

**Display section :**  
PPI image by TFT liquid crystal color display

**Frequency :**  
21kHz, 24kHz, 28kHz

**Display resolution :**  
SXGA (1280X 1024)

**Display colors :**  
Sonar image -32-color display  
Character -4-color display  
Marker -2-color display

**Display modes :**  
Head-up, north-up, and true motion (\*External signals are necessary)

**Additional modes :**  
Stabilization (±20-degree compensation) ,  
off-center (enlarged 1.5 times in a desired direction)

**Simultaneous screen modes :**  
Vertical section screen (1 direction, 2directions, enlarged screen) ,  
sonar 2 directions (lengthwise, crosswise) , memory image, audio image,  
sonar enlarged screen, multiple screen, fish finder image

**Ranges :**  
Any 15 ranges can be selected out of 150, 200, 250, 300, 400, 500, 600, 700, 800,  
900, 1000, 1200, 1400, 1500, 1600, 1800, 2000, 2500, 3000, 4000, and 5000.  
The range is enlarged 1.5 times for off-center.

**Pulse width :**  
0.5-200 msec

**Receiving method :**  
Super heterodyne method, real-time beam method, and forming method

**Transmission method :**  
OMNI transmission/Special transmission method

**Audio frequency :**  
800Hz(fixed)

**Tilt angle range :**  
20° upward-60° degrees downward

**Section detection range :**  
0° -60° downward

**Beam (at 3dB) :**  
Transmission-Horizontal 360° × 60° , Section 12° × 60° ,  
Receiving-Horizontal 9° × 9° , Section 10° × 12°

**Additional functions :**  
Interference elimination, signal processing, clutter, TVG, AGC, memory card,  
and auto tilt angle functions

**Display marks :**  
Own boat mark, wake mark, cross-line cursor, event mark (3 kinds, and max.  
10 event marks each) , direction mark, cast-net mark, tidal current mark and other  
marks. (\*Some marks are displayed only when external signals are input.)

**External signal input :**  
NMEA0183 Four inputs available with NMEA 0183,  
NMEA0183 Own boat position, boat speed, boat speed bearing, seabed depth,  
sea water temperature, and bow bearing

**Hoist unit stroke :**  
LL=1500mm, L=1300mm

**Power supply :**  
Processing Single-phase 100~220VAC, 50/60 Hz, and 200VA  
Receiving Single-phase 220VAC, 50/60 Hz, and 600VA  
Sending 3-phase 220VAC, 50/60Hz, and 1500VA  
Hoist unit 3-phase 220VAC, 50/60Hz, and 1500VA

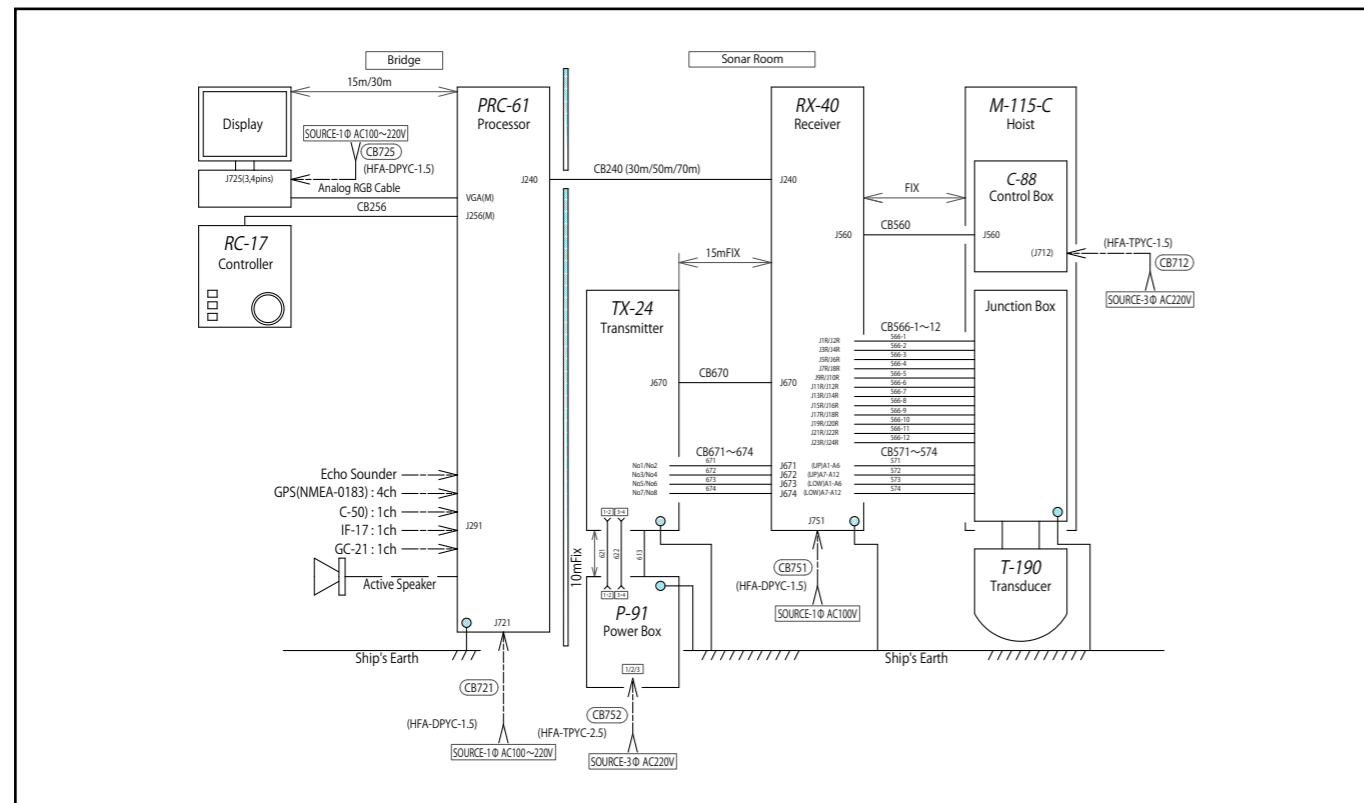
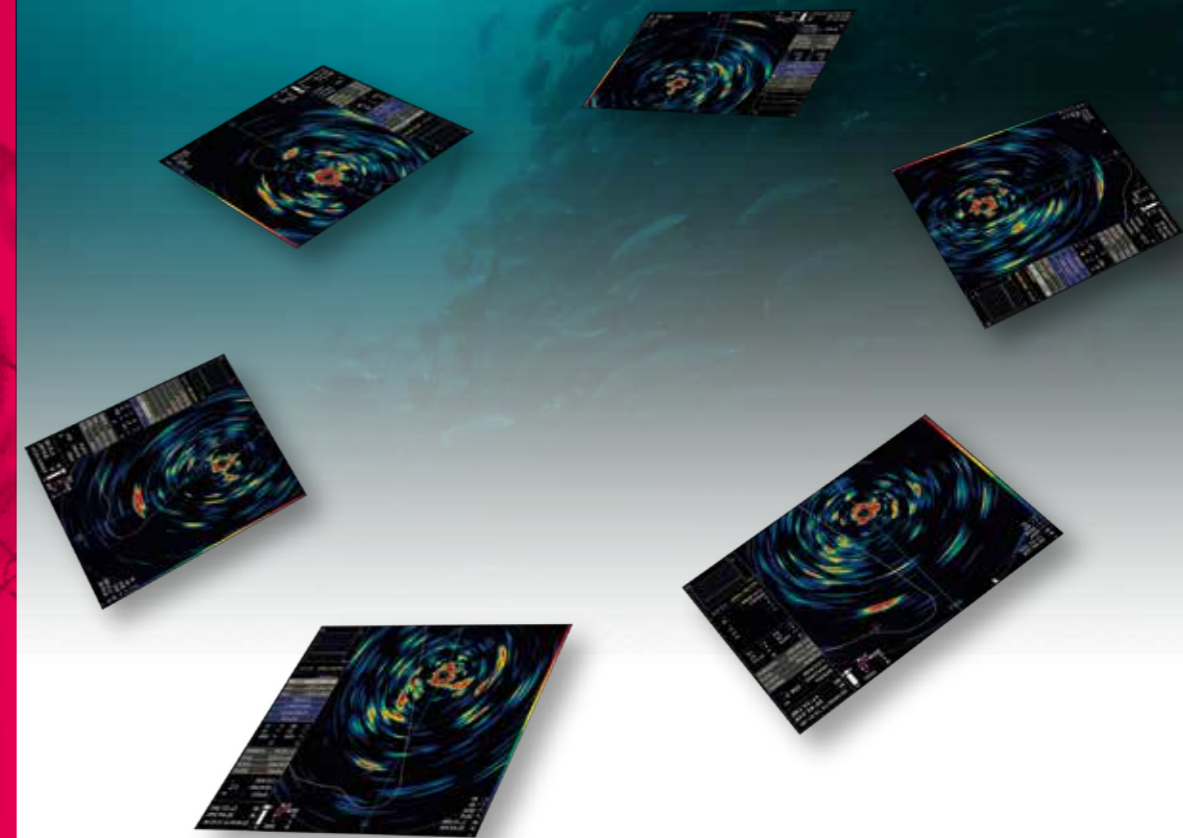
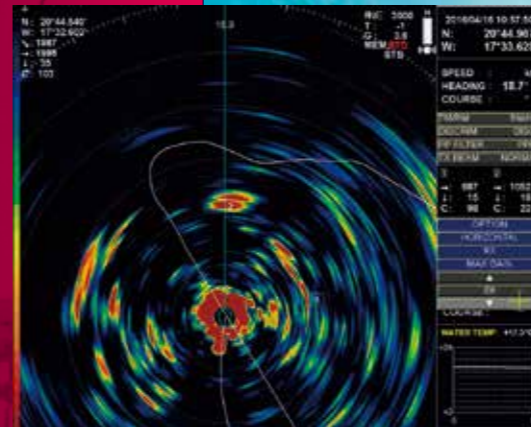
**Measurement(W×H×D) & Weight :**

I-133LCD	460mm×430mm×345mm	24Kg
RC-17 Remote Controller	246mm×158mm×46mm	1Kg
PRC-61 Processor	280mm×450mm×388mm	21Kg
TX-24 Transmitter	642mm×717mm×440mm	95Kg
RX-40 Receiver	617mm×754mm×448mm	90Kg
P-91 TX Power Box	440mm×490mm×250mm	34Kg
P-79B Power Box	215mm×335mm×153mm	12Kg
M-115C-LL Hoist	978mm×3700mm×837mm	945Kg

(with T-190 Transducer)

Super Scanning Sonar 5000 series  
Low Frequency

# KCS-5221Z



⚠ SAFETY PRECAUTION : Please be sure to read the Instruction Manual before operating  
● Specifications are subject to change without prior notice for improvement.



Super Scanning Sonar  
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# KCS-5221Z

## Valuable investments make unexpected profits.

Power is not the only quality needed to achieve good search results. Integration of all the following features will satisfy professional skippers, such as real effective power, minimized side-lobe, stabilization, and a precise display of the target.

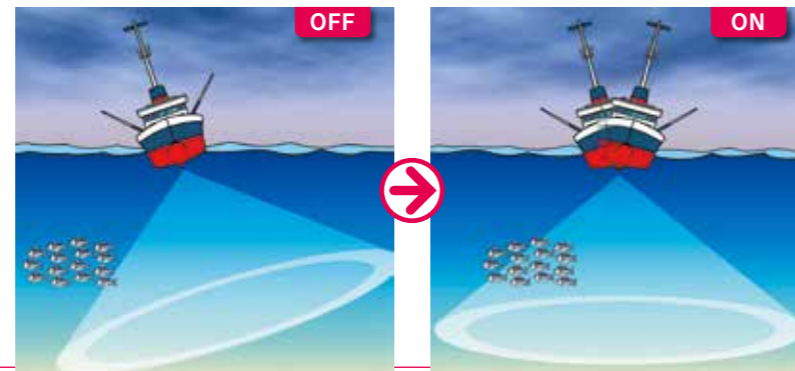
- Different display modes can be selected depending on the distance, fish type, and fishing methods
- Desired image processing methods can be selected
- Unnecessary side-lobe is minimized to the lowest possible level
- User-friendly miniaturized controller
- Advanced TX/RX stabilizing function
- Strong, stable hoist unit with guide rings
- Reliable stainless cover for protecting transducer
- Advanced sectional image

### Advanced vertical-section image and stabilization function

Changing the horizontal to vertical ratio of the sectional image clearly indicates the depth of a fish school. Together with an advanced stabilization function, the device displays no movement even when the ship pitches.

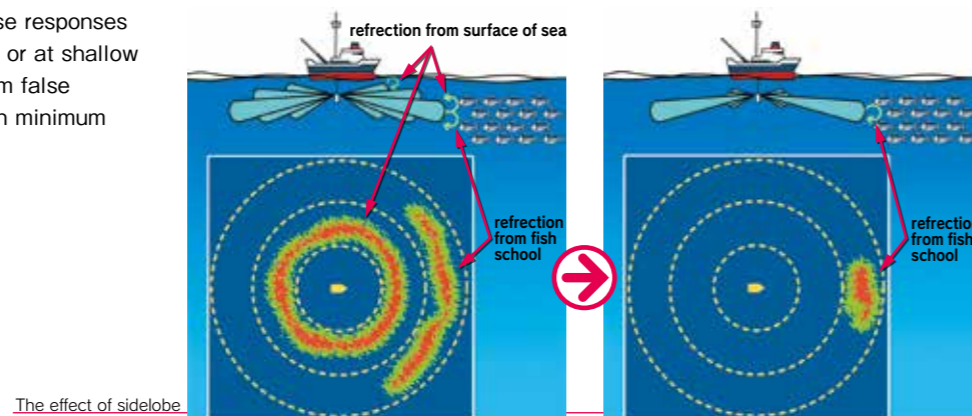
The stabilization function controls the depression angle in small 7.5 degree steps through 360 degrees for both transmission and reception. The processing time between the sensing of boat pitch to the adjustment of the depression angle has been dramatically reduced. The user can view highly.

The effect of stabilization



### Avoid false response from side-lobe

Have you given up with removing false responses from side-lobe on rough sea surfaces or at shallow seabed? Sonic's devices are free from false responses. We guarantee sounds with minimum side-lobe.



The effect of sidelobe



### Safe and reliable transducer

All Sonic Hoists have a structure with guide rings in order to withstand the threats presented by the sea. Also, transducers are exposed to shocks in the sea. Sonic use a unique transducer covered with STAINLESS STEEL to protect it from damage.

※756elements inside of the transducer



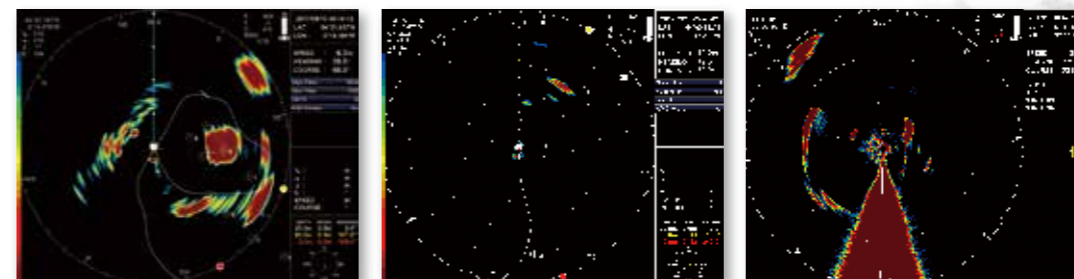
Photo of transducer

### High speed transmission cycle

High-speed image updating is essential in following fish movement. The device only takes 0.08 of a second from the last sound reception to the next transmission.

A high-speed vessel and the number of sonar transmission cycles are key points in catching up with fish.

### KCS5221Z sample pictures from real fishing grounds



Mackerel at short range

Herring at medium range

Anchovy at long range