

Multi-Graphic

Centralized School Sound System

Model: Series 2223R & 2233R



Features

- Simple operation with color-coded control panels, guidelines and instructions
- 20-watt intercom channel
- Separate program channel (35 to 250 watts available)
- Instant EMERGENCY and ALL ROOMS announcements
- Choice of one program channel (Series 2223R) or two (Series 2233R)
- Two-way voice communication between the Control Center and any classroom or speaker-equipped location
- Distribution of voice announcements from the Control Center to any or all speakers
- Supervisory tone signal for two-way communication, to alert the teacher to the call, and to prevent unauthorized monitoring
- Distribution of program material to any or all classrooms
- Separate inputs for Lo-Z balanced microphones and Hi-Z auxiliary program source
- Optional expander(s) provide eight additional microphone and/or auxiliary inputs
- Monitor program material aurally and visually
- Light annunciation and tone signal at the Control Center
- Prevent the Control Center from monitoring any classroom whose call origination switch is in the "Privacy" position
- Distribution of a single circuit classroom change signal
- Built-in CD Player and AM/FM Receiver

Description

The Bogen Multi-Graphic Series 2223R and 2233R Centralized School Sound Systems are complete, self-contained voice and program control centers for schools and institutions. They are available in configurations serving from 25 to 175 loudspeaker-equipped locations. (If a larger system is desired, please consult Bogen's Applications Engineering Department.) The control centers feature two-way intercom capability plus distribution of public address, program material, or emergency announcements. They are engineered to provide versatility and reliability, and include provisions for optional configurations, for maximum system flexibility.

The intercom channel is rated at 20 watts and features a frequency response shaped for maximum intelligibility. The intercom channel is completely independent - communication

between the control center and a classroom does not interfere with the distribution of program material to any other classroom. The Series 2223R provides one program channel, while in Series 2233R, two separate programs may be directed to different groups simultaneously. Step-by-step instructions with easy-to-follow, color-coded guidelines are provided on the front panels, so that even inexperienced users are able to easily operate the system.

Emergency announcements require only the operation of a single push button, take precedence over all other functions, and are transmitted at a predetermined level.

The modular design of the Series 2223R and 2233R permits custom configuration to individual institutional requirements,

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Description, continued

while simplifying maintenance and service. Modular design permits an increase in system capacity, or the addition of Bogen options, to meet the changing needs of the facility.

The basic Series 2223R system components include the MCP35A Control Panel, SBA225 Room Selector and Annunciator Panels, and CDR1 CD Player and AM/FM Receiver. A power amplifier is included for the program channel when the room selector capacity exceeds 50 stations.

The Series 2233R utilizes the MCP35A Control Panel and the MCPB Control Panel to provide two separately amplified program channels. The SBA325 Room Selector and Annunciator Panel (three-channel) is used to distribute different programs to different groups of staff speakers simultaneously. The SBA325 panel also causes the associated room annunciator LED to flash when a call is acknowledged by the control center operator, as a reminder that the channel is open. Separate power amplifiers are provided for each of the program channels; the power ratings are based upon the total number of room selector switches in the system.

Call-in switches are used at staff locations to call the control center. LED and tones announce calls at the control center. Call-in switches with selective privacy prohibit monitoring of the classroom from the control center but permit the room to be called. An optional configuration uses telephone handsets and permits control center-to-classroom and classroom-to-classroom phone communications via the control center. Provisions are included for voice call-in and light annunciated call-in on two-conductor shielded cable.

The SCR25A accessory permits the use of existing call-in switches, which do not contain SCR holding circuits. Provisions are included to distribute a tone signal over all speakers, to announce classroom changes, etc. Other options include alarm signaling, loop priority (interface with satellite sound systems in gyms, etc.), expander(s) to increase the number of microphone and/or auxiliary inputs and six-circuit time signaling.

The Series 2223R and 2233R systems are available for 42", 61-1/4" or 77" upright equipment racks.

Architect & Engineer Specifications

The school communication Control Center shall be a Bogen Series (enter 2223R or 2233R), or equivalent. The Control Center shall be engineered for optimum simplicity of operation, made possible by the use of functionally-identified push buttons with associated color-coded guidelines, and supported by step-by-step instructions printed on the front of the control and room selector panels.

Control Centers, which are complicated to operate, and which do not provide push-button operation, color-coded guidelines and operating instructions permanently affixed to the control panels shall not be considered. The Control Center shall provide at least the following features and functions:

1. Direct two-way voice communication between the Control Center and any classroom or speaker-equipped location, with simultaneous distribution of program material to any other classroom or location.
2. Distribution of voice announcements from the Control Center to any or all speakers.
3. Facilities for automatically sounding a supervisory tone signal over any loudspeaker selected for two-way communication, to alert the teacher to the call, and to prevent unauthorized monitoring. The tone shall sound whenever the classroom is being monitored and shall repeat at regular intervals.
4. Distribution of program material to any or all classrooms.
5. Ability to transmit a program or announcement simultaneously to all classrooms by a simple operation of a program source push button and the ALL ROOMS push button.
6. Separate inputs for Lo-Z balanced microphones and Hi-Z auxiliary program source (CD Player/AM/FM Receiver). Program source selection shall be accomplished by simply pressing the appropriately labeled push button.
7. Provision for optional expander(s) which shall each provide eight additional microphone and/or auxiliary inputs.
8. Aural (monitor speaker) and visual (LED) monitoring of all program material.
9. Facilities for voice-call origination to the Control Center from any classroom equipped with a voice-call origination switch.
10. Classroom call-origination with light annunciation and tone signal at the Control Center from any classroom equipped with a call-origination switch. The annunciator lamp shall remain lit until the call is answered and then be automatically cancelled. (Note: Specify Bogen CA10A Call Switch for this feature.)
11. Facilities to positively prevent the Control Center from monitoring any classroom whose call-origination switch is in the "Privacy" position. (Note: Specify Bogen CA11A Call/Privacy switch for this feature.)
12. Provision for the instantaneous distribution from the Control Center of emergency messages to all locations equipped with loudspeakers, simply by pressing a single red push button. This action shall override all other programs and bypass all other controls. The emergency message shall be transmitted at a predetermined level.
13. Provision to optionally distribute a classroom change signal to all speaker-equipped locations.
14. A built-in CD Player and AM/FM Receiver shall be included as standard equipment.
15. Provision shall be made to include an optional FM/AM tuner. (Note: Specify Bogen Model TP30D Digital Receiver and RPK46A rack panel kit.)

16. Functionally identified knobs, levers, push buttons, etc., and color-coded guidelines shall be provided for each function of the Control Center. The intercom channel shall be identified by green guidelines. The program channel shall be identified by amber guidelines. The emergency page push button shall be red.

To fulfill these requirements, a Bogen Multi-Graphic Series (enter 2223R or 2233R), or equivalent Control Center, shall be provided and it shall meet the following requirements:

(Use for Series 2223R) The Control Center shall use the MCP35A Control Panel to provide two separately amplified channels: an intercom channel and program channel. The intercom channel shall have an output rating of 20 watts RMS. A built-in, 35-watt amplifier shall be provided for the program channel when the room selector capacity does not exceed 50 stations. A 60-watt amplifier shall be provided when the room selector capacity is 75 to 100 stations. A 125-watt amplifier shall be provided when the room selector capacity is 125 to 175 stations.

The Control Center shall also use the SBA225 room selector panel to distribute program material and select a classroom for intercom communication. Each panel shall provide 25 three-position (Program A/OFF/Intercom C) room selector switches and associated annunciator LEDs.

ALL ROOMS and EMERGENCY push buttons shall be provided. The EMERGENCY switch shall gather all station lines to permit single push-button distribution of announcements to all speaker locations, regardless of the position of the room selector panel switches. The ALL ROOMS switch shall permit single push-button distribution of program material to all speaker locations, except any station(s) connected to the intercom channel.

(Use for Series 2233R) The Control Center shall use the MCP35A control panel and MCPB control panel to provide an intercom channel and two separately amplified program channels (Channel A and Channel B). The MCPB control panel shall additionally provide input connectors for two Lo-Z balanced microphones and one auxiliary program source, and controls to allow the operator to monitor either channel.

The intercom amplifier shall have an output rating of 20 watts RMS. Separate power amplifiers shall be provided for each program channel. Two 35-watt amplifiers shall be provided for the program channels when the room selector capacity does not exceed 50 stations. Two 60-watt amplifiers shall be provided for the program channels when the room selector capacity is 75 to 100 stations. Two 125-watt amplifiers or one 250-watt amplifier shall be provided for the program channels when the room selector capacity is 125 to 175 switches.

The Control Center shall also include the SBA325 Room Selector Panel to distribute either of two programs to selected speakers, and to communicate with a selected classroom on the intercom channel. Each panel shall provide 25 three-position (Program A/OFF/Program B) room selector switches, 25 individually-identified intercom push-on/push-off switches, and annunciator LEDs. A call from a classroom shall be acknowledged by pressing the appropriate intercom selector switch, which shall cause the annunciator LED to flash to indicate the open channel condition.

ALL ROOMS and EMERGENCY push buttons shall be provided. The EMERGENCY switch shall gather all station lines to permit single push-button distribution of announcements to all speaker locations, regardless of the position of the room selector panel switches. The ALL ROOMS switch shall permit single push-button distribution of program material to all speaker locations, except any station(s) connected to the intercom channel.

Options

ASF4: Alarm-Signaling Feature

The Alarm-Signaling Feature shall be a Bogen Model ASF4. It shall provide a choice of four distinct tones (slow whoop, chime, steady, and pulsed tone) to be used for alarm signals.

The push-button alarm panel shall be a Bogen Model PBA3. When used with the ASF4 Alarm-Signaling Feature, the PBA3 Push-Button Alarm Panel shall provide push-button activation of a choice of three tones and reset function at the Control Center.

CPP: Handset Communications Feature

The handset communication feature shall be a Bogen Model CPP, which shall include a TPS4 Telephone Power Supply with call button and LED "in-use" and "disconnect" indicators, and shall provide for (private and conference) control center-to-classroom and classroom-to-classroom communications via the control center. (Note: This feature requires the use of an HS201C Console Phone with HS201C or HS202C Staff Classroom phone.)

LPC4: Loop Priority

The loop priority circuit shall be a Bogen Model LPC4. It shall:

1. Permit the attendant to connect the remote (satellite) sys-

tem speakers either to the remote program or to any program originating at the Control Center.

2. Permit the attendant to distribute the remote system program to any selected classroom(s).
3. Automatically gather the remote system speakers for ALL ROOMS and EMERGENCY transmissions.

MCPEXP: Input Expander for MCP35A

Each Bogen Model MCPEXP shall expand the number of microphone and/or auxiliary inputs by eight (8). It shall also be capable of expanding two (2) inputs by four (4) inputs each. Multiple expanders within a system shall expand the input capacity, as required. Each section of an MCPEXP panel shall have the capability of balanced or unbalanced operation.

SCT: Six-Circuit Time Signaling Feature

Provision shall be included for automatic distribution of classroom change signals on six different circuits to those speakers programmed to receive the signal. The time signal shall have precedence over program distribution to the selected speakers. (Note: A Bogen BCMC 2000 or 3000 Series Master Program Clock, or similar device, is required for this feature.)

Options, continued

TWK351/TWK354: Two-Wire Call-In Modification

The two-wire call-in modification shall be a Bogen Model TWK351, and shall permit light-annunciated call-in with CA10A Call-In Switches, where two-conductor shielded cable has been previously installed. The TWK354 is a 3-transformer assembly only used for 2233 systems.

The Centralized School Sound System shall be mounted in:

- An upright equipment rack having a 42" vertical space and measuring 22-1/4" W x 46-1/8" H x 19-1/2" D, or
- An upright equipment rack having 61-1/4" vertical space and measuring 22-1/4" W x 65-3/8" H x 19-1/2" D, or
- An upright equipment rack having 77" vertical space and measuring 22-1/4" W x 81-1/8" H x 19-1/2" D.

The system shall be installed by or under the direct supervision of an authorized local distributor who has been trained by the manufacturer in the proper installation, operation, and service of the equipment.

Technical Specifications

Rated Output: Per Program Channel - 35 to 250 watts, dependent upon system capacity
Intercom - 20W RMS

Voice/Program Channel Inputs: Series 2223R: 2 MIC, 1 AUX, TELCO PAGE; Series 2233R: 4 MIC, 2 AUX, TELCO PAGE; Each optional MCPEXP panel adds up to 8 MIC and/or AUX inputs

Finish: Control Panels and switchbanks are black with color-coded guidelines; rack is black

Power Requirements: 120V AC, 60 Hz

Dimensions:

- Rack with 42" panel space: 22-1/4" W x 46-1/8" H x 19-1/2" D (twenty-four (24) 1-3/4" rack spaces)
- Rack with 61-1/4" panel space: 22-1/4" W x 65-3/8" H x 19-1/2" D (thirty-five (35) 1-3/4" rack spaces)
- Rack with 77" panel space: 22-1/4" W x 81-1/8" H x 19-1/2" D (forty-four (44) 1-3/4" rack spaces)

Options: ASF4 - Alarm signaling;
CPP - Handset-to-handset communication;
LPC4 - Loop priority circuit;
MCPEXP - Input expander;
SCT - Six-circuit time signaling;
TWK351 - Two-wire call-in modification

Accessory Equipment: CA10A, CA11A, CA17 - Call-in Switches
DDU250 - Dynamic Desktop Microphone
MBS1000A - Remote Paging Microphone
SCR25A - Call-in Module (required if using call-in switches without built-in SCR circuitry)
TAMB - Telephone Access Module for Telephone Paging
TWK351, TWK354 - Two-wire call-in w/shield
WMT1A - Line-Matching Transformer for Telephone Paging

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