FS-7000 SERIES INTEGRATED VOICE EVACUATION SYSTEM
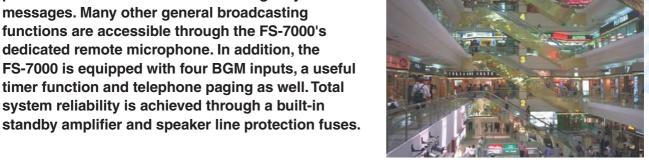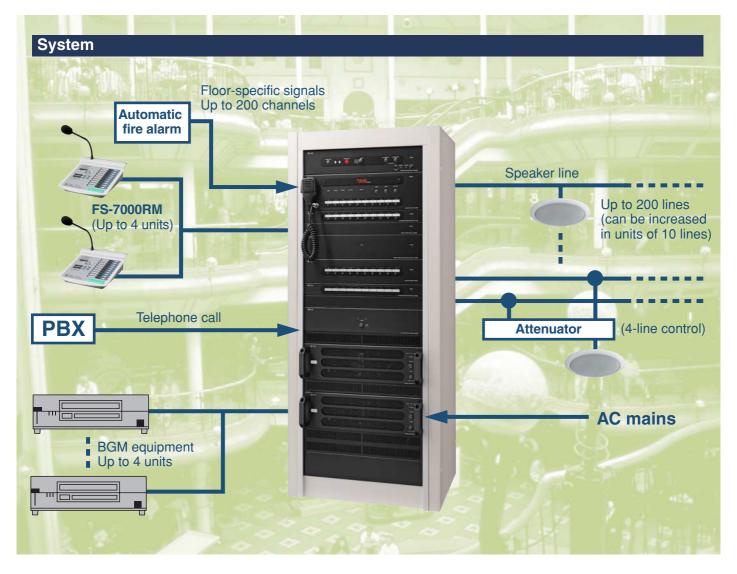
A flexible and scalable integrated system that offers reliable, high performance broadcast capabilities for any situation.

Satisfying all requirements for emerge

The FS-7000 integrated emergency general-purpose public address system is designed to optimally meet the requirements of large and medium-size venues, allowing up to 200 speaker lines to be used. This means it is ideal for commercial facilities such as department stores, factories, airports, exhibition sites and other public locations including government offices, schools and hospitals. The FS-7000 system will initiate automatic broadcasts to any selected area when it receives signals from an automatic fire alarm system.

The FS-7000 system provides automatic playback of messages through EV audio files, delivering broadcasts at full volume, bypassing the system's attenuator and over-riding any volume settings. 2-Channel broadcasts can be efficiently performed with BGM as well as emergency messages. Many other general broadcasting functions are accessible through the FS-7000's dedicated remote microphone. In addition, the FS-7000 is equipped with four BGM inputs, a useful timer function and telephone paging as well. Total system reliability is achieved through a built-in standby amplifier and speaker line protection fuses.

System

Automatic fire alarm

Floor-specific signals
Up to 200 channels

FS-7000RM
(Up to 4 units)

PBX

Telephone call

BGM equipment
Up to 4 units

Speaker line

Up to 200 lines
(can be increased
in units of 10 lines)

Attenuator   (4-line control)

AC mains

Remote microphone operations

Remote control microphones can be used to effect general-purpose broadcasts, individual-zone broadcasts, grouped broadcasts, all-call broadcasts, and for 4-tone chime activation as well.

Messages permanently stored

EV audio data is stored in nonvolatile memory to consistently maintain a high audio broadcasting quality when delivering pre-recorded messages.

Fuse protection

A short in the speaker line will cause a protection fuse to blow, cutting off that line to make sure that the ongoing broadcast being transmitted on the system's other lines will not be compromised.

2-Channel broadcast ability

Dual broadcasting capability enables BGM distribution and voice broadcasting for emergency broadcasts and priority broadcasting. This make it possible to deliver voice broadcasts to specific zones without interrupting BGM distribution in other areas.

Maximum number of inputs

Up to 4 remote microphones can be connected and there are also four additional inputs for BGM applications.

Speaker line expansion

A maximum of 200 speaker lines can be controlled.

Timer Operation

If connected to a program source whose operation can be initiated by a timer, simultaneous time signal broadcasting can be performed.

Phone-initiated paging

If a compatible telephone exchange is connected, phone-initiated simultaneous paging is possible.
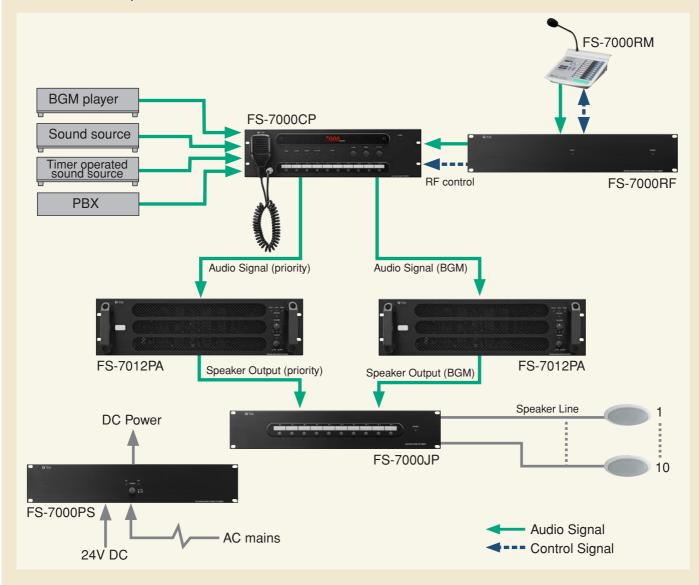
Emergency broadcasts

Emergency broadcasting can operate during power failures if connected to the emergency power supply panel. As soon as a fire alarm system's signal is detected by the system, automatic emergency alerts are broadcast.

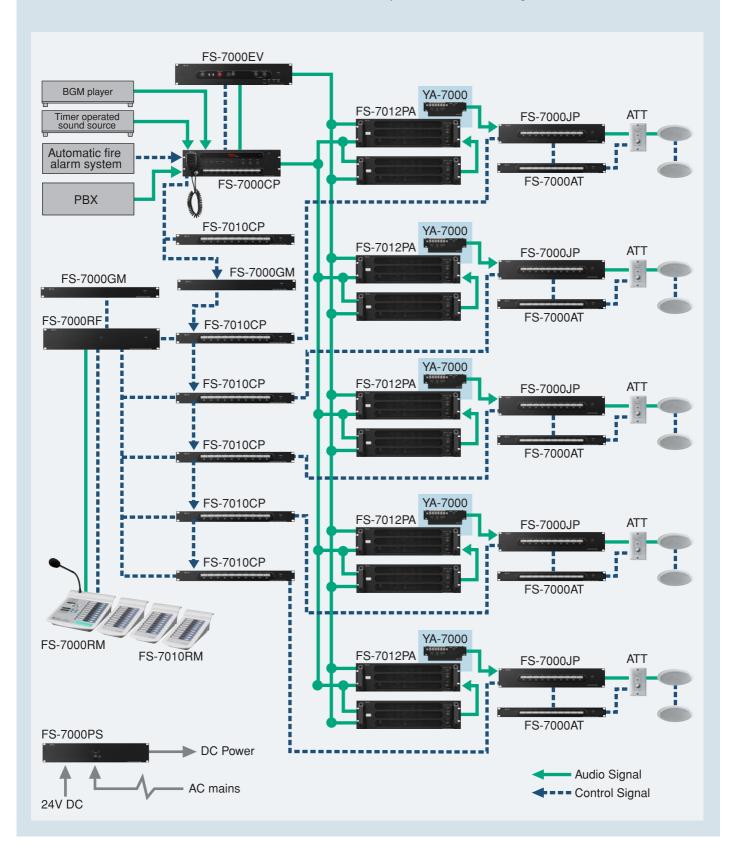## System Example 1 (10 Broadcasts Zones, 2-Channel Broadcasts)

- Broadcasts can be made to up to 10 selected zones.
- Background music and announcements using the CP microphone can be broadcast simultaneously to different zones.
- Selecting zones in which BGM broadcasts are in progress at the FS-7000CP interrupts the BGM broadcasts in those zones, allowing announcements from the CP microphone to be heard instead.

- FS-7000RM Remote Microphone enables broadcasting to up to 10 individual zones, as well as all zone calls.
- If speaker lines are shorted, the line protection fuses disconnect the shorted lines, leaving broadcasts to other speaker lines functioning intact.

FS-7000RM

BGM player

Sound source

Timer operated sound source

PBX

FS-7000CP

RF control

FS-7000RF

Audio Signal (priority)

Audio Signal (BGM)

FS-7012PA

FS-7012PA

Speaker Output (priority)

Speaker Output (BGM)

DC Power

Speaker Line

1

FS-7000JP

10

FS-7000PS

24V DC

AC mains

Audio Signal

Control Signal

System Example 2 (50 Lines, 20 Groups)

- Fire evacuation announcements can be made to the broadcast zones selected automatically when the connected automatic fire alarm system is activated.
- When an emergency broadcast is made, or when a general urgency broadcast is made from the CP microphone or FS-7000RM, these broadcasts will be made at maximum volume by overriding the attenuators.
- The power amplifier can be automatically switched over to the standby amplifier to allow broadcasts to continue when the amplifier fails.

- FS-7000RM Remote Microphone enables broadcasting to up to 10 individual zones, as well as all zone calls.
- If the FS-7000GM is connected to the FS-7000RF, the FS-7000RM's individual zone selector keys can be used as group selector keys, permitting multiple broadcast zones to be selected simultaneously by pressing a single key.
- If speaker lines are shorted, the line protection fuses disconnect the shorted lines, leaving broadcasts to other speaker lines functioning intact.

FS-7000CP
Control Panel

The FS-7000CP Control Panel is the basic operation section for the FS-7000 Series Voice Evacuation System. It is designed to be used in conjunction with the FS-7000JP Junction Panel and can control up to 10 speaker zones and a simultaneous all-zone call.

Power Source	24 V DC
Input	EV: 0 dB*, 600 Ω
	Timer: 0 dB*, 600 Ω
	Paging: –60/–20 dB*, 600 Ω
	RF (Remote microphone): 0 dB*, 600 Ω
	Preinstalled microphone (accessory): –55 dB*, 600 Ω
	AUX: –20 dB*, 600 Ω
	BGM 1: –60/0 dB*, 600 Ω
	BGM 2 – 4: –20 dB*, 10 kΩ
Output	Priority output: 0 dB*, 600 Ω
	BGM output: 0 dB*, 600 Ω
Frequency Response	50 – 15,000 Hz
S/N Ratio	Over 60 dB
Distortion	Under 1%
Priority Function	Priority output: Preinstalled microphone > EV (emergency broadcast mode)
	Timer > Paging > Remote microphone >
	Preinstalled microphone, AUX > BGM 1 ≧
	BGM 2 – 4 (general-purpose broadcast mode)
	BGM output: BGM 1 ≧ BGM 2 – 4 (by muting function setting)
External Control Input	Timer, Paging, Automatic fire alarm system (10 zones)
Output Control	10 individual zones + all-zone call or 10 group zones + all-zone call
Dimensions	482 (W) × 132.6 (H) × 376.9 (D)mm
Weight	5.2kg

FS-7010CP
Expansion Control Panel

The FS-7010CP is the expansion operation panel for the FS-7000 Series Voice Evacuation System. It is designed to be used in conjunction with the FS-7000JP Junction Panel and can control up to 10 speaker zones.

Power Sourse	24 V DC
External Control Input	Automatic fire alarm system (10 zones):
Output Control	10 individual zones or 10 group zones
Dimensions	482 (W) × 44 (H) × 337 (D)mm
Weight	3kg

FS-7000PS
DC Power Supply Panel

The FS-7000PS DC Power Supply Panel supplies 24V DC power to each component of the FS-7000 Series Voice Evacuation System. The additional use of the emergency power supply panel permits 24V DC power to be supplied for emergency broadcast to be initiated during a power failure.

Power Source	230 V AC, 50 Hz
	24 V DC
Input	24 V DC
Output	AC operation: 24V DC ±0.5V, 5A (total)
	DC operation: Voltage lowering DC input voltage approx. by 1V
External Control Input/Output	Emergency power connection, Emergency power control
Dimensions	482 (W) × 88.4 (H) × 338.2 (D)mm
Weight	8.9kg

FS-7000JP
Junction Panel

The FS-7000JP Junction Panel is used to connect speaker lines in the FS-7000 Series Voice Evacuation System. It is designed to be used in conjunction with the FS-7000CP Control Panel and the FS-7010CP Expansion Control Panel.

Power Source	24 V DC
Power Amplifier Input	Priority input, BGM input
Speaker Output	10 lines
External Control Output	General urgency/Emergency mode output/Power remote output
Dimensions	482 (W) × 88.4 (H) × 340.7 (D)mm
Weight	4.2kg

FS-7000EV
Voice Evacuation Panel

The FS-7000EV Voice Evacuation Panel is the emergency broadcast operating section of the FS-7000 Series Voice Evacuation System. It need not be installed when the system is used solely for general-purpose broadcast purposes. It has facilities for manually starting and resetting emergency broadcasts. Emergency announcements are recorded in English, which can be changed by front panel operations.

Power Source	24 V DC
Emergency Announcement	Evacuation announcement and false alarm announcement
Emergency Warning Tone	44.1 kHz sampling frequency
Frequency Response	20 – 20,000 Hz
Distortion	Under 1%
Output	EV audio output: 0 dB*, 600 Ω
	Headphone output: 0 dB*, 100 Ω
External Control Input/Output	Emergency ON output,
	Emergency control contact output,
	Automatic fire alarm system confirmation signal input,
	Emergency power control
Dimensions	482 (W) × 88.4 (H) × 341.7 (D)mm
Weight	4kg

FS-7000AT
Attenuator Control Panel

The FS-7000AT Attenuator Control Panel controls the 4-wire system attenuators in the FS-7000 Series Voice Evacuation System. Up to 10 attenuator lines can be controlled.

Power Source	24 V DC
Attenuator DC Power Input	Rated voltage: 24 V DC
Attenuator Control Output	10 lines, rated voltage: 24 V DC
Dimensions	482 (W) × 44 (H) × 336 (D)mm
Weight	3kg

FS-7000GM
Group Matrix Panel

The FS-7000GM Group Matrix Panel is used to perform group broadcasts in the FS-7000 Series Voice Evacuation System. It is designed to be connected to the FS-7000CP Control Panel or FS-7000RF Remote Microphone Interface Panel to enable group broadcasts by simultaneously selecting multiple speaker lines using the FS-7000CP's line selection switches or the FS-7000RM Remote Microphone.

Power Source	24 V DC
Group Input	Max. 20 groups
No. of Speaker Control Lines	Max. 50 lines
Dimensions	482 (W) × 44 (H) × 334.7 (D)mm
Weight	3kg

FS-7000RF
Remote Microphone Interface Panel
The FS-7000RF Remote Microphone Interface Panel is used to connect the Remote Microphone to the FS-7000 Series Voice Evacuation System. Up to 4

Power Source	24 V DC
No. of Speaker Control Lines	Max. 50 lines
Priority Control	Last-in-1st-out priority/1st-in-1st-out priority/ individual priority/no priority
Group Broadcast	Broadcast possible to up to 20 groups by connecting optional FS-7000GM
No. of Connectable FS-7000RM Units	Max. 4
Cable Distance	Total 800 m max.
Dimensions	482 (W) × 88.4 (H) × 334.7 (D)mm
Weight	4.2kg

FS-7000RM
Remote Microphone
The FS-7000RM Remote Microphone is used solely for making general-purpose announcements in the FS-7000 Series Voice Evacuation System. It can broadcast announcements to 10 different individual zones in addition to simultaneous all-zone calls.

Power Source	24 V DC
Output	0 dB*, 600 Ω
External Microphone Input	−40 dB*, 2.2 kΩ, phantom powering
Distortion	Under 1%
Frequency Response	100 – 20,000 Hz
S/N Ratio	Over 60 dB
Output Control	10 individual zones + all-zone call or 10 group zones + all-zone call
Display Section	Power indicator, Fault indicator, Busy indicator, All-zone call indicator, Zone indicators
Dimensions	190 (W) × 76.5 (H) × 215 (D)mm (goosenec microphone excluded)
Weight	900g

FS-7010RM
Remote Microphone Expansion
The FS-7010RM Remote Microphone Expansion Unit is used to expand the FS-7000RM general-purpose microphone in the FS-7000 Series Voice Evacuation System. Up to 10 lines are expandable per FS-7010RM.

Power Source	Supplied from the FS-7000RM
Display Section	Zone indicators
Dimensions	110 (W) × 76.5 (H) × 215 (D)mm
Weight	350g

FS-7006PA
Power Amplifier
The FS-7006PA power amplifier with rated output power of 600W is designed to be used in conjunction with the FS-7000 Series Voice Evacuation System. Connecting a standby amplifier to the optional YA-7000 amplifier auto switching module installed in the FS-7006PA power amplifier allows the FS-7006PA amplifier to automatically switch over to the standby amplifier when the module detects the power amplifier's failure.

Power Source	230 V AC, 50 Hz
Input	0 dB*, 10 kΩ
Rated Output	600 W
Load Impedance	100 V line, 16.7 Ω
Frequency Response	80 – 15,000 Hz
Distortion	Under 0.1%
S/N Ratio	Over 90 dB
Control Input	Volume control bypass control input
Cooling	Forced air cooling
Dimensions	482 (W) × 132.6 (H) × 532.7 (D)mm
Weight	24.8kg

FS-7012PA
Power Amplifier
The FS-7012PA power amplifier with rated output power of 1200W is designed to be used in conjunction with the FS-7000 Series Voice Evacuation System. Connecting a standby amplifier to the optional YA-7000 amplifier auto switching module installed in the FS-7012PA power amplifier allows the FS-7012PA amplifier to automatically switch over to the standby amplifier when the module detects the power amplifier's failure

Power Source	230 V AC, 50 Hz
Input	0 dB*, 10 kΩ
Rated Output	1200 W
Load Impedance	100 V line, 8.3 Ω
Frequency Response	80 – 15,000 Hz
Distortion	Under 0.1%
S/N Ratio	Over 90 dB
Control Input	Volume control bypass control input
Cooling	Forced air cooling
Dimensions	482 (W) × 132.6 (H) × 532.7 (D)mm
Weight	35.4kg

YA-7000
Amplifier Auto Switching Module
The YA-7000 Amplifier Auto Switching Module is designed to be installed in the power amplifier of the FS-7000 Series Voice Evacuation System. By connecting a standby amplifier to the YA-7000 module installed in the main amplifier, the main amplifier can be switched over to the standby amplifier when the main amplifier fails.

Power Source	24 V DC
Input	Main amplifier input, Standby amplifier input
Output	Connects to the speaker line
Dimensions	178 (W) × 61.2 (H) × 73 (D)mm
Weight	240g

*0 dB = 1 V

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