ASL
INTERCOM
A RIEDEL COMPANY

FL 2400 MS
Master
Speaker
Station

Volume
(Push to Call)

TALK

TALK

Volume
(Push to Call)

TALK

TALK

Backstage
Area
GRP 11
GRP 01
100 %
Show
Production

95 %

Foyer
GRP 09
GRP 02
30 %
Color Room

50 %

CUE
Ch. 1
GRP 16
ON AIR

CUE
Left

CUE
Ch. 4

Master
Volume

Push for
levels

MENU

SPKR

MIC

RTM

TTA

SA

ASL
DIGITAL
INTERCOM

FLEXUS
Architect's Specification

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Digital Partyline – General Requirements

The offered digital partyline system shall be designed to meet the requirements of future productions. This applies to audio quality as well as the implementation of modern and cutting-edge communication features.

The offered system shall consist of Master Speaker Stations, Remote Speaker Stations, Beltpacks, separate Power Supplies and Interfaces. The audio processing inside of the whole system should be digital and must have a minimum sample frequency of 48kHz with a resolution of 16bit. All audio transport inside the whole system must be lossless and uncompressed. The audio frequency response should be from 50Hz to 20kHz or better. All the stations shall have high quality controls and connectors. Built in switch mode power supplies shall be fully protected and shall support main voltages from 100V to 240V AC, 50/60Hz.

The whole partyline system wants to be based on an Ethernet compliant wiring infrastructure. The latency between Master Station and a Remote Speaker Station be about not more than 10ms. Wiring shall be done with standard CAT5 or CAT7 cables. Different wiring topologies will be supported (star topology, daisy chain, mixed, …). Remote speaker stations can be supplied with power either via powered daisy chain lines by the Master Station, vie power over Ethernet (PoE) switches or via local power adapters. The beltpack can be powered either by powered daisy chain lines of the Master Station or via PoE switches.

All communication channels in the system must allow full duplex communication which means 'talk' and 'listen' simultaneously. Each communication group (virtual partyline) shall support audio detection and VOX signalization for each group. Group name, volume settings, incoming calls etc. must be displayed at a colored OLED display, one display for maximum two channels.
The amplification of the audio to headset-cans and loudspeakers allows comfortable communication, also in high ambient noise environments. The system must support at least 2 program audio inputs which will be distributed via the network.

The offered system shall be able to link up to 4 master stations (systems) via a 1 Gigabit Ethernet connection and to share intercom groups and distribute PGM audio feeds between linked systems. The Master Station must offer at least 4 built in 4-wire interfaces. The interfaces can be routed to any channel of the Master Station.

Configuration of the system must be easy and self-explaining and be independent from any computer software. Configuration may be operated on each station, allowing to define or adjust at least the following features:

- Intercom group selection
- Talk enable / Talk latching or momentary
- Call send/receive enable
- Audio detect control
- PGM input adjustment
- PGM feed selection
- Signal labeling
- Gain and volume settings for all interfaces
- VOX settings
- Listen only configuration
- Microphone input adjustment
- Loudspeaker attenuation
- Configuration and routing of multi-function channels
- Stage Announce routing
- Button and display brightness
- Interface properties and routing

Speaker Stations

Master Station FL 2400 MS

19"/ 1U Master Station with gooseneck microphone and built in loud-speaker.

- 4 full duplex intercom channels
- Volume control knob for each intercom channel
- CALL system for each intercom channel with visual and audible volume controlled signaling
- Latching or momentary TALK buttons (configurable)
- Remote 'Mic Kill' function
- 2 PGM Audio inputs
- 1 PGM audio channel
- Master volume control
- PGM audio, Own Voice and Call Buzzer level adjustment
- Six multi-function channels, each to be configured as Listen Only
- Menu access
- The ability to serve 24 remote user stations (speaker stations or beltpacks)
- Full color high-resolution OLED displays showing channel and user group information
- USB connector
- Two powered daisy chain intercom lines, 100W each
- Ethernet connector to connect to a local or wide area network
- The ability to establish 100 MB and 1 GB Ethernet connections
- Four built-in 4-wire interfaces
- 3 GP-inputs and 16 GP-outputs
- Connector for Call Beacon
- Loudspeaker, Gooseneck microphone connector and XLR-4 headset connector
- Microphone input circuits with limiter
- Balanced PGM Audio inputs with limiter
- Stage Announce button and a balanced Stage Announce output
- Connector for external speaker
- Heavy gauge steel 1RU/19" housing

Supply voltage: 100-240VAC

Dimensions Width: 19"
            Height: 1 RU
            Depth: 250 mm

Completely pre-installed and prewired for immediate use.

Manufacturer: ASL
Type: FL 2400 MS

or equivalent

Remote Speaker Station FL 430

4 Channel Speaker Station with gooseneck microphone and built in loudspeaker.

- 4 full duplex intercom channels
- Volume control knob for each intercom channel
- CALL system for each intercom channel with visual and audible volume controlled signaling
- Latching or momentary TALK buttons (configurable)
- Remote 'Mic Kill' function
- One PGM audio channel
- Master volume control
- PGM audio, Own Voice and Call Buzzer level adjustment
- Six multi-function channels, each to be configured as Listen Only
- Menu access
- Full color high-resolution displays showing channel and user group information
- The ability to be powered by mains or by a powered daisy chain line or by PoE (Power over Ethernet)
- Loudspeaker, gooseneck microphone connector and XLR-4 headset connector

- Microphone input circuits with limiter
- Stage Announce button and a balanced Stage Announce output
- 3 GP Inputs
- Connector for Call Beacon
- Connector for external speaker
- Heavy gauge steel housing with either 19"/2RU flares or desktop console (to be ordered separately)

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Supply voltage:          48V via PoE
                         or 100-240VAC via power adapter

Dimensions  Width:       258 mm
            Height:      89 mm
            Depth:       67 mm
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Completely pre-installed and prewired for immediate use.

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Manufacturer: ASL
Type:         FL 430
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or equivalent

Remote Speaker Station FL 830

8 Channel Speaker Station with gooseneck microphone and built in loudspeaker.

- 8 full duplex intercom channels
- Volume control knob for each intercom channel
- CALL system for each intercom channel with visual and audible volume controlled signaling
- Latching or momentary TALK buttons (configurable)
- Remote 'Mic Kill' function
- One PGM audio channel

- Master volume control
- PGM audio, Own Voice and Call Buzzer level adjustment
- Six multi-function channels, each to be configured as Listen Only
- Menu access
- Full color high-resolution displays showing channel and user group information
- The ability to be powered by mains or by a powered daisy chain line or by PoE (Power over Ethernet)
- Loudspeaker, gooseneck microphone connector and XLR-4 headset connector
- Microphone input circuits with limiter
- Stage Announce button and a balanced Stage Announce output
- 3 GP Inputs
- Connector for Call Beacon
- Connector for external speaker
- Heavy gauge steel housing with either 19"/2RU flares or desktop console (to be ordered separately)


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Supply voltage:        48V via PoE
                       or 100-240VAC via power adapter

Dimensions  Width:     334 mm
            Height:    89 mm
            Depth:     67 mm
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Completely pre-installed and prewired for immediate use.

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Manufacturer: ASL
Type:         FL 830
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or equivalent

Remote Speaker Station FL 1230

12 Channel Speaker Station with gooseneck microphone and built in loudspeaker.

- 12 full duplex intercom channels
- Volume control knob for each intercom channel
- CALL system for each intercom channel with visual and audible volume controlled signaling
- Latching or momentary TALK buttons (configurable)
- Remote 'Mic Kill' function
- One PGM audio channel
- Master volume control
- PGM audio, Own Voice and Call Buzzer level adjustment
- Six multi-function channels, each to be configured as Listen Only
- Menu access
- Full color high-resolution displays showing channel and user group information
- The ability to be powered by mains or by a powered daisy chain line or by PoE (Power over Ethernet)
- Loudspeaker, gooseneck microphone connector and XLR-4 headset connector
- Microphone input circuits with limiter
- Stage Announce button and a balanced Stage Announce output
- 3 GP Inputs
- Connector for Call Beacon
- Connector for external speaker
- Heavy gauge steel housing with either 19"/2RU flares or desktop console (to be ordered separately)

- Supply voltage: 48V via PoE
                      or 100-240VAC via power adapter

Dimensions Width: 408 mm
            Height: 89 mm
            Depth: 67 mm

Completely pre-installed and prewired for immediate use.

Manufacturer: ASL
Type: FL 1230

or equivalent

2-channel Beltpack FL 390 BP

2-channel beltpack with "touch through display".

- 2 full duplex intercom channels
- Volume control knob for each intercom channel
- Call system for each intercom channel with visual and audible volume controlled signaling
- Call vibrator, replacing the Call buzzer
- Latching or momentary TALK buttons and TALK button disable ('Mic Mute') circuitry
- One PGM audio channel (two PGM audio channels at binaural belt-packs)
- Menu access
- Master volume control and PGM audio, Own Voice and Call Buzzer level adjustment
- Full color high-resolution display showing channel and user group information
- The ability to be powered by a powered daisy chain line or by PoE (Power over Ethernet)
- 2 Ethercon connectors for allowing daisy chain wiring
- XLR-4 headset connector
- Microphone input circuit with limiter
- Connector for earpiece
- connector for Call Light
- Strong ABS housing with steel belt clip

Supply voltage: 48V via PoE or powered daisy chain line

Dimensions   Width: 96 mm
             Height: 55 mm
             Depth: 85 mm

Completely pre-installed and prewired for immediate use.

Manufacturer: ASL
Type: FL 390 BP

or equivalent