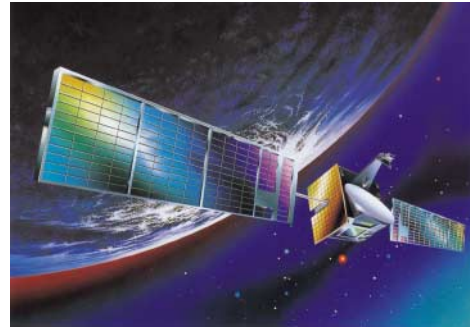




# High Technology Electronic Products

**GMDSS RADIO EQUIPMENT**



**GENERAL RADIO EQUIPMENT**



**NAVIGATION EQUIPMENT**



**FISHING EQUIPMENT**



 **SAMYUNG ENC Co.,Ltd.**



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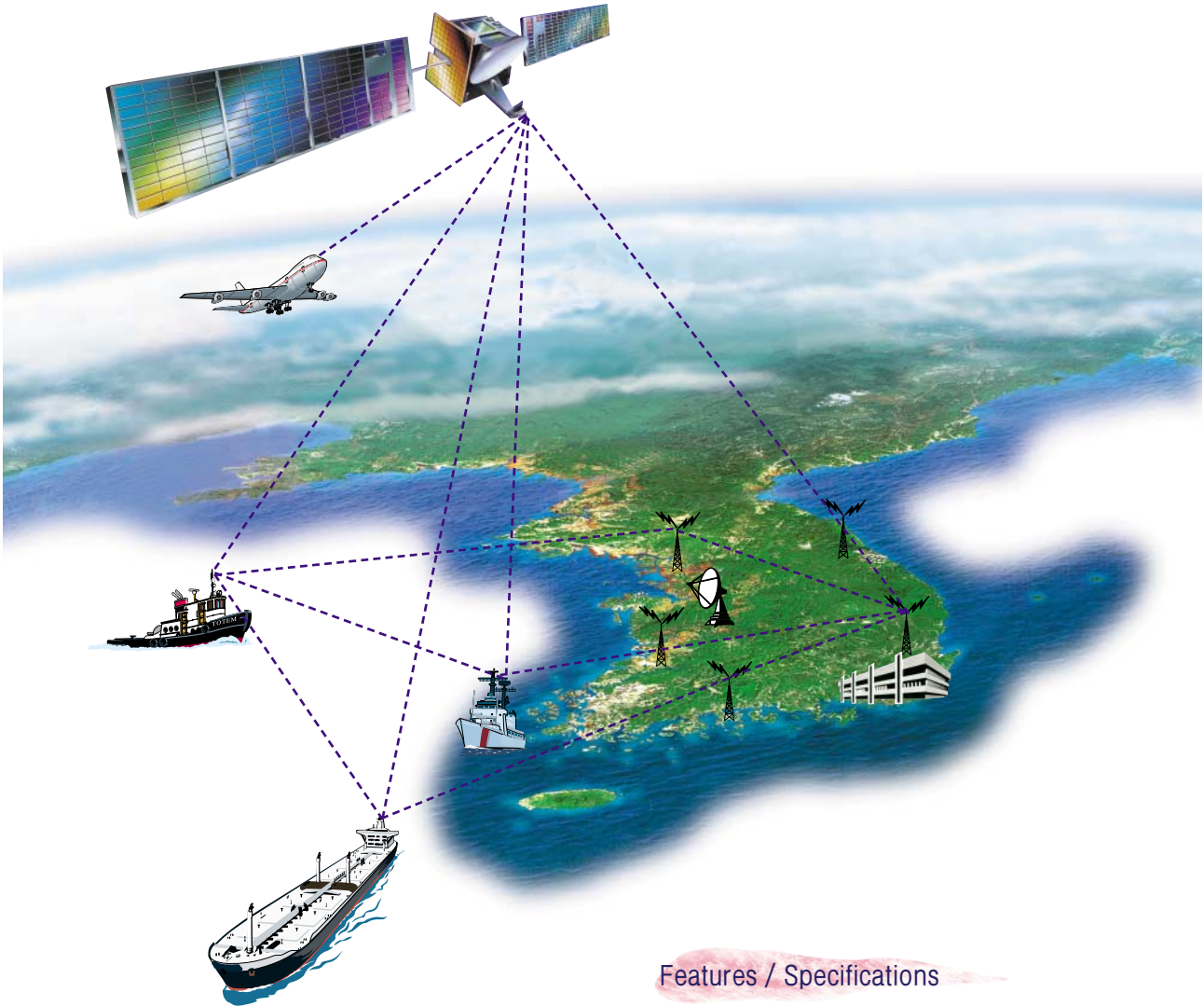
KOREA SERVICE NETWORK

WORLD WIDE SERVICE NETWORK



**AIS(Automatic Identification System)**

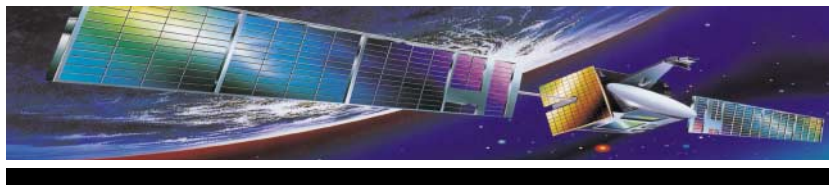
- SA-2000



**Features / Specifications**

- ▶ Compliant with IMO MSC 74(69)-Annex3, ITU-R M.1371, IEC61993, IEC60945.
- ▶ Dynamic & static navigation information is provided for 24hours continuously.
- ▶ Receiving & displaying CH70 DSC distress message.
- ▶ Connection with GPS, EDICS, ECS, GYRO, RADAR data
- ▶ Built-in digital 12 channels GPS receiver
- ▶ 3 of VHF transmitting channel (Tx : 1 channel, Rx : 3 channel)
- ▶ Display unit : 122×32 dots LCD
- ▶ Frequency range : 156.025 ~ 162.025MHz
- ▶ Designated channel : CH87B(161.975MHz), CH88B(162.025MHz)
- ▶ DSC channel : CH70(156.525MHz)
- ▶ GPS receiving frequency : L1 1575.42MHz (C/A code)
- ▶ GPS receiving type : Digital 12 channel multiple tracking type
- ▶ Datum : WGS-84
- ▶ Dimensions & Weight : 256(W)×145(H)×332(D)mm, 11Kg




**250W/400W MF/HF RADIO EQUIPMENT(CONSOLE TYPE)**
**• SRG-250/400**

**Features / Specifications**

- ▶ Compliant with ITU, IMO, CCIR.
- ▶ Built-in DSC/NBDP.
- ▶ Built-in automatic battery charge.
- ▶ Compact design enables to install and use conveniently.
- ▶ Composition : MAIN UNIT ( TRANSMITTER, RECEIVER, W/K RECEIVER, DSC/NBDP LOCAL CONTROL, EXCITER, POWER SUPPLY, AUTO BATTERY CHARGER, CONTROLLER, PRINTER, KEYBOARD, ATU)
- ▶ Frequency range : TX : 1.6MHz ~ 27.5MHz  
RX : 90KHz ~ 29.99MHz
- ▶ TX/RX channel : Full ITU channels
- ▶ Memory channel : 2,000 channels
- ▶ Frequency tolerance : within  $\pm 10$ Hz
- ▶ Modes of emission : J3E, H3E, F1B, J2B, A1A
- ▶ Operation : Simplex and Duplex
- ▶ DSC RX Frequency : 2187.5, 4207.5, 6312, 8414.5, 12577, 16804.5KHz
- ▶ Output power : 250W pep (SRG-250)  
400W pep (SRG-400)
- ▶ Power supply : AC 110/220V, DC 24V
- ▶ Dimensions & weight : Main Unit  
551(W) × 734(H) × 441(D)mm, 114Kg  
Control Unit  
398(W) × 295(H) × 90(D)mm, 7Kg

**150W/250W MF/HF DSC, NBDP RADIO EQUIPMENT(DESK TYPE)**
**• SRG-1150DN/1250DN**

**Features / Specifications**

- ▶ Compliant with ITU, IMO, GMDSS.
- ▶ Built-in DSC/NBDP.
- ▶ NBDP TERMINAL has Adopted 10.4" color LCD.
- ▶ Easy to read each function and frequencies on LCD display.
- ▶ Frequency range : Tx 1.6 ~ 27.5MHz (10Hz STEP)  
RX 500KHz ~ 29.9999MHz (10Hz STEP)
- ▶ Tx/Rx channel : ITU Channel
- ▶ Memory channel : 300 channels
- ▶ Frequency tolerance : within  $\pm 10$ Hz
- ▶ Modes of emission : J3E, H3E, F1B, J2B
- ▶ Operation : Simplex and Semi-duplex
- ▶ Output power : 150W(SRG-1150DN)  
250W(SRG-1250DN)
- ▶ DSC RX Frequency : 2187.5, 4207.5, 6312, 8414.5, 12577, 16804.5KHz
- ▶ NBDP protocol : Compliant with CCIR 625, 476-4, 490, 491, 492, 492-3 and F130
- ▶ NBDP operation mode : ARQ, CFEC, SFEC
- ▶ Modulation speed : 100 BAUD(ARQ, FEC MODE)
- ▶ Power supply : AC 110/220V, DC 24V  $\pm 15\%$
- ▶ Dimensions & weight : 240(W) × 290(H) × 160(D)mm, 11.75Kg
- ▶ NBDP monitor dimensions & weight : 316(W) × 267(H) × 142(D)mm, 3.5Kg



## 150W/250W MF/HF RADIO EQUIPMENT(DESK TYPE)

- SRG-1150D/1250D



### Features / Specifications

- ▶ Compliant with ITU, IMO, CCIR.
- ▶ Built-in DSC.
- ▶ Compact and lightweight unit.
- ▶ Easy to read LCD display.
- ▶ Automatic battery charger included.
- ▶ Frequency range : Tx : 1.6MHz ~ 27.5MHz  
RX : 500KHz ~ 29.99MHz
- ▶ TX/RX channel : 900 ITU channels
- ▶ Memory channel : 300 channels
- ▶ Frequency tolerance : within  $\pm 10$ Hz
- ▶ Modes of emission : J3E, H3E, F1B
- ▶ Operation : Simplex and Semi-duplex
- ▶ DSC RX Frequency : 2187.5, 4207.5, 6312, 8414.5,  
12577, 16804.5KHz
- ▶ Output power : 150W pep (SRG-1150D)  
250W pep (SRG-1250D)
- ▶ Power supply : AC 110/220V, DC24V
- ▶ Dimensions & weight : 240(W)×290(H)×160(D)mm, 11.75Kg

## DSC/VHF RADIO TELEPHONE

- STR-580D



### Features / Specifications

- ▶ Compliant with ITU, IMO, CCIR.
- ▶ Built-in DSC watch keeping receiver.
- ▶ Built-in remote circuit.
- ▶ Self-test function.
- ▶ Frequency range : 155 ~ 163.5 MHz
- ▶ Communication mode : Simplx, Duplex and DSC
- ▶ Output power : HIGH 25W, LOW 1W
- ▶ Modes of emission : F3E, F2B(G3E, G2B)
- ▶ Frequency deviation within :  $\pm 10 \times 10^{-6}$
- ▶ Antenna impedance : 50  $\Omega$
- ▶ Modulation : Frequency Modulation,FSK(DSC)
- ▶ Power supply : AC 110/220V, DC 24V
- ▶ Dimensions & weight : 258(W)×81(H)×315(D)mm, 4.45kg

## INMARSAT-C

### • TT-3020C



### Features / Specifications

- ▶ Compliant with the latest Inmarsat-c specifications for SOLAS/GMDSS with distress calling, CN 114, IEC 1097-4, IEC 945 and CE requirements.
- ▶ Compact and lightweight.
- ▶ Windows driven menus for easy operation.
- ▶ 2-way data, fax and e-mail transfer to world-wide destinations.
- ▶ Enhanced Group Calling (EGC).
- ▶ 10.4" Color TFT LCD display (size : 640×480).
- ▶ Frequency range TX : 1626.5 ~ 1660.5MHz  
RX : 1525.0 ~ 1559.0MHz  
GPS : 1575.42MHz
- ▶ Modulation : 1200 symbols/sec. BPSK
- ▶ Data transfer rate : 600 / bps
- ▶ Antenna elevation coverage : + 90° to ~ 15°
- ▶ TX Signalling Access mode : Slotted ALOHA
- ▶ Power supply : DC 10 ~ 32 V(RX :4.8W/TX:81W)
- ▶ Composition : TRANSCEIVER, MESSAGE TERMINAL  
ANTENNA, PRINTER, KEYBOARD, POWER SUPPLY
- ▶ Dimensions & weight : TRANSCEIVER :180(W)×50(H)×165(D)mm, 1.3kg  
MESSAGE TERMINAL :297(W)×221(H)×114.5(D)mm, 4.45kg

## NAVTEX RECEIVER

### • SNX-200



### Features / Specifications

- ▶ Use of both 518KHz(English) and 490KHz(Korean).
- ▶ Use external alarm while receiving emergency message.
- ▶ Wide band, high sensitivity antenna.
- ▶ Receiving frequency : 518KHz, 490KHz
- ▶ Receiving mode : F1B
- ▶ Antenna impedance : 50 Ω
- ▶ Signal mode : ITU-R REC, 540-2  
7Unit SITOR Code
- ▶ Printer type : Thermal B Dot
- ▶ Character/Line : English:40 Characters  
Korean:20 Characters
- ▶ Paper size : 80mm×50mm×25m Thermal Paper
- ▶ Power supply : 10V~32V DC
- ▶ Dimensions & weight : 242(W)×170(H)×128(D)mm, 2.5kg



406MHz/121.5MHz E.P.I.R.B. (Emergency Position Indicating Radio Beacon)

• SEP-406



**Features / Specifications**

- ▶ Compliant with GMDSS, IMO/CCIR, RTCM and COSPAS/SARSAT,
- ▶ Built-in self-test function and a device against inadvertent operating.
- ▶ Automatic float free housing by hydraulic pressure.
- ▶ Totally watertight in seawater, oil.
- ▶ Temperature : Operating  $-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$
- ▶ Battery : Lithium holds for 4 years
- ▶ Operating life : 48 hours at  $-20^{\circ}\text{C}$   
80 hours at  $+20^{\circ}\text{C}$
- ▶ Weight : 1.5Kg

**406MHz Satellite Transmitter**

- ▶ Frequency :  $406.025\text{MHz} \pm 2\text{ppm}$
- ▶ Output power :  $5\text{W} \pm 2\text{dB}$
- ▶ Radio type : G1B

**121.5MHz Homing Transmitter**

- ▶ Frequency :  $121.5\text{MHz} \pm 10\text{ppm}$
- ▶ Output power :  $\geq 75\text{mW}$
- ▶ Radio type : A3x

RADAR TRANSPONDER (SART)

• TRON SART



**Features / Specifications**

- ▶ Compliant with ICE-ETSI-DTI and GMDSS standards.
- ▶ Compact and lightweight.
- ▶ Totally watertight.
- ▶ Frequency : X-band (9.2~9.5GHz)
- ▶ Output power : Min. 400mW (+26 dBm)
- ▶ Battery capacity : Min. 96hrs, standby +8hrs,
- ▶ Antenna polarization : horizontal
- ▶ Frequency range :  $-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$
- ▶ Dimensions & weight : 85(W)×370(H)mm, 1.05kg

TWO-WAY RADIO TELEPHONE

• SMD-150



**Features / Specifications**

- ▶ Completely Water/Oil resistant.
- ▶ Impact and Drop Resistant from a Height of 1M .
- ▶ Frequency range : 156MHz~163MHz
- ▶ Output power : HIGH 2W, LOW 0.5W
- ▶ Modes of emission : F3E
- ▶ Communication Mode : Semi-DUPLEX
- ▶ Battery life : 8hours (10% TX, 10% RX AND 80% STAND BY)
- ▶ Power supply : 9.6V DC
- ▶ Dimensions & weight : 67(W)×313(H)×40(H)mm, 1.65kg



## 30W/50W SSB TRANSCEIVER

- SRT-2030/2050



### Features / Specifications

- ▶ Synthesized operation.
- ▶ 10Hz STEP function.
- ▶ Easy to read function and frequency using large LCD display.
- ▶ Simple one-touch operation.
- ▶ Compact and lightweight.
- ▶ Totally elimination of engine and external pulse noise with Noise Blanker circuit.
- ▶ Frequency range : TX : 1.6MHz ~ 25.999MHz  
RX : 500KHz ~ 29.999MHz
- ▶ Communication mode : Simplex and Semi-duplex
- ▶ Channel : 300 Channels
- ▶ Power supply : DC24V ± 15%
- ▶ Modes of emission and output power : J3E(30W), H3E(10W) : SRT-2030  
J3E(50W), H3E(17W) : SRT-2050
- ▶ Method of reception : DOUBLE SUPERHETERODYNE
- ▶ Intermediate frequency : 49.455MHz, 455KHz
- ▶ Duration of alarm transmission : 45sec ± 2sec
- ▶ Dimensions & Weight : 240(W)×290(H)×160(D)mm, 11.75Kg

## 100W/150W SSB TRANSCEIVER

- SRT-2100/2150



### Features / Specifications

- ▶ Synthesized operation enables to read the function and frequency easily.
- ▶ 10Hz STEP function.
- ▶ Easy to read function and frequency using large LCD display.
- ▶ Simple one-touch operation.
- ▶ Compact and lightweight.
- ▶ Totally elimination of engine and external pulse noise with Noise Blanker circuit.
- ▶ Frequency range : TX : 1.6MHz ~ 25.999MHz  
RX : 500KHz ~ 29.999MHz
- ▶ Communication mode : Simplex and Semi-duplex
- ▶ Channel : 300 Channels
- ▶ Power supply : DC24V ± 15%
- ▶ Modes emission and output power : 1.6~26.99MHz - J3E(100W/50W/25W)  
H3E(30W/25W/20W)  
27~27.99MHz - J3E(30W/20W/10W)  
H3E(10W/8W/5W)
- ▶ Method of reception : DOUBLE SUPERHETERODYNE
- ▶ Intermediate frequency : 49.455MHz, 455KHz
- ▶ Duration of transmission : 45sec ± 2sec
- ▶ Dimensions & Weight : 240(W)×290(H)×160(D)mm, 11.75Kg



## 50W DSC SSB TRANSCEIVER

• SRG-2050D



### Features / Specifications

- ▶ Digital new communication system.
- ▶ Select individual and group calling.
- ▶ Finding a position of communication partner.
- ▶ Totally elimination of engine and external pulse noise with Noise Blanker circuit.
- ▶ Easy to read function and frequency with Large LCD display.
- ▶ Synthesized operation and 10Hz STEP function.
- ▶ Built-in emergency alarm device.
- ▶ Frequency range : TX : 1.6MHz ~ 27.50MHz  
RX : 500KHz ~ 29.99MHz
- ▶ Communication mode : Simplex and Semi-duplex
- ▶ Channel : 300 Channels
- ▶ Power supply: DC24V ± 15%
- ▶ Mode of emission and output power: J3E(50W), J2B(30W), H3E(17W)
- ▶ Antenna impedance : 50 Ω
- ▶ DSC receiver Frequency : 2187.5, 4207.5, 6312, 8414.5, 12577, 16804.5KHz
- ▶ Modes of emission : F1B, J2B
- ▶ Dimensions & Weight : 238(W) × 285(H) × 166(D), 11.75Kg

## MARINE VHF RADIO TELEPHONE

• STR-570



### Features / Specifications

- ▶ New technical DOS system, keep high stability frequency, low noise, good voice.
- ▶ Easy to install in any place.
- ▶ Accept channels recommended by Russia and ITU RR.
- ▶ Can scan dual watch and all channels partly and simultaneously.
- ▶ It consists of remote system, possible to remote with HAND-SET.
- ▶ It consists of emergency channel and emergency telephone system.
- ▶ Frequency range : 146-174 MHz
- ▶ Communication mode : SIMPLEX, DUPLEX, DSC
- ▶ Channel : 999 channels. (ITU, USA, WEA, PRI)
- ▶ Modes of emission : F3E
- ▶ Antenna impedance : 50Ω
- ▶ Transmitting output : HIGH 25W, LOW 1W
- ▶ Modulation : Frequency modulation
- ▶ Bandwidth : 16KHz or less
- ▶ Emergency signal : 1300Hz, 2200Hz
- ▶ Receiving sensitivity : 0.25μV or less (20dB NQ)
- ▶ Power supply : AC 110/220V 60Hz, DC24V
- ▶ Dimensions & Weight : 216(W) × 80(H) × 302(D)mm, 4.45Kg



## 27M SSB TRANSCEIVER

### • ACRO- I



### Features / Specifications

- ▶ Adoption of DOS system enabling high stability frequency, high quality of sound, low noise.
- ▶ Solid state type circuit diagram enable saving power consumption.
- ▶ Frequency range : Transmitting:27.5~28MHz  
Receiving:500KHz~29.99MHz
- ▶ Channels : 12
- ▶ Modes of emission : J3E,H3E
- ▶ Communication mode : Simplex
- ▶ Air antenna : 75 ohm vertical whip antenna
- ▶ Type of emission and output : J3E:10W H3E:3W
- ▶ Frequency stability : Within  $\pm 20$ Hz
- ▶ Modulation method : Low-power stage balanced
- ▶ Oscillation : DOS
- ▶ Occupied bandwidth : Within 3KHz
- ▶ Carrier attenuation : 40 dB or more
- ▶ Receiving type : Double super heterodyne
- ▶ Sensitivity : S/N 20dB(output 500mV)  
J3E 3uA or less H3E 10uA or less
- ▶ Spurious interference ratio : 40dB or more
- ▶ Output impedance : 4 $\Omega$
- ▶ Power supply : DC24V  $\pm 10\%$
- ▶ Ambient temperature :  $-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- ▶ Alarm signal frequency : 27821.0KHz(H3E)
- ▶ Type approval model : ST-1000
- ▶ Dimensions & Weight : 216(W) $\times$ 80(H) $\times$ 302(D)mm, 5Kg

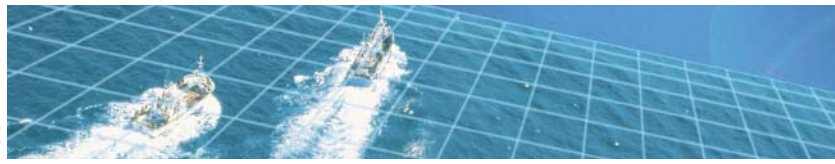
## 27M SSB TRANSCEIVER

### • ACRO- II



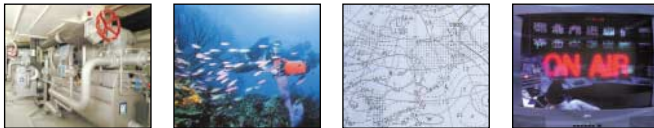
### Features / Specifications

- ▶ Frequency range : Transmitting:27.5~28MHz  
Receiving:500KHz~29.99MHz
- ▶ Channels : 99(Memory 20)
- ▶ Communication method : Simplex, semi-duplex
- ▶ Air antenna : 75 ohm vertical whip antenna
- ▶ Modes of emission and output : J3E:10W H3E:3W
- ▶ Frequency stability : Within  $\pm 20$ Hz
- ▶ Modulation method : Low-power stage balanced
- ▶ Oscillation : DOS
- ▶ Occupied bandwidth : Within 3KHz
- ▶ Carrier attenuation : 40 dB or more
- ▶ Receiving type : Double super heterodyne
- ▶ Sensitivity : S/N 20dB(output 500mV)  
J3E 3uA or less H3E 10uA or less
- ▶ Spurious interference ratio : 40dB or more
- ▶ Overall distortion : 20dB or more
- ▶ Output impedance : 8 $\Omega$
- ▶ Power supply : DC24V  $\pm 10\%$
- ▶ Ambient temperature :  $-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- ▶ Alarm signal frequency : 27821.0KHz(H3E)
- ▶ Type approval model : ST-2000
- ▶ Dimensions & Weight : 216(W) $\times$ 80(H) $\times$ 302(D)mm, 5Kg



## LCD GPS/DGPS PLOTTER(10.4")

- **NAVIS 2500/2500D**



- ▶ CCTV, Underwater Camera, TV, FM Radio, Video, Climate Fax, are able to Interface with it.

### Features / Specifications

- ▶ Supreme brightness of 350 candela.
- ▶ Adoption of 10.4" color display, widen visual field 180°, TFT LCD enabling clear pictures.
- ▶ Course up 360° revolution function according to ship head direction per 1°.
- ▶ Having two C-MAP NT cartridge slot which offer world map.
- ▶ The brisk screen changing system by having superspeed CPU.
- ▶ Convenience operation : Double keyboard is made up of front keyboard & Remote control
- ▶ Completely sealed up unit enables protecting from heat, sea water, shock.
- ▶ Count actual navigation distance by displaying color difference depends on straight route or curved ling
- ▶ Receiving frequency : L1 1575.42MHz(C/A CODE)
- ▶ Receiving type : Digital 12channel parallel
- ▶ Accuracy : GPS(NAVIS 2500)
  - a) Position : 10M 2D RMS(HDOP<2)(SA OFF)
 DGPS(NAVIS 2500D)
  - a) Position : 3M 2D RMS(HDOP<2)(SA OFF)
  - b) Velocity : 0.1kt RMS(HSOP<2)(SA OFF)
- ▶ Resolution : 640×480 PIXELS 256 colors
- ▶ Projection : Mercator drawing
- ▶ Tracking point : 20.000points, 99pieces of work diary
- ▶ Kinds of mark & mark points : 10,000Points, 21kinds
- ▶ Drawing point : 10.000points
- ▶ Screen mode : Usual, true motion, course-up, north-up, head-up modes
- ▶ Power supply : DC 10.8V~40V, consumption power 40W
- ▶ Dimensions & Weight : 316(W)×67(H)×42(D)mm, 3.5kg

## LCD GPS/DGPS PLOTTER(15.1")

- **NAVIS 3700/3700D**



- ▶ CCTV, Underwater Camera, TV, FM Radio, Video, Climate Fax, are able to Interface with it.

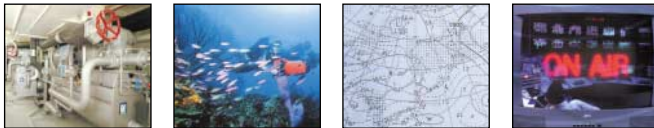
### Features / Specifications

- ▶ Adoption of 15.1" color display, widen visual field 180°, TFT LCD enables clear pictures.
- ▶ Course up 360° revolution function according to ship head direction per 1°.
- ▶ Having two C-MAP NT cartridge slot which offer world map.
- ▶ The brisk screen changing system by having superspeed CPU.
- ▶ Convenience operation : Double keyboard is made up of front keyboard & Remote control
- ▶ Completely sealed up unit enables protecting from heat, sea water, shock.
- ▶ Count actual navigation distance by displaying color difference depends on straight route or curved ling
- ▶ Receiving frequency : L1 1575.42MHz(C/A CODE)
- ▶ Receiving type : Digital 12channel parallel
- ▶ Accuracy : GPS(NAVIS 3700)
  - a) Position : 10M 2D RMS(HDOP<2)(SA OFF)
 DGPS(NAVIS 3700D)
  - a) Position : 3M 2D RMS(HDOP<2)(SA OFF)
  - b) Velocity : 0.1kt RMS(HSOP<2)(SA OFF)
- ▶ Resolution : 1024×68 PIXELS 256 colors
- ▶ Projection : Mercator drawing
- ▶ Tracking capacity : 20,000points, 99 pieces of 99 work diary
- ▶ Kinds of mark & mark points : 10,000Points, 21kinds
- ▶ Drawing point : 10.000points
- ▶ Screen mode : Usual, true motion, course-up, north-up, head-up modes
- ▶ Power supply : DC 10.8V~40V, consumption power 40W
- ▶ Dimensions & Weight : 406(W)×27(H)×10(D)mm, 7kg



## LCD GPS/DGPS PLOTTER + FISH FINDER(10.4")

- **NAVIS 3000/3000D**



- ▶ CCTV, Underwater Camera, TV, FM Radio, Video, Climate Fax, are able to Interface with it.

### Features / Specifications

- ▶ Adoption of 10.4" color display, widen visual field(180°, TFT LCD enables distinct pictures.
- ▶ Course up 360° revolution function according to ship head direction per 1°.
- ▶ Having two C-MAP NT cartridge slot which offer world map.
- ▶ Full-down mode, help mode indicated automatically.
- ▶ Convenience operation with Double keyboard system (front keyboard & Remote controller).
- ▶ Completely sealed up unit enables protecting from heat, sea water, shock.
- ▶ Used 2 frequency enables to discriminate small sized school.
- ▶ Can effectively distinguish school of fish under the ship's bottom.
- ▶ Receiving frequency : L1 1575.42MHz(C/A CODE)
- ▶ Receiving type : Digital 12channel parallel
- ▶ Accuracy : GPS(NAVIS 3000)
  - a) Position : 10M 2D RMS(HDOP<2)(SA OFF)
- ▶ DGPS(NAVIS 3000D)
  - a) Position : 3M 2D RMS(HDOP<2)(SA OFF)
  - b) Velocity : 0.1kt RMS(HSOP<2)(SA OFF)
- ▶ Resolution : 640×480 PIXELS 256 colors
- ▶ Projection : Mercator drawing
- ▶ Tracking capacity : 20,000points, 99pieces of work diary
- ▶ Kinds of mark : 21kinds
- ▶ Screen mode : Usual, true motion, course-up, north-up, head-up modes
- ▶ Indicator of Fishfinder : 50/200KHz 2frequency or 50KHz, 200KHz 1frequency
- ▶ Output power : 600W(2frequency), 1.5KW(1frequency)
- ▶ Power supply : DC 10.8V~40V, power consumption : 40W
- ▶ Dimensions & Weight : 316(W)×42(H)×67(D)mm, 3.5kg

## GPS/DGPS NAVIGATOR

- **SPR-1400**
- **DSPR-1400**



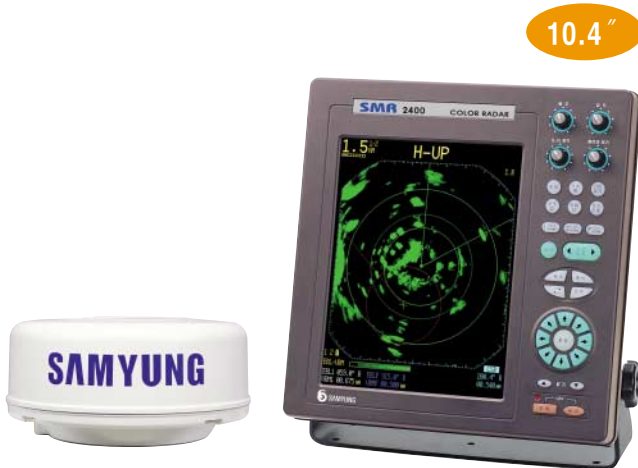
### Features / Specifications

- ▶ Compliant with IMO & MSC.
- ▶ Easy to install as potable and light size.
- ▶ Large LCD enables to see screen efficiently.
- ▶ Automatic receiving accuracy.
- ▶ Available to select a geodetic survey – WGS-84.
- ▶ Receiving frequency : L1 1575.42(C/A code)
- ▶ Display Luminosity : 128 \* 64 dot
- ▶ The number of tracking Satellite : 12 Channels, 12 Satellites
- ▶ Receiving Type : Digital 12 Channels
- ▶ Receiving Sensitivity : Less than -130dBm
- ▶ Route memory : 100 points
- ▶ Accuracy : GPS(SPR-1400)
  - ⓐ Position=10m 2D RMS(HDOP<2, SA OFF)
- ▶ DGPS(DSPR-1400)
  - ⓐ Position=3m 2D RMS(HDOP<2, SA OFF)
  - ⓑ Velocity=0.1Knots 2D RMS(HDOP<2, SA OFF)
- ▶ Interface : SAMYUNG, NMEA 0183, FURUNO(CIF), JRC, input DGPS signature(RTCM)
- ▶ Power Supply : DC 10 ~ 36V, Less than 20W
- ▶ Dimensions & Weight : 190(W) \* 112(H) \* 73(D)mm, 0.9Kg



### LCD COLOR RADAR(10.4")

- SMR-2400

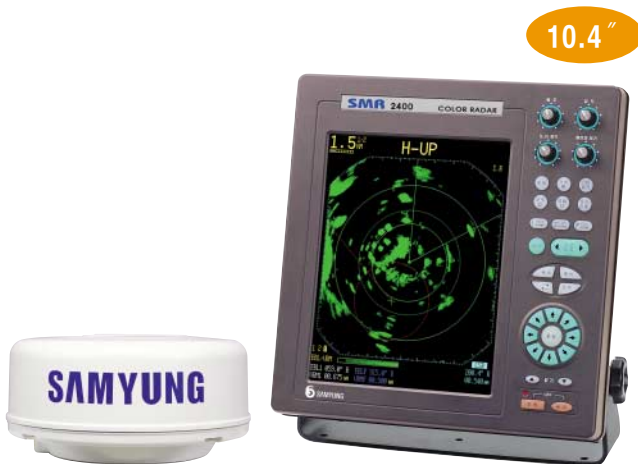


#### Features / Specifications

- ▶ Offers wide screen by adopting 10.4" color TFT LCD.
- ▶ Can choose the color of PPI display among white, blue, red, yellow, green.
- ▶ Adopted 8 direction key to make the cursor move speedily.
- ▶ Intermittent Tx mode : can operate with less consuming electric power.
- ▶ 2 of EBL, 2 of VRM : can measure accurate distance and direction
- ▶ Shape : dome-type Antenna
- ▶ Output power : 2KW
- ▶ Tx frequency : 9410 ±30MHz
- ▶ Revolution : 24 rpm
- ▶ Beam width : Horizontal 4.0°  
Vertical 25°
- ▶ Synchronising Method : Automatic / Manual switch over
- ▶ Relative wind velocity : 51.5m/sec (100knots)
- ▶ Display unit : 10.4" color VGA TFT LCD, Vertical Display.
- ▶ Distance Range : 0.125, 0.25, 0.5, 0.75, 1.5, 1, 2, 4, 6, 8, 12, 16, 24mm
- ▶ Minimum distance : 25 meters
- ▶ Display mode : head-up, north-up, course-up, true motion
- ▶ Preheat-time : about 180sec.
- ▶ Power supply : DC +10V ~ +36V, 50W
- ▶ Dimensions & Weight : 310(W)×296(W)×124(D)mm, 5.8Kg

### LCD COLOR RADAR(10.4")

- SMR-3600



#### Features / Specifications

- ▶ Offers wide screen by adopting 10.4" color TFT LCD.
- ▶ Can choose the color of PPI display among white, blue, red, yellow, green.
- ▶ Adopted 8 direction key to make the cursor move speedily.
- ▶ Intermittent Tx mode : can operate with less consuming electric power.
- ▶ 2 of EBL, 2 of VRM : can measure accurate distance and direction
- ▶ Shape : dome-type Antenna
- ▶ Output power : 4KW
- ▶ Tx frequency : 9410 ±30MHz
- ▶ Revolution : 24 rpm
- ▶ Beam width : Horizontal 4.0°  
Vertical 25°
- ▶ Synchronising Method : Automatic / Manual switch over
- ▶ Relative wind velocity : 51.5m/sec (100knots)
- ▶ Display unit : 10.4" color VGA TFT LCD, Vertical Display
- ▶ Distance Range : 0.125, 0.25, 0.5, 0.75, 1.5, 1, 2, 4, 6, 8, 12, 16, 24, 36mm
- ▶ Minimum distance : 25 meters
- ▶ Display mode : head-up, north-up, course-up, true motion
- ▶ Preheat-time : about 180sec.
- ▶ Power supply : DC +10V ~ +36V, 60W
- ▶ Dimensions & Weight : 310(W)×296(W)×124(D)mm, 5.8Kg

## MARITIME TELEPHONE(MINI-M)

• TT-3064A



### Features / Specifications

- ▶ Telephone, Fax and E-mail are available.
- ▶ Easy to install below-deck transceiver unit, with separate handset/cradle unit.
- ▶ Automatic 2-way maritime satellite tracking antenna.
- ▶ Operating frequencies : Tx 1525.0 ~ 1559.0 MHz  
Rx 1626.5 ~ 1660.5 MHz
- ▶ Channel spacing : 1.25KHz
- ▶ Range of angle : Rule  $\pm 25^\circ$   
Pitch  $\pm 15^\circ$   
Rotation  $\pm 12^\circ$
- ▶ Operating temperature :  $-40^\circ\text{C} \sim +80^\circ\text{C}$
- ▶ Relative humidity : 95%
- ▶ Wind : 100 knots
- ▶ Power supply : 10.5 ~ 32V DC
- ▶ Power consumption : Tx mode : 40W  
Rx mode : 20W  
Maximum : 70W
- ▶ Dimensions and Weight :  
Electronics Unit (TT-3034B) : 25(H) $\times$ 268(W) $\times$ 211(D)mm. 1.3Kg  
Maritime Stabilised Antenna (TT-3007C) : 210( $\varnothing$ ) $\times$ 240(H) mm, 2.2kg  
Cradle for the handset (TT-3622A) : 160(H) $\times$ 61(W) $\times$ 27(D) mm, 0.15kg  
Handset (TT-3620B) : 200(H) $\times$ 52(W) $\times$ 33(D) mm, 0.25kg

## DIGITAL SATELLITE TV TRACKING ANTENNA(FOR VESSEL)

• SDA-1500



### Features / Specifications

- ▶ Automatic Tracking Antenna can receive clear picture.
- ▶ Available to receive satellite signal and power supply with one cable.
- ▶ Available to receive all kinds of satellite receiver.
- ▶ Receiving Satellite : Mugoonghwa No. 3 (KOREASAT 3)
- ▶ Polarization : LHCP
- ▶ Range of receiving frequency : 11.7 ~ 12.0GHz
- ▶ Output frequency: 950 ~ 1250MHz
- ▶ Range of azimuth control :  $\pm 340^\circ$
- ▶ Roll / Pitching :  $\pm 30^\circ$
- ▶ Range of angle :  $15^\circ \sim 75^\circ$
- ▶ Range of temperature :  $-30^\circ\text{C} \sim 80^\circ\text{C}$
- ▶ Recovery time of receiving : 3 Sec.
- ▶ Power supply : DC10 ~ 36V
- ▶ Power Consumption : DC 12V & 800mA(Max.)
- ▶ Dimensions & Weight : 380(Diameter) $\times$ 307(Height) mm, 7.0Kg



## AUTO PILOT SYSTEM

- SM-970



### Features / Specifications

- ▶ Simple and easy operation.
- ▶ Linked to GPS plotter, auto navigation, fishing work possible without person.
- ▶ Wire remote steering control.
- ▶ The compass direction displayed in remote controller can keep watch on course.
- ▶ Lightweight and compact.
- ▶ Can be linked to engine remote control unit.
- ▶ Using contactless magnetic sensor at transmitter that enables to use endless life time.
- ▶ Using voltage of Steering controller : DC20~40V
- ▶ Signal output of solenoid : MAX 3A, +COMMON, -OUTPUT
- ▶ Heading angle resolution : 0.5 ° (electronic compass)
- ▶ Direction setting resolution : 1 °
- ▶ GPS plotter I/F(Connecting signal) : RS-232C(NMEA-0183)

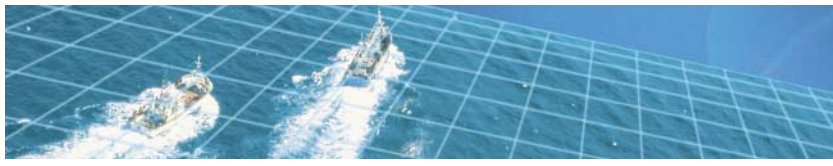
## AUTO PILOT + ENGINE CONTROL SYSTEM

- SM-970 + 975



### Features / Specifications

- ▶ Remote steering & remote engine control at any place of the ship.
- ▶ Linked to GPS Plotter, it can be used for auto navigation, fishing work possible without person.
- ▶ The compass direction displayed in remote controller can keep watch on course.
- ▶ Applicable to the whole engine type.
- ▶ Manual steering operation via remote controller even when compass/plotters steering.
- ▶ Using voltage of Steering controller : DC20~40V
- ▶ Signal output of solenoid : MAX 3A, +COMMON, -OUTPUT
- ▶ Angle indicator : 0.4mA(Full scale)
- ▶ Heading angle resolution : 0.5 ° (electronic compass)
- ▶ Direction setting resolution : 1 °
- ▶ GPS plotter I/F(Connecting signal) : RS-232C(NMEA-0183)



## A POPULAR TYPE AUTOMATION SYSTEM

• SM-980



### Features / Specifications

- ▶ Can install easily on board which manually operated existing hydraulic system.
- ▶ Can control clutch, governor and direction steering by remote control at any places of the ship.
- ▶ Can control the ship's direction towards destination in connection with GPS plotter without person.
- ▶ Can save the fuel consumption owing to navigation in straight line without an error by using newly developed electronic compass.
- ▶ Can monitor the ship's trace by displaying her direction on remote controller.
- ▶ Operating Voltage for steering and electronic lever : DC20 ~ 40V  
(Rated Voltage 24V)
- ▶ Direction resolution : 0.5 deg. (Electronic Compass)
- ▶ Direction setting resolution : 1 degree
- ▶ GPS Plotter I/F (Connection signal) : RS - 232C (NMEA-0183)
- ▶ Using Temperature : -20°C ~ +60°C

## A POPULAR TYPE AUTOMATION + ENGINE CONTROL SYSTEM

• SM-980 + 975



### Features / Specifications

- ▶ Can install easily on board which manually operated existing hydraulic system.
- ▶ Can control clutch, reduction gear and direction steering by remote control at any places of ship.
- ▶ Can control the ship's direction towards destination in connection with GPS plotter without person.
- ▶ Can save the fuel consumption owing to navigation in straight line without an error by using newly developed electronic compass.
- ▶ Can monitor the ship's trace by displaying her direction on remote controller.
- ▶ Direction resolution : 0.5° . (Electronic Compass)
- ▶ Direction setting resolution : 1°
- ▶ GPS Plotter I/F (Connection signal) : RS - 232C (NMEA-0183)
- ▶ Using Temperature : -20°C ~ +60°C
- ▶ Operating Voltage for steering and electronic lever : DC20 ~ 40V  
(Rated Voltage 24V)
- ▶ Power consumption : Max 50 W


**A POPULAR TYPE AUTOMATION+ENGINE CONTROL SYSTEM+HYDRAULIC CONTROL**
**• SM-980 + 975 + HYDRAULIC CONTROL**

**Features / Specifications**

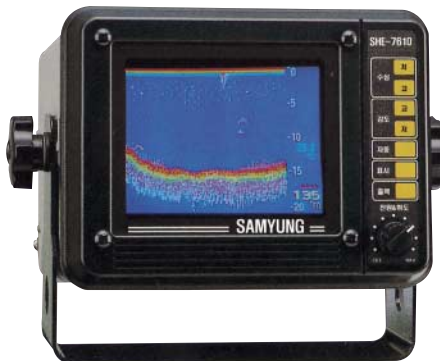
- ▶ Can install easily on board by using cylinder which is absence of hydraulic unit.
- ▶ Can control clutch, reduction gear and direction steering by remote control at any places of the ship.
- ▶ Can control the ship's direction towards destination in connection with GPS plotter without person.
- ▶ Can save the fuel consumption owing to navigation in straight line without an error by using newly developed electronic compass.
- ▶ Can monitor the ship's trace by displaying her direction on remote controller.
- ▶ Direction resolution : 0.5 deg. (Electronic Compass)
- ▶ Direction setting resolution : 1°
- ▶ GPS Plotter I/F (Connection signal) : RS - 232C (NMEA-0183)
- ▶ Using Temperature : -20°C ~ +60°C
- ▶ Operating Voltage for steering and electronic lever : DC20 ~ 40V  
(Rated Voltage 24V)
- ▶ Power consumption : Max 50 W





## COLOR FISH FINDER(6")

- SHE-7610

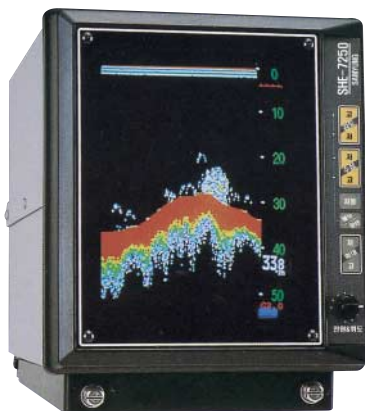


### Features / Specifications

- ▶ Track shoal of fish powerfully.
- ▶ Sharp discrimination of large/small school of fish and catching the quick movement of fish is possible.
- ▶ Built-in A scope.
- ▶ Adopting automatic enlarging function which can easily distinguish bottom fish on the sea bottom.
- ▶ Simple design to small size fishing boat and vessel.
- ▶ Display : 6" color CRT
- ▶ Frequency : 50KHz, 120KHz, 200KHz(selectable)
- ▶ Transmitting output : 200W
- ▶ Depth range : 4~200M(120KHz, 200KHz),  
8~500M(50KHz)
- ▶ Sweep speed : STOP, 1, 2, 3, 4 steps
- ▶ Auto magnification : 4 times
- ▶ Background color : Black/Blue
- ▶ Power supply : DC12V
- ▶ Consumption power : 20W
- ▶ Dimensions & Weight : 246(W)×187(H)×313(D)mm, 3Kg

## COLOR FISH FINDER(10")

- SHE-7250



### Features / Specifications

- ▶ Easy to search a school of fish using high-tech vibrator.
- ▶ Can install the unit in both width and length according to the space in bridge.
- ▶ Built in magnifying function for the bottom of the sea and homing bottom.
- ▶ Easy to search shoal of fish in shallow water.
- ▶ Display : 10" color CRT
- ▶ Frequency : 50KHz, 200KHz(Selectable)
- ▶ Output : 600W, 1.2KW
- ▶ Depth range : 5~500M(200KHz)  
5~1,000M(50KHz)
- ▶ Fixed bottom, Homing magnification: By 2times, 4times, 8times
- ▶ Auto gain : Sensitivity & Receiving ON/OFF
- ▶ Sweep speed : Stop, 1, 2, 3, 4, 5 step
- ▶ Background color : Black/Blue
- ▶ STC : ON/OFF
- ▶ Clean Echo : ON/OFF
- ▶ Color configuration : 7color + user's setting
- ▶ Operating voltage : DC11~35V
- ▶ Power consumption : 40W
- ▶ Dimensions & Weight : 278(W)×376(H)×335(D)mm, approx 9.2Kg



## COLOR FISH FINDER(10")

• SHE-7450



### Features / Specifications

- ▶ Sharp discriminative ability to discriminate exactly even a minute school of fish.
- ▶ Can search school of fish at the bottom of the sea.
- ▶ Can discriminate school of fish by selecting nearby frequency(55KHz).
- ▶ Can analyze and distinguish the existing school of fish by displaying the passed screen simultaneously.
- ▶ Sharp discrimination of large/small school of fish and bottom school of fish possible by adopting A-scope function.
- ▶ Built in function of part and fixed magnification.
- ▶ Can install the unit in both width and length according to the space in bridge.
- ▶ Display : 10" color CRT
- ▶ Frequency and output : 50KHz, 600W, 1.2KW, 7KW (55KHz NEAR-BY FREQUENCY)  
200KHz,600W,1.2KW  
50KHz/200KHz,600W,1.2KW  
28KHz,3KW
- ▶ Depth range : 10~2000M
- ▶ Shift : Max.2,000 ~4,000M
- ▶ Sweep speed : STOP, 1, 2, 3, 4, 5 step
- ▶ Auto gain : Sensitivity & Receiving ON/OFF
- ▶ Osc output : low, middle ,high
- ▶ Color configuration : 7color +user's setting
- ▶ Background color : Black/Blue
- ▶ STC : ON/OFF
- ▶ Clean Echo : ON/OFF
- ▶ A-Scope : ON/OFF
- ▶ Operating voltage : DC11-35V
- ▶ Power consumption : 40W
- ▶ Dimensions & Weight : 278(W)×376(H)×335(D)mm, approx 9.5Kg

## COLOR FISH FINDER(14")

• SHE-7470

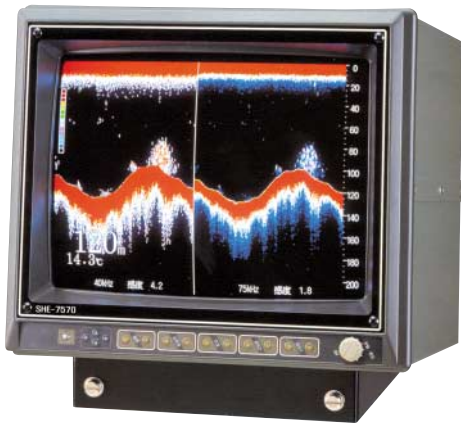


### Features / Specifications

- ▶ Can distinguish a minute school of fish quickly by high-speed shooting and high precision CRT.
- ▶ High-speed shooting.
- ▶ Color Selection Function.
- ▶ Display : 14" color CRT.
- ▶ Transmitting frequency : 50KHz/200KHz/400KHz
- ▶ Transmitting output : 1.2KW
- ▶ Depth range : 5~500M
- ▶ Shift : Max 500~1000M
- ▶ Sweep speed : stop 1, 2, 3, 4, 5 steps
- ▶ Color configuration : 7 color +user's setting
- ▶ Osc output : low middle high
- ▶ STC : Off, 1, 2, 3, 4, 5 steps
- ▶ Clean echo : ON/OFF
- ▶ Display setting : 1~4 display setting
- ▶ Operating voltage : DC 20~35V
- ▶ Dimensions & Weight : 361(W)×364(H)×438(D)mm, approx 18Kg

## COLOR FISH FINDER(14")

- SHE-7570



### Features / Specifications

- ▶ High precision, high brightness, high shooting.
- ▶ High transmitting speed.
- ▶ Drastically decrease frequency interference with other vessels.
- ▶ Display : 14" color CRT.
- ▶ Transmitting frequency : 28KHz/55KHz/100KHz
- ▶ Transmitting output : 3KW, 5KW
- ▶ Depth range : 5~2000M
- ▶ Shift : Hand Max 2000~4000M
- ▶ Color clear : 11 steps
- ▶ Sweep speed : stop 1, 2, 3, 4, 5 step
- ▶ Color configuration : 7 color+user's setting
- ▶ Osc output : low, middle, high
- ▶ STC : off, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 steps
- ▶ Clean echo : Off, 1, 2, step
- ▶ Display color : black, black-blue, blue
- ▶ Display configuration : Basic/left-right  
2 partial/up-down 2 partial
- ▶ Depth figure position : up/down partial
- ▶ Dimensions & Weight : 361(W)×364(H)×438(D)mm, approx 18Kg

## COLOR SCANNING SONAR(14")

- SHE-7330



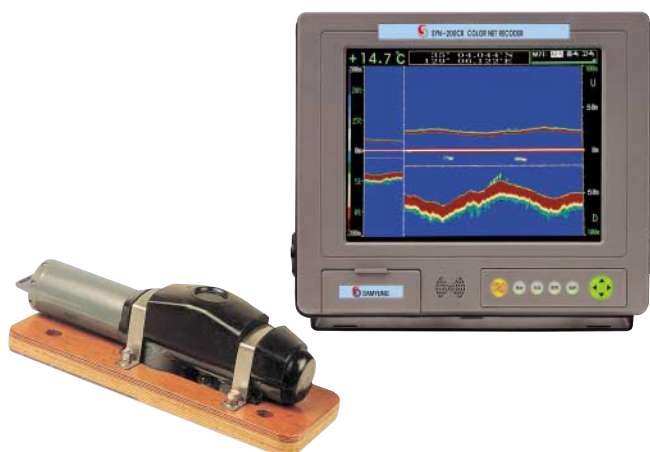
### Features / Specifications

- ▶ Built-in automatic stabilizer function.
- ▶ Target lock(trace reactions automatically).
- ▶ Color palette(choose variety of color tones).
- ▶ TVG(compensation of sonic waves).
- ▶ Easy to work - Remote control operation, selection sector angle and step angle.
- ▶ Adoption of off center image, vertical writing image, side scan image.
- ▶ Has excellent efficiency of discrimination power, it can pick up detailed school.
- ▶ Can pick up targets on all sides(360°).
- ▶ Image indication : PPI signal on a cathode ray tube
- ▶ Variable embossed curving range : +5° ~ -90° (1° step)
- ▶ Indicator power : 20~40V, 60W
- ▶ Frequency : 180KHz
- ▶ Lifting stroke : 200~400mm
- ▶ Lifting time : 10 sec.(400mm stroke, using 24V)
- ▶ Lifting up power : DC 10.5~30V
- ▶ Power consumption : 90W, Transducer lifting up : 200W
- ▶ Dimensions & weight : 419.2(W)×421.1(H)×468.7(D)mm, 28kg



## COLOR NET-RECORDER

- SYN-200CR/400CR

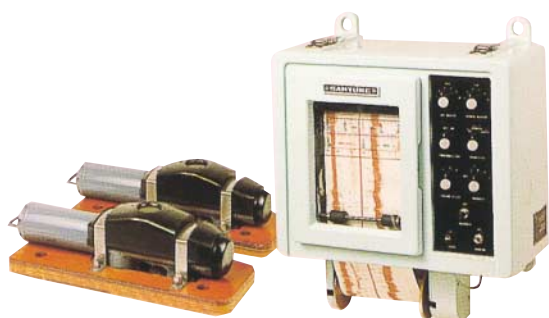


### Features / Specifications

- ▶ Adopted 10.4" of color TFT LCD to ensure clear and wide screen.
- ▶ Excellence of ability to distinguish a school of fish and fishing net.
- ▶ Screen display and print-out simultaneously.
- ▶ Display simultaneously both whole record and partial record for 200M and 400M
- ▶ Recording range(Meter)
  - SYN-200CR : 0~10, 0~20, 0~50, 0~100, 0~200
  - SYN-400CR : 0~10, 0~20, 0~50, 0~100, 0~200, 0~400
- ▶ Stored the previous 20 record in the main unit's memory.
- ▶ Receiving frequency : 50KHz supersonic wave FM
- ▶ Recording : Display and Print-out
- ▶ Printing paper : Roll type
- ▶ Power supply of recorder : +10V ~ +36V
- ▶ Max./Min. frequency of transmitter : 180KHz(SYN-200CR)  
75KHz(SYN-400CR)
- ▶ Signal discharge frequency : 50KHz supersonic wave FS modulation
- ▶ Effective distance : 2000m
- ▶ Power supply of station : 12V(alkaline battery A-1 × 8)
- ▶ Power consumption : 250mA ~ 300mA
- ▶ Dimensions & Weight : 316(W)×142(H)×267(D)mm, 3.5kg

## NET-RECORDER

- SYN-200RT/400RT



### Features / Specifications

- ▶ Detects trawl net opening, trawl location, fish schools entering, passing above and below the trawl net.
- ▶ Pinnacles and wrecks detection to avoid damage to the trawl net.
- ▶ Watch and record water temperature of net position.
- ▶ Depth recording range : upper & down 200M(SYN-200R/T)  
upper & down 400M(SYN-400R/T)
- ▶ Temp recording range : -3~ +24℃
- ▶ Receiving frequency : 50KHz Ultrasonic Wave FM
- ▶ Recording method : Record with multi-pen on 150mm paper
- ▶ Sounding frequency : 180KHz(SYN-200R/T)  
75KHz(SYN-400R/T)
- ▶ Effective distance : 2000m
- ▶ Power supply : AC 100V/220V±10%(Receiver),  
DC12V(A1 battery×8)(Transmitter)
- ▶ Dimensions : 420(W)×500(H)×250(D)mm(Receiver)



• AIS / GMDSS RADIO EQUIPMENT •



• GENERAL RADIO EQUIPMENT •



• NAVIGATION EQUIPMENT •



• FISHING EQUIPMENT •





**SAMYUNG ENC Co.,Ltd.**

**UK Distributor:**

Future Display Technology Ltd

Unit 10, Gaugemaster Way

Ford

Arundel

BN18 0RX

Tel: 01243 544014, Fax: 01243 544015

Email: [sales@fdtech.co.uk](mailto:sales@fdtech.co.uk), <http://www.fdtech.co.uk>



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