

**PROJECT PROFILE**  
**ON**  
**COMPUTER KEY BOARDS (MEMBRANE TYPE)**  
**(CORE 2006-07)**

<b>PRODUCT CODE (ASICC)</b>	:	78314
<b>QUALITY STANDARDS</b>	:	As per customer's specifications
<b>PRODUCTION CAPACITY</b>	:	Qty : 48000 Nos. per annum Value : Rs. 20,00,000
<b>YEAR OF PREPARATION</b>	:	2006-07
<b>PREPARED / UPDATED BY</b>	:	MSME - Development Institute Electronics Complex Chambaghat Solan (HP) - 173213 & Office of DC (MSME) New Delhi 01792-230766 (Tele.) 230265 (Fax) e-mail:dcdi-solan@dcmsme.gov.in

## **1. INTRODUCTION:**

Key board is an important detachable input unit of the computer use for data entry to the computer with the help of keys available on it. It is operated with 5 VDC derived from the computer. The actual number of keys on the keys board depends on the combination of the language that can be used with the system. Normally key boards of 107 & 108 keys are catering to the demand of the present computer industry. However key board of 111 keys are also being used for multimedia applications.

A good key board should offer smooth travel to the touch without catching and should able to mount formally without any flexing. It should have keys properly spaced and free of bounce for efficient use. The function of keys should be indelibly marked and should be compactable to interface with computer system.

## **2. MARKET POTENTIAL:**

Considering the growth & demand of computers in each and every comer of present & future scenario especially with reference to internet phone mental growth, there is a good demand for key boards. The test equipment and raw material required for manufacturing of keyboards are available indigenously. With Proper marketing, high quality and competitive price this type of Industries have sufficient scope.

## **3. Basis and Presumptions**

- i) The basis for calculation of Production capacity has been taken on Single Shift basis on 75% efficiency.
- ii) The maximum capacity utilization on Single Shift basis for 300 days a year. During first Year and Second year of operations the capacity utilization is 60% and 80% respectively. The unit is expected to achieve full capacity utilization from the 3rd year onwards.
- iii) The Salaries and Wages, Cost of Raw Materials, Utilities, Cost of Land and Rents etc. are based on the prevailing rates in 2006-07 in and around Himachal Pradesh. These cost factors are likely to vary with time and with location.
- iv) Interest on term loan and working capital loan has been taken at the rate of 16% on an average. This rate may vary depending upon the policy of the Financial Institutions/ Agencies from time to time.
- v) The cost of machinery and Equipments refer to a particular make/model and the prices are approximate prices prevailing in 2006-07.

- vi) The breakeven point percentage indicated is of full capacity utilization.
- vii) The project preparation cost etc., whenever required could be considered under pre-operative expenses.
- viii) The essential production machinery and test equipment required for the project have been indicated. The unit may also utilize common test facilities available at Electronics Test and Development Centres (ETDCs), Electronic Regional Test Laboratories (ERTLs) and Regional Test Centres (RTCs)

### **Implementation Schedule**

The major activities in the implementation of the project have been listed and the average time for implementation of the project is estimated at 12 months

		Period (in month) (Suggestive)
1.	Preparation of Project Report	1
2.	Registration & Other Formalities	1
3.	Sanction of Loan by Financial Institutions	3
4.	Plant / Machinery :-	
	a) Placement of Orders	1
	b) Procurement	2
	c) Power Connection / Electrification	2
	d) Installation / Erection of Machinery/Test	
	Equipment	2
5.	Procurement of Raw Materials	2
6.	Recruitment of Technical Personnel etc.	2
7.	Trial Production	11
8.	Commercial Production	12

#### **NOTE:**

- 1) Many of the above activities shall be initiated concurrently.
- 2) Procurement of raw materials commences from the 8<sup>th</sup> month onwards.
- 3) When imported plant and machinery are required the implementation period of project may vary from 12 months to 15 months.

#### **TECHNICAL ASPECTS:**

##### **1. Process of Manufacture**

The incoming Raw Material and components are tested for required Quality and specifications

before releasing for production. The electronic components *i.e.*, ICs, transistors, diodes, LEDs, resistors, capacitors, membrane switches etc. are mounted on the printed circuit board as per the electronic circuit design. The mechanical assembling *i.e.* fixing the membrane cable, rubber keyboards etc. are fixed on the base plate as per design. The two sub assembly are then integrated by aligning for appropriate contact point on the membrane. The whole assembly is enclosed in an appealing plastic case. The computer key board is finally attested and passed keyboard is properly packed for despatching.

## **2. QUALITY STANDARDS**

As per customer's specification

## **3. PRODUCTION CAPACITY PER ANNUM :**

**QUANTITY** : 48,000 Nos.

**VALUE** : Rs. 1,20,00,000/-

## **4. MOTIVE POWER: 5 KVA (Approx.)**

## **5. POLLUTION CONTROL:**

The Government accords utmost importance to control environmental pollution. The small-scale entrepreneurs should have an environmental friendly attitude and adopt pollution control measures by process modification and technology substitution. India having acceded to the Montreal Protocol in September 1992, the production and use of Ozone Depleting Substances (ODS) like Chlorofluoro Carbon (CFCs), Carbon Tetrachloride, Haloes and Methyl Chloroform etc., need to be phased out immediately with alternative Chemicals / Solvents. A notification for detailed rules to regulate ODS phase out under the environment protection Act 1986, have been put in place with effect from 19th July, 2000.

The following steps may help to control pollution in Electronics Industry wherever applicable:-

- i) In Electronics Industry, fumes and gases are released during Hand Soldering/Wave Soldering/Dip Soldering, which are harmful to people as well as environment and the end products. Alternate technologies may be used to phase out the existing polluting technologies. Numerous new fluxes have been developed containing 2-10% solids as opposed to the traditional 15-35% solids.
- ii) Electronics Industry uses CFCs, Carbon Tetrachloride and Methyl Chloroform for cleaning of printed circuit boards after assembly to remove flux residues left after soldering and various kinds of foams for packaging.

Many alternative solvents could replace CFC-113 and Methyl Chloroform in Electronics cleaning. Other Chlorinated solvents such as Trichloroethylene, per-Chloroethylene and Mythlen Chloride have been used as effective cleaners in Electronics Industry for many years. Other organic solvents such as Ketones and Alcohol's are effective in removing both solder fluxes and many polar contaminants.

## 6. Energy Conservation:

With the growing energy demand and shortage coupled with rising energy cost, a greater thrust in energy efficiency in industrial sector has been given by the Govt. of India since 1980s. The energy Conservation Act, 2001 has been enacted on 18<sup>th</sup> August, 2001, which provides for efficient use of energy, its conservation and capacity building of bureau energy efficiency created under the Act.

The following steps may help for conservation of electrical energy :

- i) Adoption of energy conserving technologies, production aids and testing facilities.
- ii) Efficient management of process/manufacturing machinery and systems, QC and testing equipments for yielding maximum Energy Conservation.
- iii) Optimum use of electrical energy for heating during soldering process can be obtained by using efficient temperature controlled soldering and desoldering stations.
- iv) Periodical maintenance of motors, compressors etc. use of power factor correction capacitors.
- v) Proper selection and layout of lighting system.
- vi) Timely switching. On-Off of the lights;
- vii) Use of compact fluorescent lamps wherever possible etc.

## FINANCIAL ASPECTS

### (i) Land & Building

Built-up area	150 Sq. Mtr.
Office, Stores	50 Sq. Mtrs.
Assembly & testing	100 Sq. Mtrs.
Rent Payable per Annum (Rs.)	<b>84,000</b>

**(ii) Machinery and Equipment:**

Sl.No	Description	Ind./Imp.	Qty.	Value(Rs.)
1.	Computer System with standard key board, monitor and software for testing of key boards	Ind.	2	50,000
2.	Power Supply unit (0 - 30V, 2 A)	Ind.	1	4,000
3.	Digital Multimeter	Ind.	1	3,000
4.	Analogue Multimeter	Ind.	1	3,000
5.	Bench drilling machine	Ind.	1	4,000
6.	Bench Grinder	Ind.	1	6,000
		<b>Total</b>		<b>70,000</b>
7.	Other fixed Assets			
8.	Electrification charges @ 10% of cost Machinery & equipment	-		7,000
9.	Office equipment, Furniture & Working tables etc.	LS		60,000
10.	Tools, Jigs, fixture, Soldering from etc.	LS		20,000
	Pre-operative expenses			10,000
		<b>Total fixed Capital</b>		<b>1,67,000</b>

**Working Capital Per Month :**

**(i) Staff & Labour**

Sl. No.	Designation	Nos.	Salary/month (Rs.)	Total Salary/month (Rs.)
1.	Manager	1	6,000	6,000
2.	Sales & Servicing Engineer	1	5,000	5,000
2.	Accountant/cum computer operator	1	4,000	4,000
3.	Skilled Workers	4	3,500	14,000
4.	Semi-Skilled Workers	5	2,500	12,500
5.	Peon / Watchman	1	2,000	2,000
	+ Pre Perquisites @ 15% of Salary			6,525
			<b>Total</b>	<b>50,025</b>

**(ii) Raw Material Requirements Per Month - (for 4,000 units)**

Sl.No	Description	Ind./Imp.	Value per	Total Value
			unit (Rs.)	(Rs.)
1.	ICs, Transistors, Diodes, LEDs etc.	Ind.	30	1,20,000
2.	Resisters, Capacitors, Preset etc.	Ind.	10	40,000
3.	PCBs	Ind.	10	40,000
4.	Membrane key tops, plunger etc.	Ind.	55	2,20,000
5.	Keyboard housing case and accessories	Ind.	55	2,20,000
6.	Cable with connector	Ind.	25	1,00,000
7.	Consumables like solder, flux, wire etc.	Ind.	05	20,000
8.	Packing material	Ind.	10	40,000
		<b>Total</b>	<b>200</b>	<b>8,00,000</b>

**(iii) Utilities per month**

Power	2,000
Water	200
<b>Total</b>	<b>2,200</b>

**(iv) Other contingent Expenses per month**

1.	Rent	7,000
2.	Postage & Stationery	1,000
3.	Telephone/Telex/Fax charges	2,000
4.	Repair & Maintenance	1,500
5.	Transport and conveyance Charges	2,500
6.	Advertisement / Publicity	1,000
7.	Insurance and Taxes	1,000
8.	Miscellaneous expenses	1,000
	<b>Total</b>	<b>17,000</b>

**Total Recurring Expenditure Per month**

**= Rs. 8,69,225**

**( i + ii + iii + iv )**

**Say = Rs. 8,69,000**

### Total Capital Investment

Fixed Capital	1,67,000
Working Capital on 3 months basis	26,07,000
<b>Total</b>	<b>27,74,000</b>

### Financial Analysis:

#### Cost of Production per annum

Total Recurring Expenditure	1,04,28,000
Depreciation on Plant & Machinery @ 10%	7,000
Depreciation on tools, jigs, fixtures etc. @ 25%	5,000
Depreciation on Office equipment, furniture @ 20%	12,000
Interest on total capital investment @ 16%	4,43,840
<b>Total</b>	<b>1,08,95,840</b>
<b>or Say</b>	<b>1,08,96,000</b>

#### Sales Turnover Per Annum

Item	Qty. (Nos.)	Rate (Rs.)	Value (Rs.)
Keyboards	48,000	250	1,20,00,000

**Profit (Per Annum) Before tax** = Sales turnover- Production cost per annum  
(per Annum)  
= **Rs. 11,04,000**

**Net Profit Ratio** = (Profit x 100) / Sales turnover  
= **9.2%**

**Rate of Return** = (Profit x 100) / Total capital Investment  
= **39.8%**



## BREAK EVEN POINT

### Fixed Cost per annum

Rent	84,000
Depreciation on machinery & equipment @ 10%	7,000
Depreciation on tools, jigs and fixtures @ 25%	5,000
Depreciation on office equipment, furniture @ 20 %	12,000
Interest on total capital investment @ 16%	4,43,840
Insurance	12,000
40% of Salary & Wages	2,40,120
40% of Other Contingencies (excluding rent & insurance)	43,200
<b>Total</b>	<b>8,47,160</b>
<b>Say</b>	<b>8,47,000</b>

$$\begin{aligned}\text{Break even point (BEP)} &= [\text{FC} / (\text{FC} + \text{Profit})] \times 100 \\ &= 43.4\%\end{aligned}$$

### Additional Information

- a) The Project Profile may be modified/tailored to suit the individual entrepreneurship qualities/capacity, production Programme and also to suit the locational characteristics, wherever applicable.
- b) The Electronics Technology is undergoing rapid strides of change and there is need for regular monitoring of the national and international technology scenario. The unit may, therefore, keep abreast with the new technologies in order to keep them in pace with the developments for global competition.
- c) Quality today is not only confined to the product or service alone. It also extends to the process and environment in which they are generated. The ISO 9000 defines standards for quality management systems and ISO 14001 defines standards for Environmental Management System for acceptability at international level. The unit may adopt ISO 9000 standards for global competition.
- d) The margin money recommended is 25% of the working capital requirement at an average. However, the percentage of margin money may vary as per bank's discretion.

**ADDRESSES OF MACHINERY, EQUIPMENTS SUPPLIER**

1.	Audiotec instruments	Testing & measuring equipments
	Survey no. 10/3, lane 3 - B,	
	Sahu Colony, Near Cumnis,	
	College of Engineering, Karvey Nagar,	
	Pune - 4110592.	
2.	Vaiseshaka Instruments,	Testing & measuring equipments
	2, Post Box Stall, 38 Industrial Area,	
	Amabala Cantt, Hariyana	
3.	Aplab	Testing & measuring equipments
	6 Vasundhara, 6 <sup>th</sup> Floor 2/7 Sarat Bose Road,	
	Kolkata - 700020	
4.	Philliphs India,	Testing & measuring equipments
	No.7, Justice Chandra Madhab Road,	
	Kolkata-700020	
5.	International Electronics,	Testing & measuring equipments
	202 Champakalal Industrial Estate,	
	105 Sion East,	
	Mumbai-400022	
6.	Electromech,	Testing & measuring equipments
	4, subramayapura Post,	
	Uttarahalli Road,	
	Bangalore - 560061.	
7.	Lalani International,	Testing & measuring equipments

	Umang Commercial Centre, (Near Hotel	
	Gitanjali), Paltan Bazaar,	
	Guwahati - 781008.	
8.	M/s. Microtek International Ltd.	Testing & measuring equipments
	Microtek House, Udyog Nagar,	
	Rohtak Road, Delhi-110041.	
9.	Sumitron Exports Pvt. Ltd.,	Testing & measuring equipments
	27, Community Centre, Naraina Phase - 1,	
	PO. Box - 10227,	
	New Delhi - 110028	
10.	Advance Tech Services,	Soldering iron & assembly tools
	56, 2nd floor, Rani Jhansi Road,	
	New Delhi-110055	
11.	Inde Enterprises, 745, Sector -8B	Soldering iron & assembly tools
	Chandigarh-160009	

#### **ADDRESSES OF RAW MATERIALS SUPPLIERS**

1.	Continental Devices India Ltd,	Components
	C-120, Naraina Industrial Estate,	
	New Delhi-110028	
2.	Muktagiri Enterprises,	Components
	No.10, Manik Chambers, 3rd floor,	
	399-A, Lamington Road,	
	Mumbai-400001.	

3.	Precision Electronic Components	Components
	Mfg. Co. B-51, Electronics Complex,	
	Kushaiguda, ECIL PO,	
	Hyderabad - 500062.	
4.	M/s Emaar Impex (P) Ltd.,	Components
	16/7 A hanuman Tarrace,	
	Tara Temple Lane Limbigton Road,	
	Mumbai-400007	
5.	M/s Omron Electronics Components (P) Ltd.,	Components
	1103, A Wing, Mittal Towers, MG Road,	
	Bangalore 560001	
6.	M/s R.S. Compontnts & Controls (I) Ltd.,	Components
	44, Okhla industrial Estate,	
	New Delhi-20	
7.	M/s Avomech Commercial (I) Pvt. Ltd.,	Relays.
	2 A&B Bright Apartments, 7 Bright Street,	
	Kolkata.- 7000 19	
8.	M/s Thakur Estate,	Relays.
	Vidyavihar (W) Mumbai-86	
9.	Calcutta PCB Printers,	Printed Circuit boards.
	51/3-A, Kalipara, Mukherjee Road,	
	Kolkata- 700008	