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PROJECT REPORT

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PROJECT:

EARPHONE MANUFACTURING UNIT

PROJECT REPORT

OF

EARPHONE MANUFACTURING UNIT

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Earphone manufacturing unit.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

PROJECT AT GLANCE

1	**Name of Proprietor/Director**	XXXXXXXX
2	**Firm Name**	XXXXXXXX
3	**Registered Address**	XXXXXXXX
4	**Nature of Activity**	XXXXXXXX
5	**Category of Applicant**	XXXXXXXX
6	**Location of Unit**	XXXXXXXX
7	**Cost of Project**	23.51 Rs. In Lakhs
8	**Means of Finance**	
i)	**Own Contribution**	2.35 Rs. In Lakhs
ii)	**Term Loan**	16.65 Rs. In Lakhs
iii)	**Working Capital**	4.51 Rs. In Lakhs
9	**Debt Service Coverage Ratio**	2.51
10	**Break Even Point**	0.39
11	**Power Requiremnet**	20 KW
12	**Employment**	8 Persons
13	**Major Raw Materials**	Wire, Plug connector, Electrical components etc.

14 Details of Cost of Project & Means of Finance

Cost of Project **Amount in Lacs**

Particulars	Amount
Building & Civil Work	Owned/Leased
Plant & Machinery	17.00
Other Misc Assets	1.50
Working Capital Requirement	5.01
Total	**23.51**

Means of Finance

Particulars	Amount
Own Contribution	2.35
Term Loan	16.65
Working capital Loan	4.51
Total	**23.51**

1. INTRODUCTION Earphones are a pair of small loudspeaker drivers worn in/on or around the head over a user's ears. They are electroacoustic transducers, which convert an electrical signal to a corresponding sound. Earphones let a user listen to an audio source privately, rather than an amplifier or speaker, which transmits sound out of the open air for anybody close by to hear. Circumoral ('around the ear') and supra-aural ('over the ear') headphones utilize a band over the top of the head to hold the speakers set up. Another sort, known as earbuds or earpieces comprise of individual units that plug into the user's ear canal. Earphones are also called as ear speakers, earbuds, and cords or, colloquially, cans. A third kind are bone conduction earphones, which ordinarily fold over the back of the head and rest before the ear canal, leaving the ear canal open. With regards to media transmission, a headset is a combination blend of earphone and microphone. Earphones associate with a signal source like an audio amplifier, radio, Compact disc player, portable media player, cell phone, video game console, or electronic instrument, either straightforwardly using a cord, or using wireless innovation, for example, Bluetooth, FM radio or DECT. The first earphones were created in the late nineteenth century for use by telephone operators, to keep their hands free. At first the audio quality was average and a stage forward was the innovation of high-fidelity earphones. Wired earphones are attached to an audio source or device by a cord or cable. The most well-known connectors are 6.35 mm and 3.5 mm connectors. The 6.35 mm connector is more common on fixed area home or professional equipment. The 3.5 mm connector stays the most broadly utilized connector for versatile application today. Connectors are accessible for changing over between 6.35 mm and 3.5 mm using adapter. The first part of the earphone functioning process is the metal coil being charged by an electrical current flowing through your earphone wiring. This charge then creates a magnetic effect that magnetically moves back and forth rapidly stretching the thin diaphragm as it vibrates back and forth. This creates the quick air movements that make the sound waves that travel through the holes in the front of your earbuds and into your ear canal. The faster the diaphragm vibrates, the higher the pitch will be that the eardrum detects. The slower the diaphragm vibrates, the lower the sound frequency will be. The combined speed of the diaphragm vibration with the force of the sound waves is what determines your volume. An earphone audio driver is usually shaped like

a disc. Moreover, an earphone driver size differs depending on the required sound output and the make. 2. MARKET POTENTIAL The global earphones and earphones market size was valued at USD 25.1 billion in 2019 and is expected to grow at a compound annual growth rate (CAGR) of 20.3% from 2020 to 2027. Rising customer inclination for improved sound insight, developing music industry, combined with mobile technology and web penetration, are a portion of the essential variables driving the market. Innovative progressions, for example, the rise ofnotch- less cell phones are foreseen to fuel the development of wireless earphones over the forecast period. Moreover, rising buyer tendency towards smart and attractive designs is required to help the deals of earphones and earphones over the time frame. Innovationadvancements are principally determined by buyer interest and demand for style and high- fidelity. Presentation of features like active noise cancellation (ANC) and near field communication (NFC) is required to offer a client with improved listening experience and ease in availability with their music gadgets. For example, presence of active noise cancellation (ANC) innovation in earphones and earphones eliminates the background noise, hence improving sound quality. Near field communication (NFC) sets up the connection between the wireless earphones and music gadget simply by tapping them to one another. Such progressed features are foreseen to fuel the market development. In terms of revenue, earphones dominated the market with a share of 53.0% in 2019. This is attributed to the comfort in hearing music, low cost, and compact size. The lightweight design and versatility of earphones settle on them a preferred choice for fitness and sports enthusiasts. Moreover, earphones give great aloof disconnection from outer sound, which converts into a vivid musiclistening experience for the user. The size and cost have decreased the prevalence of the on- ear and over-ear earphones as of late. Notwithstanding, technologies in these earphones with

highlights, like rich bass signature and active noise cancellation (ANC) make them a preferred choice among the audiophile community. The large sized ear cups permit the producers to outfit the earphones with dynamic and electrostatic sound drivers, bringing about upgraded and clear solid quality. Industries like Bose Corporation, Sony Corporation, Sennheiser GmbH and Co. KG, and Skullcandy.com are occupied with improving the plan and styling of their earphones by offering leather ear cup cushions, foldable earphones, and better form quality, which is relied upon to keep the earphones trending among the users. 3. INDUSTRIAL SCENARIO An earphone manufacturer starts with basic questions: Earphones to be wireless or wired, to be inexpensive, or long-lasting? These questions will determine what components the earphones will have, and what materials will be used to make them. Most earphones are made of pre-molded plastic, carbon elements, polymers and metal components, with additions like gel cups for ears, and rubber for protection or comfort. All these materials need to be available to the manufacturer, and some of them might purchase already created parts by another supplier, such as the gel cups or the wire for earphone connection. These pre- made parts will be included in the master design of the earphones. Many of these components alone will affect how the sound is produced. On the off chance that a manufacturer makes thicker cables, not exclusively will they last more, yet the sound quality will likewise be improved. On the off chance that the jack is gold-plated, the earphones will cost more, yet transmit sound more clearly. If the maker decides to add noise cancelling or dampening affects these will likewise influence the materials and designs utilized. Use of earphones for fitness activities under different environmental conditions, like rain and dust, has pushed the makers to add durability to their items. A few industries have made their product with a specific IPX rating, which is a wellbeing rating to offer insurance against dust and water. For instance, IPX1 evaluated gadget is protection against water drops and can be trickled with water for 10 minutes. The degree of assurance goes from the number 0 to 9 and increments with the most elevated level being IPX9, which offers security against the splash of water from a high-pressure spout. Additionally, on account of residue, the rating goes from IP0X to IP6X, with IP6X being the most noteworthy. Products with an IP57 rating are water resistant and dust tight to high pressure sprays. Presence of such useful features and some significant development in product technology is expected to keep the product in demand over the forecast period. Some of the prominent players in the earphones and earphones market

are: Apple Inc, Harman International Industries, Incorporated, Bose Corporation, Sennheiser Electronics GmbH & Co. KG, Sony Corporation etc.

4. PRODUCT DISCRIPTION

4.1 PRODUCT USES

- Earphones may be used with stationary CD and DVD players, home theatre, personal computers, or portable devices (e.g., digital audio player/MP3 player, mobile phone).
- Cordless earphones are not connected to their source by a cable. Instead, they receive a radio or infrared signal encoded using a radio or infrared transmission link, such as FM, Bluetooth or Wi-Fi. These are powered receiver systems, of which the earphone is only a component.
- Cordless earphones are used with events such as a Silent Gig or Silent disco. In the professional audio sector, earphones are used in live situations by DJ's with a DJ mixer, and sound specialists for checking signal sources.
- In radio studios, earphone is used by DJ's when talking to the microphone while the speakers are turned off to eliminate acoustic feedback while monitoring their own voice.
- In studio recordings, vocalists and musicians use earphones to play or sing along to a support track or band.

4.2 RAW MATERIAL REQUIREMENT

1. **Wire-** This wire is made with PVC material and pure copper wire core.

2. **Plug connector-** 3.5mm 4 Pole Metal Earphones plug connectors

3. **Electrical components**- Resistors, ICs, Microphone condenser, Customized circuitboard, NdFeB Magnets, Press switched.

4. **Plastic** – LDPE, HDPE, PP type of plastic granules can be used.

5. **Other material-** Solder paste, solder flux, Rubber tips, Iron-alloy steel metal sheet, Diaphragm with attached coil etc.

4.3 MANUFACTURING PROCESS

This process can be broken down in following steps-

1. Raw material procurement
2. Design
3. Injection molding- Plastic molding
4. Metal shielding enclosures manufacturing
5. Driver unit assembly
6. PCB assembly
7. Final assembly
8. Testing

Raw material procurement

Raw material will be purchased. To ensure complete quality control, all raw materials are checked strictly as per established quality standards and requirements, which are listed in the inspection reports. Individual supplier assessment and supplier rating is done depending upon the rejection levels at the incoming quality control stage. Sorting of raw material will be done. In sorting procedure the different types of materials or parts will be sorted out like plastic, metal parts, electrical components etc. It will be separated and material will be stored; a dust free, neat and clean environment is a must, for which an air handling unit is required and later on it will dispatch to assembly line.

Design

Designing of earphones are changing as technology in improving and trend between users. Design & development services encompass several procedures before manufacturing and assembly take place:

- Firstly, customer's specifications or product need is determined.
- After that, product concept detailing, objective of project and preliminary specification.
- The product is then visualized, developed and tested.
- Lastly, prototype is sent to the customer for approval.

Some different designed earphones are shown in figure below:

Injection molding- Plastic molding

Plastic molding is done by using injection molding machine. Speaker shell, microphone cover will be made using injection molding. These plastic components used in earphone construction are typically injection molded using plastic granules. In this process; Firstly granules are fed via hopper into a heated barrel. Where the plastic will be melted at set temperature. The melted plastic is then injected through a nozzle into a mold cavity where it cools and hardens to the configuration of the cavity and the formed plastic parts for earphone is ejected out. The plastic shell is used to provide covering for the electric components of the earphone such as driver unit and microphone circuit. Vertical injection molding machine is used to over mold audio connector with cord and to mold wire at the microphone circuit board's end.

Metal shielding enclosures manufacturing

Metal shielding enclosures such as metal cone or frame is used in driver unit to support the magnet. Where a magnet produces the magnetic field; metal frame directs it into the channel. Deep drawn stamping is used to form these metal parts. Precise deep drawn stamping machine is used for this process. Pieces of flat sheet metal is fed into a sheet metal stamping press that uses a tool and die surface to form the metal into a new shape. Production facilities and metal fabricators offering stamping services will place the material to be stamped between die sections, where the use of pressure will shape and shear the material into the desired final shape for the product or component. Machines can be programmed or computer numerically controlled (CNC) to offer high precision and repeatability for each stamped piece. Then curling will be done which is forming a rolled edge at the open end of a part.

Driver unit assembly

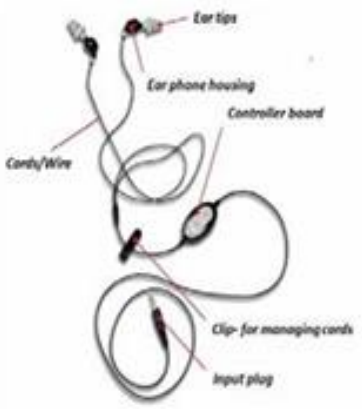
Driver is simply miniature loudspeaker. This involves three main components: a magnet, a coil and a diaphragm. The procured magnet will be attached with the iron cone shape frame, which magnifies the movement and causes air to vibrate in and toward your ear as sound waves. Then the diaphragm with attached voice coil will be placed inside a magnetic channel where a powerful magnet produces the magnetic field and a soft metal frame directsit into the channel. In the coiled electromagnet, this metal material has the big advantage that it can change magnetic field directions with only a minimal loss of energy. Further magnet sizePCB will be glued to the bottom of the metal cone; which will be soldered while finalassembly takes place.

PCB assembly

Microphone circuit board assembly for earphone will be done in PCB assembly unit. On customized bare board solder paste will be applied using printer. Here stencil is used which a thin piece of stainless steel with cut holes. It helps to solder paste to go on the pads, where the components are going to be soldered down. To get the right amount of solder paste in all the places solder paste inspection machine is used. This machine check whether the solid paste printed by the printing machine meets the IPC standards. It will check the thickness and amount of solder paste that may lead to defective products. The inspection systems within solder paste printers use 2D technology whereas the dedicated SPI machines use 3D technology to enable a more thorough inspection including solder paste volume per pad and not just print area. Once the printed PCB has been confirmed to have the correct amount of solder paste applied it moves into the next part of the manufacturing process which is component placement. Pick and place machine is used for component placement. Each component will be picked from its packaging using either a vacuum or gripper nozzle, checked by the vision system and placed in the programed location at high speed. Following the component placement process, it is important to verify that no mistakes have been made and that all parts have been correctly placed before reflow soldering. The best way of doing this is by using an AOI machine to make checks such as component presence, type/value and polarity. After pre reflow automated optical inspection reflow process will be done; reflow soldering is a process in which a board will be heated to attach electrical components to contact pads. Further Post-Reflow Automated Optical Inspection (AOI) will be done, wheresurface mount assembly process is to again check that no mistakes have been made by using an AOI machine to check solder joint quality.

Final Assembly

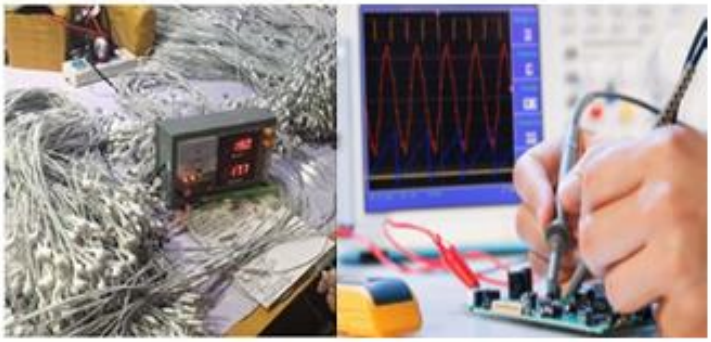
Assembled PCB, driver units, formed plastic covers and required electrical components will be dispatched to assembly line. Wire will be cut and stripped out by auto wire cut and strip machine. Audio connector will be soldered with one end of wire by connector soldering machine. Further connector will be molded with wire/cord using vertical injection molding process. The second end of this wire will be soldered with microphone control board. For speaker unit connection; two wires will be taken and it will be soldered with driver units. Another end of these wires will be soldered with the microphone control board. Further microphone cover will be placed on microphone control board. Speaker shell or cover will be fitted on driver unit. Rubber ear tips will fixed with speaker shell. Clip will be fitted in cable/wire for managing it. Earphone will be dispatched for testingthe appearance and sound quality. After testing cable winding and binding will be done by machines and worker.



Testing

- Sound quality testing
- Frequency testing

- Quality control
- PCB testing- For PCB testing its ICT and functionality test will be done.
  In circuit testing (ICT) - It will check its shorts or bad solder joints, critical component values, overall board functionality.
  Functional Test- Its most comprehensive test to determine board's final pass/fail status.



4.4 YIELD OF PRODUCT/PRODUCTION RATIO

Earphone manufacturing process might take close to 40-50 minutes. The production capacity will be approx. 960 pieces per day with 8 workers and on the basis of single shift and 90% of efficiency.

5. INDIAN STANDARDS FOR THE PRODUCT

- Quality standard
- ISI standards
- ISO 14001:2004 - Work towards globally approved environmental policies, CE compliance, RoHS, etc.
- ISO 9454 - Standard for soldering fluxes.
- ISO 10564 – Methods for the sampling of soft solders for analysis.

6. PROJECT COMPONENTS

6.1 Land /Civil Work

The land require for this manufacturing unit will be approx. around 2500 square feet.

6.2 Plant & Machinery

This is semi-automatic type of plant and production capacity is set to be 960 pieces of finish product per day.

- **Automatic wire cutting& stripping machine**

This machine is used to cut and strip wires for earphone.

- **Connector soldering machine**

This machine is used to solder plug connectors with wire.

After earphone assembly it will be wounded and bounded by this machine and product will dispatch for packaging.

- **Injection molding machine**

Plastic molding is done by using horizontal injection molding machine. The plastic components used in earphone construction are typically injection molded using plastic granules. The plastic parts are used to provide covering for the microphone circuit board, driver unit etc. Vertical injection molding machine is used to mold audio connector with cord.

- **Precision stamping machine**

To form driver unit metal parts this machine can be used.

- **Curling machine**

  To form a rolled edge at the open end of a formed metal part this machine is used.

- **Solder Paste printer**

Solder Paste printing process is the common way of applying solder paste onto a PCB, which is performed by printing solder paste through apertures in a stencil.

- **Pick and place machine**

Pick and place machines used for placing surface mount components as accurately and quickly as possible.

- **Reflow machine**

Reflow soldering is a process in which a solder paste will be heated and electrical components will be attached to contact pads.

- **SPI machine**

Solder Paste Inspection is a key technique used in the manufacture and test of PCBs. SPI machine enables fast and accurate inspection of the solder paste on PCBs to ensure that the quality of paste on PCB are printed correctly and without manufacturing faults.

- **AOI machine- Automated optical inspection**

Use of an AOI machine is to make checks such as component presence, type/value and polarity while PCB assembly.

- **Laser printing machine**

This machine is used to print company logo on formed product.

- **Earphone testing machine-**

This machine come with digital display used for earphone parameters testing.

- **Multimeter-** It is an electronic measuring instrument that combines several measurement functions in one unit.

- **Tools-** Cutter, tweezers, Strippers, Rubber hammer etc.

Earphone Manufacturing Business		
Machines	**Unit**	**Price**
Automatic Wire Cutting & Stripping Machine	1	1,00,000
Connector Soldering Machine	1	1,50,000
Semi-Automatic Cable Winding and Binding Machine	1	80,000
Injection Molding Machine	1	1,75,000
Precision Stamping Machine	1	2,15,000
Curling Machine	1	35,000
Solder Paste Printer	1	1,75,000
Pick & Place Machine	1	1,50,000
Reflow Machine	1	1,00,000
SPI Machine	1	1,00,000
AOI Machine	1	2,00,000
Laser Printing Machine	1	1,50,000
Earphone Testing Machine	1	25,000
Multimeter (Graphical Type)	1	20000
Tools	-	25000
Total		**1700000**

6.2 Power Requirement

This manufacturing facility can work with three phase AC power supply. For machineries and other electrical utilities 20KW power will be required for above mentioned capacity plant.

6.3 Manpower Requirement

Manpower required for this manufacturing is round 8 people.

6.4 Other Utilities

General electrical apparatus, Water, telephone etc.

7. LICENSE AND APPROVALS

- MSME Udyam registration
- BIS certification
- ISO certification
- Factory license

- GST registration
- NOC from the Fire Safety Board

8. SWOT ANALYSIS

- **Strengths** –Profit margin will be high. Product Cost and will be low and quality will be good hence conforms to more customers' requirements.
- **Weakness**- Lack of division of Laboure. Maintenance of machineries will be required. Returnvalue can be more.
- **Opportunities**-Export enhancement will be an opportunity. More sales opportunities. Advance technologies to design earphones can be adapted.
- **Threats**- Prices of raw materials, technology improvement, customer shopping trends, Competitors can be threats for this unit.

PROJECTED BALANCE SHEET

PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
Liabilities					
Capital					
Opening Balance		3.43	5.49	8.24	11.63
Add:- Own Capital	2.35				
Add:- Retained Profit	3.83	6.05	7.75	9.39	11.20
Less:- Drawings	2.75	4.00	5.00	6.00	7.00
Closing Balance	**3.43**	**5.49**	**8.24**	**11.63**	**15.83**
Term Loan	14.80	11.10	7.40	3.70	- 0.00
Working Capital Limit	4.51	4.51	4.51	4.51	4.51
Sundry Creditors	1.66	1.88	2.11	2.35	2.61
Provisions & Other Liabilities	0.70	1.50	1.80	2.16	2.59
TOTAL :	**25.10**	**24.47**	**24.06**	**24.35**	**25.54**
Assets					
Fixed Assets (Gross)	18.50	18.50	18.50	18.50	18.50
Gross Depreciation	2.78	5.13	7.14	8.84	10.29
Net Fixed Assets	**15.73**	**13.37**	**11.36**	**9.66**	**8.21**
Current Assets					
Sundry Debtors	1.51	1.81	2.04	2.28	2.53
Stock in Hand	5.16	5.83	6.53	7.26	8.01
Cash and Bank	0.71	0.96	1.12	1.66	2.79
Loans & Advances/Other Current Assets	2.00	2.50	3.00	3.50	4.00
TOTAL :	**25.10**	**24.47**	**24.06**	**24.35**	**25.54**

PROJECTED CASH FLOW STATEMENT

PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
SOURCES OF FUND					
Own Margin	2.35				
Net Profit	3.90	6.47	8.40	10.74	13.32
Depreciation & Exp. W/off	2.78	2.36	2.00	1.70	1.45
Increase in Cash Credit	4.51	-	-	-	-
Increase In Term Loan	16.65	-	-	-	-
Increase in Creditors	1.66	0.22	0.23	0.24	0.26
Increase in Provisions & Other liabilities	0.70	0.80	0.30	0.36	0.43
TOTAL :	**32.54**	**9.85**	**10.94**	**13.04**	**15.46**
APPLICATION OF FUND					
Increase in Fixed Assets	18.50				
Increase in Stock	5.16	0.67	0.70	0.72	0.75
Increase in Debtors	1.51	0.31	0.23	0.24	0.25
Repayment of Term Loan	1.85	3.70	3.70	3.70	3.70
Loans & Advances/Other Current Assets	2.00	0.50	0.50	0.50	0.50
Drawings	2.75	4.00	5.00	6.00	7.00
Taxation	0.07	0.42	0.64	1.35	2.12
TOTAL :	**31.84**	**9.60**	**10.77**	**12.51**	**14.32**
Opening Cash & Bank Balance	-	0.71	0.96	1.12	1.66
Add : Surplus	0.71	0.25	0.16	0.54	1.13
Closing Cash & Bank Balance	**0.71**	**0.96**	**1.12**	**1.66**	**2.79**

CALCULATION OF D.S.C.R

PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
CASH ACCRUALS	6.61	8.41	9.76	11.09	12.65
Interest on Term Loan	1.64	1.44	1.03	0.63	0.22
Total	8.24	9.85	10.79	11.72	12.87
REPAYMENT					
Instalment of Term Loan	1.85	3.70	3.70	3.70	3.70
Interest on Term Loan	1.64	1.44	1.03	0.63	0.22
Total	3.49	5.14	4.73	4.33	3.92
DEBT SERVICE COVERAGE RATIO	**2.36**	**1.92**	**2.28**	**2.71**	**3.28**
AVERAGE D.S.C.R.					**2.51**

REPAYMENT SCHEDULE OF TERM LOAN							
					Interest		11.00%
Year	Particulars	Amount	Addition	Total	Interest	Repayment	Closing Balance
ist	Opening Balance	-					
	Mar-00		16.65	16.65	-	-	16.65
	2nd month	16.65	-	16.65	0.15	-	16.65
	3rd month	16.65	-	16.65	0.15	-	16.65
	4th month	16.65		16.65	0.15	-	16.65
	5th month	16.65	-	16.65	0.15	-	16.65
	6th month	16.65	-	16.65	0.15	-	16.65
	7th month	16.65	-	16.65	0.15	0.31	16.34
	8th month	16.34	-	16.34	0.15	0.31	16.03
	9th month	16.03	-	16.03	0.15	0.31	15.73
	10th month	15.73	-	15.73	0.14	0.31	15.42
	11th month	15.42	-	15.42	0.14	0.31	15.11
	12th month	15.11	-	15.11	0.14	0.31	14.80
					1.64	1.85	
2nd	Opening Balance						
	1st month	14.80	-	14.80	0.14	0.31	14.49
	2nd month	14.49	-	14.49	0.13	0.31	14.18
	3rd month	14.18	-	14.18	0.13	0.31	13.88
	4th month	13.88	-	13.88	0.13	0.31	13.57
	5th month	13.57	-	13.57	0.12	0.31	13.26
	6th month	13.26	-	13.26	0.12	0.31	12.95
	7th month	12.95	-	12.95	0.12	0.31	12.64
	8th month	12.64	-	12.64	0.12	0.31	12.33
	9th month	12.33	-	12.33	0.11	0.31	12.03
	10th month	12.03	-	12.03	0.11	0.31	11.72
	11th month	11.72	-	11.72	0.11	0.31	11.41
	12th month	11.41	-	11.41	0.10	0.31	11.10
					1.44	**3.70**	
3rd	Opening Balance						
	1st month	11.10	-	11.10	0.10	0.31	10.79
	2nd month	10.79	-	10.79	0.10	0.31	10.48
	3rd month	10.48	-	10.48	0.10	0.31	10.18
	4th month	10.18	-	10.18	0.09	0.31	9.87
	5th month	9.87	-	9.87	0.09	0.31	9.56
	6th month	9.56	-	9.56	0.09	0.31	9.25
	7th month	9.25	-	9.25	0.08	0.31	8.94
	8th month	8.94	-	8.94	0.08	0.31	8.63
	9th month	8.63	-	8.63	0.08	0.31	8.33
	10th month	8.33	-	8.33	0.08	0.31	8.02
	11th month	8.02	-	8.02	0.07	0.31	7.71
	12th month	7.71	-	7.71	0.07	0.31	7.40
					1.03	**3.70**	

ASSUMPTIONS

- Production Capacity of Earphone manufacturing unit is 120/hour. First year, Capacity has been taken @ 50%.
- Working shift of 8 hours per day has been considered.
- Raw Material stock is for 15 days and finished goods Closing Stock has been taken for 20 days.
- Credit period to Sundry Debtors has been given for 7 days.
- Credit period by the Sundry Creditors has been provided for 15-20 days.
- Depreciation and Income tax rates has been taken as per the Income tax Act,1961.
- Interest on working Capital Loan and Term loan has been taken at 11%.
- Arrangement for labour wages has been made as per the prevailing market rates, which may vary from place to place and the minimum wages fixed by the concerned authorized from time to time.
- Selling Prices & Raw material costing has been increased respectively in the subsequent years.
- The rental value of the workshop shed and other built up/covered areas has been taken as per the prevailing market rates, which may vary from place to place and time to time.
- The rates quoted in respect of machines, equipment and raw materials are those prevailing at the time of preparation of this project profile, and are likely to vary from supplier to supplier and place to place.
- This project profile is prepared for guidance; hence, entrepreneurs are advised to check all the parameters while intending to put up such unit.

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