

Achieving  
**CORPORATE SECURITY**

*Aiphone's AI-900  
Integrated  
Intercommunication  
System*



*Aiphone Corporation is committed to supplying quality products and  
services and to being a reliable business partner.  
ISO 9001:2000 Quality Statement*

## AI-900

The AI-900 provides a complete communication network throughout a facility or campus, and can be easily integrated with access control and video surveillance systems. In today's world of heightened security, and with a variety of application needs, a system needs to be flexible and versatile. Simple programming of the AI-900 allows each system to be custom-configured to meet the specific needs of almost any commercial or institutional application. Whether the person on duty is in a security office or is making rounds, a call from a remote area never has to go unanswered. The AI-900 is a sophisticated yet simple system that meets the demands of today's corporate and institutional facilities.

### AI-900 Total Solution System Applications:

Aiphone's AI-900 Integrated Security Intercommunication System is a voice communication system that allows calls to be made quickly and easily—even in emergency situations—with the touch of a button. The AI-900 system's ability to integrate with other systems makes it ideal for security applications.

#### School / Institutional



- Door entry and perimeter control
- Classroom-to-office communication
- Staff-to-staff communication
- Elevator communication
- Zone paging

#### Parking



- Emergency calling
- Scan monitoring
- Areas of evacuation or rescue
- Perimeter access control
- CCTV control

#### Office / Building Communications



- Door entry and perimeter control
- CCTV control
- Scan monitoring of secure areas
- Elevator communications
- Areas of rescue assistance
- Office-to-office communications
- Zone paging

#### Correctional



- Perimeter and door access control
- CCTV control
- Staff-to-inmate communication
- Scan monitoring of secure areas
- Zone paging

## Features

- **Station Capacity**  
Single Exchange:  
4 Master Stations  
64 Substations  
  
Up to 16 Exchanges:  
64 Master Stations  
1024 Substations
- **System Integration**  
Remote control and monitoring via RS-232 communication protocol
- **Remote System Management**  
PC programming and monitoring software  
Program and maintain multiple exchanges off-site from PC
- **Audio Recording**  
Recording capability from the master or telephone through the audio recording output
- **Data Logging**  
The operating log of all control functions can be stored on PC for future reference
- **Master Station Flexibility**  
Aiphone master station with alphanumeric display and clock line communication
- **Paging Interface**  
For external amplifier zone distribution with 16 control ports
- **External Audio Input**  
For station and external amplifier zone distribution with four trigger inputs

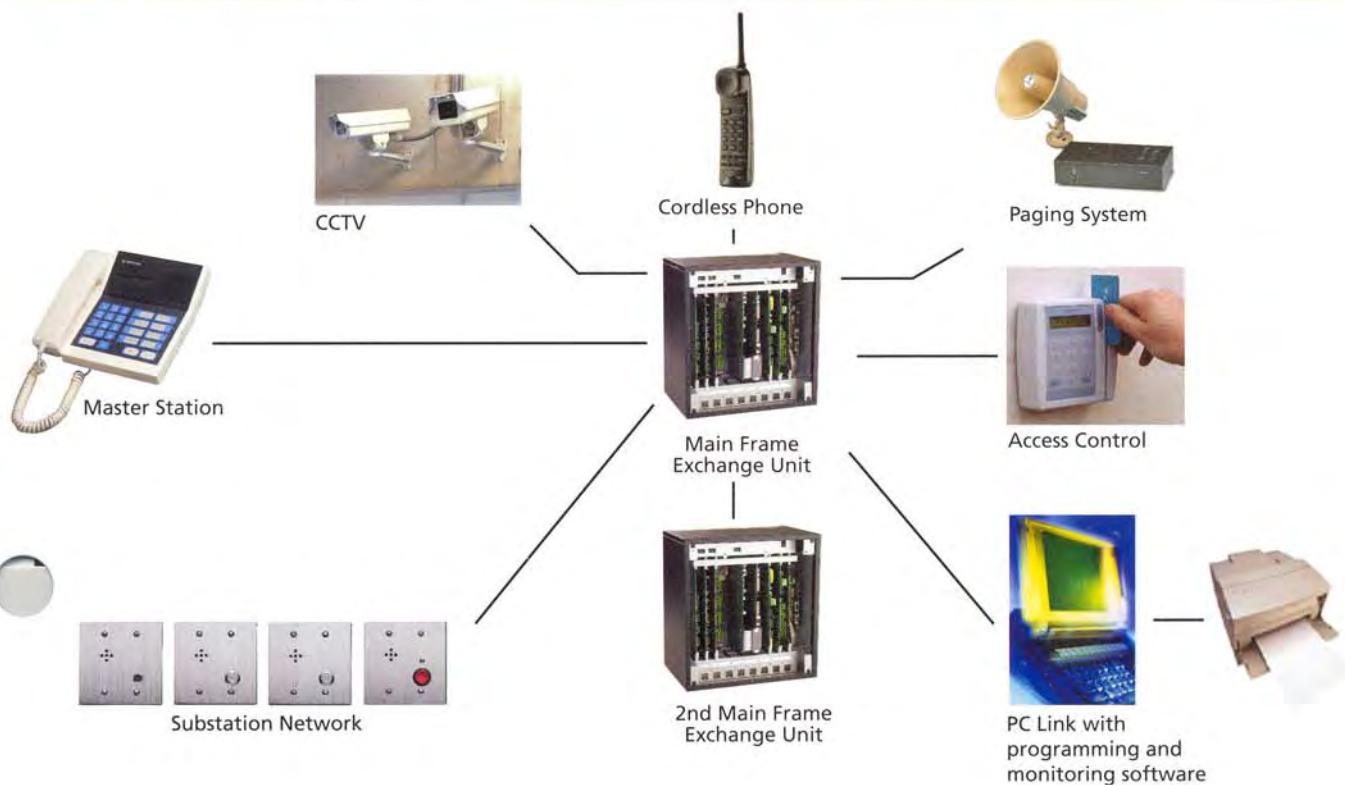
## Functions

- **Telephone**  
Direct-in dial  
Outside line access  
Manual forwarding  
Off-site forwarding
- **Call Forwarding Manual Remote (Call Capture)**  
Time-based  
No answer  
Busy  
Off-site telephone
- **Paging**  
Zone (19)  
All-zone paging  
Public Address (16)
- **Scan Monitor**
- **Master Station Grouping (16)**
- **Emergency Conference**
- **Auto-Dial and Redial**
- **Call Transfer/Hold**
- **Priority (Emergency/Normal)**
- **Automatic Time-out**
- **Call Queuing**
- **Selective Response**



For ideas, specifications and assistance call an Aiphone Technician, toll-free at **800-692-0200**.

## System Integration



# SYSTEM COMPONENTS AND SPECIFICATIONS



## AI-900MF Main Frame

The AI-900MF Main Frame can accommodate the following features with the installation of the corresponding circuit cards. Up to 4 master stations or single line phones (2 masters per AI-900MS card; 2 phones per AI-900AL card); up to 64 substations; up to 2 CO lines; paging to 19 zones; tie line connection to additional Main Frame, RS-232 input/output for system programming and event logging.



## AI-RS150 Standard Indoor Substation

The AI-RS150 is built with a black resin call button and 14-gauge stainless steel. It can call and converse with the programmed master stations. All substation models are wired with a shielded pair to the Main Frame.



## AI-RS170 Outdoor Vandal Resistant Substation

The AI-RS170 is equipped like the AI-RS160, but with the internal components protected with a synthetic rubber sealant, making it weather resistant. Calls and communicates with programmed master stations or telephones.



## AI-MS900 Master Station

The AI-900MS can initiate or receive calls from programmed substations. Equipped with Push-to-Talk button for simplex communication, vox operated handset, redial and transfer keys, and eight auto-dial keys. Alphanumeric display for caller ID. Two-twisted pair wiring to Main Frame.



## AI-RS160 Indoor Vandal Resistant Substation

The AI-RS160 is made with heavy 11-gauge stainless steel and a vandal resistant stainless steel call button. Calls and communicates with programmed master stations or telephones.



## AI-RS180 Outdoor Emergency Substation

The AI-RS180 is vandal and weather resistant with a red aluminum call button, call assurance LED, and an output to control an external relay. Used for ADA compliance or emergency call applications.



## SBX-2G Surface Mount 2-Gang Stainless Steel Enclosure

The SBX-2G is used for surface mounting the AI-RS substations where flush mounting these substations is not possible.

## AI-900MS Master Station Interface Card

One or two cards per Main Frame. The AI-900MS card provides connection and audio recording outputs for one or two master stations. With two cards installed, four master stations can be connected to one Main Frame.

## AI-900AL Telephone Master Station Card

One or two cards per Main Frame, used in lieu of AI-900MS card. The AI-900AL allows a standard telephone with caller-ID capabilities to be used in place of a master station for communication functions. One or two phones per card, taking the place of an AI-900MS card supporting two master stations. Equipped with audio recording outputs for each telephone connected.

## AI-900RS Substation Interface Card

Up to four cards per Main Frame. Each AI-900RS card supports up to 16 substations, and up to 64 substations per Main Frame with four cards installed. Connect subs with simple two conductor shielded wire homerun to the Main Frame.

## AI-900C0 C/O Telephone Line Interface Card

One card per Main Frame. The AI-900C0 allows the connection of up to two outside phone lines, with audio recording outputs for each line. Integration with outside lines allows communication between sub or master stations and standard telephones, cell phones, or pagers.

## AI-900AF Audio Function Card

Connection of external PA amplifier for paging. Up to four inputs from audio sources and 16 outputs to external paging zones. Multiple zones or all zones can be selected and paged simultaneously.

## AI-900TI Tie Line Interface Card

One card per Main Frame in multi-exchange system. The AI-900TI card is used to interconnect multiple Main Frames, expanding the capacity and functionality of the system. Up to four voice paths between Main Frames.

## AI-900DI Direct-Select/Master Station Interface Board

Used to create a direct-select style master station in place of a digital master. Used with AI-910DI for individual selector buttons and call-in LEDs. Also allows integration with external security systems via AI-910DI board.

## AI-910DI Direct-Select Input/Output Relay Board

The AI-910DI is used in conjunction with the AI-900DI board to provide relay outputs to control external devices or systems. Each board contains 32 programmable relays, and multiple boards can be used for up to 1024 relays. Use for integration with access control and/or video surveillance systems.

## AI-PU200 Power Transformer Unit

The AI-PU200 has two 20V, 2.5A AC outputs. One unit is required for every two AI-900RS cards installed in the Main Frame.

## AI-PN100B Rack Mount Panel

The AI-PN100B is used to rack mount two AI-PU200 power transformers side-by-side.

## AI-YC303 Main Frame Wall Mounting Bracket

The AI-YC303 is used to wall mount the AI-900MF Main Frame.

## Specifications

Power Source	20V AC, 2.5A, provided by AI-PU200; 24V DC provided by external 5A power supply not supplied by Aiphone
Current Consumption	7A
Communication Modes	Duplex, half-duplex, and Push-to-Talk
Serial Ports	RS-232 compliant, D-sub connector (9-pin female) 2 ports
Operating Temperature:	
- Indoor Units	32 - 104 degrees F.
- Outdoor Units	14 - 131 degrees F.
System Capacity	4 master stations; 64 substations per Main Frame
Master Station Mounting	Wall or desk mount
Master Station Wiring	2 twisted pairs, homerun to Main Frame
Substation Mounting	Flush mount in 2-gang box
Substation Wiring	2 conductor shielded, homerun to Main Frame
Wiring Distance:	
- Master to AI-900MS	2,950' w/24AWG; 4,920' w/22AWG
- Subs to AI-900RS	1,640' w/24AWG; 2,625' w/22AWG
- Between Main Frames	1,970' w/24AWG; 3,280' w/22AWG
Dimensions:	(WxHxD)
-AI-900	19" x 17-1/2" x 11-3/8"
-AI-MS900	8-1/2" x 3" x 8-3/8"
-AI-RS-150/160/170/180	4-3/4" x 4-3/4" x 2-3/8"

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