

ASA 10107 CENTRAL EXCHANGE

Features

- *Digital Transmission*
- *Microprocessor Controlled*
- *User Programmable*
- *Expandable from 10 to 60 Lines and 3 Links in Increments of 10 Lines*
- *Up to 15 Simultaneous Conversation Paths (30 Lines)*



General Description

The ASA 10107 Series Central Exchange is a microprocessor controlled switching exchange providing a minimum of 10 station extensions and 3 simultaneous hands-free conversational paths (links) in one wall-mountable enclosure. This system can be expanded up to 60 lines and 3 links. The enclosures are self-contained (except for the required AC power transformer) and can be mounted on a wall. Each enclosure contains plug-in circuit cards with line filter units to terminate all digital remote stations using a two-wire screw-type termination block. Standard features, some of which are programmable, include waiting call, automatic recall, executive priority, I-am-busy return, group call, all call, call forwarding, call transfer, inquiry to third party during call, and call transfer to secretary.

Display-equipped master stations connected to the ASA 10107 display the calling extension number when a call is received. Display-equipped master stations can also be programmed to cause either a return time or return date to display on calling display-equipped master stations.

Engineers' Specifications

1. The duplex digital intercom central exchange shall be ASA 10107 Central Exchange or approved equal. The central exchange shall be microprocessor controlled and shall provide all the electronic components necessary to connect and control 10 to 60 station extensions, allowing any station to digitally communicate with any other station and converse hands-free from both the calling and the called station.
2. The central exchange shall be housed in a self-contained enclosure capable of wall mounting. The enclosure shall initially contain all the necessary plug-in circuit cards to control 10 stations and provide three digital duplex speech links. The enclosure shall also provide five receptacles for additional circuit cards, each controlling up to 10 stations, which can be plugged in to expand enclosure capacity up to 60 stations. It shall be possible to customize the system line and speech link capacity using the five universal card cage receptacles. Each speech card shall expand the system's link capacity by four. It shall be possible to have a system with a capacity of 30 lines and 15 links.
3. Each central exchange shall include a plug-in microprocessor with permanent programming that provides the following features:
 - a. All Call
Any master station shall be able to call all other stations at the same time. All call can be enabled or disabled on a system-wide basis through call parameter programming, or can be disabled on an individual basis. Called stations shall sound an intermittent high/low tone of medium length to indicate that an all call is about to be received. It shall be possible to exclude stations from hearing all call on an individual basis.
 - b. Call Forwarding
Extensions shall be programmable to route calls from one extension to another predetermined extension.
 - c. Call Me Message
A calling extension's number shall be placed in a queue for retrieval at the called station when the called station is busy or does not answer.
 - d. Call Transfer
All master stations shall be able to transfer all incoming calls to another extension by placing the call on hold [00] and entering the extension number of the third party.
 - e. Executive Priority Call
Stations assigned "interrupt" priority by system programming shall be able to interrupt the call in progress at the called station when a busy signal is heard.
 - f. Group Call
The central exchange shall allow up to 10 group call numbers to have extensions in one group code or up to seven group codes at the same time for group combining. The system shall allow a total of 90 unique group call groups when the system is configured for four-digit group call numbers. Called stations shall sound an intermittent high/low tone of medium length signal to indicate that a group call is about to be received.
 - g. Group Hunting
The system shall allow up to 10 group hunting groups with a maximum of 10 extension numbers in each group. Each group can be programmed to search for the first free station or sequentially search for the next available station.
 - h. Free Numbering

**(Engineers'
Specifications)**

Each station extension, regardless of its numerical position in the system, shall be programmable by the user in a two-, three-, or four-digit format related to administrative functions such as room number and staff code number.

- i. Line Fault Lock-Out
Any station extension that short circuits or otherwise fails to complete an operational sequence shall be automatically removed from the system and/or reset.
 - j. Privacy Call
Callers shall be able to notify the called party to pick up the handset for a private call by pressing a single key before dialing the extension number. The called station shall then sound a privacy call tone to notify the called party to use the station handset.
 - k. Speed Dialing
The system shall allow properly equipped stations to be programmed for single-digit dialing.
 - l. Waiting Call
Callers shall be able to notify the called party that a call is waiting by pressing a single key after the busy signal is heard. The called station shall then sound tones and display the calling extension's number to notify the called party that a call is waiting.
4. The central exchange shall accept optional plug-in printed circuit cards that add the features listed below. Each option card requires a slot in an enclosure, decreasing the number of slots available for station cards, and therefore the number of stations that the exchange can control.
- a. Analog Circuit Card
A 10-station analog circuit card for interfacing with Model HL511 and HL512 analog intercom stations.
 - b. Conference Circuit Card
A three-party conference circuit card providing conference call capability. The system shall allow two conference cards to be connected to provide a six-party conference call capability.
 - c. TLAI Ten Line Analog Interface Card
A ten-line circuit card connecting standard DTMF telephones to the central exchange.
 - d. Facilities Circuit Card
A three-channel facilities circuit card providing any three of the following functions: alarm/break signals, background music/program distribution, central information channel, mobile radio connection, public address, radio paging, and/or tie-line with another ASA exchange.
 - e. Tie-Line Circuit Card
A two-channel circuit card to connect the central exchange to some PBX or mobile radio systems using two-, four-, or eight-wire lines.
 - f. Test/Service Card and Program
A testing/extension card and PC program used to back up central exchange data and programming with any IBM-compatible PC.

**(Engineers'
Specifications)**

- g. CCDX Speech Card
Each card expands the system's speech link capacity by four. The system shall have a maximum capacity of 15 speech links.
- 5. The central exchange shall work with the optional devices listed below.
 - a. DIGI Relay Box
A relay device allowing a station to unlock a door or connect to an external amplifier. The function of this device shall not require a card slot in the rack.
 - b. SIGNAL Repeater Box
A device used to extend the distance between the central exchange and a station when two-wire line lengths exceed 2,600 feet (800 m). The function of this device shall not require a card slot in the rack. Five devices maximum per line. Requires external power supply.
 - c. ELS2B Interface
An equipment rack with required electronics to interface a new Model ASA 10107 Central Exchange to an existing ELS2B Central Exchange.
- 6. The central exchange shall consist of a wall-surface mounted enclosure with cover approximately 16.2 inches (41.1 cm) high by 14.3 inches (36.3 cm) wide by 10 inches (25.4 cm) deep for 60 stations. Each enclosure shall weigh between 30.8 pounds (13.9 kg) for a basic version to 36.3 pounds (16.3 kg) for a fully equipped version. Size and weight shall not include the remote AC power transformer required for each enclosure.
- 7. The central exchange shall operate normally at ambient temperatures between 41° F (+5° C) and 131° F (55° C) with a relative humidity range of 20% to 80%.
- 8. Each central exchange enclosure shall have an external AC power transformer requiring 110/120/220/240 volts 50/60Hz at 230VA per enclosure. The transformer's dimensions shall be 6.1 inches (155 mm) high by 4.2 inches (107 mm) wide by 3.6 inches (91 mm) deep, and it shall weigh 9 pounds (4.1 kg).
- 9. Each line shall be hardened against ESD up to 800V.

ROF 1579002/1 LIDI

Ten-Station Digital Line Card (base system contains one)

**Associated
Equipment**

ROF 1579003/1 CCDX

Four-Channel Speech Card (base system contains one)

ROF 1579004/1 ADIO

Three-Channel Facilities Card

ROF 1579004/3 ADIO

Three-Party Conference Card

ROF 1579005/1 TLDT

Two-Channel Tie-Line Card (for connecting another ASA 10107 or an ASA 10105)

ROF 1579005/2 TLDT

Two-Channel Tie-Line Card (for connecting PBX and mobile radio)

ROF 1579027 TLAI

Ten Line Analog Interface Card

ROF 1579009/1 TSTX

Testing and Programming Card (Requires software part number PC-PROGRAMME)

ROF 1579012

Testing/Extension Card

ROF 1579026 LICI

Ten-Station Analog Line Card (for connecting 511E analog stations)

591 613/1

Signal Repeater Box

591 614/1 DIGI

Remote Station Relay Box

ROA 2195049/2

LFU Filter PCB with connectors to two LIDI boards (base system contains one)

PSAC36V18A

Power Transformer

Printed in USA