ELECTRONIC SECURITY SYSTEM

1. INTRODUCTION:

Relax, Engage and Manage Your Businesswhile one take care of the security systems installed at your premise. Safer surroundings are something that everyone hopes for. But, trouble can come knocking when you least expect it. So we hereby proposed the profile of electronics security system provision. In this profile we cover CCTV Surveillance System, Access Control System, Fire Alarm System, Multi-Apartment Video Door Phones, Video Door Phones, Intruder Alarm System, Fingerprint Locks, and Remote Managed Services (RAM).

2. PRODUCT & ITS APPLICATION:

Electronic security system refers to any electronic equipment that could perform security operations like surveillance, access control, alarming or an intrusion control to a facility or an area which uses a power from mains and also a power backup like battery etc. It also includes some of the operations such as electrical, mechanical gear. Determination of a type of security system is purely based on area to be protected and its threats.

Role of Electronic Security System:

Electronic security relates to leveraging innovation in defensive holding by anticipating unapproved access to individuals and property. The government is a universal and major customer of such security administrations and business sections also utilizes the security systems for their workers for giving security. These days, one can witness their usage in range like domestic application and small stores moreover.

- **Importance of Electronic Security System:**

The electronic security systems are broadly utilized within corporate work places, commercial places, shopping centersand etc. These systems are also used in railway stations, public places and etc. The systems have profoundly welcomed, since it might be worked from a

remote zone. And these systems are also utilized as access control systems, fire recognition and avoidance systems and attendance record systems. As we are know that the crime rates are increasing day by day so most of the people are usually not feeling comfort until they provide a sure for their security either it may be at office or home. So we should choose a better electronic system for securing purpose.

Classification of Electronic Security System: Classification of security system can be done in different ways based on functioning and technology usage, conditions of necessity accordingly. Based on functioning categorizing electronic security system as follows: CCTV Surveillance Security System, Fire Detection/Alarming System, and Access Control/Attendance System.

- **Applications of Electronic Security System:**

Electronic security system extends its applications in various fields like home automation, Residential (homes and apartments), commercial (offices, banks lockers), industrial, medical, and transportations. Some of the applications using electronic security system are electronic security system for railway compartment, electronic eye with security, electronic voting system are the most commonly used electronic security system.

- CCTV System
- Fire Alarm System
- Intrusion Detection...
- Video Door Phones
- System Finger

3. DESIRED QUALIFICATIONS FOR PROMOTER:

Promoter for this project may have any graduation plus background of electronics or electrical maintenance knowledge or experience. Although wiring a door bell involves purely electrical knowledge, working with the present theory will require some basic knowledge of electronics.

4. INDUSTRY LOOK OUT AND TRENDS

In Indian market Godrej is the only trusted and very old company engaged in providing security systems to banks, governments and corporate. Godrej Security Solutions is eyeing over 40% increase in turnover from home safe products to Rs 170 crore for this year helped by innovative products launches. Overall, Godrej Security Solutions is looking at Rs 860 crore turnovers this year as against Rs 750 crore in the previous fiscal.

5. MARKET POTENTIAL AND MARKETING ISSUES:

Electronic security System market is very broad, as it is customer base and different for each application. Electronic security systems consist of so many parameters and are known as per their application. Some of the systems available in the market are : Container Security System, Burglar Alarm Systems, RF Dual System, Communications And Office Automation Program, Kits and Analog Systems, Home Security System, Electronic Security Systems, Road Safety Equipment, Integrated Security Equipment, Alliance Security Systems, Password Based Security System, Guard Monitoring System, Axis Fire Protection, Remote Monitoring System, Microcontroller Security System (Blackcat Z Plus LCD), Electronic Security System, Door Security Device, Canteen Management System, GSM Base Security Systems, Electronic Security System, Gateway Panel Home Automation System, Auto Security System, Monitoring Alarm System, Digital Security System, Electronic System Security, GSM GPRS Fuel Theft Prevention System, Patrol Track - Device Data Preview, Electronic Security Solution, Electronic Security System, GSM Security System, Video Door Phones, Analog Fire Detection Panel, Parametric Protection Systems, Perimeter Security Systems, Commercial Security System, Security System, Digital Peephole Viewer, Guard Patrol System, Home Electronic Security Safe, Keypad Security System, Security Surveillance System, Security System, Wire Security System, Go Through Security System, Electronic Security System, Security System with Automation, Electronic Article Security System, Multi Apartment System, Thermal Plate Setter, Line Security System, Monitoring Solutions, RF Consumable, Safety Systems, Legrand Video Door Phone, Wireless Wired Home Security System, Security Surveillance System, Security System For Shop, Electronic Security System, Phone Intercom

System, Electronic Article Surveillance, Apartment Security System,, D3D Security Systems, Integrated Security System, GSM Alert Electronic Security System, Electronic Security Alarm Systems, Door Entry System., etc.

6. REQUIREMENTS – Material/Equipment:

The major materials required for this type of projects are depending on the application of the products. There are some of them are Hard Disc, PCBs with Electronic Components, Display cum control panel, Electronic Connectors/Switch/ Sockets, Metallic case with clamps, Connecting cables/ wires, Solder soft, screws, CCD Camera, Metallic case with clamps, Connecting cables/ wires, Packing material etc.

Machinery and equipment are Oscilloscope (10 MHz), CCTV Camera, LCD Monitor, DC Power Supply (30V, 2A), Analog Multi-meters, Digital Multi-meters, Bench Drilling machine, Portable Grinder, Tool kits etc. The total cost is not more than Rs. 1, 00,000.00.

Land &Building:
Total Built up area required will be rented cover shed of floor area of about 500 sq. mtrs. To be taken on rent @ Rs. 200 per sq. Mtrs. Per annum.
MOTIVE POWER: Motive Power required would be 5 HP.

7. MANUFACTURING PROCESS:

The incoming raw materials and components are tested for required quality and specifications. The components are formed, shaped and soldered on pre-designed printed circuit boards and tested for desired performance. The electronic and mechanical sub-assemblies are carried as per design specifications .The tested PCBs are fixed in the back side of front door of the enclosure, the key pad unit is fixed and the inter connections are made with proper electrical wiring . The batteries are connected in the system and the whole unit is checked for the required performance. Finally the tested products are packed attractively for dispatch to the dealers/customer. The electrical and electronic components

are produced and inspected as a routine quality control inspection. Suitable PCBs are to be soldered to accommodate all the components in two segments as transmitter and receiver 1.Inspection of raw materials/components/sub-assemblies. 2. Mounting of PCB/Sub - assemblies/CCD Camera/Switches/Sockets in the cabinet. 3. Inter-connecting the PCBs/Sub-assembly/CCD Camera, 4. Precautions in respect of CMOS IC's should be taken care of while mounting/soldering IC on PCB/Chassis. 5. QA/QC check/Packing/dispatch.

8. MANPOWER REQUIREMENT:

Sr. No.	Designation Of Employees	Salary Per Person	Monthly Salary ₹	Number of employees required				
				Year-1	Year-2	Year-3	Year-4	Year-5
1	Operators	12,000	12000.00	1	1	1	1	1
2	Helpers	10,000	10000.00	1	1	1	1	1
3	Admin Manager	12,000	12000.00	1	1	1	1	1
4	Office Boy	10,000	10000.00	1	1	1	1	1
	Total		44000.00	4	4	4	4	4

9. IMPLEMENTATION SCHEDULE:

The project can be implemented in 2 months' time as detailed below:

Sr. No.	Activity	Time Required *(in months)*
1	Acquisition of premises	1.00
2	Construction (if applicable)	1.00
3	Procurement & installation of Plant & Machinery	1.00
4	Arrangement of Finance	2.00
5	Recruitment of required manpower	1.00
	Total time required *(some activities shall run concurrently)*	2.00

10. COST OF PROJECT:

Sr. No.	Particulars	₹ in Lacs
1	Land	0.00
2	Building	0.00
3	Plant & Machinery	1.00
4	Furniture, Electrical Installations	1.00
5	Other Assets including Preliminary / Pre-operative expenses	0.10
6	Working Capital	15.00
	Total	**17.10**

11. MEANS OF FINANCE:

Bank term loans are assumed @ 75 % of fixed assets.

Sr. No.	Particulars	₹ in Lacs
1	Promoter's contribution	4.28
2	Bank Finance	12.83
	Total	**17.10**

Turnover

Sr No	Description	Cost/U	Quantity	Sales/annu	Revenue/year
1	Security Systems	₹ 50000	150	₹ 7500000	₹ **7500000.00**
Total					₹

12. WORKING CAPITAL CALCULATION:

Sr. No.	Particulars	Gross Amt	Margin %	Margin Amt	Bank Finance
1	Inventories	7.50	0.25	1.88	5.63
2	Receivables	3.75	0.25	0.94	2.81
3	Overheads	3.75	100%	3.75	0.00
4	Creditors	-		0.00	0.00
	Total	15.00		6.56	8.44

13. LIST OF MACHINERY REQUIRED:

The main Plant and machineries required are :Centre Lathe , Radial drill Machine, Bench Drill Machine, Shaper Stroke, Cylindrical Grinder C.D. Hydraulic Press, Hand Press, Double ended Grinder, Hacksaw Machine, Balancing Machine, Coil Winding Machine ,Hand Shear ,Air Compressor with Accessories, Oxygen Acyteline Cylinder with accessories.
A detail of important machinery is given below: Power Requirement: 40 HP

Sr. No.	Particulars	UOM	Qtty	Rate (₹)	Value (₹ in Lacs)
	Plant & Machinery / Equipments				
a)	***Main Machinery***				
i.	Lathe machine, Winding, welding machine	NOS.	1	700000	7.00
ii.	Assembly requirement for Semiconductors and IC chips	Nos	1	125000	1.25
iii.	Other Machineries	Nos	1	150000	1.50
iv.	Installation, Erection And Electrification			100,000	1.00
v.	Taxes, Transportation			125000	1.25
	Sub-Total Plant & Machinery				**12.00**
	Furniture / Electrical Installations				
a)	Office Furniture	LS	1	100000	1.00
b)	Stores Cupboards	LS	1	100,000	1.00
c)	Computer & Printer	L. S.	1	100000	1.00
	Sub Total				**3.00**
	Other Assets				
a)	Preliminary And Preoperative				1.80
	Sub-Total Other Assets				1.80
	Total				**16.80**

All the machines and equipment are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of machines and tooling to have modern and flexible designs. It may be worthwhile to look at reconditioned imported

machines, dies and tooling. Some of the machinery and dies and tooling suppliers are listed here below:

1. Bhavya Machine Tools
   A-601, 6th Floor, Sapath-4, Opp. Karnavati Club,
   S.G. Highway Road, Satellite, Ahmedabad-380051, Gujarat, India.
   Phone No: +91- 79 - 4024 2800, +91- 79- 4024 2880

2. Hifine Machine
   5, New India Estate, Inside Relief Hotel,
   Sanand Char Rasta, Sarkhej, Ahmedabad-382210, Gujarat
   Phone: 079 26891274, 079 26890274

3. Sagar Engineering Works
   A-129, Road No. 9 D,
   V. K. I. Area, Jaipur - 302013,
   Rajasthan, India
   Phone: +91-9829024358, +91-141-4064876

4. Pulsar Electronics Private Limited
   No. 127/128, Sonal Link Industrial Estate, No. 2,
   Link Road Opposite Movie Time Cinema,
   Malad West, Mumbai - 400064, Maharashtra, India
   Phone: +91-7021000597,+91-9867024141

5. Cosmic Devices
   No. 1702/307, Srinath Building, 3rd Floor Bhagirath Palace, Chandni Chowk, Delhi - 110006, India
   Phone: +91-9810413218, +91-9313866166

14. PROFITABILITY CALCULATIONS:

Sr. No.	Particulars	UOM	Year-1	Year-2	Year-3	Year-4	Year-5
1	Capacity Utilization	%	60%	70%	80%	90%	100%
2	Sales	₹. In Lacs	45.00	52.50	60.00	67.50	75.00
3	Raw Materials & Other direct inputs	₹. In Lacs	37.01	43.18	49.35	55.52	61.69
4	Gross Margin	₹. In Lacs	7.99	9.32	10.65	11.98	13.31
5	Overheads except interest	₹. In Lacs	2.31	2.46	2.75	2.83	2.89
6	Interest	₹. In Lacs	1.28	1.28	0.86	0.64	0.51
7	Depreciation	₹. In Lacs	0.70	0.50	0.35	0.25	0.23
8	**Net Profit before tax**	₹. In Lacs	**3.69**	**5.08**	**6.70**	**8.26**	**9.68**

The basis of profitability calculation:
The growth of selling capacity will be increased 10% per year. (This is assumed by various analysis and study; it can be increased according to the selling strategy.)

Energy Costs are considered at Rs 7 per Kwh and fuel cost is considered at Rs. 65 per liter. The depreciation of plant is taken at 10-12 % and Interest costs are taken at 14 -15 % depending on type of industry.

15. BREAKEVEN ANALYSIS:

Sr. No.	Particulars	UOM	Value
1	Sales at full capacity	₹. In Lacs	75.00
2	Variable costs	₹. In Lacs	61.69
3	Fixed costs incl. interest	₹. In Lacs	3.40
4	BEP = FC/(SR-VC) x 100	% of capacity	25.57%

16. STATUTORY / GOVERNMENT APPROVALS

As per the allocation of business rules under the Constitution, labour is in the concurrent list of subjects. It is dealt with by the MOLE at the Central and Departments of Labour under State Governments in respective States / UTs. The MOLE has enacted workplace safety and health statutes concerning workers in the manufacturing sector, mines, ports and docks and in construction sectors.

Further, other Ministries of the Government of India have also enacted certain statutes relating to safety aspects of substances, equipment, operations etc. Some of the statutes applicable in the manufacturing sector are discussed below:

The Manufacture, Storage and Import of Hazardous Electronic Rules (MSIHC), 1989

These MSIHC Rules are notified under the Environment (Protection) Act, 1986. These rules are aimed at regulating and handling of certain specified hazardous chemicals. The rules stipulate requirements regarding notification of site, identification of major hazards, taking necessary steps to control major accident, notification of major accident, preparation of safety report and on-site emergency plan; prevention and control of major accident, dissemination of information etc. These rules are notified by the Ministry of Environment and Forests (MOEF) but enforced by the Inspectorates of Factories of respective States / UTs in the manufacturing sector.Entrepreneur may contact State Pollution Control Board where ever it is applicable.

17. BACKWARD AND FORWARD INTEGRATIONS

Both forward and backward integration for any Electrical Industry are strategies to gain better control over the supply chain, reduce dependency on the suppliers and increase their competitiveness. The two strategies can help companies reduce their dependency on suppliers and increase their influence over the customers. The benefits of these strategies can be big. Both impact the bottom line directly. Integration happens if a company moves

upward or downward in its supply chain. Starting from the suppliers from whom the raw materials are obtained, the chain moves downstream towards the distributors and the retailers. If the suppliers' power is very high, it can create financial burdens for the company. Suppose the number of suppliers of a company is low, then the control in their hands would be low. The burden in that case will fall upon company's shoulders. Its expenditure on raw materials will be high.

18. TRAINING CENTERS AND COURSES

There is no such training required to start this business but, basic Electrical or IC bachelor's degree is plus point for enterpriser. Promoter may train their employees in such specialized institutions to grow up the business. There are few specialized Institutes provide degree certification in chemical Technology, few most famous and authenticate Institutions are as follows:

1. Department of Electrical LD College of engineering
   No.120, Circular Road, University Area, Navrangpura,
   Opposite Gujarat University, Ahmedabad, Gujarat 380015

2. MIT College of Engineering, Pune
   Gate.No.140, Raj Baugh Educational Complex,
   Pune Solapur Highway,
   LoniKalbhor, Pune – 412201
   Maharashtra, India

Udyamimitra portal (link : www.udyamimitra.in) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.