

HEARING AID

1. INTRODUCTION

Hearing aid is an important electronic device for partially deaf people to help them hear better. The instrument comprises an earphone, microphone and a small amplifier circuit. The main circuits and power source, like batteries, are housed in a box that can be carried in the pocket of the person. The earphone and microphone are attached to the amplifier by wires. Hearing aids would require good marketing and service set up. There's a steady and distinct demand for the product.

2. RAW MATERIALS

ICs, semiconductor devices, resistors, capacitors, earphone, condenser microphone, PCBs, wires & cords cabinet, batteries etc.

3. MANUFACTURING PROCESS

The components are assembled as per design on the PCB and soldered. The connecting wires are attached and hooked to microphone and earphone. The circuit is placed inside the box, connected to batteries and checked for performance.

4. MANPOWER REQUIREMENT : 7

5. PROJECT COST

A. Fixed Capital

Land & Building	Rented
Plant & Machinery	1,20,000
	1,20,000

B. Working Capital (per month)

Raw Material & Packing	1,30,000
Utilities	1,500
Salary & wages	15,000
Other expenses	7,000

	1,53,500
Total (A+B)	273500

6. COST OF PRODUCTION / ANNUM

	(.)
Raw materials etc. (per annum)	18,42,000
Depreciation on machinery	12,000
Interest on investment	70,000
	19,24,000

7. PROFITABILITY

Sales turnover	24,00,000
Operating expenses	19,24,000
Annual profit	4,76,000
Percentage of profit on investment / sales	80%

Market potential :

At present, in India there are 12-13 units manufacturing different types of hearing aids. Majority of the units are in the small scale and mainly manufacturing pocket type hearing aid. Very few manufacturers (like Arphi and Philips) are producing miniature hearing aids, which are purchased by users in high income group due to its high price. There may be a significant expansion in demand if such hearing aids are introduced at a reasonable price and it good after sales service is provided. The spectacle type hearing aid suggested for production in this profile is miniature sized. However since this product is still new to Indian Market, special effort would be required for selling inspite of good market potential and therefore production of pocket type hearing aid has also been envisaged. As market for miniature hearing aid starts to establish itself, production could be progressively shifted to it.

Production capacity :

Pocket size 3000 nos

Spectacle type 1500 nos

List of Plant, Machinery & equipment :

- 1 Audio frequency oscillator
- 2 10 MHz dual trace oscilloscope
- 3 Distortion factor meter
- 4 Output meter
- 5 Multimeter
- 6 Precision sound level recorder
- 7 Diagnostic audiometer (dB meter)
- 8 Portable drilling machine
- 9 DC Power supplies 915v/1A
- 10 Temp. controlled soldering iron
- 11 Assembly tools ,jigs and fixtures
- 12 Production table and chairs
- 13 Dies, jigs and fixtures

