Your Navigation Partner

HANSHIN will keep in touch with you and do our best to provide the high quality of products and service for you.

HANSHIN

SINCE 1988

DREAM OF THE FUTURE OCEAN!

HANSHIN ELECTRONICS

─ GREETING

Hanshin Electronics Co., Ltd. was established in 1988 manufacturing Intercom system, servicing Radio communications systems and Air traffic control systems industries. We will continue to utmost quality products and services to the trusted customers such as Shipbuilding companies, Shipping companies, Korea government, Korea Coast Guard and Military for Intercom system, Radio communication and Navigation system solutions. We have registered as a supplier to most of not only domestic shipyards but also overseas shipyards. We acquired the quality management systems conformed to ISO 9001 in 2003. With dedicated and passionate professional engineers who trained at JRC, JOTRON as agent and other manufacturers of combined valuable experiences, HANSHIN is ready to serve your needs at anytime and anywhere. HANSHIN will keep in touch with you and do our best to provide the high quality of products and service for you.
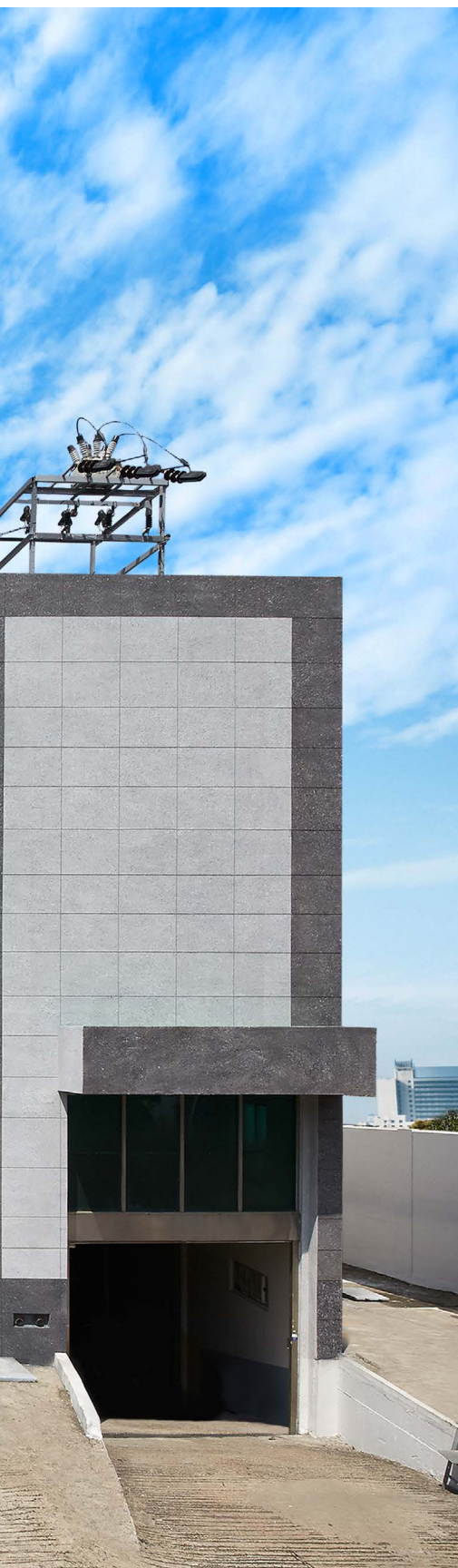
Your sincerely
Hanshin Electronics Co., Ltd.

CONTENTS

2016   JRC Service Grading Award for 4 years in a row – ranked as the highest one
Registered in a patent for Focus adjuster for search light lens
(Reg.No.10-1580599) [Total 10 patens]
Registered in a patent for High brightness LED luminaries radiator
(Reg.No.10-1601227)

2015   Developed Automatic detection and Fixed LED Searchlight

2013   Achievement award from the Ministry of Land, Infrastructure and Transports
Achievement award from the Ministry of Trade, Industry and Energy

Type approval by RINA for HPA-9800 PA/GA and HX-480 VoIP
telephone system

Awarded Excellent company of ISO by KR

2012   Awarded 5 Million export company by president of Korea
ISO 14001:2004 certification

Type approval by DNV for public address system(HPA-9700)
and Telephone system.

Awarded by Minister of Strategy and Finance

2011   Type approval by CCS for sound powered telephone and public
address system(HPA-9700)

Developed BNWAS and Acquired Type Approval certificate by
Korea Maritime Affairs and Port Office

2010   Type approval by RINA for Public address system(HPA-9700)
and telephone system

2008   Selected as export bluechip medium and small enterprises by
Busan & Ulsan regional- SMBA(Small & medium business administration)
Established of special business department(Air traffic control system)

2006   Developed digital marine clock
Registered in a patent for Ex. type speaker(Reg.No.10-0562475) Acquired

2003   I.S telephone certificate from KIMM(Korea institute
of machinery & materials)
Registered in a patent for uninterrupted dual public address
system(Reg.No.0402958)
Acquired ISO 9001-2000 certificate from KR(Korean register of
shipping)

2000   Established attached technology research institute

1997   Made a contract for technical service agent with JRC(Japan Radio Co., Ltd.)
Won the Prime Minister's Award

1994   Changed company name to Hanshin Electronics Co., Ltd.

1991   Developed marine auto telephone exchange system

1989   Developed marine public addresser, omni directional TV
antenna and communal aerial system

1988   Established Hanshin Electronics Industry

PUBLIC ADDRESS SYSTEM

HPA-9800 series

Public Address General Emergency Alarm System is designed for general announcing with advanced technology and complies with IMO regulation III/6.5 & Res. MSC.47(66)/Circ.808 performance standards.

This system is also specially made to keep good performance under the harsh environment of vessel at sea and especially off shore marine plant. For this system, paging function through auto telephone exchanger and combined talk back function are available. Interfacing with external general emergency alarm, fire alarm, signal column light, air horn, VDR and fail alarm monitoring system are also available.

Type Approval by DNV GL and RINA

| System Feature |

- Perfect duplication system (A-B System)
- Flexible choice of output power and installation space
- Reliable and durable performance
- Simple installation and easy maintenance
- Convenient control with microprocessor and diode matrix
- Automatic main/em'cy power changeover

| System Diagram |
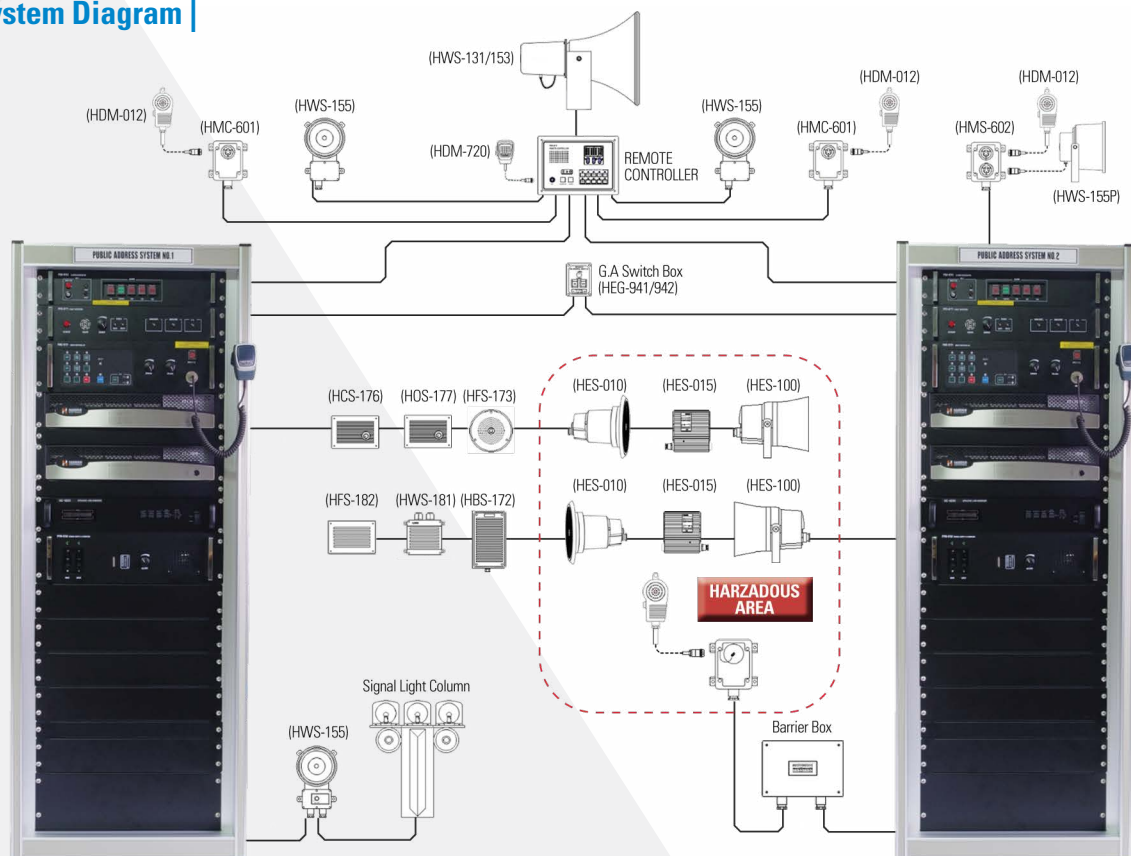
PUBLIC ADDRESS SYSTEM

LOUD&CLEAR

| System Specification |

HPA-9800 Main Unit

- Dual type (A-B) system
- Output : 1,500W~9,000W
- Remote controller : Standard 6 ea (Extension : 15ea)
- Line checker
- Alarm generator
  - General emergency alarm
  - Fire alarm
  - CO_2 smoke alarm
  - Gas alarm
  - etc.
- GA muting
- Announcing priority : 18 class
- Auto-telephone paging call (all, group-1, group-2)
- Automatic main/em'cy power changeover
- Fault detector (system check)
- Operating temperature & humidity : -5℃ ~ +60℃, 95%
- Frequency characteristic : 50Hz~15kHz
- Distortion : less than 0.5%
- S/N Ratio : more than 70dB
- Power source : AC110/220V, 50/60Hz
- Dimension(W x D x H mm) : 600 x 750 x 1565

HBC-210 Remote Controller

- Call signal : 800Hz
- Microphone with volume
- Speaker selector : 9 group
- Dimmer : Speaker selector lamp brightness
- Monitor speaker with volume
- Flush or Wall mounting type
- Dimension(W x D x H mm) : 275 x 110 x 200

PUBLIC ADDRESS SYSTEM

HPA-9700 series

Public Address with Talkback System is designed for general announcing with advanced technology and complies with IMO regulation III/6.5 & Res. MSC.47(66) performance standards.

This system is also specially made to keep good performance under the harsh environment of vessel at sea.

For this system, paging function through auto telephone exchanger and talk-back function are available.

Interfacing with external general emergency alarm, fire alarm, air horn and signal light column are also available.

Registered in a patent for uninterrupted dual public address system by Korean Intellectual property office on 2003.

Type Approval by DNV GL, RINA and CCS

| System Feature |

- Flexible choice of output power and installation space
- Reliable and durable performance
- Simple installation and easy maintenance
- Convenient control with microprocessor and diode matrix
- Automatic main/em'cy power changeover
- Automatic main/sub amplifier changeover in dual system

| System Diagram |
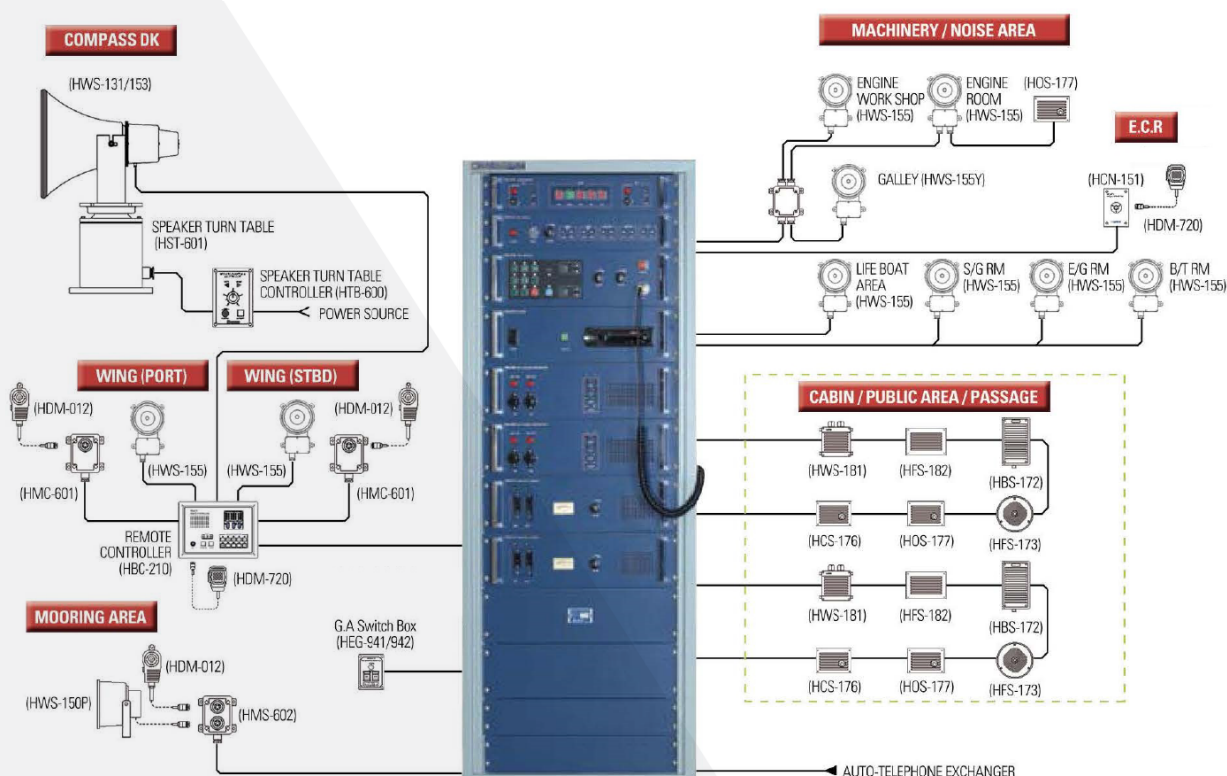
PUBLIC ADDRESS SYSTEM

LOUD&CLEAR

| System Specification |

HPA-9700 Main Unit

- Single/Dual system
- Single/Dual rack type
- Output : 200W~2,000W
- Remote controller : Standard 6ea (Extension : 36ea)
- Master & Slave changeover/Two amp. run type
- Alarm generator : option
    - General emergency alarm
    - Fire alarm
    - CO_2 smoke alarm
    - Gas alarm
    - etc.
- GA muting
- Announcing priority : 12 class
- Auto-telephone paging call (all, group1, group2)
- Automatic main/em'cy power changeover
- Fault detector (system check)
- Operating temperature & humidity : -5℃ ~ +55℃ , 95%
- Frequency characteristic :120~12000Hz within±6dB
- Distortion : less than 0.5%
- S/N Ratio : more than 55dB
- Power source : AC110/220V, 50/60Hz & DC24V
- Dimension(W x D x H mm) : 585 x 450 x 1500
                                    (single rack/800W dual system)

HBC-210 Remote Controller

- Call signal : 800Hz
- Microphone with volume
- Speaker selector : 9 group
- Dimmer : Speaker selector lamp brightness
- Monitor speaker with volume
- Flush or Wall mounting type
- Dimension(W x D x H mm) : 275 x 110 x 200

PUBLIC ADDRESS SYSTEM

HPA-7300 series

Public Address with Talkback System is designed for general announcing with advanced technology and complies with the IMO regulation III /6.5 & Res. MSC.47(66) performance standards.

This system is also specially made to keep good performance under the harsh environment of vessel at sea.

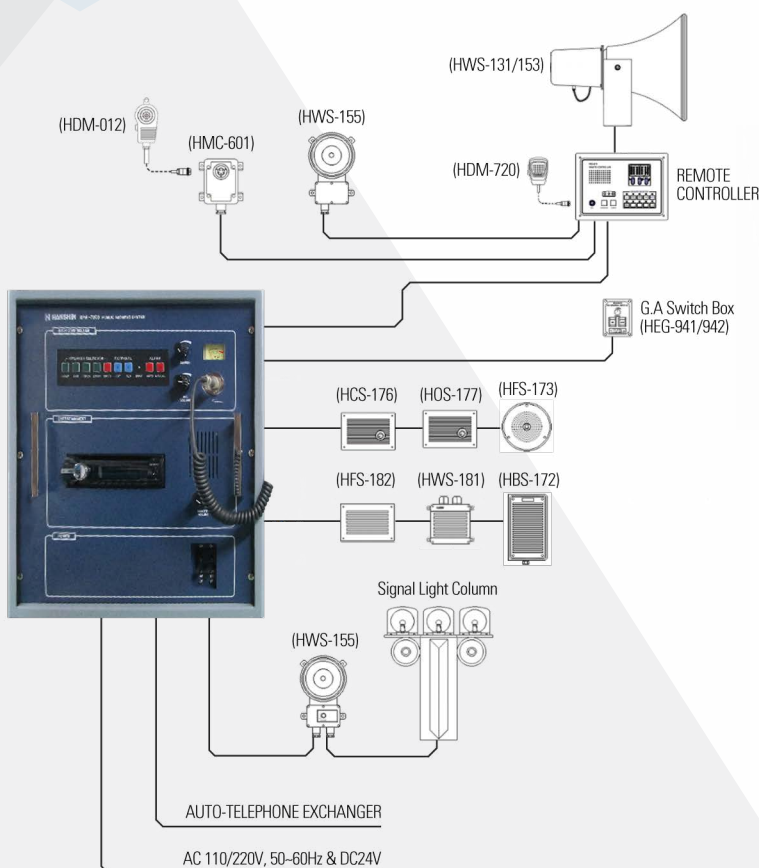For this system, paging function through auto telephone exchanger and combined talk back function are available.

CE mark(EMC) by DNV GL

| System Feature |

- Reliable and durable performance
- Simple installation and easy maintenance
- Convenient control with microprocessor and diode matrix
- Automatic main/em'cy power changeover

| System Diagram |

HPA-7300 Main Unit

- Single type system
- Output : 200W, 400W
- Remote controller : option(max. 2ea)
- Announcing priority : 9 class
- Automatic main/em'cy power changeover
- Operating temperature & humidity : -5℃ ~ +55℃ , 95%
- Power source: AC 110/220V, 50/60Hz & DC24V
- Dimension(W x D x H mm) : 430 x 300 x 450

HBC-310 Remote Controller

- Call signal : 800Hz
- Microphone with volume
- Speaker selector : 5 group
- Dimmer : Speaker selector lamp brightness
- Monitor speaker with volume
- Dimension(W x D x H mm) : 275 x 110 x 200

PUBLIC ADDRESS SYSTEM

LOUD&CLEAR

HPA-6100

HPA-6100 Series Public Addressor miniaturized to fit a small craft with latest technology.
It was made in order to keep its performance under the harsh environment of the vessel at sea.
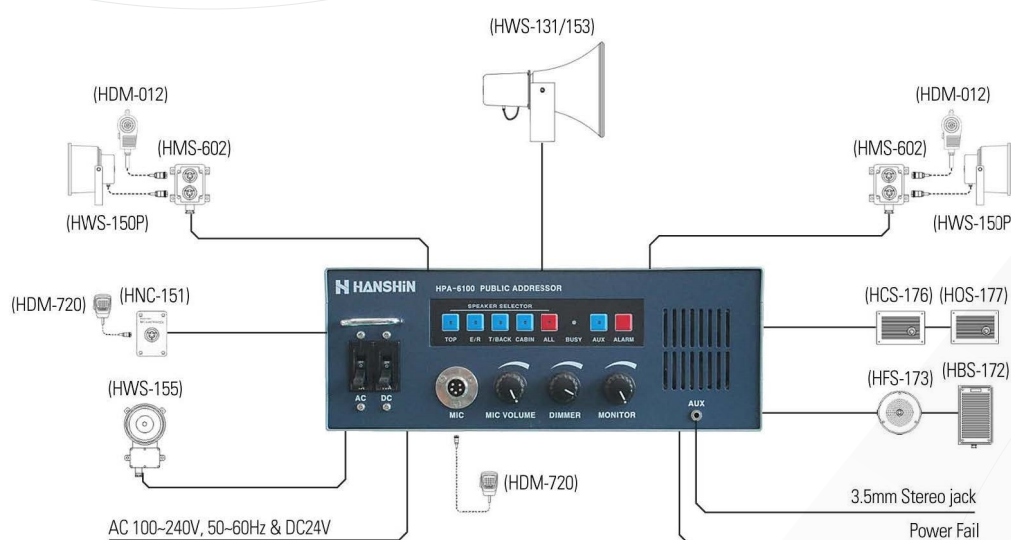It is useable for general broadcasting and talk-back.

| System Feature |

- Miniaturization
- Self-protection circuit of Power amplifier unit
- Easy installation and Easy maintanance
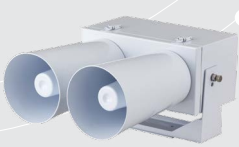- Aux. input for AM/FM radio CD&MP3 player

| System Diagram |

(HWS-131/153)

(HDM-012)
(HMS-602)
(HWS-150P)

(HDM-012)
(HMS-602)
(HWS-150P)

(HDM-720) (HNC-151)

(HWS-155)

HPA-6100 PUBLIC ADDRESSOR
SPEAKER SELECTOR
TOP E/R T/BACK CABIN ALL BUSY AUX ALARM
AC DC
MIC MIC VOLUME DIMMER MONITOR AUX

(HCS-176) (HOS-177)

(HFS-173) (HBS-172)

(HDM-720)

3.5mm Stereo jack
Power Fail

AC 100~240V, 50~60Hz & DC24V

| System Specification |

- Desk / Flush type
- Output : 100W
- Automatic main/em'cy power changeover
- Announcing priority : 5 class
- Talkback : 2 lines
- Operating temperature & humidity : -5℃~55℃, 95%
- Power source : AC100~240V, 50~60Hz & DC24V
- Dimension(W x D x H mm) : 364 x 343 x 170 (Desk)
                            360 x 342 x 160 (Flush)

PUBLIC ADDRESS SYSTEM
ACCESSORIES

MODEL	HWS-133	HWS-153	HWS-131	HWS-155 / 155A2
WATER TIGHT SPEAKER				
MOUNTING TYPE	WALL	WALL	WALL	WALL
OUTPUT	200W / 300W / 400W / 600W	75W / 100W / 150W	30W / 50W	5W / 10W / 15W / 20W
IP GRADE	IP56	IP56	IP56	IP56
DIMENSION (WxDxH mm)	385 x 260 x 450	Ø390 x 488	Ø320 x 350	168 x 148 x 296
MATERIAL	ALUMINUM, SUS	ALUMINUM, STEEL	ALUMINUM, STEEL	POLYETHYLENE

MODEL	HWS-150PB	HWS-155AV / AV2 / BV2	HWS-181	HWS-182
WATER TIGHT SPEAKER				
MOUNTING TYPE	PORTABLE	WALL	WALL	FLUSH
OUTPUT	10W	5W / 10W	1W / 2W / 5W	1W / 2W
IP GRADE	IP56	IP56	IP56	IP56
DIMENSION (WxDxH mm)	181 x 151 x 199	170 x 148 x 296	180 x 75 x 179	195 x 105 x 135
MATERIAL	POLYETHYLENE	POLYETHYLENE	ABS	ABS

MODEL	HFS-173	HBS-172	HCS-176	HOS-177
CABIN & PASSAGE SPEAKER(N.W.T)				
MOUNTING TYPE	CEILING	BOTH SIDE	CEILING	ONESIDE WALL
OUTPUT	1W / 2W / 5W	2W / 5W	1W / 2W / 5W	2W / 5W
IP GRADE	IP20	IP20	IP20	IP20
DIMENSION (WxDxH mm)	Ø175 x 98	210 x 85 x 125	195 x 69 x 135	195 x 68 x 135
MATERIAL	POLYETHYLENE	ABS	ABS	ABS

MODEL	HES-020	HES-050
Ex. TYPE SPEAKER		
MOUNTING TYPE	WALL	WALL
OUTPUT	20W	50W
TYPE OF PROTECTION	Ex d IIC T6	Ex d IIC T6
IP GRADE	IP56	IP56
DIMENSION (WxDxH mm)	158 x 240 x 224	404 x 494 x 382
MATERIAL	ALUMINUM	ALUMINUM

MODEL	MFD-178
METAL FIRE DOME	
MOUNTING TYPE	CEILING
DESCRIPTION	for HFS-173
TEST STANDARDS	IMO Res. MSC. 307(88):2010
FIRE RESISTANCE	B0 CLASS
DIMENSION	Ø168 x 116
MATERIAL	STEEL 1.2T

PUBLIC ADDRESS SYSTEM
ACCESSORIES

LOUD&CLEAR

MODEL	HMC-601	HMC-601A / B	HMS-602A / B	HJB-902 / 903 / 904
WATER TIGHT JUNCTION BOX				
MOUNTING TYPE	FLUSH	WALL	WALL	WALL
IN USE	MICROPHONE	MICROPHONE	MICROPHONE	-
IP GRADE	IP56	IP56	IP56	IP56
DIMENSION (WxDxH mm)	120 x 46 x 160	155 x 112 x 190	157 x 112 x 190	155 x 80 x 230
MATERIAL	UNSATURATED POLYESTER	UNSATURATED POLYESTER	UNSATURATED POLYESTER	UNSATURATED POLYESTER

MODEL	HEG-941D	HEG-941F	HEG-941W	HEG-942F	HEG-942W
G.E.A SWITCH BOX (N.W.T)					
MOUNTING TYPE	FLUSH	FLUSH	WALL	FLUSH	WALL
DESCRIPTION	AUTO / MANUAL	AUTO / MANUAL	AUTO / MANUAL	AUTO	AUTO
DIMMER	0	X	X	X	X
IP GRADE	IP20	IP20	IP20	IP20	IP20
DIMENSION (WxDxH mm)	80 x 90 x 120	80 x 73 x 120	80 x 60 x 120	80 x 87 x 120	80 x 60 x 120
MATERIAL	STEEL	STEEL	ABS	STEEL	ABS

MODEL	HEG-941W	HEG-942W
G.E.A SWITCH BOX (W.T)		
MOUNTING TYPE	WALL	WALL
DESCRIPTION	AUTO / MANUAL	AUTO
DIMMER	X	X
IP GRADE	IP66	IP66
DIMENSION (WxDxH mm)	185 x 90 x 177	185 x 90 x 177
MATERIAL	ABS	ABS, POLYESTER

MODEL	HCN-151	HCN-251
MICROPHONE JUNCTION BOX		
MOUNTING TYPE	FLUSH	FLUSH
IN USE	MICROPHONE	MICROPHONE
IP GRADE	IP20	IP20
DIMENSION (WxDxH mm)	80x 79 x 120	80 x 72 x 120
MATERIAL	STEEL	STEEL

MODEL	HDM-012	HDM-720
MICROPHONE		
MOUNTING TYPE	HANDY	HANDY
CABLE CORD	0.75m / 5m / 10m / 15m / 20m / 25m / 30m	
IP GRADE	IP66	IP20
DIMENSION (WxDxH mm)	65 x 47 x 145	58 x 32 x 94
MATERIAL	ABS	ABS

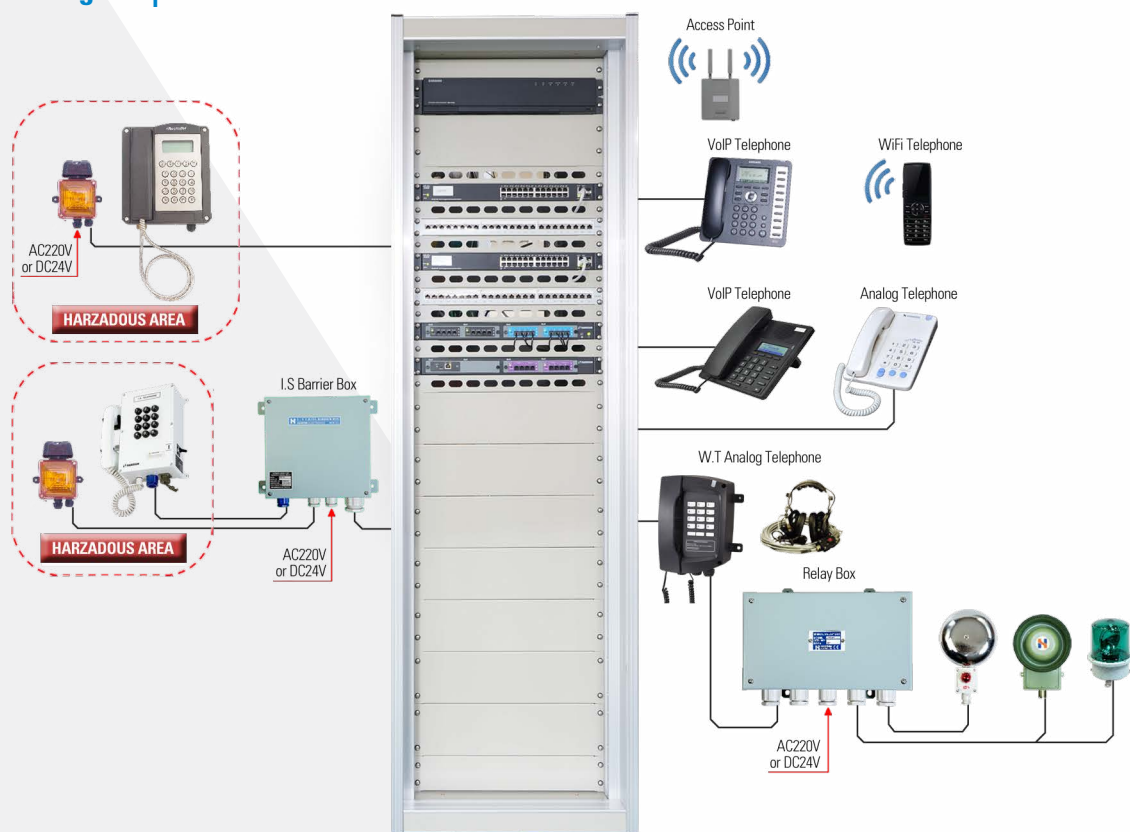# MARINE TELEPHONE SYSTEM
VoIP Exchanger

HXV-2000 VoIP Auto Exchange System is designed with high reliable technology and providing the voice communication of existing analog exchanger and digital exchanger, VoIP, data communication, internet and voice via wireless LAN in an one IP platform. The system is also specially made to keep a good performance under the harsh environment of vessel at sea and especially off shore marine plant.

Type Approval in progress by DNV GL

| System Feature |

- Flexible choice of line capacity
- IP Telephony, Providing wireless solutions and various application
- Supports various telephone(Analog type, Digital type, IP type, WLAN type and Ex type)
- Simple installation and easy maintenance
- Automatic main/em'cy power changeover

| System Diagram |

AC220V or DC24V

HARZADOUS AREA

I.S Barrier Box

HARZADOUS AREA

AC220V or DC24V

Access Point

VoIP Telephone

WiFi Telephone

VoIP Telephone

Analog Telephone

W.T Analog Telephone

Relay Box

AC220V or DC24V

MARINE TELEPHONE SYSTEM LOUD&CLEAR

VoIP Exchanger

| System Function & Specification |

HXV-2000

- System Capacity
  - Extension : IP, Analog max. 296 lines
                VoIP : 200 lines
  - Analog : 0 line (Option : max. 96 lines)
  - External : 4 lines (Option : max. 40 lines)
  - Ethrnet 100BaseTX (WAN, LAN)
- Inter-Communication
- Automatic Call-back
- Call Transfer(Camp-on)
- External Call & Trunk
- Add-on Conference
- Priority Call
- Call Split
- Wake-up Call(Morning Call)

- Simultaneous Call : Standard : 70 lines
- Paging Call
- Group Call
- Power Fail Alarm
- Hot Line
- Remote Maintenance
- ARS
- Pulse/Tone Conversion
- Automatic Main / Em'cy Power Changeover
- Hands Free : IP Telephone
- Operating Temperature & Humidity : -5℃~55℃, 95%
- Power Supply : AC110/220V, 50/60Hz & DC24V
- Dimension(W x D x H mm) : 600 x 750 x 1565

MODEL	VoIp Flush Type	VoIp Desk Type	Wifi Type	Desk Type
TELEPHONE				
MOUNTING TYPE	FLUSH	DESK	PORTABLE	DESK
TYPE	STANDARD	STANDARD	STANDARD	STANDARD
IP GRADE	IP20	IP20	IP20	IP20
DIMENSION (WxDxH mm)	190 x 70 x 220	153 x 143 x 210	110 x 80 x 155	160 x 80 x 220
MATERIAL	ABS	ABS	ABS	ABS

MODEL	Flush Type	Wall Type	Portable Type	W.T/Ex Type
TELEPHONE				
MOUNTING TYPE	FLUSH	WALL	PORTABLE	WALL
TYPE	STANDARD, NOISE CANCEL, DIMMER	STANDARD, NOISE CANCEL, SUB RECEIVER, HEADSET	STANDARD	STANDARD
IP GRADE	IP56	IP56	IP66	IP56
DIMENSION (WxDxH mm)	182 x 131 x 285	199 x 135 x 242	325 x 210 x 205	210 x 140 x 270
MATERIAL	ABS	ABS	STEEL	ABS

MARINE TELEPHONE SYSTEM
Auto Telephone Exchanger

HX-120 **HX-72** **HX-26**

Automatic Telephone Exchange System is designed with high reliable technology and mounted with IAPX8088 microprocessor CPU, stored program for system control, space division matrix for switch control, dial tone multi frequency system, protecting function from lightning and call quality stabilizing circuit. The system is also specially made to keep a good performance under the harsh environment of vessel at sea.

Type Approval by DNV GL for HX-120 and HX-72
Type Approval by RINA for HX-120 and HX-72
CE mark(EMC) by DNV GL for HX-26

| System Feature |

- Flexible choice of line capacity
- High reliability microprocessor control
- Simple installation and easy maintenance
- Conversion of pulse/tone
- Automatic main/em'cy power changeover
- Add on VoIP Gateway (max. 60 lines) : option

| System Diagram |
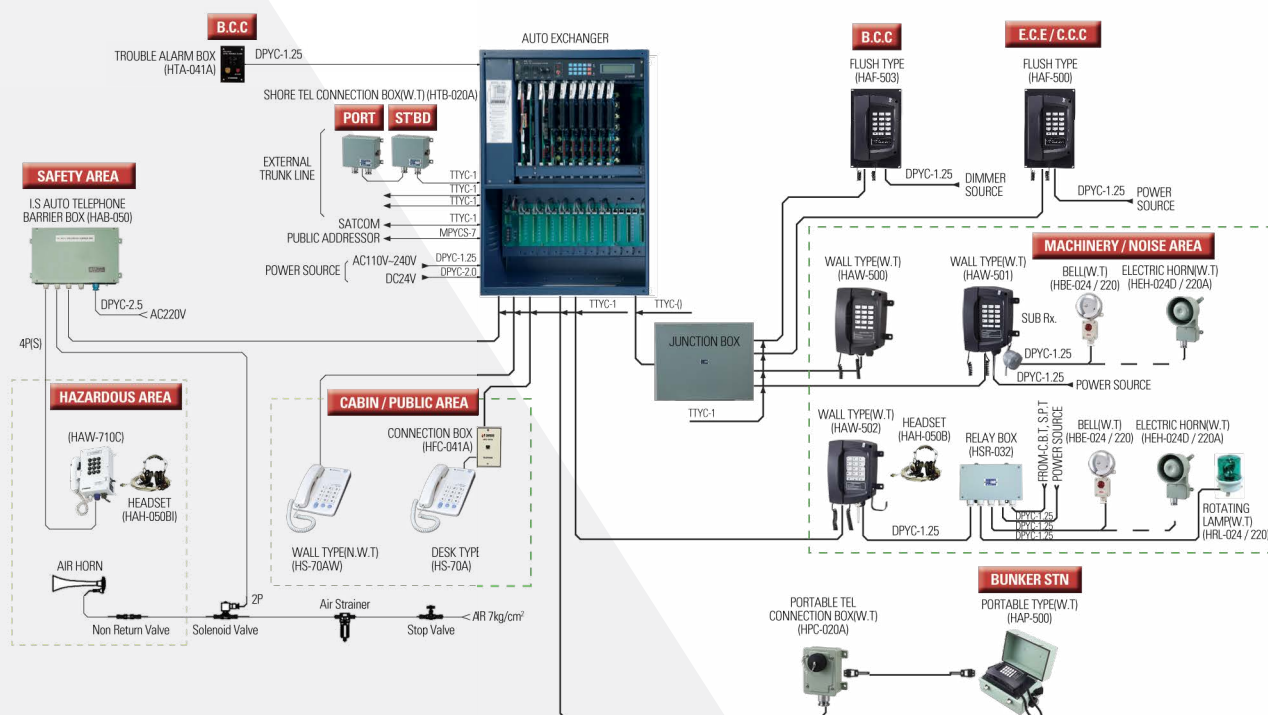
MARINE TELEPHONE SYSTEM

LOUD&CLEAR

| System Function & Specification |

DESCRIPTION		HX-120	HX-72		HX-26
SYSTEM CAPACITY	O	Extension : max. 118 line(HX-120), 70 lines(HX-72) External : 4 lines(option : max. 40 lines)		O	Extension : max. 26 lines External : 2 lines(option : max. 12lines)
MAJOR FUNCTION				O	
INTER - COMMUNICATION	O			O	
AUTOMATIC CALL -BACK	O			O	
CALL TRANSFER(CAMP-ON)	O			O	
EXTERNAL CALL & TRUNK	O	4 lines(shore line, satcom & etc)		O	2 line(shore line & satcom)
ADD-ON CONFERENCE	O	All lines		O	All lines
PRIORITY CALL	O			O	
CALL SPLIT	O			O	
WAKE-UP CALL(MORNING CALL)	O			X	
SIMULTANEOUS CALL	O	max. 15 lines		O	max. 4 lines
SELF RING TEST	O			O	
PAGING CALL	O	3 lines(all, group-A, group-B)		O	1 line(all)
GROUP CALL	O	option(max. 6 groups)		X	
HOT LINE	O	option		X	
REMOTE DISPLAY UNIT	O	option		X	
ALARM AND DISPLAY FOR SYSTEM FAILURE	O			X	
ALARM FOR HANDSET OFF-HOOK	O			O	
DISPLAY FOR HANDSET OFF-HOOK	O	max. 8 lines		X	
PULSE / TONE CONVERSION	O			O	
AUTOMATIC MAIN / EM'CY POWER CHANGEOVER	O			O	
REDIAL, HOLD & SPEAK-PHONE	O	Desk type, Wall type(N.W.T)		O	Desk type, Wall type(N.W.T)
OPERATING TEMPERATURE		-5~55℃			
OPERATING HUMIDITY		95%			
POWER SUPPLY		AC110V ±10%, 0.86A, 50/60Hz AC220V ±10%, 0.43A, 50/60Hz DC24V ±10%, 2.2A	AC110V ±10%, 0.36A, 50/60Hz AC220V ±10%, 0.18A, 50/60Hz DC24V ±10%, 1.67A		AC110V ±10%, 0.57A, 50/60Hz AC220V ±10%, 0.28A, 50/60Hz DC24V ±10%, 2.65A
POWER CONSUMPTION		System : 80W Internal tel. : 0.85W	System : 40W Internal tel. : 0.85W		System : 60W Internal tel. : 0.85W
RACK SIZE (W x D x H mm)		540 x 240 x 1340	630 x 250 x 730		440 x 166 x 570

MODEL	HS-70A	HS-70AW	HAW-50X	HAW-501	HAW-502	HAF-50X	HAP-530
TELEPHONE							
MOUNTING TYPE	DESK	WALL	WALL	WALL	WALL	FLUSH	PORTABLE
TYPE	STANDARD	STANDARD	STANDARD, NOISE CANCEL	SUB RECEIVER	HEADSET	STANDARD, NOISE CANCEL, DIMMER	STANDARD
IP GRADE	IP20	IP20	IP56	IP56	IP56	IP56	IP66
DIMENSION (WxDxH mm)	160 x 80 x 220	160 x 110 x 220	199 x 135 x 242	199 x 135 x 242	199 x 135 x 242	182 x 131 x 285	325 x 205 x 210
MATERIAL	ABS	ABS	ABS	ABS	ABS	ABS	STEEL

MARINE TELEPHONE SYSTEM
Common Battery Telephone

Common Battery Telephone System(HCT-5D, HCT-12S, HCT-24S) is very useful communication system under the emergency situation. I.S type telephone can be conbined with HCT-12S or HCT-24S as well.
It is specially designed in consideration of harsh environment at sea.
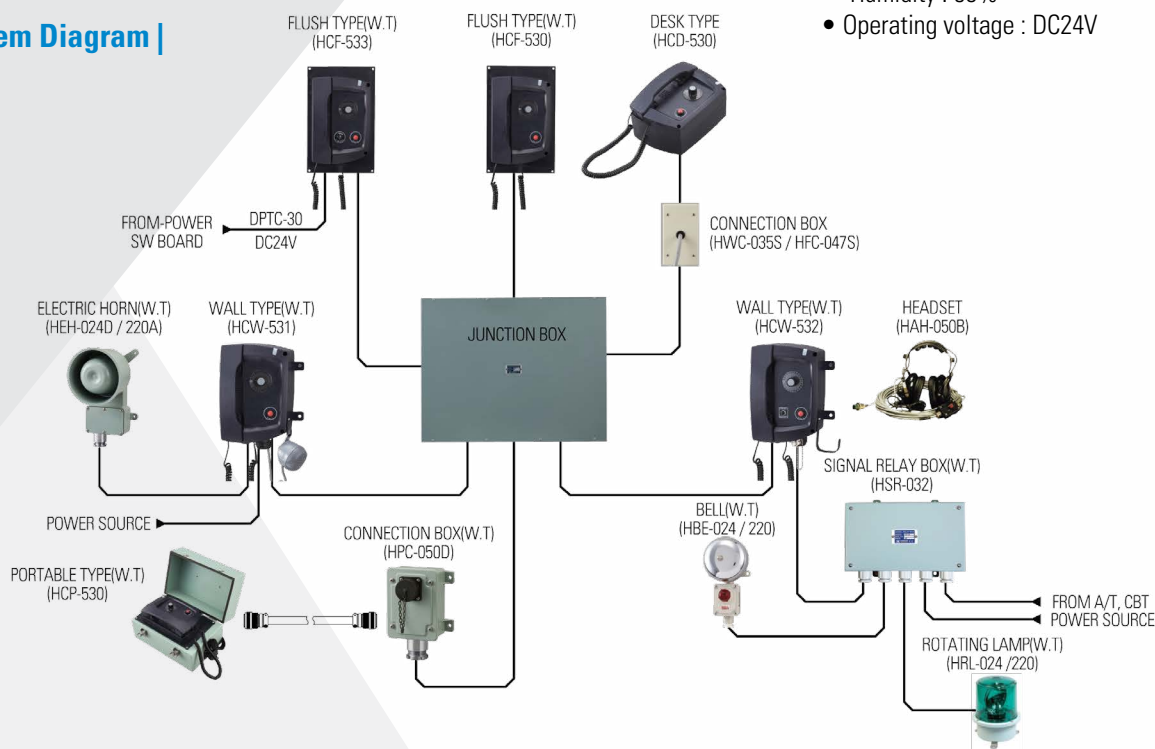
Type Approval by DNV GL and RINA

| System Feature |

- Easy operation
- Simple installation and easy maintenance
- Three types of system are available
  - Direct calling
  - Master & Slave calling (1:4)
  - Mutual selective calling (12 lines, 24 lines)

| Operating Specification |

- Operating condition
  - Temperature : -5℃ ~ +55℃
  - Humidity : 95%
- Operating voltage : DC24V

| System Diagram |

FLUSH TYPE(W.T) (HCF-533)
FLUSH TYPE(W.T) (HCF-530)
DESK TYPE (HCD-530)
FROM-POWER SW BOARD
DPTC-30 DC24V
CONNECTION BOX (HWC-035S / HFC-047S)
ELECTRIC HORN(W.T) (HEH-024D / 220A)
WALL TYPE(W.T) (HCW-531)
JUNCTION BOX
WALL TYPE(W.T) (HCW-532)
HEADSET (HAH-050B)
POWER SOURCE
CONNECTION BOX(W.T) (HPC-050D)
BELL(W.T) (HBE-024 / 220)
SIGNAL RELAY BOX(W.T) (HSR-032)
PORTABLE TYPE(W.T) (HCP-530)
FROM A/T, CBT POWER SOURCE
ROTATING LAMP(W.T) (HRL-024 /220)

MODEL	HCD-5X0	HCW-5XX	HCW-5X1	HCW-5X2	HCF-5XX	HCP-5X0
TELEPHONE						
MOUNTING TYPE	DESK	WALL	WALL	WALL	FLUSH	PORTABLE
TYPE	STANDARD	STANDARD, NOISE CANCEL, CABLE ENTRY	SUB RECEIVER	HEADSET	STANDARD, NOISE CANCEL, DIMMER	STANDARD
LINE	DIRECT, 12 LINES, 24 LINES					
IP GRADE	IP56	IP56 / IP22(CABLE ENTRY)	IP56	IP56	IP56	IP66
DIMENSION (WxDxH mm)	157 x 155 x 244	199 x 135 x 242	199 x 135 x 242	199 x 135 x 242	182 x 131 x 285	325 x 205 x 210
MATERIAL	ABS	ABS	ABS	ABS	ABS	STEEL

MARINE TELEPHONE SYSTEM
Sound Powered Telephone

LOUD&CLEAR

Sound Powered Telephone System(HST-5D, HST-12S, HST -24S) is very useful communication system under the emergency situation because it keeps normal operating condition with built-in generator even though the main AC power and emergency DC power source are not supplied. It is specially designed in consideration of harsh environment at sea.
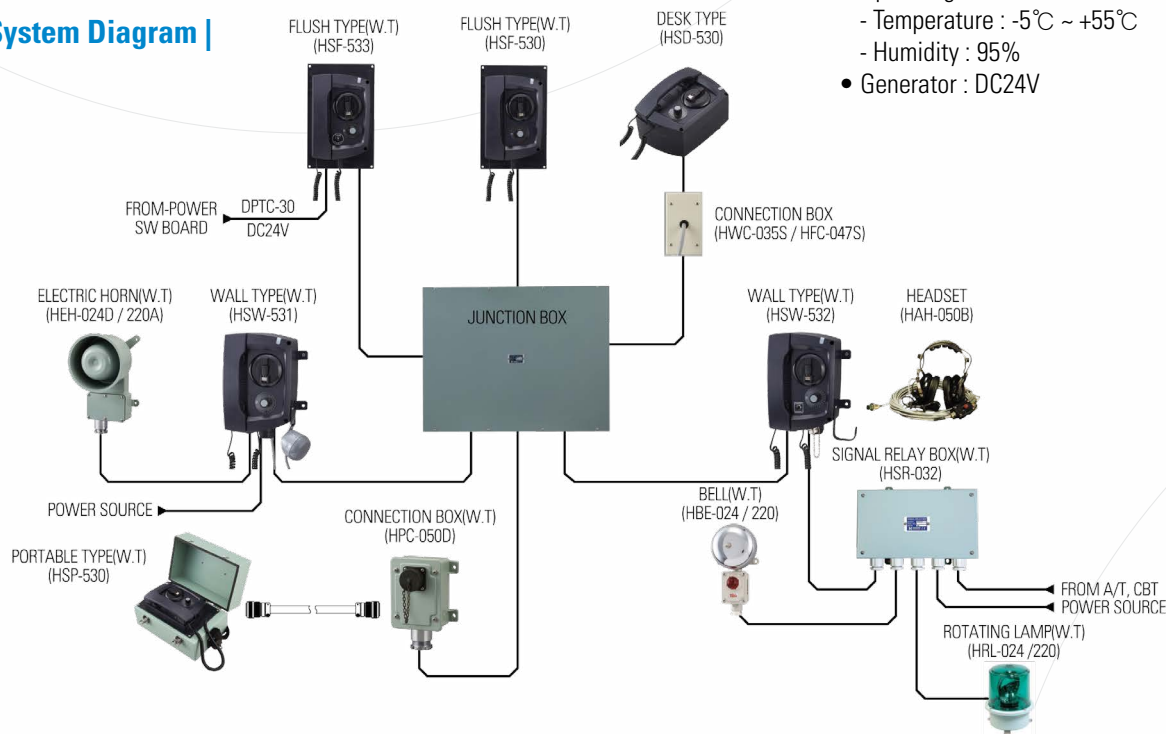
Type Approval by DNV GL, RINA and CCS

| System Feature |

- Easy operation
- Simple installation and easy maintenance
- Communication is available for 10-15 min with one-time charging
- Enable to recharge while system is operating
- Three types of system are available
  - Direct calling
  - Master & Slave calling (1:4)
  - Mutual selective calling (12 lines, 24 lines)

| Operating Specification |

- Operating condition
  - Temperature : -5℃ ~ +55℃
  - Humidity : 95%
- Generator : DC24V

| System Diagram |

FLUSH TYPE(W.T) (HSF-533)
FLUSH TYPE(W.T) (HSF-530)
DESK TYPE (HSD-530)
FROM-POWER SW BOARD DPTC-30 DC24V
CONNECTION BOX (HWC-035S / HFC-047S)
ELECTRIC HORN(W.T) (HEH-024D / 220A)
WALL TYPE(W.T) (HSW-531)
JUNCTION BOX
WALL TYPE(W.T) (HSW-532)
HEADSET (HAH-050B)
POWER SOURCE
CONNECTION BOX(W.T) (HPC-050D)
SIGNAL RELAY BOX(W.T) (HSR-032)
BELL(W.T) (HBE-024 / 220)
PORTABLE TYPE(W.T) (HSP-530)
FROM A/T, CBT POWER SOURCE
ROTATING LAMP(W.T) (HRL-024 /220)

MODEL	HCD-5X0	HSW-5XX	HSW-5X1	HSW-5X2	HSF-5XX	HSP-5X0
TELEPHONE						
MOUNTING TYPE	DESK	WALL	WALL	WALL	FLUSH	PORTABLE
TYPE	STANDARD	STANDARD, NOISE CANCEL, CABLE ENTRY	SUB RECEIVER	HEADSET	STANDARD, NOISE CANCEL, DIMMER	STANDARD
LINE	DIRECT, 12 LINES, 24 LINES					
IP GRADE	IP56	IP56 / IP22(CABLE ENTRY)	IP56	IP56	IP56	IP66
DIMENSION (WxDxH mm)	157 x 155 x 244	199 x 135 x 242	199 x 135 x 242	199 x 135 x 242	182 x 131 x 285	325 x 205 x 210
MATERIAL	ABS	ABS	ABS	ABS	ABS	STEEL

MARINE TELEPHONE SYSTEM

I.S Auto Telephone

I.S Auto Telephone System is for inter-communication where installed in hazardous or flammable area in consideration of the special environment of vessel at sea.

This telephone system is also specially designed and manufactured to comply with intrinsically safety construction standard of IEC 60079-0 / 60079-11 and Ex ia IIC T6 protection type.

It had been tested and inspected by the KIMM(Korea Institute of Machinery & Materials) under the authority vested by Republic of Korea.

I.S Telephone Certificate by KIMM and CE mark(EMC) by DNV GL

| System Feature |

- Voice open voltage : max. 21V
- Voice short current : max. 46mA
- Hook/Call SW short current: max. 10mA
- Transmitter/ Receiver level: adjustable
- Operating environment: 40℃<Ta<+60℃, 5%-95%

MODEL	HAW-710A	HAW-710B	HAW-710C	HAP-910
I.S TELEPHONE				
MOUNTING TYPE	WALL	WALL	WALL	PORTABLE
TYPE	STANDARD	SUB RECEIVER	HEADSET	STANDARD
IP GRADE	IP56	IP56	IP56	IP56
DIMENSION (WxDxH mm)	241 x 106 x 308	241 x 106 x 308	241 x 106 x 308	326 x 180 x 188
MATERIAL	PC	PC	PC	STEEL

MODEL	HET-700	HET-700S
Ex. TELEPHONE		
MOUNTING TYPE	WALL	WALL
Ex. TYPE	Ex d ia IIC T6	Ex d ia IIC T6
IP GRADE	IP56	IP56
DIMENSION (WxDxH mm)	375 x 150 x 355	375 x 150 x 355
MATERIAL	CAST AL & CAST BRASS	CAST AL & CAST BRASS

I.S Auto Telephone Barrier Box

- Power supply : AC110/220V, DC24V
- Hook/Call SW zener voltage : 28V
- Hook/Call SW short current : max. 10mA
- Voice signal zener voltage : 28V
- Voice signal short current : max. 46mA
- External alarm : 3 ports

MARINE TELEPHONE SYSTEM

LOUD&CLEAR

I.S Common Battery Telephone (IS CBT-16)

I.S CBT System is for inter-communication where installed in hazardous or flammable area in consideration of the special environment of vessel at sea. This telephone system is also specially designed and manufactured to comply with intrinsically safety construction standard of IEC 60079-0 / 60079-11 and Ex ia IIC T6 protection type.

It had been tested and inspected by the KIMM(Korea Institute of Machinery & Materials) under the authority vested by Republic of Korea.

Acquired I.S Telephone Certificate by KIMM and CE mark(EMC) by DNV GL

| System Feature |

- Voice open voltage : max.13.1V
- Voice short current : max.46mA
- Hook/Call SW short current : max.10mA
- Transmitter/Receiver level : adjustable
- Operating environment : 40℃<Ta<+60℃, 5%-95%

MODEL	HCW-701A3	HCW-701B3	HCW-701C3	HCF-801A3	HCF-801D3	HCP-901A3
SAFETY TELEPHONE						
MOUNTING TYPE	WALL	WALL	WALL	FLUSH	FLUSH	PORTABLE
TYPE	STANDARD	SUB RECEIVER	HEADSET	STANDARD	DIMMER	STANDARD
IP GRADE	IP56	IP56	IP56	IP22	IP22	IP56
DIMENSION (WxDxH mm)	241 x 99 x 308	241 x 99 x 308	241 x 99 x 308	220 x 152 x 275	220 x 152 x 275	325 x 180 x 198
MATERIAL	PC	PC	PC	STEEL	STEEL	STEEL

MODEL	HCW-710A	HCW-710B	HCW-710C	HCF-810	HCP-910
HAZADOUS TELEPHONE					
MOUNTING TYPE	WALL	WALL	WALL	FLUSH	PORTABLE
TYPE	STANDARD	SUB RECEIVER	HEADSET	STANDARD	STANDARD
IP GRADE	IP56	IP56	IP56	IP22	IP56
DIMENSION (WxDxH mm)	241 x 99 x 308	241 x 99 x 308	241 x 99 x 308	220 x 152 x 275	365 x 240 x 188
MATERIAL	PC	PC	PC	STEEL	STEEL

I.S CBT Barrier Box

- Capacity : max.16 lines
- Power supply : AC110/220V, DC24V
- Hook/Call SW zener voltage : 13.1V
- Hook/Call SW short current : max.10mA
- Voice signal zener voltage : 13.1V
- Voice signal short current : max. 46mA
- External alarm : 2 ports

MARINE TELEPHONE SYSTEM

I.S Sound Powered Telephone (IS SPT-16)

I.S SPT System is for inter-communication where installed in hazardous or flammable area in consideration of the special environment of vessel at sea. This telephone system is also specially designed and manufactured to comply with intrinsically safety construction standard of IEC 60079-0 / 60079-11 and Ex ia IIC T6 protection type.

It had been tested and inspected by the KIMM(Korea Institute of Machinery & Materials) under the authority vested by Republic of Korea.

I.S Telephone Certificate by KIMM and CE mark(EMC) by DNV GL

| System Feature |

- Voice open voltage : max. 20V
- Voice short current: max. 50mA
- Hook/Call SW short current: max. 10mA
- Transmitter/Receiver level: adjustable
- Operating environment: 40℃<Ta<+60℃, 5%-95%

MODEL	HSW-730A	HSW-730B	HSW-730C	HSF-830	HSP-930
HAZADOUS TELEPHONE					
MOUNTING TYPE	WALL	WALL	WALL	FLUSH	PORTABLE
TYPE	STANDARD	SUB RECEIVER	HEADSET	STANDARD	STANDARD
IP GRADE	IP44	IP44	IP44	IP33	IP56
DIMENSION (WxDxH mm)	241 x 99 x 532	241 x 99 x 532	283 x 99 x 532	220 x 151 x 350	365 x 240 x 188
MATERIAL	PC	PC	PC	STEEL	STEEL

MODEL	HSD-640	HSW-740A	HSW-740B	HSW-740C	HSF-840A	HSF-840D	HSP-940
SAFELY TELEPHONE							
MOUNTING TYPE	DESK	WALL	WALL	WALL	FLUSH	FLUSH	PORTABLE
TYPE	STANDARD	STANDARD	SUB RECEIVER	HEADSET	STANDARD	DIMMER	STANDARD
IP GRADE	IP22	IP44	IP44	IP44	IP22	IP22	IP56
DIMENSION (WxDxH mm)	215 x 220 x 120	200 x 153 x 307	200 x 153 x 307	234 x 153 x 307	160 x 165 x 280	160 x 150 x 280	325 x 180 x 198
MATERIAL	ABS	ABS	ABS	ABS	ABS	ABS	STEEL

I.S SPT Barrier Box

- Capacity : max. 16 lines
- Power supply : AC110/220V, DC24V
- Hook/Call SW zener voltage : 24V
- Hook/Call SW short current : max. 10mA
- Voice signal zener voltage : 5.1V
- Voice signal short current : max. 50mA
- External alarm : 8 or 16 ports

MARINE TELEPHONE SYSTEM

LOUD&CLEAR

ACCESSORIES

MODEL	HJB-511AF / CF	HJB-512AF / CF	HJB-524CF	HJB-511AW / CW	HJB-512AW / CW	HJB-524CW
CONNECTION BOX						
MOUNTING TYPE	FLUSH			WALL		
IP GRADE	IP23			IP23 / IP44		
DIMENSION (WxDxH mm)	475 x 82 x 320 / 280 x 80 x 230 / 850 x 160 x 645			460 x 82 x 350 / 265 x 80 x 228 / 850 x 160 x 683		
MATERIAL	STEEL			STEEL		

MODEL	HFC-041A	HWC-031A	HPC-020A	HTB-020A
CONNECTION BOX				
MOUNTING TYPE	FLUSH	WALL	WALL	WALL
IP GRADE	IP20	IP20	IP56	IP56
DIMENSION (WxDxH mm)	80 x 54 x 120	80 x 54 x 120	155 x 112 x 190	210 x 88 x 189
MATERIAL	ABS	ABS	POLYESTER	STEEL

MODEL	HWC-030C	HFC-040C	HPC-020C	HPC-050B	HPC-050BI	HPC-050D
CONNECTION BOX						
MOUNTING TYPE	WALL	FLUSH	WALL			WALL
IP GRADE	IP20	IP20	IP56			IP56
DIMENSION (WxDxH mm)	80 x 54 x 120	80 x 54 x 120	155 x 112 x 190			155 x 116 x 198
MATERIAL	ABS	ABS	UNSATURATED POLYESTER			UNSATURATED POLYESTER

MODEL	HWC-033C	HWC-035S	HWC-134S	HFC-045C	HFC-047S	HFC-146S
CONNECTION BOX						
MOUNTING TYPE	WALL			FLUSH		
IP GRADE	IP20			IP20		
DIMENSION (WxDxH mm)	80 x 50 x 140			80 x 50 x 140		
MATERIAL	STEEL			STEEL		

MODEL	HSR-032
SIGNAL RELAY BOX (W.T)	
MOUNTING TYPE	WALL
IP GRADE	IP44
DIMENSION (WxDxH mm)	284 x 84 x 200
MATERIAL	ABS

MARINE TELEPHONE SYSTEM
ACCESSORIES

MODEL	HRL-024D	HRL-220A
ROTATING LAMP (W.T)		
MOUNTING TYPE	WALL	WALL
POWER	DC24V	AC220V
IP GRADE	IP56	IP56
DIMENSION (WxDxH mm)	154 x 183 x 197	155 x 183 x 197
MATERIAL	PC, ALUMINUM	PC, ALUMINUM

MODEL	HEH-220A	HEH-024D
ELECTRIC HORN (W.T)		
MOUNTING TYPE	WALL	
OUTPUT	max. 20W	
SPEAKER LEVEL	max. 110 ~ 115dB	
IP GRADE	IP56	
DIMENSION (WxDxH mm)	168 x 148 x 296	
MATERIAL	POLYETHYLENE	

MODEL	HAH-050B	HAH-050BI	HEADSET STORAGE BOX
HEADSET			
MOUNTING TYPE	-	-	WALL
IP GRADE	IP30	IP30	IP66
DIMENSION (WxDxH mm)	160 x 310	160 x 327	340 x 188 x 342
MATERIAL	ABS	ABS	ABS

MODEL	HEF-020
Ex. BELL (W.T)	
MOUNTING TYPE	WALL
SOUND LEVEL	100~102dB
TYPE OF PROTECTION	Ex d IIC T6
IP GRADE	IP66
DIMENSION (WxDxH mm)	200 x 132 x 239
MATERIAL	ALUMINUM, STEEL

MODEL	HTA-041A	HTA-030A
TROUBLE ALARM (N.W.T)		
MOUNTING TYPE	FLUSH	WALL
IP GRADE	IP20	IP20
DIMENSION (WxDxH mm)	80 x 70 x 120	80 x 69 x 120
MATERIAL	STEEL	ABS

MODEL	HEE-020
Ex. ELECTRIC HORN (W.T)	
Ex. TYPE	Ex d IIC T6
IP GRADE	IP56
DIMENSION (WxDxH mm)	158 x 240 x 224
MATERIAL	ALUMINUM

MODEL	HBE-024A	HBE-220A	HBE-024B	HBE-220B
BELL (W.T)				
MOUNTING TYPE	WALL	WALL	WALL	WALL
OUTPUT	DC24V	AV220V	DC24V	AV220V
SOUND LENEL	105dB	108dB	103dB	105dB
IP GRADE	IP65	IP65	IP65	IP65
DIMENSION (WxDxH mm)	200 x 132 x 336	200 x 132 x 336	136 x 132 x 274	136 x 132 x 274
MATERIAL	ABS, STEEL	ABS, STEEL	ABS, STEEL	ABS, STEEL

MODEL	HCC-162	HSC-165
HAZADOUS PORTABLE TEL CONNECTION BOX (W.T)		
MOUNTING TYPE	WALL	WALL
IP GRADE	IP56	IP56
DIMENSION (WxDxH mm)	152 x 107 x 184	282 x 125 x 215
MATERIAL	BMC	ABS

MARINE CLOCK SYSTEM

LOUD&CLEAR

Hanshin provides three types of marine clock system.
HGC-100/100N digital marine clock display UTC(GMT) and LT(local time) with digital type and it can be connected with GPS/DGPS and will be changed the LT(local time) automatically or can be set manually as the location of the vessel. Combined analog slave clock and digital slave clock is available. HSC- MQ1 marine clock display UTC(GMT) and LT(local time) with analog type and it could be set local time manually as the location of the vessel. Analog slave clock only is available.

CE mark(EMC) by DNV GL

HSC-MQ1

HGC-100 / 100N

| System Function & Specification |

DESCRIPTION	HSC-MQ1	HGC-100	HGC-100N
GPS INTERFACE	-	NMEA-0183(IEC61162-1, RS-422, $--RMC or $--ZDA) / 4,800bps	
SYSTEM CONFIGURATION	Analog Slave Clock(max. 70ea)	Analog & Digital Slave Clock(max. 100ea)	
CRYSTAL OSCILLATION FREQUENCY	32.768kHz(TCXO)	32.768kHz(TCXO)	
ACCURACY	Within ±0.15 sec per day	Within ± 0.15 sec per day Synchronizing from GPS automatically	
TEMPERATURE FOR ACCURCY	0℃ ~ 40℃	0°C ~ 40℃	
OPERATING TEMPERATURE RANGE	-25℃ ~ +70℃	-25°C ~ +70℃	
DISPLAY	Analog	Digital(FND)	
OUTPUT SIGNAL(Analog Slave Clock)			
- FOR 0.5SEC SLAVE CLOCK	DC24V, 0.5sec Polarized Pulse	DC24V, 0.5sec Polarized Pulse	
- FOR 30SEC SLAVE CLOCK	DC24V, 30sec Polarized Pulse	DC24V, 30sec Polarized Pulse	
- TIME SIGNAL FOR ENGINE TELEGRAPH LOGGER	Time signal for engine telegraph logger (ADV/REV)	Time signal for engine telegraph logger (ADV/REV)	-
- SERIAL	-	NMEA-0183(IEC61162-1,RS-422, $--ZDA)/4,800bps	-
ETHERNET	-	-	- interface :10/100 Mbps RJ45 Ports -Protocols : UDP
POWER CONSUMPTION			
- AC220V	max. 50VA	max. 200VA	
- DC24V	1.6A(max. 50VA)	8.2A(max. 200VA)	
POWER SUPPLY	AC100~220V & DC24V	AC100~220V & DC24V	
MATERIAL	Steel	Steel	
WEIGHT	8.5kg	8kg	
DIMENSION (WxDxH mm)	410 x 80 x 340(Flush/Wall type)	410 x 110 x 340(Flush type), 350 x 110 x 280(Wall type)	

MARINE CLOCK SYSTEM
Digital, IP Type

DESCRIPTION		HDC-210 / 210N	HDC-220 / 220N	HDC-230 / 230N	HDC-240 / 240N	HDC-260 / 260N
DIGITAL CLOCK (2HAND TYPE)						
MOUNTING TYPE		FLUSH	WALL	WALL	BOTH-SIDE	WALL
DIMMER SWITCH		O	O	X	O	X
IP GRADE		IP30	IP30	IP44 / IP56	IP30	IP30
DIMENSION (WxDxH mm)	DIGITAL	165 x 50 x 105	150 x 50 x 105	210 x 52 x 140	210 x 107 x 105	340 x 50 x 160
	IP	165 x 58 x 105	150 x 55 x 105	210 x 54 x 140	210 x 115 x 105	340 x 58 x 160
MATERIAL		STEEL	STEEL	STEEL	STEEL	STEEL

DESCRIPTION		HDC-310 / 310N	HDC-320 / 320N	HDC-330 / 330N	HDC-221 / 221N
DIGITAL CLOCK (3HAND TYPE)					
MOUNTING TYPE		FLUSH	WALL	WALL	WALL
DIMMER SWITCH		X	O	X	O
IP GRADE		IP44 / IP56	IP30	IP44	IP44
DIMENSION (WxDxH mm)	DIGITAL	200 x 39 x 105	180 x 50 x 120	249 x 52 x 140	Ø180 x 50
	IP	209 x 56 x 155	180 x 55 x 120	249 x 57 x 140	Ø180 x 50
MATERIAL		STEEL	STEEL	STEEL	ABS

DESCRIPTION	HCS-DAP	HCS-DD	HCS-DP
DIMMER CONTROLLER			
MOUNTING TYPE	FLUSH	FLUSH	FLUSH
IP GRADE	IP44 / IP56	IP44 / IP56	IP44 / IP56
DIMENSION (WxDxH mm)	80 x 71 x 120	81 x 71 x 120	81 x 71 x 120
MATERIAL	STEEL	STEEL	STEEL
IN USE	Dimmer S/W for Analog Slave Clock	Dimmer S/W for Digital Slave Clock	Dimmer & Sec. Adjust Switch (Backlight) for Analog Slave Clock

MARINE CLOCK SYSTEM
Analog Type

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MODEL	HSC-103R	HSC-103S	HSC-104R	HSC-104S	HSC-323	HSC-404
SLAVE CLOCK (2HAND TYPE)						
MOUNTING TYPE	FLUSH	FLUSH	FLUSH	FLUSH	WALL	BOTH-SIDE
E.L PLATE	X	O	X	X	X	X
IP GRADE	IP22	IP22	IP22	IP22	IP22	IP22
DIMENSION (WxDxH mm)	Ø180 x 85	192 x 56 x 192	Ø180 x 85	192 x 56 x 1192	Ø210 x 79	260 x 160 x 210
MATERIAL	ABS	STEEL	ABS	STEEL	ABS	ABS

MODEL	HSC-104W	HSC-320	HSC-321	HSC-322	HSC-431
SLAVE CLOCK (2HAND TYPE)					
MOUNTING TYPE	WALL	WALL	WALL	LUXERY, WALL	DECORATIVE, WALL
E.L PLATE	X	X	X	X	X
IP GRADE	IP66	IP22	IP56	IP22	IP22
DIMENSION (WxDxH mm)	323 x 130 x 225	Ø210 x 79	210 x 79 x 244	Ø270 x 48	300 x 45 x 220
MATERIAL	ABS	ABS	ABS	ABS	WOOD

MODEL	HSC-211R	HSC-211S	HSC-212R	HSC-212S
SLAVE CLOCK (3HAND TYPE)				
MOUNTING TYPE	FLUSH	FLUSH	FLUSH	FLUSH
SECOND ADJUST SW	X	O	X	X
E.L PLATE	X	X	X	O
IP GRADE	IP22	IP22	IP22	IP22
DIMENSION (WxDxH mm)	Ø175 x 85	192 x 56 x 192	Ø180 x 85	192 x 56 x 192
MATERIAL	ABS	STEEL	ABS	STEEL

MODEL	HSC-222	HSC-231	HSC-232
SLAVE CLOCK (3HAND TYPE)			
MOUNTING TYPE	LUXERY, WALL	WALL	WALL
SECOND ADJUST SW	X	O	O
E.L PLATE	X	X	O
IP GRADE	IP22	IP22	IP22
DIMENSION	Ø270 x 48	Ø210 x 79	Ø210 x 79
MATERIAL	ABS	ABS	ABS

MODEL	HSC-250R	HSC-250S	HSC-251
3HAND 30SEC SILENCE TIME SLAVE CLOCK			
MOUNTING TYPE	FLUSH	FLUSH	WALL
SILENCE MARK	O	O	O
SECOND ADJUST SW	X	O	O
E.L PLATE	X	X	X
IP GRADE	IP22	IP22	IP22
DIMENSION (WxDxH mm)	Ø180 x 85	192 x 56 x 192	Ø210 x 79
MATERIAL	ABS	STEEL	ABS

SATELLITE TV & COMMUNAL AERIAL SYSTEM

Satellite TV Receiving & Communal Aerial System is designed for watching TV and listening radio satisfactorily in any direction and place at sea, and the satellite TV antenna, omni-directional antenna and whip antenna are made of solid material in consideration of harsh marine environment at sea.

The Satellite TV & multi-amplifier built in main unit enables to cover Ku band, C band, AM(MW/SW), FM, VHF, UHF band, adopted AGC(Automatic Gain Control) circuit to prevent the rage of weak electromagnetic wave.

The Communal Aerial System is operated automatically as power on, and manual control is not necessary because AGC level of amplifier unit is adjusted by maker's pre-setting.

CE mark(EMC) by DNV GL

| System Feature | (HCA-124C)

- Simple installation and compact unit
- Mounted automatic gain control circuit in the multi-amplifier unit
- Mounted break-in circuit to protect the system
- Available max. 92 outlets

(HWS-402LD)

(HCA-124C)

(HOA-33T)

SATELLITE TV & COMMUNAL AERIAL SYSTEM ACCESSORIES

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MODEL	HOB-47F	HOB-47S	HOB-49F	HOB-49H	HOB-49S	HOB-146F	HOB-146S	HOB-148F	HOB-148H	HOB-148S
COMBINATION BOX										
MOUNTING TYPE	FLUSH	WALL	FLUSH	SEMI-FLUSH	WALL	FLUSH	WALL	FLUSH	SEMI-FLUSH	WALL
DESCRIPTION	AC4, TV, RADIO		AC2, TV, RADIO			AC4, TEL, TV, RADIO		AC2, TEL, TV, RADIO		
IP GRADE	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
DIMENSION (WxDxH mm)	280 x 75 x 145	280 x 75 x 145	210 x 73 x 120	210 x 73 x 120	210 x 73 x 120	280 x 75 x 145	280 x 75 x 145	210 x 73 x 120	210 x 73 x 120	210 x 73 x 120
MATERIAL	ABS	ABS, STEEL	ABS	ABS, STEEL	ABS, STEEL	ABS	ABS, STEEL	ABS	ABS	ABS

MODEL	HOB-138H	HOB-145F	HOB-145H	HOB-145S	HOB-155H	HOB-155	HOB-150F	HOB-150S	HOB-235F
COMBINATION BOX									
MOUNTING TYPE	SEMI-FLUSH	FLUSH	SEMI-FLUSH	WALL	SEMI-FLUSH	WALL	FLUSH	WALL	FLUSH
DESCRIPTION	AC4, TEL	AC2, TEL, LAN, TV, RADIO			AC2, TEL, LAN, TV, RADIO		AC2, TEL, TV, RADIO		AC4, LAN
IP GRADE	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
DIMENSION (WxDxH mm)	210 x 73 x 120	210 x 73 x 120	210 x 73 x 120	210 x 73 x 120	210 x 73 x 120	210 x 73 x 120	210 x 73 x 120	210 x 73 x 120	248 x 52 x 138
MATERIAL	ABS	ABS	ABS	ABS	ABS	ABS, STEEL	ABS	ABS, STEEL	POLYESTER, STEEL

MODEL	HOB-238FM	HOB-245F	HOB-245FM	HOB-246F	HOB-247F
COMBINATION BOX					
MOUNTING TYPE	FLUSH	FLUSH	FLUSH	FLUSH	FLUSH
DESCRIPTION	AC4, TEL, LAN	AC4, LAN, TV, RADIO	AC4, TEL, LAN, TV, RADIO	AC4, TEL, TV, RADIO	AC4, TV, RADIO
IP GRADE	IP20	IP20	IP20	IP20	IP20
DIMENSION (WxDxH mm)	248 x 52 x 138	248 x 52 x 138	248 x 52 x 138	248 x 52 x 138	248 x 52 x 138
MATERIAL	POLYESTER, STEEL	POLYESTER, STEEL	POLYESTER, STEEL	POLYESTER, STEEL	POLYESTER, STEEL

MODEL	HOB-338H	HOB-346F	HOB-347F	HOB-446F
COMBINATION BOX				
MOUNTING TYPE	SEMI-FLUSH	FLUSH	FLUSH	FLUSH
DESCRIPTION	AC4, TEL	AC4, TEL, TV, RADIO	AC4, TV, RADIO	AC4, LAN, TV, RADIO
IP GRADE	IP20	IP20	IP20	IP20
DIMENSION (WxDxH mm)	210 x 73 x 120	280 x 75 x 145	280 x 75 x 145	280 x 75 x 145
MATERIAL	ABS	ABS	ABS	ABS

MODEL	HOB-52F	HOB-52S	HOB-01F	HOB-01S	HOB-02F	HOB-02S
OUTLET BOX						
MOUNTING TYPE	FLUSH	WALL	FLUSH	WALL	FLUSH	WALL
OUTPUT	TV, RADIO		TV		RADIO	
FREQUENCY	0.1 ~ 900MHz		54 ~ 900MHz		0.1 ~ 108MHz	
IP GRADE	IP20	IP20	IP20	IP20	IP20	IP20
DIMENSION (WxDxH mm)	80 x 45 x 120	80 x 54 x 120	80 x 45 x 120	80 x 54 x 120	80 x 45 x 120	80 x 54 x 120
MATERIAL	ABS	ABS	ABS	ABS	ABS	ABS

CCTV SYSTEM

This CCTV System is designed for real time monitoring and event recording.
It is applicable to record important scene with high resolution image.
Coaxial Video Transmitter Solution makes it possible to control PTZ camera remotely in one coaxial cable.
In addition DVR controller enables to control monitoring picture and controller remotely in one coaxial cable.

| System Feature |

- Camera and pan/tilt control are available in one coaxial cable
- Monitor picture and remote control are available in one coaxial cable
- Housing, Pan/tilt are designed against severe onboard environment (IP68)
- Ex. Protection : Ex IIC T5, IP66
- Operating temperature : -25℃ ~ +60℃

| System Specification |

- Camera input : max. 256ea
- Control station : max. 16ea
- PTZ Control support : RS422/485
- Pan/Tilt
  - Pan angle : 355°, Tilt angle : -90° ~ +90°
  - Operating temperature : -25℃ ~ +60℃
  - International protection : IP68
  - Ex Protection : Ex IIC T5, IP66

| System Diagram |
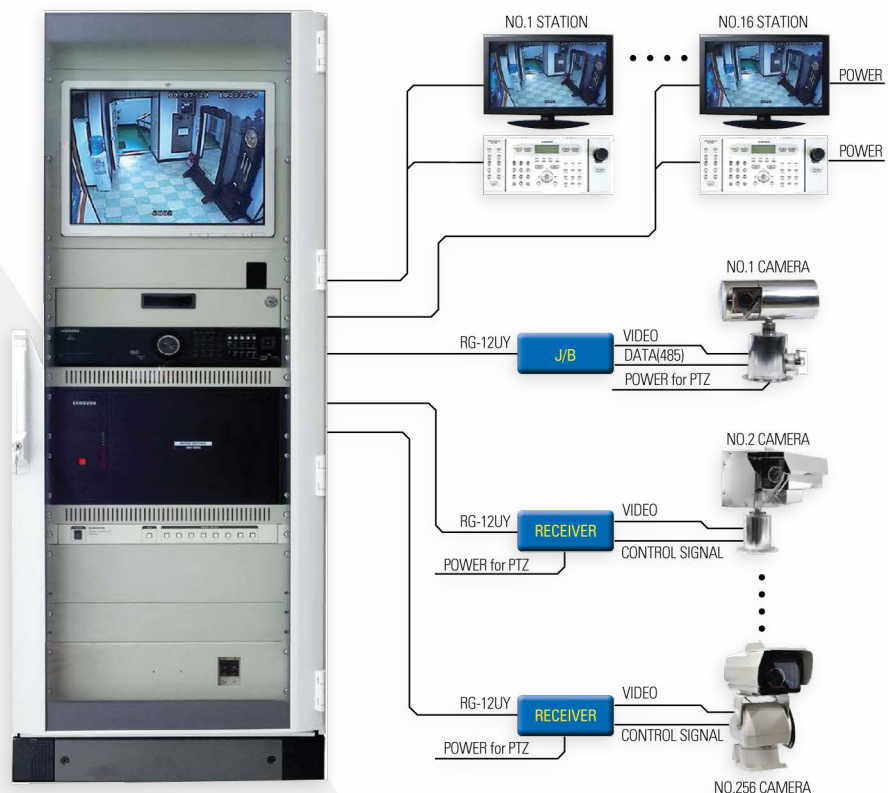
IP CCTV SYSTEM

To control the analog CCTV camera and pan/tilt, IP CCTV system based on LAN convert analog signal data to control on the Ethernet and the transmitted signal can be used in the CMS to control and real time monitoring. Main features of CMS are DVR function for the video recoding, matrix function to control multiple video and controller function to control pan/tilt. Pan/Tilt/Housing can be classified dome type which is installed in accommodation area, waterproof type which is installed in machinery/outdoor area and Ex. type which is installed in hazardous area.

| System Feature |

- Easy to install and can be utillized exiting network
- CMS : Controller integrated program of DVR and Matrix
- Ex. protection: Ex d IIC T6
- International protection: IP66
- Operating temperature: -25℃ ~ +60℃

| System Diagram |

BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM

BNWAS (HBN-117)

The purpose of a bridge navigational watch alarm system is to monitor bridge activity and detect operator disability which could lead to marine accidents.

The system monitors the awareness of the Officer of the Watch(OOW) and automatically alerts the captain or another qualified OOW if for any reason the OOW becomes incapable of performing the OOW's duties.

This purpose is achieved by a series of indications and alarms to alert first the OOW and, if he is not responding, then to alert the Captain or another qualified OOW. Additionally, the BNWAS may provide the OOW with a means of calling for immediate assistance if required.

The BNWAS should be operational whenever the ship's heading or track control system is engaged, unless inhibited by the Captain.

Time Chart

90sec (90~180)	3rd STAGE REMOTE AUDIBLE ALARM(CREW CALL)
15sec	2nd STAGE REMOTE AUDIBLE ALARM(OFFICER CALL)
15sec	1st STAGE REMOTE AUDIBLE ALARM(BRIDGE)
12min (3~12)	VISUAL INDICATOR(RESET SWITCH FLICKER)

| System Diagram |

Motion Sensor
BNP-740

Reset, Visual Alarm
BNP-710

Reset, Visual, Audible Alarm
BNP-720

Motion Sensor
BNP-740

4C x 0.5SQ   4C x 0.5SQ   6C x 0.5SQ   4C x 0.5SQ

HBN-117
Bridge Navigational Watch Alarm System

Option
POWER SUPPLY
HPS-100B
(24V,3A)

AC   AC
DC   DC

GYRO
Auto Pilot

AMS

2C x 0.5SQ   2C x 0.5SQ

Crew Deck   J/B   J/B   Officer Deck

Audible Alarm   Audible Alarm   Audible Alarm   Audible Alarm

BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM

LOUD&CLEAR

| System Feature |

- User-friendly
- Dimmer control
- Emergency call facility
- Infrared motion sensor
- Auto-run input(Auto pilot , Gyro)
- Power supply DC24V or AC220V
- Fail indicator
- Alarm
  - Standard : 30ea
  - Option : max. 90ea
- Dimension (W x D x H mm) / Weight
  - Wall type : 270 x 110 x 188 / 3Kg
  - Flush type : 210 x 105 x 145 / 2Kg

MODEL	BNP-710F	BNP-710W	BNP-720F	BNP-720W
RESET & ALARM UNIT				
MOUNTING TYPE	FLUSH	WALL	FLUSH	WALL
DESCRIPTION	RESET, VISUAL ALARM	RESET, VISUAL ALARM	RESET, VISUAL, AUDIBLE ALARM	RESET, VISUAL, AUDIBLE ALARM
POWER SOURCE	DC24V, 25mA	DC24V, 25mA	DC24V, 25mA	DC24V, 25mA
SOUND LEVEL	none	none	85dBm, ver.vol & tone	86dBm, ver.vol & tone
IP GRADE	IP40	IP40	IP40	IP40
DIMENSION (WxDxH mm)	120 x 91 x 80	80 x 106 x 120	120 x 91 x 80	120 x 106 x 80
MATERIAL	STEEL	STEEL	STEEL	STEEL

MODEL	BNP-730F	BNP-730W	BNP-750A / R	BNP-740
RESET & ALARM UNIT				
MOUNTING TYPE	FLUSH	WALL	WALL	CEILING
DESCRIPTION	AUDIBLE ALARM	AUDIBLE ALARM	RESET, VISUAL, AUDIBLE ALARM	MOTION SENSOR
POWER SOURCE	DC24V, 30mA	DC24V, 31mA	DC24V, 200mA / 15mA	DC24V, max. 17mA
SOUND LEVEL	80dBm	80dBm	83dBm	none
IP GRADE	IP22	IP22	IP65	IP30
DIMENSION (WxDxH mm)	80 x 56 x 80	80 x 59 x 80	185 x 143 x 255	87 x 149 x 127
MATERIAL	ABS	ABS	ABS	ABS

MODEL	HPS-100B
POWER SUPPLY	
MOUNTING TYPE	WALL
IN PUT	AC110/220V, DC24V
OUT PUT	DC24V, 3.6A
IP GRADE	IP20
DIMENSION (WxDxH mm)	150 x 170 x 112
MATERIAL	STEEL

ANEMOMETER & ANEMOSCOPE

HTA-1400, HAA-1600

Hanshin Anemometer is accurate and reliable wind sensor specifically designed for the rigors of the marine environment.
The wind speed sensor is three cups type in order to make easy installation and maintainance.
Unique transducer produces a NMEA signal without electrical contacts.
All materials are carefully selected for corrosion resistance and maximum durability in the harsh marine environment.

CE mark(EMC) by DNV GL

| Specification |

HTA-1400 : True & Relative mode monitoring, Digital display
HAA-1600 : Relative mode monitoring, Digital display
Wind speed range : 70m/s
Outdoor remote controller is provided by option
＊Ultrasonic sensor type transmitter is available

| System Diagram |

HTA-1400 True & Relative Type
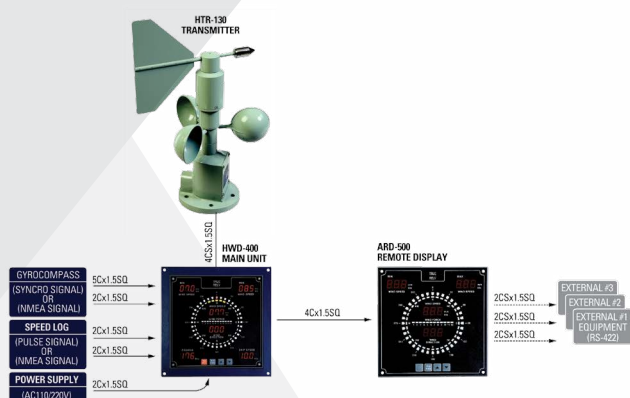
HAA-1600 Relative Type

MODEL	HWD-400	HWD-600	
MAIN UNIT			
MOUNTING TYPE	FLUSH	DESK	FLUSH
IP GRADE	IP23	IP23	IP23
DIMENSION (WxDxH mm)	260 x 151 x 260	258 x 100 x 250	195 x 30 x 195
MATERIAL	STEEL	STEEL	STEEL

MODEL	ARD-510	
REMOTE DISPLAY		
MOUNTING TYPE	DESK	FLUSH
DESCRIPTION	for HWD-600	for HWD-600
IP GRADE	IP23	IP23
DIMENSION (WxDxH mm)	258 x 100 x 250	195 x 30 x 195
MATERIAL	STEEL	STEEL

MODEL	ARD-500
REMOTE DISPLAY	
MOUNTING TYPE	FLUSH
DESCRIPTION	for HWD-400
IP GRADE	IP23
DIMENSION (WxDxH mm)	195 x 30 x 195
MATERIAL	STEEL

MODEL	HWR-420	HWR-620
DIMMER & REMOTE CONTROLLER		
MOUNTING TYPE	FLUSH	FLUSH
DESCRIPTION	for HWD-400	for HWD-600
IP GRADE	IP23	IP23
DIMENSION (WxDxH mm)	75 x 49 x 100	75 x 49 x 100
MATERIAL	STEEL	STEEL

MODEL	HTR-130
TRANSMITTER	
MOUNTING TYPE	DECK
IP GRADE	IP56
DIMENSION (WxDxH mm)	309 x 180 x 510
MATERIAL	ALUMINIUM

WIND SPEED ALARM SYSTEM LOUD&CLEAR

WSA-700

Wind speed alarm system (WSA-700) is a device that generates alarm by measuring current wind situation.
This wind speed alarm system allows the user to set two different wind speed readings at which they would like to be notified, both visually and audibly, when the wind meets either set-point.

| System Feature |

- Display Method : 2lines LCD, 16characters
- Save External Memory
- Output : Visual / Audible Alarm, thermal printer
- Automatic main/em'cy power changeover

| System Specification |

- Alarm / Lamp Output: max. 1Port (DC24V / 1.5A)
- NMEA Input
  - $--ZDA, $--MWV / RS-422 / 4,800bps / 38,400bps
- NMEA Output
  - $--ALR, $--MWV / RS-422 / 4,800bps / 38,400bps
  - Alarm Dry Contact : Max. 1Port
  - Power Input: AC170~240V (or AC100~132V)(Main),DC24V(Em'cy)
  - Consumption : max. 2.1A(50W)
  - Dimension(W x D x H mm) : 195 x 120 x 97
  - Weight : Appr. 1 kg

| System Diagram |

GPS Signal(ZDA)

Wind Speed(MWV)

AC

DC

WSA-700
Wind Speed Alarm System

2012/07/27 10:51
00.0m/s [14m/s]

RESET

SETTING

Alarm Dry Contact

AMS

NMEA-0183(MWV)

Visual

Audible
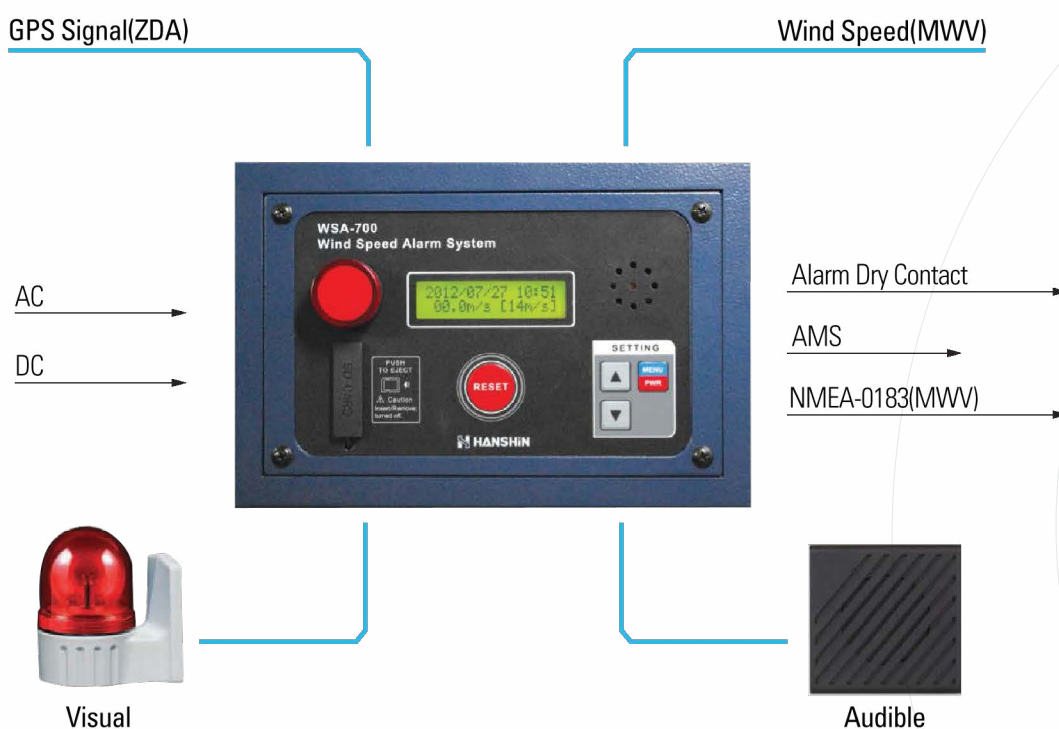
SOUND RECEPTION SYSTEM

HSR-1400

The HSR-1400 Sound Reception System is designed for general announcing with advanced technology, and complies with the IMO Res.MSC.191(79), IMO Res A.694(17), SOLAS Reg.V/19, IEC 60945(2002), ISO 14859(2012), IEC61162 series, IEC62288-ed2(2014) performance standards.
The HSR-1400 system consists of:
• SRM-141, Main Control and Display Unit
• SRR-142, Microphone Unit
• SRD-143, Remote Display Unit (optional)

The system will receive sound signals in the audio band 70Hz-2100Hz, digitally process them to remove unwanted noise and reproduce these incoming signals acoustically inside the bridge. This system will indicate the approximate direction of the inbound signals using 8 led (light emitting diodes) on the front panel.

Type Approval by USCG and RINA
MED Module-B / D by RINA

| System Feature |

Main Control and Display Unit (SRM-141)
• Easy operation
• SRR-142 interface connection
• Built-in loudspeaker and Wide function
• 8 Direction indicator
• Loudspeaker volume control and power on/off
• Direction and activity indicator LED's dimming control
• 3 Mute circuits
• Self-test functionality
• Connection for power supply DC24V and AC110 ~ 220V
• External power fault output (dry contact) connection

Microphone Unit (SRR-142)
• Simple installation with only one microphone unit
• Condenser microphone for very good reception
   in the required audio band
• Digital signal processing algorithms
• Active noise rejection of in-band noise

| System Diagram |
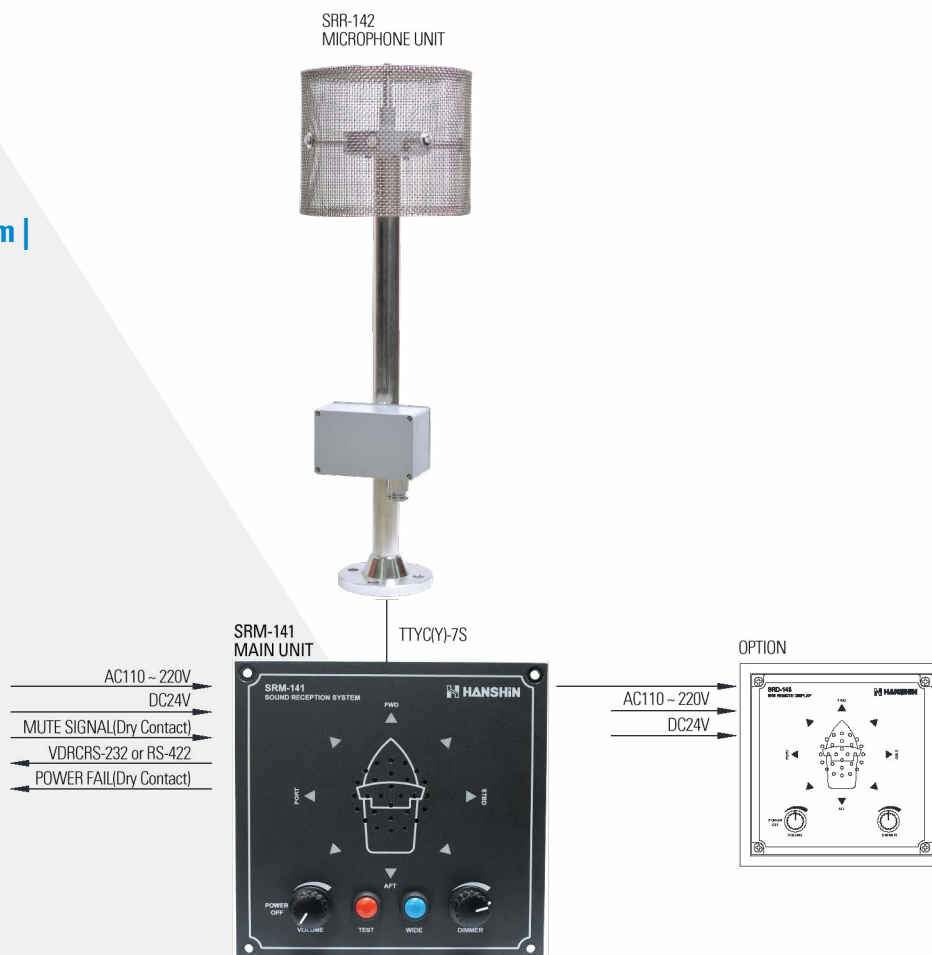
SOUND RECEPTION SYSTEM

LOUD&CLEAR

| System Specifications |

SRM-141 Main Control and Display Unit

- Operational Voltage : AC110~220V and DC24V
- Power Consumption : 24V / 3.6W(if there is no sound), 14W(if there is a sound)
- Frequency Range : 70-820Hz
- Wide Frequency Range : 70-2100Hz
- Color/finish : Black
- Internal loudspeaker output power (max) : 5W
- Internal loudspeaker impedance (min) : > 8 Ohm
- Operating temperature & humidity : -25℃ ~ +55℃, 93%
- 8-Directions, 45 Degrees, ±5 Degree deviation
- Dimension(W x D x H mm) : 175 x 163 x 175

SRR-142 Microphone Unit

- Operational Voltage: DC±12V
- Ambient noise level: 57dB(A), The whistle must come in over ambient noise.
- Protection: IP66
- Operating temperature & humidity: -25℃ ~ +55℃, 93%
- Dimension : Ø255 x 804

LOCAL AREA NETWORK SYSTEM

| Network Consulting |

Carrying out customized Network Consulting services to guarantee stability, availability, expandability,and security, with vast experience and expertise in the field of integrated network establishment.

Hanshin performs customer-oriented network consulting services from planning and designing network infrastructure, to making development directions and master plan.
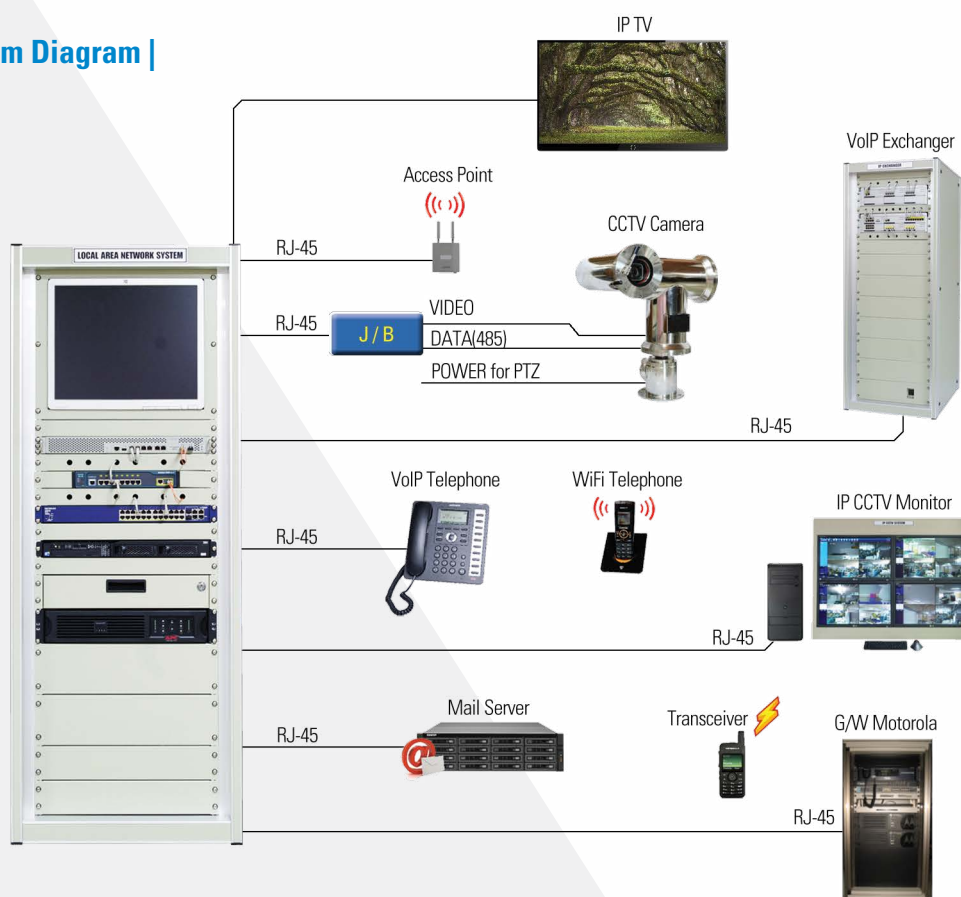
| Network Establishment |

Provide various products and solutions to establish integrated network infrastructure for shipbuilding yard, and enterprises. Hanshin has been performed a variety of network building business with its differentiated technical skills in wire-wireless broadband network, network separation and related solution, and electronic conference and voting.

| System Feature |

- Providing network solutions to meet the requirements of shipboard communications
  (IP PBX, IP CCTV, IP TV, WiFi Mobile, Mail Server, etc)
- Gigabit switch as a core equipments
- Providing load balancing and load sharing
- Easy installation and design
- Max. 4Gbps throughput
- 215K L4 CPS / 135K L7 CPS
- Support 12,000 simultaneous sessions
- 8Giga ports (2SFP+6 Copper)
- Providing power hot-swapping

| System Diagram |

IP INTERCOMMUNICATION SOLUTION

LOUD&CLEAR

Satellite

V-sat

TV

IP Slave Clock

IP-Telephone

Set Top Box

PC

HUB

IP-Telephone
Exchange System

LAN

IP CCTV Camera

IP-Telephone

IP PA R/Controller

HUB

IP Marine Clock System

IP PA R/Controller

Speaker

Speaker

PA/GA System

Wireless LAN
Access Point

Smart Device

LAN

Entertainment System
(Sat TV, IPTV, etc)

HUB

Set Top Box

TV

IP Slave Clock

IP CCTV CMS

IP-Telephone

CERTIFICATE

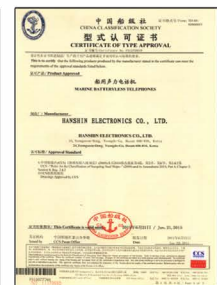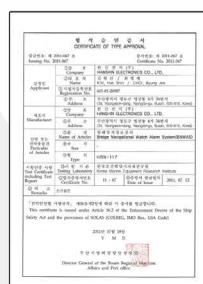|		
Quality Management System (ISO:9001)	Quality Management System (ISO:14001)	MED Module B/D HSR-1400 SRS
USCG Type Approval HSR-1400 SRS	RINA Type Approval HSR-1400 SRS	DNV GL Type Approval HPA-9700 PA
RINA Type Approval HPA-9800 PA	DNV GL Type Approval HPA-9700 PA	RINA Type Approval HPA-9700 PA
CCS Type Approval HPA-9700 PA	DNV GL CE HPA-7300 PA	DNV GL Type Approval Auto Tel.
RINA Type Approval Auto Tel.	DNV GL Type Approval C.B.T	RINA Type Approval C.B.T
DNV GL Type Approval S.P.T	RINA Type Approval S.P.T	CCS Type Approval S.P.T
Ex.Proof CCTV ATEX	DNV GL CE MARINE CLOCK	DNV GL CE HCA-124C CAS
BNWAS Type Approval HBN-117	KMA Anemometer & Anemoscope HTR-130, HWD-600	DNV GL-CE Anemometer & Anemoscope HTR-130, HWD-600

GLOBAL NETWORK

Netherlands
France
Spain
Egypt
South Africa
Bulgaria
Greece
Turkey
Iran
UAE
India
Bangladesh
Vietnam
Thailand
Singapore
Indonesia
Dalian
Shanghai
Guangzhou
Hongkong
Korea
Japan
Taiwan
Philippines
Australia
Canada
Panama
Peru
Brazil
Uruguai
Argentina

● **EUROPE**

Bulgaria
Greece
Netherlands
Spain
France

● **MIDDLE EAST**

Egypt
Iran
South Africa
Turkey
UAE

● **ASIA**

Bangladesh
Dalian
Guangzhou
Shanghai
Hongkong
India
Indonesia
Japan
Korea
Philippines
Singapore
Taiwan
Thailand
Vietnam

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