# SMART

**SMART INDUSTRIAL PA SYSTEM (MODEL MCS II IP)** Distributed Amplifier Design Concept INDUSTRIAL PA SYSTEM (**MODEL WMHS II IP**) with unique features of MULTIPLE PAGE CHANNELS & PRIVATE INTERCOM CHANNELS for Paging facility on existing plant **EPBX.**

The first of its kind PA SYSTEM ON VOIP allows for locating individuals anywhere in the plant by using the Individual location paging, zone paging & ALL call paging feature. Multiple Private Intercom Channels allow two way private Communications.

MASTER CONTROL STATION

<u>**MULTIPLE PAGE CHANNEL**</u>: This feature is used for:-

- MULTI CHANNEL SMART IP TELEPHONE PAGING.
- SIMULTANEOUS DIFFERENT ZONE PAGE CALL FROM MULTIPLE LOCATIONS.
- ALL CALL paging.
- The SMART IP TELEPHONES IN AN AREA formed as Zones.
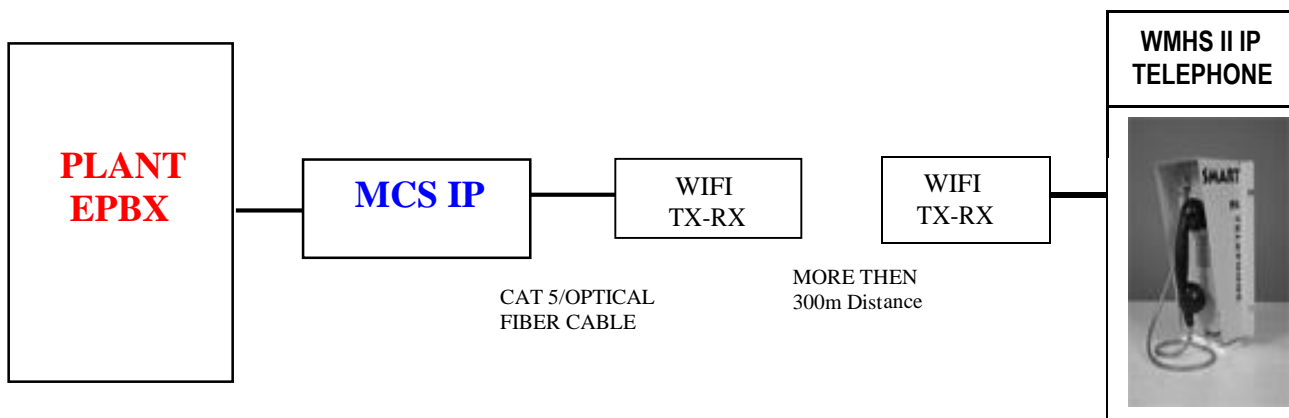- Locating and contacting people in a Particular location, zone or all over the plant.

<u>**MULTIPLE PRIVATE INTERCOM CHANNEL**</u>: This feature is used for:-

- Multi Channel point to point communication.
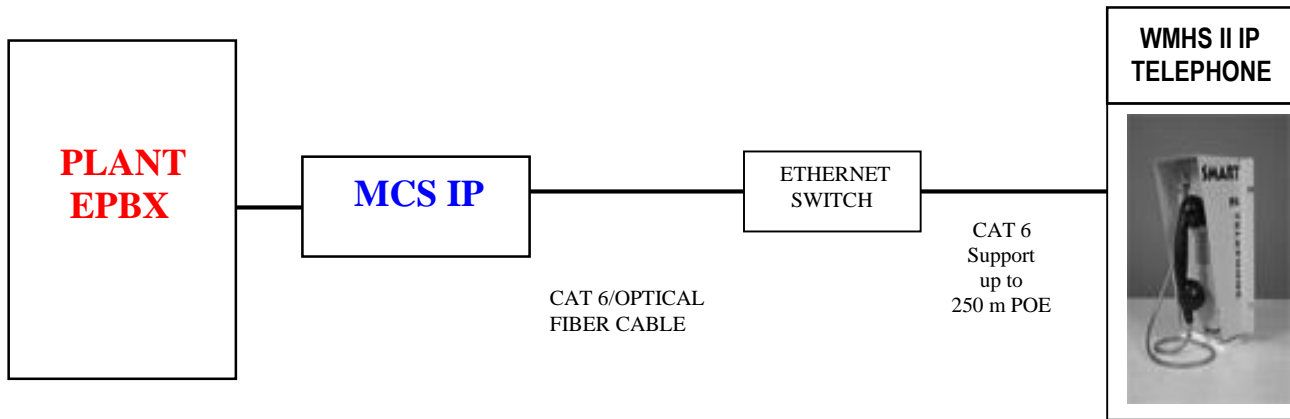- Selective communication by dialing individual access code.

## System Configuration 1

PLANT EPBX — MCS IP — WIFI TX-RX — WIFI TX-RX — WMHS II IP TELEPHONE

CAT 5/OPTICAL FIBER CABLE

MORE THEN 300m Distance

One can page from android mobile phone to any location.

# System Configuration 2

**PLANT EPBX**

**MCS IP**

ETHERNET SWITCH

**WMHS II IP TELEPHONE**



CAT 6/OPTICAL FIBER CABLE

CAT 6 Support up to 250 m POE

One can page from android mobile phone to any location.

## SMART IP BASE PA SYSTEM

# SMART IP BASE PA SYSTEM STAR CONNECTION
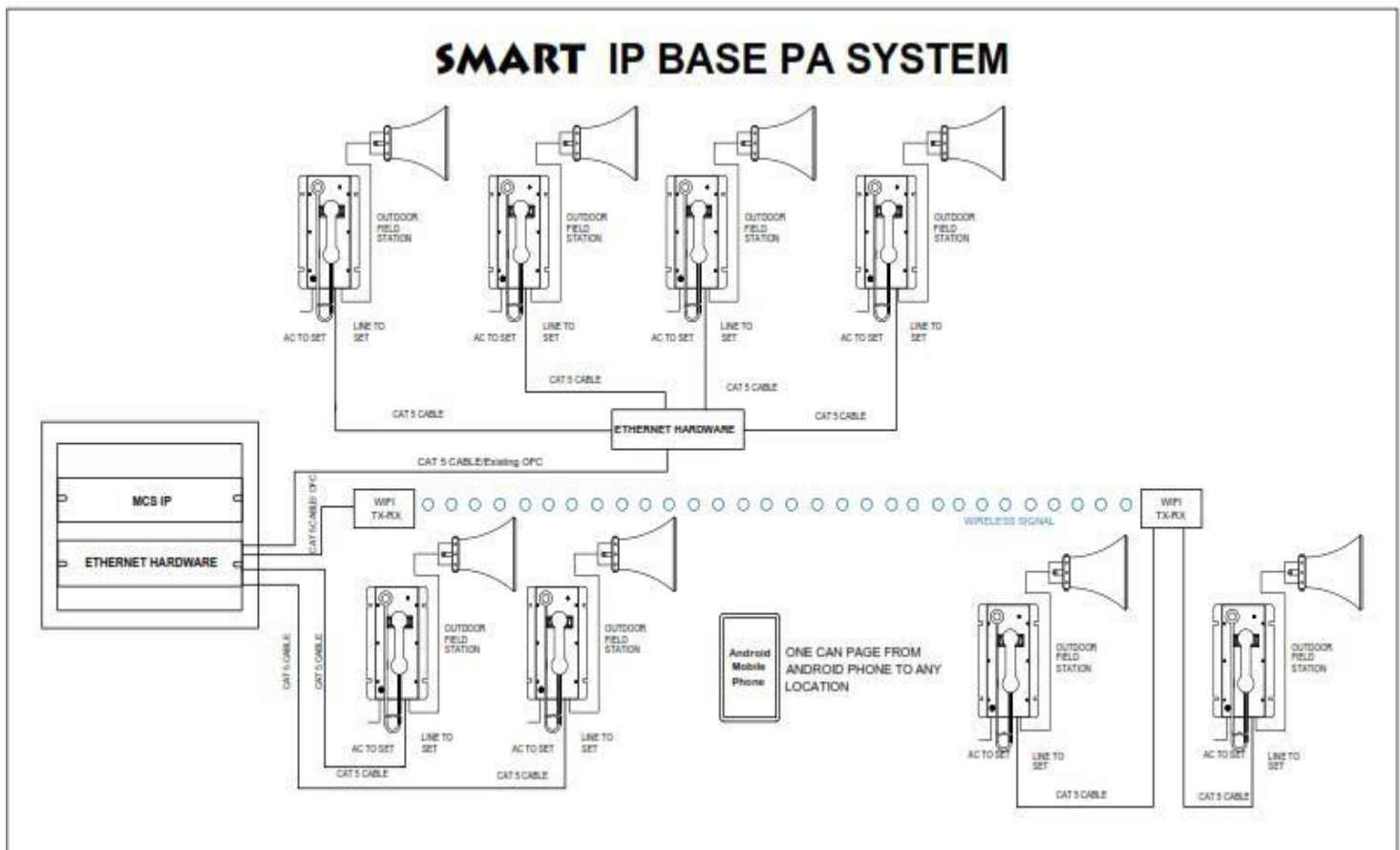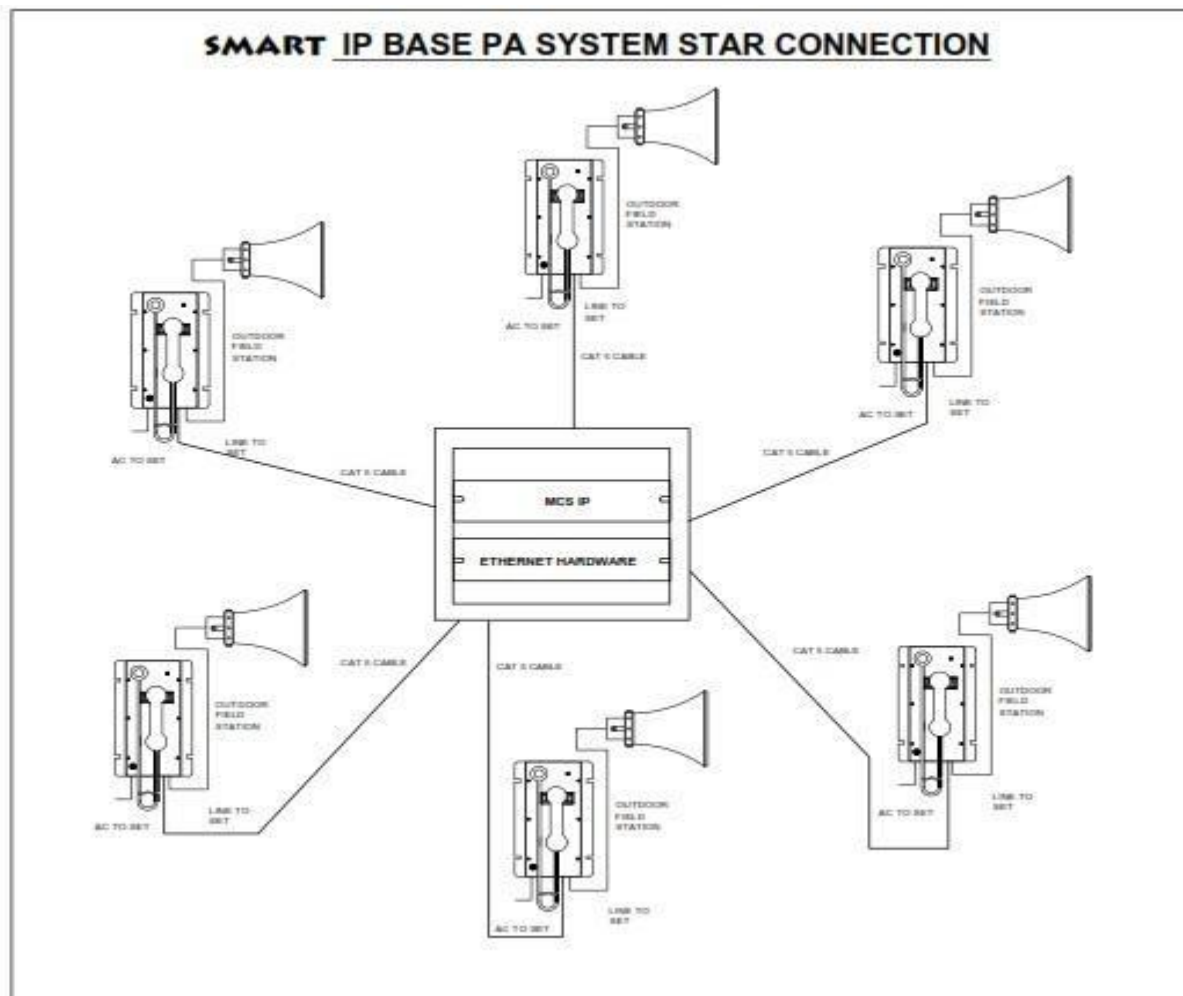


Use media converters at MCS II IP ETHERNET SWITCH AND WIFI TX-RX for OFC.

For Loop wiring of OFC dual mode MEDIA CONVERTERS are to be used at WIFI TX-RX END

 SMART IP PA TELEPHONE can be easily install any location under wifi range or used in existing wifi network.

 As the WIRELESS capability of IP PA TELEPHONE can be install over moveable wagon loader .

# SMART MASTER CONTROL STATION (MCS II IP ): -

The Master Control Station is 100% non-blocking VOIP system.
- IP - CONTROLLER
- ETHERNET SWITCH

The basic features of the Smart IP Base Communication System (MCS II IP) are as follows:

- Making zone call and all call by dialing access code.
- Volume controls and amplifiers in each field location.
- No high power amplifier required.
- Above 1sq mm, 2 cores, ATC, PVC insulated cable for loudspeaker horn from IP Telephone (WMHS II IP) to speakers.
- IP telephones (WMHS II IP) operate on 220 V AC / 110 V AC/ POE
- System based on distributed amplifier design.
- Easy expansion requiring no hardware change.
- Single location multi zoning possible

# WORKING:-

- SMART IP PA TELEPHONES (MODEL WMHS II IP) are connected to MCS II IP through OFC , CAT6 or WIRELESS network.

- SMART LOUD SPEAKERS HORNS (MODEL LSOD) are connected to IP TELEPHONE SETS.

- On dialing individual extension number of any IP TELEPHONE (WMHS II IP) the required person may be paged, on pickup the communication is in private mode.

- This system is based on distributed amplifier based principle thus cabling is very limited.

- Existing OFC is used between MCS II IP and WMHS II IP for Long distance.

- The system being easy to install, expand, maintain and is widely being used by Indian industries for their communication needs.

## ADVANTAGES: -

- Individual volume controls built-in to each IP TELEPPHONES for volume adjustment after system is installed.

- Unlimited speaker expansion using external additional amplifier.

- Many localities require conduit for "high voltage" (Class 1) conductors, this is rarely a necessity with a distributed amplifier system. Being single PCB design it is easy to maintain.

- Highly secure communication.

- The system can use existing OFC cables and WIFI network as the bandwidth for voice is very low.

- WMHS II IP phones work on POE.

## VOIP FEATURES:-

The VOIP is a full feature voice over IP device that offers a high-level of integration including a10M/100Mbps network port, market-leading sound quality, rich functionalities, and a compact and lightweight design. The VoIP network signaling protocol supported is SIP. The VOIP is fully compatible with SIP industry standard and can interoperate with many other SIP compliant devices and software on the market.

## VOIP Protocols

- Supports voice code - G.711 (A-Law & μ-Law),G.719 (pass through),G.722,G.722.1 licensed from Polycom®,G.722.1 Annex C licensed from Polycom®,G.726
- Protocols - SIP (Session Initiation Protocol), MGCP (Media Gateway Control Protocol), Jingle/XMPP, H.323, GR-303.

# SMART PA TELEPHONE MODEL WMHS II IP

SMART **WIRELESS PA TELEPHONE** (MODE –WMHS II IP) is a multiple role; multiple location operating IP telephone unit by construction with built in public address system, works as a normal telephone as well as a page phone unit connected to **WIRELESS TX-RX** so it is a wireless PA telephone first of its kind. This phone has a built in amplifier, which is connected to external loudspeaker horn and works on either 220 volts AC or 110 Volts AC. One has to just lift the telephone handset of any extension, dial the extension number of PA Telephone and after the call matures automatically, make necessary announcement. The communication between the calling party and the called party is in private mode, when the called party lifts the handset.

SMART **WIRELESS PA TELEPHONE** (MODE –WMHS II IP) disconnects automatically if the calling party disconnects the call. The announcement is made at specified location only and not all over the plant and at any time more than one person can make announcement on different PA telephone sets. Incoming call from the PA telephone is like normal telephone call, just lift the receiver and dial the required extension. It is essential for growing organizations because of its unique features and is proposed to be used in
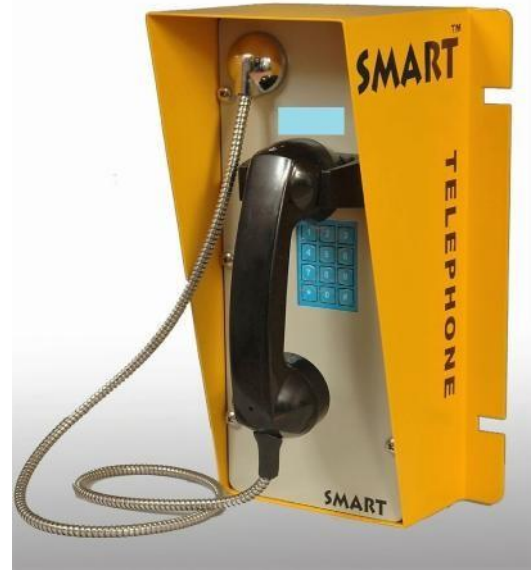
## OPERATIONS: -

### 1. TO MAKE A CALL: -
- Lift the handset, hear the dial tone.
- Dial desired extension number & communicate.
- Replace handset to disconnect active call.

### 2. INCOMING CALL: -
- From any phone dial the extension number of SMART PA TELEPHONE. It will connect automatically and acknowledge with a BEEP TONE.
- Announce after the hearing the BEEP TONE.
- Communication will be in PRIVATE MODE when called party lifts the receiver.
- Replacing the receiver on cradle will reset the SMART PA TELEPHONE.

## VERSATILE APPLICATIONS: -

❋ Cement Plants. ❋ Mines. ❋ Petrochemical Refineries. ❋ Chemical Plants. ❋ Construction Sites. ❋ Steel Plants. ❋ Spinning Yarns ❋ Fertilizer Plants. ❋ Sugar Mills. ❋ Power Generation Facilities ❋ Pulp & Paper Mills ❋ Food Processing Plant ❋ Warehouses ❋ Recreation Facilities ❋Hydroelectric Facilities ❋ Drilling Rigs ❋ Ammonia Storage Area ❋ Process industries❋ ANY LARGE AND MEDIUM SCALE INDUSTRIAL UNITS.

## ACCESSORIES AND OPTIONS: -

- External Loudspeaker Horn.
- Color selection (subject to minimum quantities).

<u>SMART CHOICE: -</u>

- Simple Installation.
- Simple Operation.
- One-piece waterproof non-tactile keypad.
- Magnetic reed hook-switch reduces moving parts subject to wear.
- 16-gauge rugged steel powder coated construction.
- Heavy industrial ABS handset & SS cord.
- Noise-canceling type microphone.
- Auto disconnect to free line for next call.
- A service temperature range from 0 to +60 o C.
- Encapsulated circuit boards impervious to water and condensation.
- CAT6 Cable and POE.
- Easy troubleshooting ensuring minimum downtime.

## *SPECIFICATIONS: -*

### <u>Electrical Requirement :-</u>

| | |
|---|---|
| Power Source: | 220 V AC / 110 V AC / POE. |
| Connector | RJ-45 CAT-6 / WIFI connection provides Ethernet communications / wireless communication |
| Protocol | Standard Internet Protocol (IP) is used for voice ion control and communications |
| Power consumption: | < 35 Watts. |
| Stand by consumption: | < 5 Watts. |
| Amplifier: | 30 Watts (RMS). |
| Horn Speaker: | 60 watts, 8 ohms. |
| Handset: | Standard hand set, four feet stainless steel Armour tube. |

### <u>Mechanical Specifications:-</u>

| | |
|---|---|
| Dimensions: | 360 X 160 X 180 (in mm). |
| Weight: | 5 Kgs. |
| Construction: | 16 SWG Powder Coated Steel Body. |
| Cradle: | Al-Alloy with Magnetic reed switch. |
| Hand set construction: | High impact ABS. |
| Standard mounting: | Vertical wall / panel. |
| Microphone: | Noise canceling dynamic. |

### <u>Environmental:-</u>

| | |
|---|---|
| Moisture Resistance: | 0 to 95% humidity with PCB conformal coated. |
| Temperature Range: | 0 to +60C. |
| Dust resistance: | Fully weather proof enclosure. |

### CONFIRMING TO IP 65-DEGREE PROTECTION.

INDUSTRIAL COMMUNICATIONS SIMPLIFIED.

*<u>"(Specifications and description subjected to change without prior notice)"</u>*

# CABLES & WIRELESS CO.

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