b>23</b>
<b>III. Details of buildings and parts thereof unused and cost thereof</b> . . . . .	<b>24</b>
<b>IV. Summary of Conclusions and Recommendations</b> . . . . .	<b>25—29</b>

## ESTIMATES COMMITTEE (1958-59)

### *Chairman*

Shri Balvantray Gopaljee Mehta

### *Members*

2. Shri Shripad Amrit Dange
3. Sardar Jogendra Singh
4. Dr. Sushila Nayar\*
5. Shri Radha Charan Sharma
6. Shri Ranbir Singh Chaudhuri
7. Dr. Gopalrao Khedkar
8. Shrimati Sucheta Kripalani
9. Shri M. Thirumala Rao
10. Shri T. N. Viswanatha Reddy\*\*
11. Shri Ramanathan Chettiar
12. Shri N. R. Ghosh†
13. Pandit Govind Malaviya
14. Shri Resham Lal Jangde
15. Shri Mathuradass Mathur‡
16. Shri Dodda Thimmaiah
17. Shri M. L. Dwivedi
18. Shri R. K. Khadilkar
19. Shri Bhaurao Krishnarao Gaikwad
20. Shri Shraddhakar Supakar
21. Shri Rohanlal Chaturvedi
22. Shrimati Mafida Ahmed
23. Shri S. A. Matin
24. Shri Narendrabhai Nathwani
25. Shri Rajeshwar Patel
26. Shri Surendra Nath Dwivedy§
27. Shrimati Renu Chakravartty
28. Shri M. Sankarapandian
29. Shri Jhulan Sinha
30. Shri Ramji Verma

### SECRETARIAT

Shri S. L. Shakhder—*Joint Secretary.*

Shri A. R. Shirali—*Deputy Secretary.*

Shri R. K. A. Subrahmanya—*Under Secretary.*

---

\*Elected w.e.f. 28-8-1958 *vice* Shri Mahavir Tyagi resigned.

\*\*Elected w.e.f. 17-9-1958 *vice* Shri J. Rameshwar Rao resigned.

†Elected w.e.f. 23-9-1958 *vice* Shrimati Renuka Ray resigned.

‡Elected w.e.f. 23-9-1958 *vice* Shri Nemi Chandra Kasliwal resigned.

§Elected w.e.f. 17-12-1958 *vice* Shri Vijayram Raju resigned.

## INTRODUCTION

1. The Chairman, Estimates Committee, having been authorised by the Committee to submit the Report on their behalf present this Fifty-ninth Report on the Ministry of Defence—Bharat Electronics (Private) Limited, Bangalore.

2. During the course of supplementaries to Starred Question Nos. 1056 and 1075 answered in the Lok Sabha on the 10th March, 1959 (reproduced in Appendix I), the Speaker directed the Estimates Committee to investigate the reasons for shortfall in production at the Bharat Electronics (Private) Limited, Bangalore as an *ad hoc* matter immediately.

3. The Estimates Committee (1956-57) had examined the estimates relating to the Bharat Electronics (Private) Limited *vide* their Thirty-ninth Report (1st Lok Sabha) which was presented to the Lok Sabha in December, 1956. The question referred to the Committee by the Speaker was, therefore, examined in the light of the Committee's earlier Report, and the replies of the Ministry of Defence thereto. The Committee called for such further particulars from the Ministry of Defence as were necessary for the *ad hoc* examination and examined their representatives as also the representatives of the Bharat Electronics (Private) Limited and the Radio and Cable Board on the 15th and 16th April, 1959. The Committee's findings are embodied in this Report.

4. The Committee wish to express their thanks to the Officers of the Ministry of Defence and the Radio and Cable Board for placing before them the material and information that they wanted in connection with this examination.

NEW DELHI;  
The 30th April, 1959.

BALVANTRAY G. MEHTA,  
Chairman,  
Estimates Committee.

---

Vaisakha 10, 1881 (S)

## INTRODUCTORY

The Bharat Electronics (Private) Limited was set up in 1954 for the purpose of manufacturing various kinds of electronic equipment and their components including valves. The technical assistance was to be provided by the French firm, Compagnie General-de-Telegraphic Sans Fil (C.S.F.) with whom the Government of India had entered into an agreement for a period of ten years with effect from 1st of January, 1953.

2. The original estimate for the establishment of the factory and the actual expenditure incurred thereon upto 1958-59 are given below:

	Estimate	Actual expenditure upto 1958-59.
	(In lakhs of rupees)	
Buildings (Factory & residential) . . . . .	397·10*	129·70 (upto 31-1-1959)
†Plant & Machinery . . . . .	249·90*	96·41
Fees to C. S. F. . . . .	53·00	22·00
	700·00	248·11

\*A saving of 17·5% was anticipated in the original estimates.

†Including special test and measuring equipment as well as furniture fixtures, office appliances, transport vehicles, storeshandling equipment, canteen equipment etc.

## II

### PRODUCTION

#### A. Programmes

3. The original production programme for the years 1956-62 was laid down in Schedule II to the agreement with C.S.F. and was as follows:

	Rs.
1956 . . . . .	50 lakhs
1957 . . . . .	200 „
1958 . . . . .	300 „
1959—62 . . . . .	425 „ per year (estimated to be the full production capacity in the factory)

4. Subsequently, the calendar years were converted into financial years (e.g. 1956 to 1956-57) without any change in the value of production. Later, the programme of production for various years was further revised as shown in the following statement:

Year	Original target	Production programme as revised in 1955	Production programme as revised in 1956 & 1958
		(In lakhs of rupees)	
1956-57 . . . . .	50	67·18	38·82
1957-58 . . . . .	200	205·27	136·34
1958-59 . . . . .	300	No change	70·82
1959-60 . . . . .	425	No change	100·70

5. The reasons for the revisions in the production programme were stated by the Ministry of Defence to be as follows;

The original production programme, as indicated in the agreement with the C.S.F., was prepared on the basis of the requirements of various users for the years 1956—62 as ascertained by the Ministry of

Defence in 1952. Due to various developments in the field of electronics during 1952-55 the user requirements were ascertained afresh as a result of which the production programme was revised in consultation with C.S.F. The programme had to be further revised in 1956 and again in 1958 to meet the altered requirements of the user Departments.

### B. Actual Production

6. The actual production at B.E.L. during the three years ending 1958-59 and its percentage to the revised production programme are given below:

Year	Original programme	Revised Production Programme	Actual Production			Percentage of (3) to (1)	Percentage of (3) to (2)
			(a) For Defence Deptts.	(b) For Civil Deptts.	(c) Total		
1	2	3	4	5	6	7	8
(In lakhs of rupees)							
1956-57	50	38.82	Nil	5.97	5.97	11.9	15
1957-58	200	136.34	Nil	27.88	27.88	13.9	20
1958-59	300	70.82	Nil	64.5*	64.5*	21.5	91

### C. Reasons for Shortfall

7. The shortfall in production was explained by the representatives of the Ministry of Defence as follows:—

(i) The revised production programme was drawn up on the basis of information furnished by the Radio and Cable Board (a body composed of the representatives of various user Departments, with the Wireless Adviser in the Ministry of Communications as its Chairman) which was entrusted with the responsibility of co-ordinating the user requirements. While the Radio and Cable Board standardised the requirements of the various users to the extent possible, modifications to suit requirements of individual users had to be settled by the B.E.L. with the users themselves. This took time and as a result production could not be commenced as expected;

(ii) The bulk of the production programme for the first two years was in respect of two sets required by the Army (Rs. 173.4 lakhs). The C.S.F. were very optimistic in regard to their production. The sets were, however, basically new and it took the C.S.F. a long time to develop them especially because of the stringent requirements of the users necessitated by the specialised role for which they were required;

\* Estimated.



(iii) Even in regard to the two other sets which were proposed for production in the first two years, developmental work and modifications to suit the operational use of the users were required;

(iv) User Departments had no experience of the French equipment and desired demonstrations, technical tests and trials before they accepted the equipment;

(v) Even though the Radio and Cable Board intimated advance requirements of the users, the latter did not place firm orders on the B.E.L. for various reasons (*see vi & vii below*) as a result of which production could not be undertaken, especially since it took about 2 to 3 years to establish production of a new item;

(vi) While firm orders could not be placed in respect of new equipment until it had been developed and accepted, the reasons for absence of firm orders even in other cases were explained as due to the fact that while the advance requirements were based on a general assessment by the users, the actual orders depended upon their deficiencies revealed at a particular time. Besides, it was difficult to place firm orders for all anticipated requirements as that would amount to advance commitment which was not permissible; and

(vii) To some extent, the foreign exchange difficulties of the various users who had to pay for the foreign exchange required in the production of the equipment by the B.E.L. also stood in the way of increasing production.

8. Asked for his assessment of the reasons for shortfall in production, the Financial Adviser to the Ministry of Defence who is also a Director of B.E.L. stated that "there was no doubt that the project was originally conceived rather ambitiously (in relation to our abilities)" and that the original manufacturing programme was certainly optimistic as subsequent events had proved.

9. *It seems evident to the Committee that there was poor planning in regard to the drawing up of the production programme of the B.E.L.* As stated by the Financial Adviser the original production programme based on the user requirements as assessed in 1952 and provided for in the agreement with the C.S.F. was itself not very realistic. As observed by the Defence Secretary there was not sufficient coordination between the production programme and the users requirements. It did not seem to the Committee that sufficient attention had been given in regard to the desirability of producing standard equipment which could be readily produced in bulk at the B.E.L. Instead new standards and specifications were suggested. Even when the Defence Department asked for a set which had still to be developed and which was not in use anywhere in the world except perhaps in Australia—a step which the representatives of the Ministry of Defence admitted, in retrospect, might with advantage have been avoided—the Radio and Cable Board, the Bharat Electronics as well as the C.S.F. anticipated no difficulty in

regard to its production on a large scale, an optimism which was evidently not related to abilities. In consequence of the modifications in the equipment which became necessary to suit divergent user requirements and which had to be agreed upon between the BEL and the users, the programme of production had inevitably to undergo several modifications with the result that the actual production lagged far behind. The assurance which was held out to the Committee in 1956 by the Ministry of Defence (*vide* para. 114 of their 39th Report—First Lok Sabha) that in spite of the changes made till then there would be no material change in the total value of production for 1956 and 1957 also failed to be fulfilled. *The Committee consider it particularly regrettable that the B.E.L. even though under the Ministry of Defence, has not so far been able to produce any electronic equipment for the Defence Services in whose case the necessity of reducing dependence on foreign sources is especially important\*.*

10. The Committee in para 116 of their 39th Report (First Lok Sabha) had apprehended the possibility of frequent changes in the production programme and had, therefore, suggested that some arrangement should be arrived at with the Radio & Cable Board to lay down a firm production programme for three or four years at a time without making any changes every now and then. While the Committee did not have the benefit of discussing the position in this respect with the Chairman, Radio & Cable Board who is also a member of the Board of Directors of the BEL as he was on deputation abroad, *it seems to them on the basis of the evidence given before them by the representatives of the Ministry of Defence and the Secretary of the Radio and Cable Board that the Radio and Cable Board, though composed of the representatives of all user, Departments, has not been effective enough in coordinating and standardising the requirements of the users so as to present a firm production programme to the Bharat Electronics (P) Ltd.*

#### D. Outlook for future and suggestions

11. The Committee were informed in regard to the future that steps had been taken to increase the production. The Board of Directors had approved a production programme of about Rs. 1 crore for the year 1959-60. The production programme for the next three years had also been drawn up. An agreement had also been entered into with a foreign firm for the production of certain equipment. Negotiations in regard to manufacture of valves and other equipment were in an advanced stage. The Committee were assured by the Defence Secretary that "notwithstanding the initial disappointment and reverses, we are comparatively rapidly catching up and I think very soon BEL should be able to give a very much more satisfactory account of itself than it was able to do during the last few years".

---

\*At the stage of factual verification the attention of the Committee was drawn to the fact that an agreement had been entered into with a foreign firm for the production of certain equipment, referred to in para 11, and it was stated that the production of certain Defence equipment was now in hand.

12. Asked for his views to prevent shortfall in production in future years as also to increase the production in the factory, the Managing Director of Bharat Electronics made the following suggestions:

(a) Various types of equipment required by the users should be standardised as quickly as possible as it was uneconomical to produce the equipment in small numbers and delays occurred in carrying out modifications to suit the requirements of the users;

(b) The user departments should place firm orders on the BEL three years in advance because it took at least 2 to 3 years to plan the production of a new item;

(c) In a new industry relaxation of standards to a certain extent was needed in the initial stages so that the industry could gradually grow and build its own standards;

(d) The import duties on certain specialised components and raw materials were much higher than the duty on completed equipment with the result that the cost of indigenous production became higher than the imported equipment. Some preferential treatment for the import of such components and raw materials was necessary; and

(e) the foreign exchange component of the production in the BEL had to come from the concerned user departments. Several difficulties were involved in this and delays occurred and sometimes orders also did not materialise. The foreign exchange requirements should, therefore, be met from one source on a long-term basis.

13. In regard to the standardisation of equipment the responsibility lies on the Radio & Cable Board as well as on the Standardisation Committee of the Defence Services which is required to rationalise the requirements of the three Services and bring them on a common basis. However, as pointed out in para 10, the existing position in this matter is hardly satisfactory. *The Committee recommend that the Radio & Cable Board and the Standardisation Committee of the Defence Services should take more energetic steps to analyse the entire electronic equipment in use in the country in their respective spheres, whether in the public sector or in the private sector (and not merely of the user departments) and to standardise in consultation with the Indian Standards Institution, if necessary, the requirements of all users in a way which would enable at once the BEL to produce in bulk the equipment required and the various users to accept it as produced by BEL according to the prescribed specifications.*

14. In regard to the desirability of placing firm orders in advance, the Committee were informed by the Financial Adviser that the general question had been gone into by the Finance Ministry. He also stated that an inter-Ministerial Committee was being set up to examine changes required in the financial regulations to permit of long-term planning of stores by project authorities and the Central Ministries concerned. He agreed, however, that firm orders for established

items could be placed on a long-term basis as was, in fact, done in the case of Ordnance factories, but in respect of equipment which had yet to be developed and accepted by the users, it was obviously not possible to adopt the same method. In this connection the Committee observe from the material supplied to them that there are considerable discrepancies between the requirements for 1959-62, as intimated to BEL, and the actual orders placed on them. In several cases only partial orders in respect of the requirements had been placed even though the equipment had been developed and accepted by the users. For instance, in case of certain equipment, the requirements indicated to BEL were 2925 sets but the actual orders placed were only for 1,500 sets. *The Committee cannot but agree that absence of firm orders in advance as also piecemeal orders would result in unplanned and uneconomic production in BEL which is certainly not desirable. They do not see any reason why firm orders to the extent of requirements cannot be indicated simultaneously with the acceptance of equipment by users. The Committee recommend that the various users undertake a 5-year planning in respect of their requirements. They also recommend a thorough review of the existing position in regard to the system of placing firm orders on a long-term basis to enable the BEL to plan its production properly.*

15. In this connection it was brought to the Committee's notice that even though the BEL was the only factory producing electronic equipment in the country the user departments could approach the BEL only through the DGS&D. The Managing Director, BEL considered this procedure as dilatory and wasteful. *The Committee recommended a review of the existing position.*

16. As regards relaxation of standards, the Committee do not feel happy that such a suggestion should at all be made. The equipment especially in respect of the Defence Services might have to be used in adverse conditions and relaxation might mean more expenditure in the shape of wastages. *The Committee recommend that it should be ensured by BEL that they stick to the specifications prescribed and agreed upon. For this purpose, it should be ensured that the technical and the production sides of the BEL are strengthened and made efficient.*

17. In regard to the import duties on components, the Committee feel that it is rather anomalous that the duties should be such as to make an item of equipment costlier if its components were imported and assembled instead of its being imported as a complete set. *In the circumstances they suggest that the levy of import duties especially in regard to electronic components which cannot be manufactured in the country, might be reviewed in the light of the suggestions made by the Managing Director.*

18. As regards the Managing Director's suggestion that the foreign exchange requirements for the production to be undertaken in the BEL be made available to the latter alone instead of to the

various user departments, *the Committee feel that it is a suggestion which might with advantage be agreed to since it would facilitate better planning and also enable users to accept BEL sets as and when they require them.*

19. The Committee were informed by the Managing Director that "as the users have not been able to accept many CSF equipment BEL is now negotiating licensing agreements with a number of firms whose equipments are acceptable to them. BEL is, however, finding that the terms quoted by those firms are generally unreasonable. Their tendency is to quote such unreasonable terms as to make it absolutely uneconomical for BEL to manufacture or even to assemble their equipment here so that ultimately the Government may be forced to place orders direct on them. This is making the position of BEL extremely difficult and it is necessary that Government should take action to meet this situation." He, therefore, made the following suggestions:—

- (i) The users, instead of specifying equipment of a particular make, should broadly give their specifications and suggest 3 or 4 manufacturers whose equipments would be acceptable to them.
- (ii) Even where BEL is forced to go to a particular firm because no other similar equipment is available, the Government should not purchase any equipment from them so that they may be forced to enter into licensing agreements on reasonable terms. In very urgent cases, purchases may be made provided the firms enter into licensing agreements in advance on reasonable terms for future requirements.

20. The Committee at the outset consider it unfortunate that the users have not been able to accept many CSF equipments. The CSF was selected and an agreement entered into with it on the recommendations of a Technical Sub-Committee on which all the user departments were represented and of which the present Chairman, Radio & Cable Board and the present Managing Director, BEL were members (*vide* para 6 of the 39th Report). The Committee were also assured by the Defence Secretary in 1956 that the CSF equipment was put through a very severe test by the users as well as by the Technical Development Establishment and was acceptable to them (*vide* para 6 of the 39th Report). *In the circumstances, they fail to understand why the users should specify equipment of a particular make and firm and not (as suggested by the Managing Director) indicate their specifications leaving it to the BEL either to develop and manufacture the equipment themselves or to enter into licensing agreement with foreign firms for the purpose. In this connection, the necessity of long-term planning and standardising the equipments to the extent possible have already been pointed out. The Committee consider that in all these matters, the Radio & Cable Board should play a more positive role.*

21. *The Committee feel that the second suggestion made by the Managing Director should be kept in view every time a Ministry proposes to purchase any electronic equipment.*

22. *The Committee consider that the reported tendency on the part of foreign firms to quote unreasonable terms for collaboration, thereby making it uneconomical for the BEL to manufacture or even to assemble equipment patented by those firms, underlines the necessity for steps to be taken to prevent excessive dependence on foreign firms for the manufacture of electronic equipment in the BEL. For this purpose, it is essential that the BEL should strengthen its Development and Design Organisation so that it, together with the Defence Research & Development Organisation, could develop materials and techniques in the electronic field in their own laboratories as well as in the Universities and National Laboratories as expeditiously as possible.*

In this connection while welcoming the appointment, though belated, of a technical officer as Managing Director, B.E.L. 4 years after the EL was set up and almost 16 months after the Committee had occasion to point out the need of a senior technical officer at the BEL (vide para 55 of their 39th Report First Lok Sabha, *the Committee feel that it might be advantageous if the Defence Science Organisation is also actively associated with the Directorate of the BEL.*

#### **E. Analysis of Imports & their production**

23. The Committee observe that the estimated value of the indents for electronic equipment raised by the Defence Services and the orders placed abroad by the various Ministries of the Government of India during the last three years amount to Rs. 352 lakhs. They were informed in this connection that indents for import in respect of Government departments, including Defence Services, were referred to BEL for clearance and thereby it was ensured that nothing that could be manufactured by BEL in time was imported. There are, however, limitations to the efficacy of this procedure. As was pointed out to the Committee by the Managing Director, BEL because of the present foreign exchange difficulties and the six-monthly system of foreign exchange budgeting, user departments placed orders on the BEL only in dribbles as and when foreign exchange was made available to them and wanted their fulfilment in a short period. The BEL often found it difficult to accept orders on this basis, either because they were uneconomic to produce in small numbers or because of the time factor, with the result that the user departments resorted to imports. While the foreign exchange aspect has been dealt with earlier, *the Committee feel that the procedure of screening of indents is not effective enough since it does not prevent heavy imports to meet the requirements and also does not ensure effective utilisation of installed capacity for their production.*

24. The Committee are not aware of the extent of imports of electronic equipment by the private sector. The indents in this respect are screened by the Development Wing of the Ministry of Commerce & Industry. They are not, however, required to be referred to the BEL for clearance.

*25. The Committee consider that it is necessary to analyse the pattern of imports of electronic equipment in the country. It is also necessary that there should be some long-term planning by the user departments, especially on the part of the Defence Services, as also in regard to the requirements of the private sector, so as to enable the BEL to plan its production properly. In this connection, the Committee reiterate the necessity pointed out in para 113 of their 39th Report (First Lok Sabha), of a survey in this regard by a Committee of experts.*

### III

#### MANUFACTURE OF COMPONENTS

26. The value of raw materials and components procured by the Bharat Electronics (P) Ltd. indigenously as well as those imported during the last three years is given below:—

	(Rs. in lakhs)	
	Indigenous	Imported
1956-57 . . . . .	1·86	13·08
1957-58 . . . . .	4·86	45·11
1958-59 (up to December 1958) . . . . .	2·42	21·62
	9·14	79·81

27. In this connection the Committee were told by the Managing Director of Bharat Electronics (P) Ltd. that in the initial stage of the manufacture of an equipment, the components had to be imported from abroad. Efforts were, however, being made to gradually fabricate in the country all the required components and raw materials and to bring down the imports as much as possible. It was added that while the indigenous content in the equipment manufactured by the Bharat Electronics (P) Ltd. at present was on an average 60% it had reached even 80% in the case of 400W Transmitter. It was asserted, however, that complete self-sufficiency in the electronics field was difficult to achieve even in technically advanced countries.

28. In regard to the indigenous production of components, the Committee were informed that the Bharat Electronics (P) Ltd. were obtaining some of their requirements from various sources in Bombay, Hyderabad, Bangalore, Mysore etc. However, it was added that since the manufacture of component parts was one of the objects of the Bharat Electronics (P) Ltd., before sub-contracting the manufacture of any component they took into account their own capacity for the purpose.

29. The Committee consider that it should be the constant endeavour of the Bharat Electronics (P) Ltd. to achieve self-sufficiency in the matter of indigenous procurement of raw materials and components. In this matter, the need for decentralisation and encouragement of feeder industries by going in for the system of sub-contracting the manufacture of components, to the extent possible as in the U.K. and U.S.A., should be constantly kept in view. The Committee



understand that a sub-committee of the Radio Manufacturers' Association is looking into this question. Nevertheless they feel that this is a matter where the Government and the Bharat Electronics (P) Ltd., should take the lead. *The Committee, therefore, reiterate the suggestion made by them in para 131 of the 39th Report (First Lok Sabha) for the appointment of a Committee of experts to undertake a survey of the indigenous capacity for the manufacture of components etc., and for drawing up a long-term plan for the manufacture of various items to the extent required.*

## IV MANUFACTURE OF VALVES

30. The Committee were informed that the manufacture of valves was included in the agreement with the CSF, and that on the advice of the latter, an expenditure of Rs. 13·80 lakhs had been incurred by the Bharat Electronics (P) Ltd. on the construction of buildings and purchase of equipment for the Valves Division, as follows:—

(In lakhs of rupees)

	1955-56	1956-57	1957-58	1958-59	Total
1. Buildings . . . . .	..	..	5·37	0·13	*5·50
2. Air-conditioning plant . . . . .	..	..	2·50	..	2·50
3. Other Plant Machinery . . . . .	5·47	0·33	..	..	5·80
					13·80

\*This represents 50% of the value of the buildings constructed both for receiving and transmitting valves.

As, however, the valves of CSF manufacture were not stated to be found suitable, negotiations were started with other foreign firms and were now in final stages. It was expected that the first batch of valves would come off the production line two years after the agreement was signed.

31. The value of radio receiving valves imported in the country during the last three years is as follows:—

	(In lakhs of rupees)
April to December, 1956 . . . . .	25·44
January to December, 1957 . . . . .	45·32
January to November, 1958 . . . . .	30·81

32. The Committee had recommended in para 133 of their 39th Report (First Lok Sabha) that negotiations for the manufacture of valves be expedited and production undertaken at an early date. The delay in concluding the agreement was attributed to Government's anxiety to get the best possible terms in the interest of Bharat Electronics (P) Ltd., having regard to their past experience. *Nevertheless, the Committee feel that an unduly long time has been taken in finalising the agreement for valves manufacture. In view of the extent of*

*imports of the radio receiving valves into the country, the Committee hope that it would be possible to finalise the negotiations soon and to undertake the manufacture of valves at an early date.*

*33. Besides, they fail to understand why an expenditure to the extent of Rs. 13·80 lakhs has so far been incurred on the Valves Division on the basis of advice given by the CSF who, however, are not expected to collaborate in the manufacture of valves. The Committee wonder whether the equipment so far purchased for the Valves Division on the advice of the CSF and the buildings constructed therefor would be fully utilised for the type of valves proposed to be manufactured in collaboration with the firm with whom negotiations are proceeding.*

## V

### PURCHASES OF PLANT AND MACHINERY

34. The Committee were informed that out of the total plant and machinery worth Rs. 84.41 lakhs (excluding Rs. 12 lakhs for transport vehicles, stores handling equipment etc.) purchased for the Bharat Electronics (P) Ltd. upto 1958-59, machinery worth Rs. 3.15 lakhs remains uninstalled at present, while that costing Rs. 5.94 lakhs though installed has not been put to any use so far. The table below gives the total value of machinery purchased, the production capacity of machinery installed in the machine shops and actual production:—

Year	Progressive total of machinery, test equipment etc. installed	Production capacity of machinery installed in machine shops	Actual production	Percentage of (4) to (3)
1	2	3	4	5
	(in lakhs of rupees)			
1956-57 . . . . .	56.09	90	5.97	6.6
1957-58 . . . . .	74.96	100	27.88	28.0
1958-59 . . . . .	81.26	120	64.5	53.9

35. The overall utilisation of standard machine tools installed in the production shops, and which cost Rs. 51.7 lakhs, was stated to be as follows in the last three years:—

1956-57 . . . . .	25%
1957-58 . . . . .	33%
1958-59 . . . . .	44%

36. The detailed utilisation of machinery during 1958-59 and their value are given in Appendix II.

37. The low utilisation of machinery was explained by the Managing Director of the Bharat Electronics (P) Ltd., as follows:—

- (i) The requirements of machinery had to be assessed with reference to the original production programme and the purchases made accordingly. Even then considerable economy was exercised and as against the original estimate of Rs. 2.5 crores, machinery worth Rs. 96.41 lakhs only was purchased. But the actual production fell short of the programme of production (for reasons explained in Sec. II), as a result of which the utilisation of machinery was less than anticipated.

- (ii) Technical machinery of various kinds (including specialised types of equipment) had to be purchased in the initial stages for proper production even though their utilisation would be small. In this connection, it was stated that in a specialised electronics industry where a varied and wide range of equipment was intended to be produced, the utilisation of machinery could not be more than 70%. It was added that even if the production target of Rs. 50 lakhs had been achieved in the first year of production, the utilisation of machinery would not have been 100%.

38. The Financial Adviser, asked for his views, stated that it appeared to him, viewing the matter in retrospect, that the initial purchase of machinery was heavy and somewhat unbusinesslike. *In the circumstances and considering the extent of uninstalled machinery and the utilisation of the installed machinery, the Committee doubt whether there had been adequate planning in regard to requirements of plant and machinery with particular reference to the question whether the purchase was related to the immediate requirements of the Bharat Electronics (P) Ltd., In this connection the Committee consider significant the unusual provision in the Agreement with the CSF which restricts the fees payable to the latter for their services in the purchase and installation of equipment for the factory to 10% of the value of equipment certified to have been inspected in the Works of the suppliers and found acceptable as per the orders placed. The Committee feel that it would be desirable to have an expert technical inquiry into the purchases of plant and machinery with particular reference to their past and future utilisation.*

## VI

### CONSTRUCTION OF BUILDINGS

39. The expenditure upto 31-1-1959 on factory and residential buildings amounted to Rs. 129.70 lakhs. The Committee were informed that of the buildings constructed so far, certain buildings were only partly used, the percentage of vacant area ranging from 5 to 100%. A statement showing details of all such buildings and their cost is given in Appendix III.

40. The Financial Adviser informed the Committee that about 50% of the technical buildings were unoccupied mainly due to the valve project and other production not coming up as rapidly as expected. He added that the building programme could have been phased much more than it was. *The Committee consider it unfortunate that the building programme was drawn up without much relation to the needs on the production programme, resulting in such large vacant spaces in the buildings which in the words of the Financial Adviser, had a very dampening effect.*

## VII CONCLUSION

41. The Committee observe from a note furnished to them by the Radio & Cable Board "that in June 1954, the Prime Minister had issued a directive to all the Ministries that every Department using wireless or electronic equipment should cooperate with the Bharat Electronics (P) Ltd. to their utmost to enable it to make the country self-sufficient in regard to such equipment. The user departments were also directed to adjust their future programme of purchase and provisioning so as to avoid the import and stocking of large quantity of such equipment which could be manufactured in the Bharat Electronics (P) Ltd. and that no new equipment should be introduced and brought into use in these Departments of the Government without first ascertaining that such equipment could be manufactured by the Bharat Electronics (P) Ltd. The Departments were also asked to give their fullest cooperation to the Radio & Cable Board in the task of bringing about coordination in this field." *The Committee do not think that the Prime Minister's directive has been adequately respected by the various user departments including the Defence Services or that the Radio & Cable Board and the Ministry of Defence, both of whom had an important responsibility ensured or even secured its observance.\* There has undoubtedly been faulty planning in various matters as pointed out in the Report. There is also a case for a scrutiny and a review of the working of the agreement with the C.S.F. with particular reference to the assumptions that were made while entering into the agreement vide para 14 of the Committee's 39th Report (First Lok Sabha), and also of the assistance so far rendered by them. Nevertheless the Committee feel that more energetic steps are required, especially on the part of those charged with the responsibility of coordination, as indicated at various places in the Report, if adequate production of electronic equipment in the Bharat Electronics (P) Ltd., is to be ensured.*

New Delhi;  
The 30th April, 1959.  
Vaisakha 10, 1881 (Saka).

BALVANTRAY G. MEHTA,  
Chairman,  
Estimates Committee.

\*The Committee were informed at the stage of factual verification that "(1) the various user Ministries and Departments had been circularised by the Defence Ministry and reminded of the Prime Minister's directive in March, 1955 and in September, 1956 respectively and (2) at the instance of the Defence Ministry the Ministry of W.H.&S issued instructions in November, 1956 to all the Ministries regarding the procedure to be followed in placing orders for electronic equipment prescribing that electronic equipment could be imported only after BEL had given clearance". The Committee consider, however, that the effectiveness of these steps taken by the Defence Ministry can only be judged with reference to (1) the production figures given in para 6 and in particular the fact that the Defence Departments have accounted for no production at the BEL even in the 5th year after the setting up of the BEL and (2) the figures of import of electronic equipment given in para 23.

**APPENDIX I**

(*Vide* Para 2 of . Introduction)

**LOK SABHA**

**Starred Question No. 1056**

*Answered on the 10th March, 1959*

**BHARAT ELECTRONICS (PRIVATE) LTD.**

**\*1056. Shri Ajit Singh Sarhadi:—**Will the Minister of Defence be pleased to state:

- (a) whether Bharat Electronics (Private) Ltd. is keeping to the schedule of production in the current year; and
- (b) if not, the reasons therefor?

*ANSWER*

**THE DEPUTY MINISTER OF DEFENCE (SARDAR SURJIT SINGH MAJITHIA)**

- (a) Only partially, Sir.
- (b) The production programme for the current year was based on anticipated orders. But the orders were not received sufficiently early, and consequently, production could not be taken up as planned.



**Starred Question No. 1075**

*Answered on the 10th March, 1959*

**PRODUCTION IN BHARAT ELECTRONICS**

\*1075. { **Shri Mohammed Imam:**  
**Kumari Veda Kumari:**

Will the Minister of **Defence** be pleased to state:

(a) the value of total production in Bharat Electronics (Private) Limited, Bangalore during the years 1955-56, 1956-57 and 1957-58; and

(b) whether there is any proposal to take up new lines of production?

*ANSWER*

**THE DEPUTY MINISTER OF DEFENCE (SHRI K. RAGHURAMAIAH)**

(a) The value of production of electronic equipment during the last three years is as follows:—

1955-56—NIL  
1956-57—Rs. 6 lakhs  
1957-58—Rs. 28 lakhs.

(b) Yes. Amongst others an agreement has been entered into for the manufacture of portable trans-receiver set. Negotiations for the manufacture of other types of equipment are in progress.

**Shri Ajit Singh Sarhadi:** Is it a fact that the Bharat Electronics have not kept up to the schedule till now; If so, is it not intended that there should be an enquiry as to why they have not kept up to the schedule?

**Sardar Majithia:** I have already given the reasons for not keeping up to the schedule in the answer, and that is that the orders were not received sufficiently early, and therefore we could not go into production for those specific items, because that is the normal procedure laid down on which we take up production.

**Shri Ajit Singh Sarhadi:** Is it not a fact that at the outset for many years there was no technical personnel in Bharat Electronics to keep up to the schedule?

**Sardar Majithia:** No, Sir. As I said—I do not mind repeating it again—it is only because orders were not received and therefore as we did not have any orders, we did not proceed with the production schedule which can only be done after the necessary orders are received.

**Mr. Speaker:** No no. The hon. Member wants to know if for want of technical personnel orders could not be received.

**Sardar Majithia:** No, Sir.

**Shri Mohammed Imam:** Is it not a fact that this concern is over-capitalised and they have constructed a very huge building in which a lot of space is lying idle and machinery also is lying idle? May I know the reasons for this? I would like to know why there was such a huge investment on such a small factory.

**Mr. Speaker:** Does it arise out of this? Hon. Member wants to know why a large percentage of the machinery and building space is lying idle. That is the question.

**Sardar Majithia:** That also can be put down to the same thing that as soon as we receive orders, it will go into production, and as the orders increase, as they are expected to, more machinery will be brought into work.

**Shri Joachim Alva:** Has Government kept a check on a large amount of similar equipment being imported into the country, and has the Ministry kept in touch with other Ministries to see that such imports are stopped because they militate against the sale of the production from Bharat Electronics?

**Sardar Majithia:** It does not arise out of this, I am afraid.

**Mr. Speaker:** No, no. A huge factory is established and it is lying idle. It is for the purpose of producing, and if there is unhealthy competition from a foreign country, how does it not arise?

**Sardar Majithia:** The competition will only come when this starts producing, and this factory will only start producing when we receive definite orders.

**Mr. Speaker:** No orders will be received so long as there is import. Hon. Minister will kindly understand the link. So long as foreign imports come in here, there will not be any orders received, and so long as orders are not received, this will be lying idle, and therefore it is necessary for any person who starts it to take steps. Ordinary industrialists will always come to the Government and ask for imposition of heavy tariff on the imported article or prevention of it. Why is not a similar thing being done in this case?

**Sardar Majithia:** This will be brought to the notice of the Commerce and Industry Ministry, and I hope they will take action.

**Shri Prabhat Kar:** May I know whether it is a fact that for the manufacture of valves a building was erected for Rs. 20 lakhs and up till now the manufacture of valves has not been undertaken, and for the last two years in spite of the delay no steps have been taken by the Defence Ministry, and if not, why?

**Sardar Majithia:** It is true that the valves have not been produced so far. They have now practically negotiated, and as soon as this is over, valves will be coming off the line.

**Shri Ranga:** In view of the fact that these negotiations are supposed to have been going on for several months and about two months ago the Public Accounts Committee were assured that it was coming to a close and they were going to clinch the whole matter, have Government been able, since then, to obtain the necessary licence from the Commerce and Industry Ministry in order to enable them to conclude this agreement and take up this manufacture?

**Sardar Majithia:** As I said, the negotiations are very nearly in the final stage, and I expect . . .

**Shri Ranga:** With whom? Is it with the company or with the Commerce and Industry Ministry?

**Sardar Majithia:** With the company with which we are going to collaborate to produce these valves.

**Shri Ranga:** Why is it . . .

**Mr. Speaker:** These seems to be a lot of interest shown in this matter. I shall refer this matter for investigation to the Estimates Committee as an *ad hoc* matter immediately.

**Shri Ranga:** I thank you.

## APPENDIX II

(Vide Para 36)

### *Value of Plant & Machinery not Fully in use During 1958-59*

The percentage of utilisation of standard machine tools installed in the Production Shops is furnished below which will give an idea of the extent to which machinery is not fully in use:

Extent of utilisation of the machines	Value (Rs. in lakhs)
76% and above . . . . .	16.88
51 to 75% . . . . .	5.10
26 to 50% . . . . .	7.58
6 to 25% . . . . .	4.45
Upto 5% . . . . .	1.85
Nil Usage . . . . .	7.88*
TOTAL . . . . .	43.04

NOTE.—\*Out of Rs. 7.88 lakhs worths of machines which were not used in 1958-59 machines valued at Rs. 1.95 lakhs were used in previous years to some extent.

### APPENDIX III

(Vide Para 39)

*Details of Buildings & Parts thereof unused & cost thereof*

Sl. No.	Building No.	Percentage of vacant Area	Cost there- of  Rs.
1	No. 6—Building First Floor—Plant & Services . . . . .	20%	1,37,326.
2	2-0—North Wing First Floor—M.D's Secretariat, Budget & Finance, Supplies, etc. . . . .	40%	1,61,589
3	2-B—First Floor—Drawing Office . . . . .	15%	30,789.
4	2-0—Ground Floor—Material Inspection, Stores . . . . .	5%	20,198
5	2-1—Building—First Floor—Personnel Department, D.G.M.'s Office, etc. . . . .	30%	1,80,225
6	2-1—Ground Floor—Material Control, Chemical & Physical Laboratories, etc. . . . .	20%	1,20,151
7	3-0—Workshop Buildings—Machine Shop, Shop Planning etc. . . . .	30%	3,44,879
8	3-2—Workshop Buildings—Assembly, Testing, etc. . . . .	70%	11,52,050
9	3-3—Workshop Buildings—Valves Division. . . . .	100%	11,02,019
10	3-4—Workshop Buildings—Crystal Division, Transformer Division, etc. . . . .	75%	7,42,073
			39,91,299

## APPENDIX IV

### *Summary of Conclusions and Recommendations*

S. No.	Paragraph No.	Conclusions/Recommendations
1	2	3
1	9	<p>(i) It seems evident to the Committee that there was poor planning in regard to the drawing up of the production programme of the Bharat Electronics (P) Ltd. It did not seem that sufficient attention had been given in regard to the desirability of producing standard equipment which could be readily produced in bulk at BEL. Instead new standards and specification were suggested.</p> <p>(ii) The Committee consider it particularly regrettable that the BEL, even though under the Ministry of Defence, has not so far been able to produce any electronic equipment for the Defence Services in whose case the necessity of reducing dependence on foreign sources is especially important.</p>
2	10—13	<p>(i) it seems to the Committee that the Radio and Cable Board has not been effective enough in coordinating and standardising the requirements of the Users so as to present a firm production programme to the Bharat Electronics (P) Ltd.</p> <p>(ii) The Committee recommend that the Radio &amp; Cable Board and the Standardisation Committee of the Defence Services should take more energetic steps to analyse the entire electronic equipment in the country in their respective spheres whether in the public sector or in the private sector (and not merely of the user departments) and to standardise in consultation with the Indian Standards Institution, if necessary, the requirements of all users in a way which would enable at once the Bharat</p>

1

2

3

---

Electronics (P) Ltd. to produce in bulk the equipment required and the various users to accept it as produced by Bharat Electronics (P) Ltd. according to the prescribed specifications.

- 3      14      The Committee observe that there are considerable discrepancies between the requirements for 1959-62 as intimated to Bharat Electronics (P) Ltd. and the actual orders placed on them. They cannot but agree that absence of firm orders in advance as also piecemeal orders would result in un-planned and uneconomic production in Bharat Electronics (P) Ltd. which is certainly not desirable. They do not see any reasons why firm orders to the extent of requirements cannot be indicated simultaneously with the acceptance of equipment by users. The Committee recommend that the various users undertake a 5-year planning in respect of their requirements. They also recommend a thorough review of the existing position in regard to the system of placing firm orders on a long-term basis to enable the Bharat Electronics (P) Ltd. to plan its production properly.
- 4      15      Even though the Bharat Electronics (P) Ltd. was the only factory producing electronic equipment in the country the user departments could approach the Bharat Electronics (P) Ltd. only through the DGS&D. The Committee recommend a review of the existing position.
- 5      16      The Committee do not feel happy that a suggestion for relaxation of standards should at all be made. They recommend that it should be ensured by Bharat Electronics (P) Ltd. that they stick to the specifications prescribed and agreed upon. For this purpose it should be ensured that the technical and the production sides of the Bharat Electronics (P) Ltd. are strengthened and made efficient.
- 6      17      The Committee suggest that the levy of import duties especially in regard to electronic equipment, which cannot be manufactured in the country, might be reviewed in the light of the suggestions made by the Managing Director.
- 7      18      The Committee feel that the Managing Director's suggestion that the foreign exchange requirements for the production to be undertaken in the BEL be made available to the latter alone instead of the
-

---

1	2	3
		various user Departments is a suggestion which might with advantage be agreed to since it would facilitate better planning and also enable users to accept BEL sets as and when they require them.
8	20	The Committee consider it unfortunate that the users have not been able to accept many CSF equipments. They fail to understand why the users should specify equipment of a particular make and firm and not indicate their specifications leaving it to the Bharat Electronics (P) Ltd. either to develop and manufacture the equipment themselves or to enter into licensing agreement with foreign firms for the purpose. The Committee consider that in all these matters the Radio & Cable Board should play a more positive role.
9	21	The Committee suggest that the suggestion that Government should not purchase any equipment from foreign firms unless they enter into licensing agreement with Bharat Electronics (P) Ltd. on reasonable terms for future requirements (except in very urgent cases) should be kept in view every time a Ministry proposes to purchase any electronic equipment.
10	22	(i) The Committee consider that the reported tendency on the part of foreign firms to quote unreasonable terms for collaboration, thereby making it uneconomical for the BEL to manufacture or even to assemble equipment patented by those firms, underlines the necessity for steps to be taken to prevent excessive dependence on foreign firms for the manufacture of electronic equipment in the BEL. For this purpose, it is essential that the B.E.L. should strengthen its Development and Design Organisation so that it together with the Defence Research & Development Organisation could develop materials and techniques in the electronic field in their own laboratories as well as in the Universities and National Laboratories as expeditiously as possible.  (ii) The Committee feel that it might be advantageous if the Defence Science Organisation is also actively associated with the Directorate of the B.E.L.
11	23	The Committee feel that the procedure of screening of indents is not effective enough since it does not prevent heavy imports to meet the requirements and also does not ensure effective utilisation of installed capacity for their production.

---



---

1	2	3
12	25	The Committee consider that it is necessary to analyse the pattern of imports of electronic equipment in the country. It is also necessary that there should be some long-term planning by the user departments especially on the part of the Defence Services as also in regard to the requirements of the private sector so as to enable the Bharat Electronics (P) Ltd. to plan its production properly. In this connection, the Committee reiterate the necessity pointed out in para 113 of their 39th Report (First Lok Sabha) of a survey in this regard by a Committee of Experts.
13	29	The Committee consider that it should be the constant endeavour of the Bharat Electronics (P) Ltd. to achieve self-sufficiency in the matter of indigenous procurement of raw materials and components. In this matter the need for decentralisation and encouragement of feeder industries by going in for the system of sub-contracting the manufacture of components, to the extent possible, as in the U.K. and U.S.A., should be constantly kept in view. The Committee, therefore, reiterate the suggestion made by them in para 131 of the 39th Report (First Lok Sabha) for the appointment of a Committee of Experts to undertake a survey of the indigenous capacity for the manufacture of components etc. and for drawing up a long-term plan for the manufacture of various items to the extent required.
14	32-33	(i) The Committee feel that an unduly long time has been taken in finalising the agreement for valves manufacture. They hope that it would be possible to finalise the negotiations soon and to undertake the manufacture of valves at an early date.  (ii) Besides they fail to understand why an expenditure to the extent of Rs. 13.80 lakhs has so far been incurred on the Valves Division on the basis of advice given by the CSF who, however, are not expected to collaborate in the manufacture of valves. The Committee wonder whether the equipment so far purchased for the Valves Division on the advice of the CSF and the buildings constructed therefor could be fully utilised for the type of valves proposed to be manufactured in collaboration with the firm with whom negotiations are proceeding.
15	38	The Committee doubt whether there had been adequate planning in regard to the requirements of plant

---

---

1	2	3
---	---	---

---

and machinery with particular reference to the question whether the purchase was related to the immediate requirements of the Bharat Electronics (P) Ltd. In this connection, they consider significant the unusual provision in the Agreement with the CSF which restricts the fees payable to the latter for their services in the purchase and installation of equipment for the factory to 10% of the value of equipment certified to have been inspected in the Works of the suppliers and found acceptable as per the orders placed. The Committee feel that it would be desirable to have an expert technical inquiry into the purchases of plant and machinery with particular reference to their past and future utilisation.

- 16      40      The Committee consider it unfortunate that the building programme was drawn up without much relation to the needs or the production programme, resulting in large vacant spaces in the buildings.
- 17      41      The Committee do not think that the Prime Minister's directive has been adequately respected by the various User Departments including the Defence Services or that the Radio & Cable Board and the Ministry of Defence, both of whom had an important responsibility, ensured or even secured its observance. There has undoubtedly been faulty planning in various matters as pointed out in the Report. There is also a case for a scrutiny and a review of the working of the agreement with the CSF with particular reference to the assumptions that were made while entering into the agreement and also of the assistance so far rendered by them. Nevertheless the Committee feel that more energetic steps are required, especially on the part of those charged with the responsibility of coordination, if adequate production of electronic equipment in the Bharat Electronics (P) Ltd. is to be ensured.
-

**LIST OF AUTHORISED AGENTS FOR THE SALE OF PARLIAMENTARY PUBLICATIONS OF THE LOK SABHA SECRETARIAT, NEW DELHI-1**

Agency No.	Name and address of the Agent	Agency No.	Name and address of the Agent	Agency No.	Name and address of the Agent
1.	Jain Book Agency, Connaught Place, New Delhi.	26.	The International Book Service, Deccan Gymkhana, Poona-4.	50.	Chanderkant Chimar Lal Vora, Gandhi Road, Ahmedabad.
2.	Kitabistan, 17-A, Kamla Nehru Road, Allahabad.	27.	Bahri Brothers, 188, Lajpat Rai Market, Delhi-6.	51.	S. Krishnaswamy & Co., P.O. Teppakulam, Tiruchirappalli-1.
3.	British Book Depot, 84 Hazratganj, Lucknow.	28.	City Book-sellers, Sohanganj Street, Delhi.	52.	Hyderabad Book Depot, Abid Road (Gun Foundry), Hyderabad.
4.	Imperial Book Depot, 268, Main Street, Poona Camp.	29.	The National Law House, Near Indore General Library, Indore.	53.	(R) M. Gulab Singh & Sons (P) Ltd., Press Area, Mathura Road, New Delhi.
5.	The Popular Book Depot (Regd.), Lamington Road, Bombay-7.	30.	Charles Lambert & Co., 101, Mahatma Gandhi Road, Opp. Clock Tower, Fort, Bombay.	54.	(R) C. V. Venkiahala Iyer, Near Railway Station, Chalakudi. (S.I.)
6.	H. Venkaramiah & Sons, Vidyavidhi Book Depot, New Statue Circle, Mysore.	31.	A. H. Wheeler & Co. (P) (Ltd.), 15, Elgin Road, Allahabad.	55.	(R) The Chidambaram Provision Stores, Chidambaram.
7.	International Book House, Main Road, Trivandrum.	32.	M.S.R. Muthy & Co., Viskhapatnam.	56.	(R) K. M. Agarwal & Sons, Railway Book Stall, Udaipur (Rajasthan).
8.	The Presidency Book Supplies, 8-C, Pycroft's Road, Triplicane, Madras-5.	33.	The Loyal Book Depot, Chhipi Tank, Meerut.	57.	(R) The Swadeshmitran Ltd., Mount Road, Madras-2.
9.	Atma Ram & Sons, Kashmere Gate, Delhi-6.	34.	The Good Companion, Baroda.	58.	The Imperial Publishing Co., 3, Faiz Bazar, Daryaganj, Delhi-6.
10.	Book Centre, Opp. Patna College, Patna.	35.	University Publishers, Railway Road, Jullundur City.	59.	Azeez General Agency, 471, Tilak Road, Tirupati.
11.	J. M. Jaina & Brothers, Moti Gate, Delhi-6.	36.	Students Stores, Raghurath Bazar, Jammu-Tawi	60.	Current Book House, Maruti Lane, Raghunath Dadaji Street, Bombay-1
12.	The Cuttack Law Times Office, Cuttack-2.	37.	Amar Kitab Ghar, Diagonal Road, Jamshedpur-1.	61.	Shri A.P. Jambulingam, Trade Representative & Marketing Consultant, Prudential Bank Building, Rashtapuri Road, S. cunde abad.
13.	The New Book Depot, Connaught Place, New Delhi.	38.	Allied Traders, Motia Park, Bhopal.	62.	K. G. Aseervadam & Sons, Cloughpet. P.O. Ongol, Guntur Dist. (Andhra)
14.	The New Book Depot, 79, The Mall, Simla.	39.	E. M. Gopal Krishna Kone (Shri Gopal Mahal) North Chitrai Street, Madura.	63.	The New Order Book Co., Ellis Bridge, Ahmedabad.
15.	The Central News Agency, 23/90, Connaught Circus, New Delhi.	40.	Friends Book House, M.U., Aligarh.	64.	The Triveni Publishers Masulipatanam.
16.	Lok Milap, District Court Road, Bhavnagar.	41.	Modern Book House, 286 Jawahar Ganj, Jabalpur.	65.	Deccan Book Stall, Ferguson College Road, Poona-4.
17.	Reeves & Co., 29, Park Street, Calcutta-16.	42.	M. C. Sarkar & Sons (P) Ltd., 14, Bankim Chatterji Street, Calcutta-12.	66.	Jayant Book Depot, Chappawala Kuan, Karol Bagh, New Delhi-5.
18.	The New Book Depot, Modi No. 3, Nagpur.	43.	People's Book House, B-2-829/1, Nizam Shahi Road, Hyderabad Dn.	67.	Bookland, 663, Madan Gate, Ajmer (Rajasthan).
19.	The Kashmir Book Shop, Residency Road, Srinagar, Kashmir.	44.	W. Newman & Co. Ltd., 3, Old Court House Street, Calcutta.	68.	Oxford Book & Stationery Co., Scindia House, Connaught Place, New Delhi.
20.	The English Book Store, 7-L, Connaught Circus, New Delhi.	45.	Thacker Spink & Co., (1938) Private Ltd., Esplanade East, Calcutta-1.	69.	Makkala Pustaka Press, Balamandira, Gandhinagar, Bangalore-9.
21.	Rama Krishna & Sons, 16-B, Connaught Place, New Delhi.	46.	Hindustan Diary Publishers, Market Street, Secunderabad.	70.	Gandhi Samiriti Trust, Bhavnagar.
22.	International Book House Private Ltd., 9, Ash Lane, Bombay.	47.	Laxmi Narain Agarwal, Hospital Road, Agra		
23.	Lakshmi Book Store, 42, M. M. Queensway, New Delhi.	48.	Law Book Co., Sardar Patel Marg., Allahabad.		
24.	The Kalpana Publishers, Trichinopoly-3.	49.	D. B. Teraporevala & Sons Co. Private Ltd., 210 Dr. Naoroji Road, Bombay-1.		
25.	S. K. Brothers, 15A/65, W.E.A., Karol Bagh, New Delhi-5.				

---

---

**PRINTED AT THE PARLIAMENTARY WING OF THE GOVERNMENT OF  
INDIA PRESS, NEW DELHI AND PUBLISHED BY THE LOK SABHA  
SECRETARIAT UNDER RULE 382 OF THE RULES OF PROCEDURE AND  
CONDUCT OF BUSINESS IN LOK SABHA (FIFTH EDITION).**

---

---

