A Leader

SHINSUNG COMMUNICATIONS, INC.

of PA Audio Products

SPA SERIES

MIC 1 MIC 2 MIC 3 MIC 4 MIC 5/TEL MIC 6/AUX 1 AUX 2

CONTOUR

SHIN SUNG
Communications, Inc.

SHINSUNG COMMUNICATIONS, INC.

CONTENTS

COMPANY OUTLINE

1. Establishment : 1978. 10. 25

2. President : Sanghoon Kim

3. Home page : www.shinsungcom.com

4. E-mail : shinsung@shinsungcom.com

5. Tel : 82-31-908-1999

6. Fax : 82-31-908-6233

7. Address : Ilsan Techno Town #624, 138, Ilsan-ro, Ilsandong-gu,
   Goyang City, Gyunggi-do, Korea

8. Business Items : Industrial and Commercial Amplifiers, Horn Speakers,
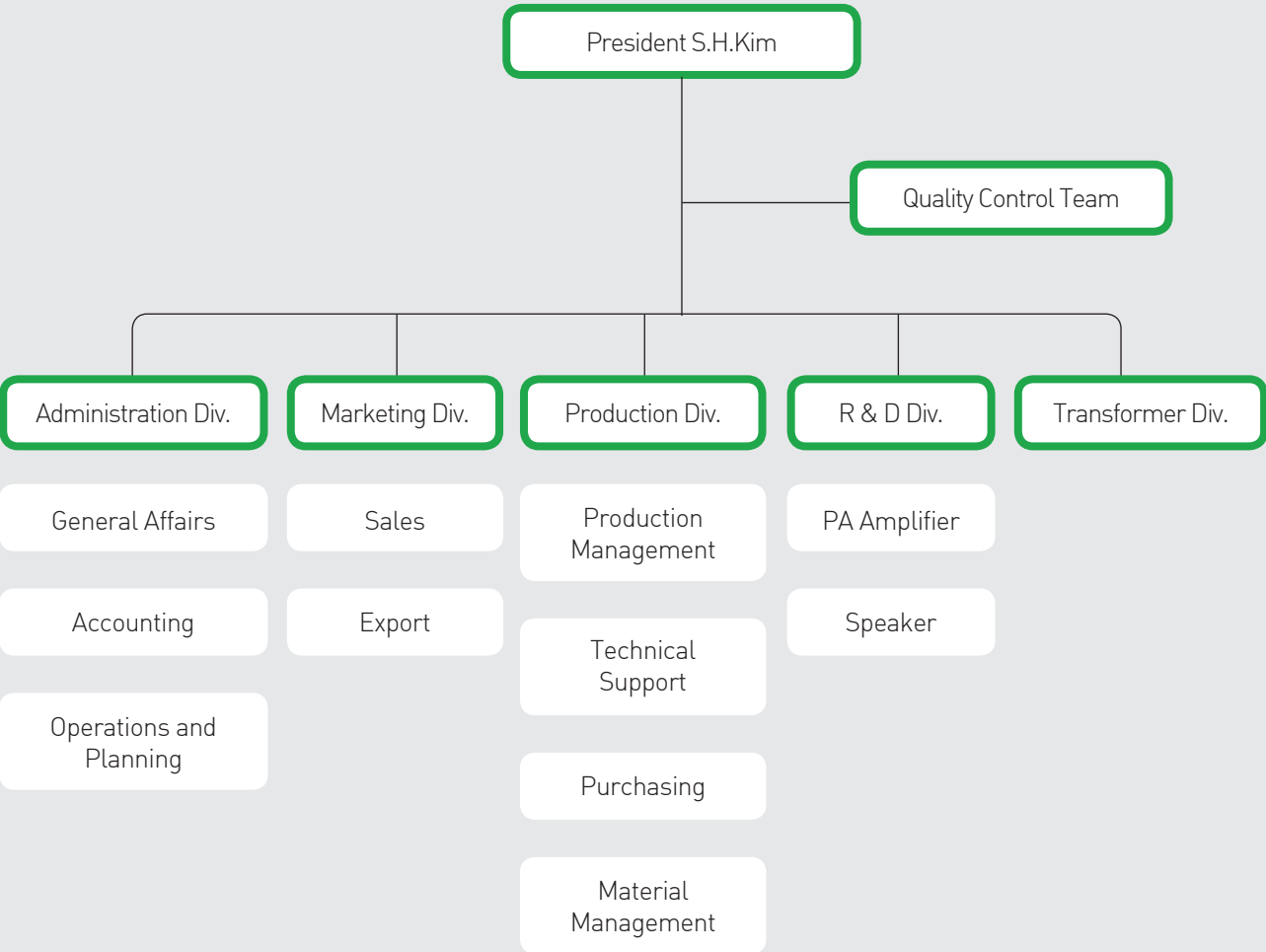   Intercom Systems, Power Transformer and Related Accessories.

HISTORY OF SHINSUNG
REPRESENTATIVE

2014 11 - Certified Self-control Safety Confirmation (KC) (SDPA-600)
11- Obtained additional ETL certificates of industrial amplifier models (SDPA-300, STPA-100, SPA-150)
11- Selected as a prospective small and medium company by Gyeonggi-do Provincial Government
05 - Certified technological innovation-oriented small and medium enterprise(INNO-BIZ)
05 - Selected as Woman-Friendly First-Degree Relationship Company
04 - Selected as a frontier company for electronics trading
04 - Certified Quality Management System(ISO 9001:2008)
04 - Selected as exporter based on Korea-EU certification of origin by commodity(for the second round)
03 - Increased capital

2013 12 - Certified Self - control Safety Confimation (KC)(SDPA-2330)
11 - Received commendation for regional economic development from Governor of Gyeonggi-do
10 - Selected as a prospective small and medium company by Goyang city government
08 - Participated in the delegation of Eastern Europe market development
06 - Included in Public Address System for domestic plant
05 - Participated in 2013 INFORCOMM
04 - Participated in the delegation of North American market development

03 - Certified Self-control Safety Confirmation (KC)(SPA-250A)
01 - Registered trademark of Shinsung Comunications INC.

2012 11 - Selected as a prospective small and medium company based on applicaion of Korea - USA FTA
10 - Recognized establishment of the corporate R&D Center
06 - Selected as exporter based on Korea EU certification of origin by commodity (for the first round)
05 - Obtained Certificate of Venture Business Company

2011 02 - Incorporated into a supplier of the transformer
01 - Obtained UL and ETL certificates of industrial amplifler

2010 The office & factory moved to Ilsan

2009 The production of the amplifiers started
2007 UL for the Fire Alarm approved
2003 ISO 9001 : 2000 approved
2002 UL standard approved
1999 CE certification approved
1996 ISO 9002 approved
1996 President Mr.Sanghoon Kim appointed
1989 Shinsung Trademark registered
1978 Established Shinsung Communications, INC.

SHINSUNG ORGANIZATION

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                        President S.H.Kim
                              │
                              ├──────────── Quality Control Team
                              │
    ┌──────────┬──────────┬───┴──────┬──────────┬──────────┐
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| Administration Div.	Marketing Div.	Production Div.	R & D Div.	Transformer Div.
General Affairs	Sales	Production Management	PA Amplifier	
Accounting	Export	Technical Support	Speaker	
Operations and Planning		Purchasing		
		Material Management		

SHINSUNG VISION

Shinsung's philosophy is humanities.
By putting people first, we create values for customers and continue to enhance the qualities of their lives.

With advanced technologies and customer oriented attitude,
Shinsung will present a new life style in audio products as a global leader.

Customer

Employee

Investor

SHINSUNG
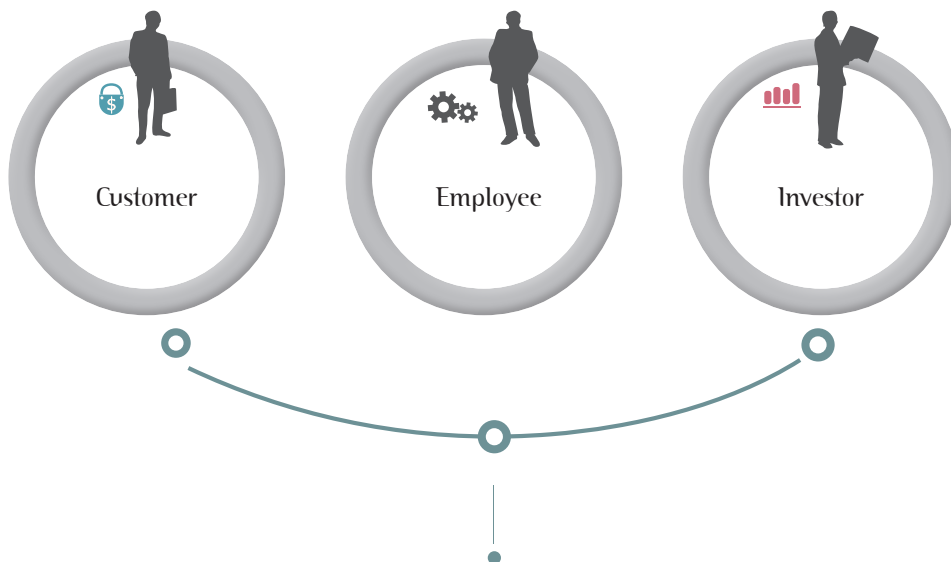
A Company People Love
A Company Creating New Life Style

BUSINESS ITEMS
(Products exporting to Bogen)

Power Amplifier

Mixer Amplifier

Telephone Paging Systems

Horn Speaker

Self Amplified Systems

Other Items

Bogen Communications,Inc., in USA(Shinsung's global partner)

Shinsung has been Bogen's partner as a main supplier of power amplifiers for more than
20 years. Bogen has become one of the top players in the U.S market with a significant market share
in the public address systems. Such achievements are due to its excellent sales skills combined with
our innovative and reliable products.

Learn more about Bogen : www.bogen.com

BUSINESS ITEMS Power Amplifiers (Bogen OEM)

M300, M450, M600

Feature of Product

· 3 modes of operation : Stereo (4-ohm), Dual Mono (4-ohm), or 70V Mono
· 3 mono power levels : 600W, 900W, or 1200W for 70V speaker systems
· 3 stereo power levels : 300W, 450W, or 600W per channel @ 4 ohms
· 2 x 1 mixer function in mono modes
· 2 Module input bays for flexible modular input capability

X300, X450, X600

Feature of Product

· Dual 70V amplifier channels
· 300W, 450W, or 600W per channel for 70V speaker systems
· Transformerless direct drive outputs
· Electronically balanced high-impedance inputs

HTA125A, HTA250A

Feature of Product

- 125W & 250W models
- Designed for continuous operation at rated power, up to 120 deg. F; convection-cooled
- Thermal protection and automatic electronic overload protection
- Hi-Z unbalanced and Lo-Z balanced or unbalanced input w/ accessory transformer (TL600)

BPA60

Feature of Product

- 60W model
- 1 input : Hi-Z unbalanced
- Lo-Z balanced input with accessory transformer
- Input level control and lo-cut filter switch
- 8-ohm/25V, 16-ohm, 25VCT, and 70V outputs
- Provides continuous high-quality sound

V35, V60, V100, V150, V250

Feature of Product

- 35W, 60W, 100W, 150W, & 250W models; each with a large power reserve
- 8 module input bays, accepts up to 2 signal-processing output modules or up to 8 input modules
- Four priority levels
- 4-ohm, 8-ohm, 25V, & 70V outputs
- Rack mountable w/ kit (sold separately)

WV100, WV150, WV250

Feature of Product

- 100W, 150W, & 250W models; each with a large power reserve
- 8 module input bays, accepts up to 2 signal-processing output modules or up to 8 input modules
- Four priority levels
- 4-ohm, 8-ohm, 25V, & 70V outputs
- Wall-mountable with Back Box and Door (sold separately)
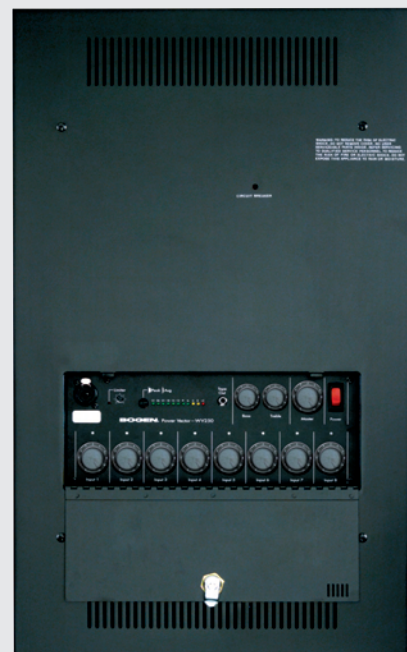
GS35, GS60, GS100, GS150, GS250

Feature of Product

- 35W, 60W, 100W, 150W, & 250W models
- 7 inputs; 4 MIC (Lo-Z), 1 AUX (Hi-Z), 1 MIC/TEL, 1MIC/AUX
- 4-ohm, 8-ohm, 25V, 25VCT, and 70V outputs
- Dual-function, 10-band graphic equalizer (acoustic EQ/feedback control)

C10, C20, C35, C60, C100

Feature of Product

- 10W, 20W, 35W, 60W, & 100W models
- 4 inputs (C35/60/100 models) : 1 MIC (Lo-Z), 1 AUX (Hi-Z), 1 TEL, plus 1 selectable MIC or AUX
- 3 inputs (all C10/C20 models) : 1 MIC (Lo-Z), 1 TEL, plus 1 selectable MIC or AUX
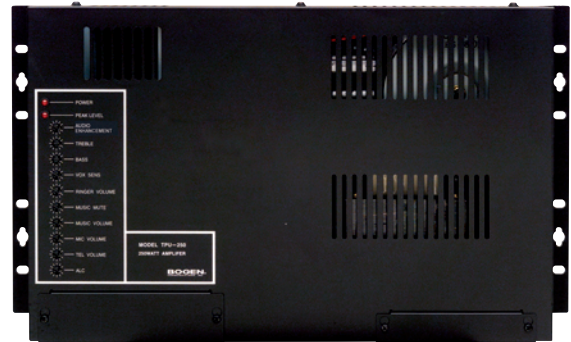- 4-ohm, 8-ohm (not on C100), 16-ohm, 25V, & 70V outputs

BUSINESS ITEMS Telephone Paging Systems (Bogen OEM)

Telephone Paging Amplifiers (TPU15A, TPU35B, TPU60B,TPU100B, TPU250)

Feature of Product

- 15W, 35W, 60W, 100W, & 250W models specially designed for telephone paging systems
- 3 inputs on TPU250 & TPU-B models : 1 TEL, 1 MIC (Lo-Z), 1 AUX (Hi-Z)
- 2 inputs on TPU15A : 1 TEL, 1 AUX (Hi-Z)
- Built-in night ringer

Zone Paging Controller (PCM2000: PCMCPU, PCMTBM, PCMTIM, PCMZPM)

Feature of Product

- 1 to 99 paging zones and up to 32 programmable paging zone groups
- Emergency All-Zone Override Paging input
- 250W power handling capacity (separate amplifier required)
- Operates with 70V and self-amplified (24V) paging systems
- Select zones or groups for background music, night ringer, code calling, tones, & talkback
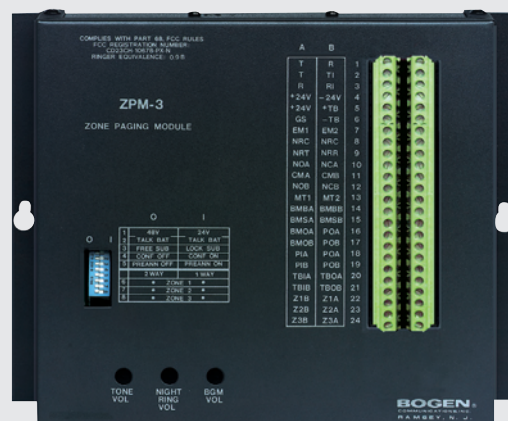
Pre-Assembled PCM Paging System (PCMSYS3)

- Pre-assembled 3-Zone PCM System with Power Supply included
- Same great features as found in PCM2000
- Ready-To-Go right out of the box
- Expandable up to 99 Zones
- Emergency All-Zone Override Paging Input
- 250W Power handling capacity

3-Zone Paging Module (ZPM3)

- 3 Zone Paging Plus All-Call
- 3 easily programmable zone groups (1-3 zones in each)
- One-way & two-way paging (talk back operation requires TBA15)
- 100W total power handling capability
- Background music input
- Emergency All-Zone override paging input
- Battery or power supply operation (both sold separately)

Telephone Access Module(TAMB2)

Feature of Product

- Interfaces a telephone system with a paging system to allow paging announcements to be made through any telephone
- Updated version of the venerable TAMB, functionally the same
- Loop start, ground start, & station port (90V ring up) compatibility
- Bi-directional for two-way systems
- Rack-mount or wall-mount; half-rack width units can be mounted side-by-side
- Background music input with volume control
- UL60950 listed; FCC registered

SPT5A, SP58A, SPT15A, SP158A, SPT30A, SP308A

Feature of Product

· Maximum speaker power capacities of 7.5W, 15W, & 30W
· Rotary switch-selected power taps on transformer models
· Consistent voltage (70V/25V) and 8-ohm versions
· Tilt & swivel base for easy aiming
· All metal construction with enamel finish
· Weatherproof design

Bidirectional Horn (BDT30A)

Feature of Product

· Twin re-entrant horns for bi-directional projection
· Maximum speaker power capacity of 30W
· Variable tap impedance selector switch
· Tilt & swivel base for easy aiming
· All metal construction with enamel finish
· Weatherproof design

Wide Dispersion Reentrant Horn Loudspeaker (KFLDS30T)

Feature of Product

- 70 x 95 degree dispersion with rotatable horn flare
- 30 watts max. @ 70V or 15 watts max. @ 25V
- Weatherproof, polycarbonate & aluminum construction
- All-purpose mounting bracket provides precise positioning in the vertical and horizontal planes with a single adjustment
- 7 position weather-sealed switch matches either 70V or 25V constant-voltage line

Easy Design Speakers (HS7EZ, HS15EZ, HS30EZ)

Feature of Product

- Maximum speaker power capacities of 7.5W, 15W, & 30W
- Single-tap design
- Stepped attenuator volume control
- For 70V systems
- Tilt & swivel base for easy aiming
- All metal construction with enamel finish
- Weatherproof design

Paging Horn (IH8A)

Feature of Product

· Maximum speaker power capacity of 15W
· 8-ohm impedance
· High intelligibility and efficiency
· Weatherproof design
· 12" connecting cable for easy installation
· Tilt and swivel base for easy aiming

Flange-Mounted Reentrant HornLoudspeaker (FMH15T)

Feature of Product

· 15 watts max. @ 70V or 25V
· Weatherproof design for indoor or outdoor use
· Vandal-resistant, for applications in hostile environments
· All metal construction with black enamel finish
· Select flush (BBFM6) or surface (BBSM6) mount enclosure for installation (each sold separately)
· Heavy-duty cast aluminum grille (SGHD8) & adapter ring (FMHAR8) for installation (each sold separately)

BUSINESS ITEMS Self Amplified Systems (Bogen OEM)

Buffer/Expander/Volume Control (BUFEX)

- Volume control for network of speakers
- Buffer drives up to 150 speakers
- Bypass feature allows emergency announcements to be heard even if local speaker volume is set low or off
- 600-ohm input impedance

Signal Level Control (SLC)

- Volume control for network of up to 150 speakers
- Easy install, wire with audio feed to speakers
- 10 position settings plus off
- Secure terminal strip connections

Digital Switching Horn Speakers
(SAH5, SAH15, SAH30)

Feature of Product

· 5W, 15W, 30W models
· High-efficiency digital switching amplifier technology
· Low DC current draw and heat dissipation
· Unique flare shape provides controlled sound dispersion
· Operates with continuous background music & at high ambient temperatures
· Rotatable horn for vertical or horizontal dispersion
· Cast aluminum swivel mount

Metal Horn Speakers (AH5A, AH15A)

Feature of Product

· 5W and 15W models
· Weatherproof housing: all-aluminum construction
· Screwdriver-adjustable volume controls
· Tilt & swivel mounting brackets for vertical or horizontal positioning
· Textured mocha enamel finish
· Banding slots for easy mounting on beams and pillars
· 4-conductor connection cable included

Ambient Noise Sensor (ANS501)

Feature of Product

- Automatically adjusts paging level as ambient noise levels rise and fall
- Supports up to 4 small sensor microphones (1 ANS500M included) for large areas
- Sensor microphones can be located up to 2,000 feet from control unit
- Easily connects in at pre-amp out -power amp in process loop
- Input/output: 600-ohm balanced, unbalanced
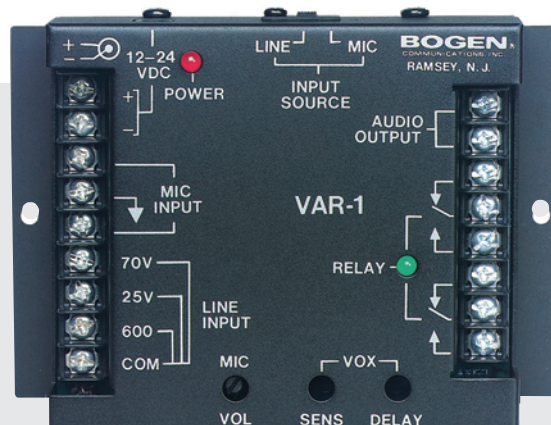
Voice-Activated Relay (VAR1)

Feature of Product

- 2 sets of C-Form (N.O. & N.C.) relay contacts respond to audio activity
- 4 levels of input signals: microphone, 600-ohm line, 25V, & 70V speaker systems
- Built-in balanced, low noise, high gain microphone pre-amp
- A transformer-isolated, 600-ohm small signal level output of detected audio available
- Trigger threshold adjustment

Night Ringer (NR100)

Feature of Product

- Responds to 90V ring signals or external contact closures
- Produces dual-frequency electronic ringer tone
- Easily connects to any paging system
- Automatically mutes background music while ringing
- Ringer volume control

Attenuators (AT10A, AT35A , ATP10, ATP35)

Feature of Product

- Adjusts loudspeaker output levels on 25V and 70V systems
- 2 models control up to 10-watt or 35-watt speaker systems
- 10 attenuation steps and an off setting
- Mounts in standard electrical box
- Simple connections

Line-Matching Transformer (WMT1A)

Feature of Product

- Hi-Z, 10k-ohm primary impedance
- Lo-Z, 600-ohm secondary impedance, balanced with center tap
- Matches high-to-low impedance or low-to-high impedance
- Adapts line level signals to microphone inputs
- RCA connector for Hi-Z side / Screw terminals for Lo-Z side
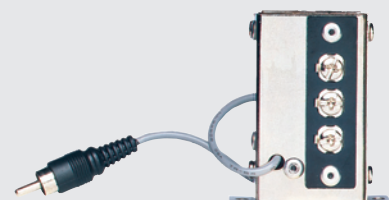
BUSINESS ITEMS

Amplifier Accessories (Bogen OEM)

- **GSRVC** : Remote Volume Control (Gold Seal Amps)
- **PVSC** : Power Vector Security Cover (V-Series Amps)
- **PVMC** : Rear Module Bay Cover (V-Series Amps)
- **RVCP** : Remote Volume Control (V- & WV-Series Amps)
- **TL100** : 1:1 Ratio Plug-In Transformer (BPA60/HTAs/MT250D)
- **TL600** : Plug-In: 600 ohms Transformer (BPA60/HTAs/MT250D)
- **GSTRC** : Gold Seal Security Cover (Gold Seal Amps)

Mounting Kits (Bogen OEM)

- **GSRPK** : Rack Kit (Gold Seal Amps)
- **RPK82** : Rack Mount Kit (TPU35B/60B/100B)
- **RPK86** : Rear Rack Support Brackets (M-Class/Black Max)
- **RPK84** : Rack Mount Kit (PCM2000)
- **RPK87** : Rack Mount Kit (V-Series)
- **RPK91** : Rack Mount Kit (TAMB2)
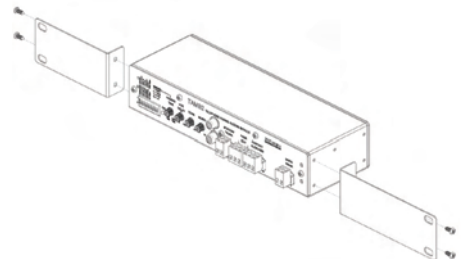
Speaker Mounting Hardware (Bogen OEM)

- **BC1** : Beam Clamp (Horn Loudspeakers)
- **SMTB** : Tile Bridge for Easy Install Speakers (SM1EZ/SM4T)
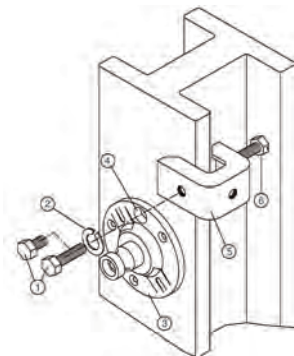
PUBLIC ADDRESS SYSTEM

Power Amplifier

Pre Amplifier

Emergency Amplifier

Portable Amplifier

Other Items

SPA-2330 | POWER AMPLIFIER 300W

Feature of Product

· Its low noise and high output circuit that ensures the signal to noise ratio above 95dB and
  low distortion rate under 0.5% assures high performance.
· Its gain-adjusting volume function enables the variation up to-12dB.
· Its temperature detector ensures the control of output by monitoring
  the rise of temperature caused by overload or excessive input.
· The output level displayer facilitates the output verification. In addition, its highly reliable parts ensure high performance.

Size and Function

Output Power	300W(RMS) ⟨ 1% THD
Adjustable input gain	-12dB
Fan forced-air cooling system	Automatic two-speed cooling fan
Protection	Thermal, PC limiter
Frequency Response	70Hz-18KHz(+1/-3dB)
S/N	95dB
Output/Impedance	4Ω /35V, 16Ω /70V, 33Ω /100V
Power Consumption	830VA
Power Source	AC220V, 60Hz, DC24V
Weight	14.1kg
Dimensions	483(W) x 133(H) x 320(D)mm

SPA-2315 | POWER AMPLIFIER 150W

Feature of Product

· Its low noise and high output circuit that ensures the signal to noise
  ratio above 95dB and low distortion rate under 0.5% assures high performance.
· Its gain-adjusting volume function enables the variation up to-12dB.
· Its temperature detector ensures the control of output by monitoring the rise of temperature caused
  by overload or excessive input.
· The output level displayer facilitates the output verification. In addition,
  its highly reliable parts ensure high performance.

Size and Function

Output Power	150W(RMS) ⟨ 1% THD
Adjustable input gain	-12dB
Fan forced-air cooling system	Automatic two-speed cooling fan
Protection	Thermal, PC limiter
Frequency Response	70Hz-18KHz(+1/-3dB)
S/N	95dB
Output/Impedance	4Ω /24V, 32Ω /70V, 66Ω /100V
Power Consumption	450VA
Power Source	220AC; 60Hz, 24VDC
Weight	11kg
Dimensions	483(W) x 133(H) x 320(D)mm

SPA-1330 | POWER AMPLIFIER

Feature of Product

· Its low noise and high output circuit that ensures the signal to noise ratio above 95dB and low distortion
  rate under 0.5% assures high performance.
· Its gain-adjusting volume function enables the variation up to-12dB.
· Its temperature detector ensures the control of output by monitoring the rise of temperature caused by
  overload or excessive input.
· The output level displayer facilitates the out put verification. In addition, its highly reliable parts ensure high performance.

Size and Function

Output Power	300W(RMS)
Frequency Response	70Hz-18KHz
Adjustable input gain	-12dB
S/N	95dB
Output/Impedance	4Ω /57V,16Ω /70V,33Ω /100V
Power Source	220AC; 60Hz, 24VDC
Weight	12kg
Fan forced-air cooling system	Automatic two-speed cooling fan
Protection	Thermal, PC limiter
Power Consumption	830VA
Dimensions	270(W) x 133(H) x 320(D)mm

SPP-2192 | PRE AMPLIFIER

Feature of Product

· This device mixes or amplifies 8CHANNEL input signal of MIC1~3, CHIME/CD/AUX/TUNER/DECK.
· Based on its signal to noise ratio above 60dB and low distortion under 0.5%, it ensures high performance.
· It gives priority to MIC1, making it take precedence over other signal source(MUTE).
· Lamp is on to inform whether the signal is present in the input/output signal source, and the electronic balance system was applied to the input/output circuit.
· It provides REC output function.

Size and Function

THD	0.5%
Frequency Response	80Hz-18KHz
TONE CONTROL	Bass-100Hz±12KHz, Treble-10KHz±12dB
S/N	60dB
Inputs	Mic-60dB/600Ω (BALANCED) CD-20dB/47KΩ(UNBALANCED) Deck-20dB/47KΩ(UNBALANCED) Aux-20dB/47KΩ(UNBALANCED) Chime-20dB/47KΩ(UNBALANCED)
Outputs	main output-0dB/600Ω (BALANCED) Rec output-20dB/1KΩ(UNBALANCED)
Power Source	DC 24V
Weight	3.5kg
Dimensions	483(W) x 44.5(H) x 320(D)mm

SPP-1192 | PRE AMPLIFIER

Feature of Product

· This device mixes or amplifies 8CHANNEL input signal of MIC1~3,CHIME/CD/AUX/TUNER/DECK.
· Based on its signal to noise ratio above 60dB and low distortion under 0.5%, it ensures high performance.
· It gives priority to MIC1, making it take precedence over other signal source(MUTE).
· Lamp is on to inform whether the signal is present in the input/output signal
  source, and the electronic balance system was applied to the input/output circuit.
· It provides REC output function.

Size and Function

THD	0.5%
Frequency Response	80Hz-18Hz
TONE CONTROL	Bass-100Hz±12dB, Treble-10KHz±12dB
Inputs	Mic-60dB/600Ω (BALANCED), CD-20dB/47KΩ(UNBALANCED) Deck-20dB/47KΩ(UNBALANCED), Aux-20dB/47KΩ(UNBALANCED) Chime-20dB/47KΩ(UNBALANCED)
Outputs	main output-0dB/600Ω (BALANCED), Rec output-20dB/1KΩ(UNBALANCED)
S/N	60dB
Power Source	DC 24V
Weight	2.1kg
Dimensions	270(W) x 44.5(H) x 320(D)mm

SEP-2206 | EMERGENCY AMPLIFIER

Feature of Product

· Being connected with the fire detector, it ensures the unmanned activation of siren and emergency escape alarm in case of fire.
· With its built-in voice file, it ensures the activation of emergency escape alarm, and is capable of recording the 'escape alarm broad casting' with its built-in key microphone(16 seconds).
· The emergency escape alarm sound can be activated manually based on the interlocking operation system in case of fire.

Size and Function

Integrates with fire alarm system	
External auto announcement available with voice file	
Function test switch	
Operation Selector Switch	Manual, auto
Input	-50dBm/1.2kΩ (UNBALANCED)
Output	0dBm/600Ω (BALANCED)
Frequency Response	-3dB(200Hz ~ 10KHz)
S/N	60dB
Distortion	0.5%(200Hz ~ 10KHz)
Voice file	Operation Memory(16 Sec)
EM MIC	Uni-directional dynamic Microphone
Power Source	DC24V
Weight	4.1kg
Dimensions	483(W) x 89(H) x 320(D)mm

SEM-2216 | EMERGENCY SYSTEM

Feature of Product

· Being connected with the fire detector, it ensures the unmanned activation of siren
  and emergency escape alarm in case of fire.
· With its built-in voice file, it ensures the activation of emergency escape alarm, and is capable of recording the˙
  escape alarm broadcasting˙with its built-in key microphone(16 seconds).
· It has 16 speaker-controlling circuits. The REMOTE can be controlled remotely,
  depending on the overall operation function and circuits(16 circuits).
· No additional device is required because the amplified output monitor and chime function were added.

Size and Function

Voice file	Operation Memory (16 Sec)
EM MIC	Uni-directional dynamic Microphone
CHIME	UP, DOWN (4-tone)
Monitor Speaker	1W/8Ω
Monitor Selector	5CH
Speaker Selector	16CH
Remote Control 1,2	16CH
Fire Control	16CH
Amp Input,Output	16CH
Power Source	DC24V
Weight	4.9㎏
Dimensions	483(W) x 89(H) x 320(D)㎜

SPA-2324CT | POTABLE AMPLIFIER

Feature of Product

· Based on low-noise and high output circuit, its switch for its 5 speakers and overall units ensures
  the broadcasting without any constraint.
· Direct current power(BATTERY DC24V) can be used in case of power outage.
· The THERMISTOR, installed in the HEAT SINK, controls the output in the case of abnormal temperature caused
  by excessive input or overload.
· CD/TUNER function enables various application.
   - Digital tuner and DECK, CD can be used freely if compatible(optional).
· Microphone ranging from 1 to 3(PANTEM POWER), and signals such as TUNER,CD,AUX,CHIME/SIREN,
  and others, can be mixed.

Size and Function

Aux input, Line out, Pre out	
Signal Sources	CD player, FM tuner
S/N	95dB
Output/Impedance	70V,83MHz/100V,42Ω
Tuning Range	FM 87.5~108Ω /AM 522~1620KHz
ANT	FM 300Ω BALANCED or 75Ω UNBALANCED
Frequency Response	70Hz-18Hz
Output Power	240W(RMS) @ < 1% THD
Power Source	AC220V/60Hz, DC24V, 650W
Weight	14.1kg
Dimensions	420(W) x 133(H) x 340(D)mm

SPA-2324 | POTABLE AMPLIFIER

Feature of Product

· Based on low-noise and high output circuit, its switch for its 5 speakers and overall units ensures
  the broadcasting without any constraint.
· Direct current power(BATTERY DC24V) can be used in case of power outage.
· The THERMISTOR, installed in the HEAT SINK, controls the output in the case of abnormal
  temperature caused by excessive input or overload.
· CD/TUNER function enables various application. * Digital tuner and DECK, CD can be used freely if compatible(optional).
· Microphone ranging from 1 to 3(PANTEM POWER), and signals such as TUNER,CD,AUX,CHIME/SIREN, and others, can be mixed.

Size and Function

Aux input, Line out, Pre out	
Signal Sources	CD player, FM tuner
S/N	95dB
Output/Impedance	70V,83Ω /100V,42Ω
Tuning Range	FM 87.5~108MHz/AM 522~1620KHz
ANT	FM 300Ω BALANCED or 75Ω UNBALANCED
Frequency Response	70Hz-18KHz (+1/-3dB)
Output Power	240W(RMS) @ < 1% THD
Power Source	AC220V/60Hz, DC24V, 650W
Weight	12.5kg
Dimensions	420(W) x 133(H) x 340(D)mm

SMP-2208 | MONITOR PANEL

Feature of Product

· Up to 8 power amps can be selected with the channel selection switch, and the output level of selected amp can be checked (LED level meta).
· Its speaker volume adjustor enables the adjustment to appropriate sound volume.
· It high power speaker provides rich and clear sound quality when checking the output condition.

Size and Function

Channel selector switches	8ch(Amp Output 100V)
LED indication	1
monitor speaker with attenuator	0,-6,-12,-18,-24dB, OFF
Monitor Speaker	3W/8Ω
Power Source	DC24V
Weight	4kg
Dimensions	483(W) x 89(H) x 320(D)㎜

SPG-2144 | PROGRAM EXCHANGER

Feature of Product

· Composed of 4 input and 4 output circuit, it is used when a broadcasting that covers 4 dimensions such as school, hotel, department store, and others, is required.
· Connected with Matrix Logic, this device converts the signal automatically when the emergency timer, remote broadcasting and others are input from the outside.
· The input signal is automatically converted on the basis of priority sequencing, according to the order of EM(FIRE, EMSWITCHER), TIMER, RM1, RM2.
· It has a lamp that displays the signal that is currently broadcasted(EM, TIMER, RM1, RM2).

Size and Function

PGM Inputs/Outputs	4 Line
Emergency Interface	Emergency, timer, remote 1, remote 2
Indicators	Emergency, timer, remote 1, remote 2
Power Source	DC 24V
Weight	3.2kg
Dimensions	483(W) x 44.5(H) x 320(D)㎜

SES-2116 | EMERGENCY SWITCHER

Feature of Product

· The automatic fire detection signal(16 circuits) activates the escape emergency broadcasting on the floor where
  the fire started(the light is on the lamp, indicating the floor where the fire started) and the floors right after such a floor.
· 16 switches and all switches were placed to allow the system to be activated manually in case of emergency,
  enabling the selection of individual and all speakers.
· Expansion of its 16 circuits is possible.

Size and Function

Auto fire sensing and announcement at designated zone

Speaker Selector	All, Channels 1-16
Display	Selector switch on/off
Power Source	DC24V
Weight	3.3kg
Dimensions	483(W) x 44.5(H) x 320(D)mm

SML-2116 | MATRIX LOGIC

Feature of Product

· Based on the priority-based broadcasting sequence, it enables the shifting of broadcasting according to the order of ordinary broadcasting, remote, and emergency broadcasting.
· This device is connected to the emergency switch, emergency panel, and relay group.
· With the connection terminal for expansion, the circuits can be expanded into more than 16 circuits.

Size and Function

Priority Controls	Emergency, timer, remote 1, remote 2, main
Controls	Two and three wire system
Display	Prior mode LED
Power Source	DC24V
Weight	3.3kg
Dimensions	483(W) x 44.5(H) x 320(D)㎜

SPC-2324 | POWER DISTRIBUTOR/BATTERY CHARGER

Feature of Product

· This device enables the overall control of the power(AC, DC, battery) for all units installed in the rack system.
· The battery shifts to DC power system automatically if the AC power supply stopped as a result of power
  outage. At this time, the output is always based on direct current(DC24V) system.
· It has the displaying lamp(LED) that enables the verification of voltage of AC and DC, and provides remote controlling function.
· The battery is recharged at 3A fully. The electric current reduces as the battery is recharged to full
  capacity(27.3V), keeping the battery is fully recharged.

Size and Function

LED Display	AC, DC, BAT, CHARGER
AC Outlet	AC switched(OUTLET X 8) AC unswitched(OUTLET X 2)
DC Outlet	DC unswitched(TEMITOR X 4)
Remote control	2ch
DC Output Voltage	24V/5A DC
Charge Voltage or Current	27.3V/3A DC
Power Consumption	210VA
Power Source	AC220V/60㎐
Weight	7.5㎏
Dimensions	483(W) x 133(H) x 320(D)㎜

SRM-2816 | REMOTE AMPLIFIER

Feature of Product

· This device enables the broadcasting through the speaker by remotely controlling the relay group of public
  address broadcasting(16 channels).
· The displaying lamp(LED) is fitted with 5 DOT LED output level meta
  on its frontal panel, allowing the condition of switch to be figured
  out conveniently.
· 4 musical scale chime circuit was adopted which informs the beginning
  and the end of broadcasting, and the high
  sensitivity microphone and javara microphone facilitate the operation.

Size and Function

Control Output	All, channels 1-16
Selector Switches/indicator	All, channels 1-16
Output Impedance	+3dB/600Ω (BALANCED)
MIC	-60dB/10KΩ(UNBALANCED)
Frequency Response	80Hz-18KHz
Power Source	DC 24V
Weight	1.75kg
Dimensions	250(W) x 185(H) x 80(D)mm

SDT-1106 | FM / AM TUNER

Feature of Product

· Using the BAND button, the broadcasting channel, FM1, FM2, FM3, MW1, MW2, can be selected.
· It has the highly-noticeable digital LED displayer and provides automatic
  channel selecting function. In addition, it provides 18 channel saving function', for each band.
· It provides the memory scan/maintenance function.

Size and Function

Tuning Range	FM 87.5~108$_{MHz}$, AM 522~1620$_{KHz}$
ANT	FM 300Ω BALANCED or 75Ω UNBALANCED AM high impedance lead antenna
Usable Sensitivity	FM 2μV / AM 4.5μV
Signal to noise ratiot	FM 60dB / AM 45dB
Frequency Response	70$_{Hz}$~18$_{KHz}$
variable output	-20dB/1Ω UNBALANCED
Power Source	DC24V
Weight	1.9$_{kg}$
Dimensions	270(W) x 44.5(H) x 320(D)$_{mm}$

SCT-1102 | CD-R/RW COMPATIBLE

Feature of Product

CD
· It can replay MP3 file and provides the display function and random repetition program play.
· It enables the forward winding and rewinding during the play, and also enables repeated play of single music and selected group of music.

TUNER
· Using the BAND button, the broadcasting channel, FM1, FM2, FM3, MW1, MW2, can be selected.
· It has the highly-noticeable digital LED displayer and provides automatic channel selecting function. In addition, it provides '6 channel saving function', for each band.
· It provides the memory scan/maintenance function.

Size and Function

Tuning Range	FM 87.5~108$_{MHz}$, AM 522~1620$_{KHz}$
ANT	FM 300Ω BALANCED or 75Ω UNBALANCED AM high impedance lead antenna
Usable Sensitivity	FM 2μV / AM 4.5μV
Frequency Response	20Hz-20KHz
Distortion	0.01%
S/N	60dB
Output Level	0dB/600Ω (UNBALANCED)
Power Source	DC24V
Weight	2.1kg
Pick-Up	3-Beam Method
Photo Detector	6-Divied Photo Detector
Magazine	1CD System
Tuner Memory	total 30(FM : 18, AM : 12)
Signal to noise ratiot	FM 60dB / AM 45dB
Dimensions	270(W) x 44.5(H) x 320(D)mm

SEP-1241 | EMERGENCY PANEL

Feature of Product

· Being connected with the fire detector, it ensures the unmanned activation of siren and emergency escape alarm in case of fire.
· With its built-in voice file, it ensures the activation of emergency escape alarm, and is capable of recording the
  'escape alarm broadcasting'with its built-in key microphone(16 seconds).
· The emergency escape alarm sound can be activated manually based on the interlocking operation system in case of fire.

Size and Function

Operation Selector Switch	Manual, auto
Input	-50dBm/1.2KΩ(UNBALANCED)
Output	0dBm/600Ω (BALANCED)
Frequency Response	-3dB(200Hz ~ 10KHz)
Distortion	0.5%(200Hz ~ 10KHz)
Voice file	Operation Memory(16 Sec)
EM MIC	Uni-directional dynamic Microphone
S/N	60dB
Power Source	DC24V
Weight	2.5kg
Dimensions	270(W) x 89(H) x 320(D)mm

SMR-2830 | MATRIX RELAY GROUP

· This device is composed by the circuit exclusive for apartment broadcasting facility.
· It provides the signal receiving unit interlocking function for each floor(B1-28F, parking lot) and switch(parking lot, whole unit) function.
· It has two REMOTES(RM ALL, SP ALL) and enables the control of overall operation and parking lot without regard to the priority-based sequence.
· It displays the floor where the fire started and the floor right above and below such a floor in accordance
with the LAW ON FIRE PREVENTION AND FIGHTING if the˙ fire detection unit interlocking system˙is activated.

Size and Function

Fire Control/indicator	30CH
Remote Control	2CH
AMP Input	1CH
Speaker Output	30CH
Power Source	DC 24V
Weight	3.6kg
Dimensions	483(W) x 44.5(H) x 320(D)㎜

SMR-2160 | MATRIX RELAY GROUP

Feature of Product

· It is composed by two groups of the circuit exclusive for apartment broadcasting facility
· It provides the signal receiving unit interlocking function for each floor(B1-28F, parking lot) and switch(parking lot, whole unit) function.
· It has two REMOTES(RM ALL, SP ALL) and enables the control of overall operation and parking lot without regard to the priority-based sequence.
· It displays the floor where the fire started and the floor right above and below such a floor in accordance with the LAW ON FIRE PREVENTION AND FIGHTING if the˙ fire detection unit interlocking system˙is activated.
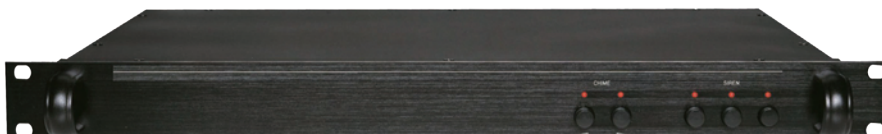
Size and Function

Fire Control/indicator	30CH, 2 Group
Remote Control	2CH
AMP Input	2CH
Speaker Output	30CH, 2 Group
Power Source	DC 24V
Weight	4.8㎏
Dimensions	483(W) x 44.5(H) x 320(D)㎜

SCS - 2142 | CHIME & SIREN

Feature of Product

· It provides the electronic 4 musical scale and flat/wave siren function.
· It provides beautiful musical tone based on 4 scale chime of 440Hz, 554Hz, 659Hz, 880Hz.
· Two siren sounds, that is flat siren and wave siren, can be selected, which can also be used
  for various drill alert such as emergency alarm warning.

Size and Function

Chime	440Hz, 554Hz, 659Hz, 880Hz
Siren	800Hz
Output Level	-20dB / 1㏀UNBALANCED
Power Source	DC24V
Weight	3.2kg
Dimensions	483(W) x 44.5(H) x 320(D)mm

S-CDVR4000 | CAR DVR 4CH HDD TYPE / CAR DVR 4CH USB TYPE

Feature & Function

- Wide range input voltage(DC 12V ~ 36V).
- Supply DC power(12V) to cameras(up to 4 cameras).
- Easy and User-Friendly embedded RTOS.
- Using embedded security SoC chip.
- Appling reliable H.264 compression.
- Smart design and Small size.
- Applicable for various vehicle type(taxi, bus, truck etc).
- Removable HDD.
- USB Back up(USB2.0).
- Mobile Viewer(Android, i-phone(option, in case of network connection)).
- Using as especial or general security DVR.
- Multiple external interface port(4 sensors, 1 alarm, 1 RS485).
- Video Interface with TV(or navigation)monitor(CVBS).
- Direct GPS interface(RS232 type).
- Provide real time E-map utilities.
- Display actual speed.
- Display real time and actual moving path.
- Auto Power level detection and battery protection(option).
- Redundancy Battery operation(option).
- Hot swappable power sources(option).
- No noise operation and a small power consumption.

Feature & Function

- Wide range input voltage(DC 12V ~ 30V).
- Automatic over Voltage(30V)/Current Protection.
- Supply DC power(12V) to cameras(up to 4 cameras).
- Easy and User-Friendly embedded RTOS.
- Using embedded security SoC chip.
- Appling reliable H.264 compression.
- Recording on removable Micro SD Card.
- Smart design and Small size.
- Applicable for various vehicle type(taxi, bus, truck etc).
- Support Two USB(Back up(USB2.0) and Mouse) and remote Controller(remocon).
- Possible to use as especial or general security DVR.
- Video Interface with TV(or navigation)monitor (CVBS type).
- External(redundancy) battery operation(option).
- Automatic battery charging and over charging protection(option).
- Hot swappable power sources using(option).
- No noise operation and a small power consumption.

S-DVR 4000/8000 | DVR-SERIES 4/8CH

Feature & Function

· Easy and User-Friendly embedded RTOS
· H.264
· The essential needs & functions for standalone DVR
· Emergency Alarm Application
· Stable operation, Smart design and Strong
· Various recording resolution -Max 240fps/200fps (NTSC/PAL) in CIF
· Remote back up/AVI backup/USB backup
· Multi language available (English, Korean)
· Mobile Viewer(android, i-phone)
· Best products for small shops (SOHO) and ordinary consumers to start
· No noise operation and a small power consumption

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