

Display section :
 PPI image by TFT liquid crystal color display

Frequency :
 21kHz

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 10 ranges can be selected out of 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

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 (Ver1.5, Ver2.0, Ver3.0)
 Latitude, Longitude (GGA, GLL), Vessel Speed & Direction (VTG), Heading (HDT,
 HDM, HDG), Water Temperature (MTW), Water Depth (DBT, DBS), Wind Velocity
 & Direction (MWV, MWD), Current Direction & Speed (CUR)

Remarks: There are any equipments which can not be input.

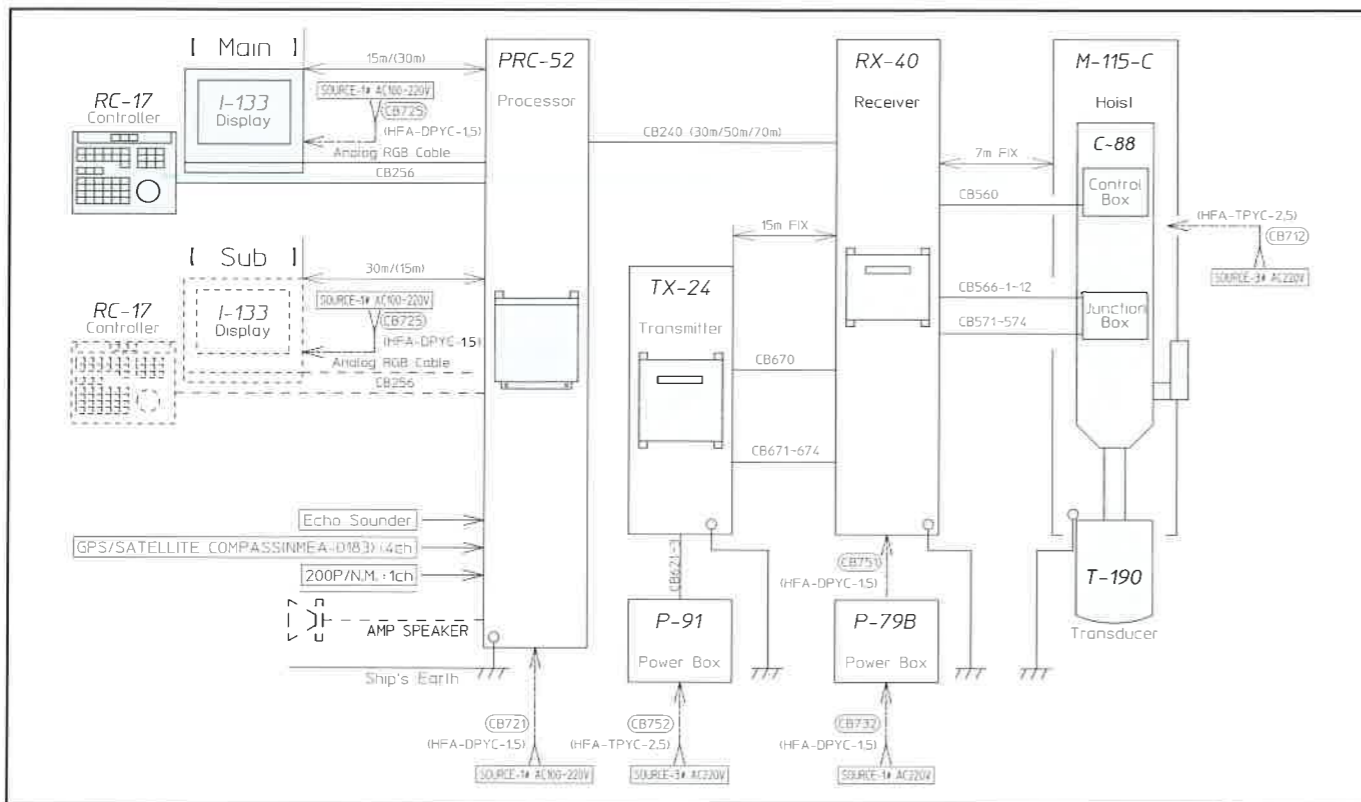
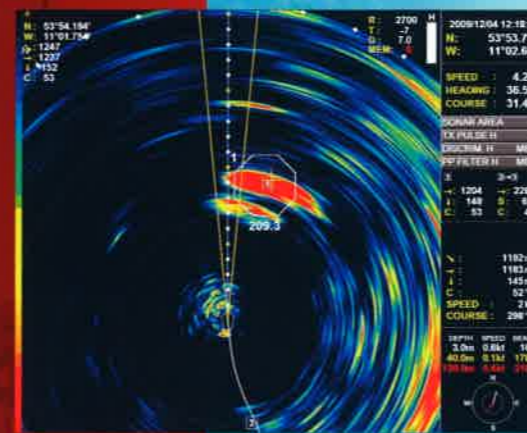
Hoist unit stroke :
 LL=1500mm, L=1300mm

Power supply :

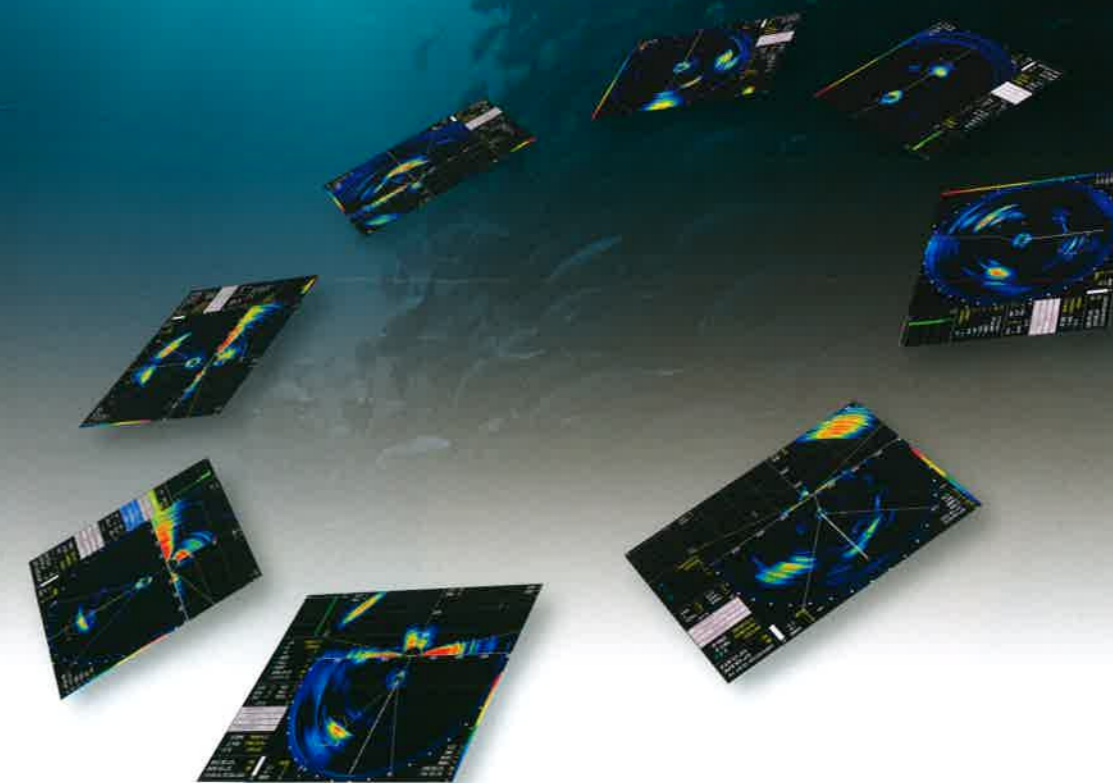
Processing	Single-phase 100~200VAC, 50/60 Hz, and 200VA
Receiving	Single-phase 220VAC, 50/60 Hz, and 600VA
Sending	3-phase 220VAC, 50/60Hz, and 4000VA
Hoist unit	3-phase 220VAC, 50/60Hz, and 1500VA

Super Scanning Sonar 3000 series
 Low Frequency

KCS-3221Z



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



Longer-detection range and advanced functions will satisfy all users!

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.

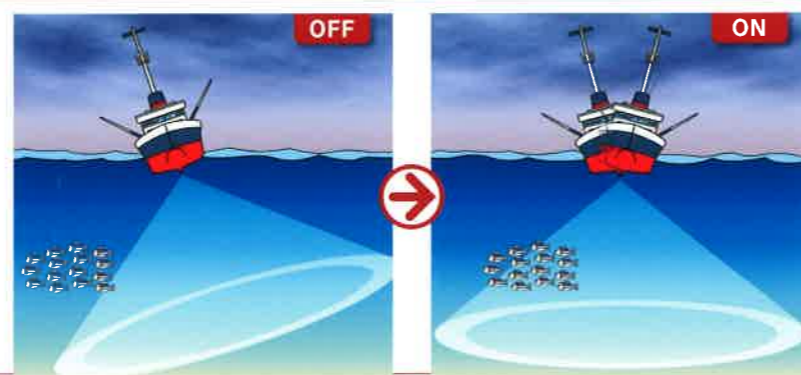
- ➡ Different display modes can be selected depending on the distance, fish type, and fishing methods
- ➡ Desired image processing methods can be selected
- ➡ Unnecessary side-lobe is minimized to the lowest possible level
- ➡ User-friendly miniaturized controller
- ➡ Advanced TX/RX stabilizing function
- ➡ 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.

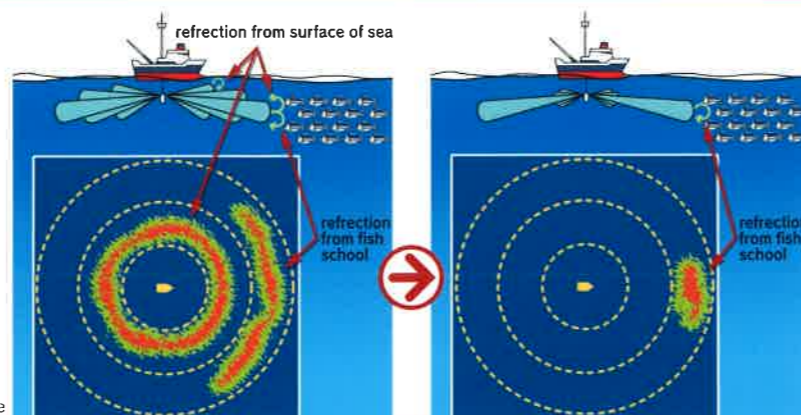
The stabilization function controls the depression angle in small 7.5 degree steps through 360 degrees for both transmission and reception. The processing time between the sensing of boat pitch to the adjustment of the depression angle has been dramatically reduced. The user can view highly.

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

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.

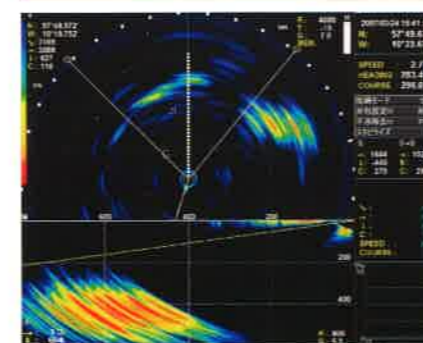
Safe and reliable transducer

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.

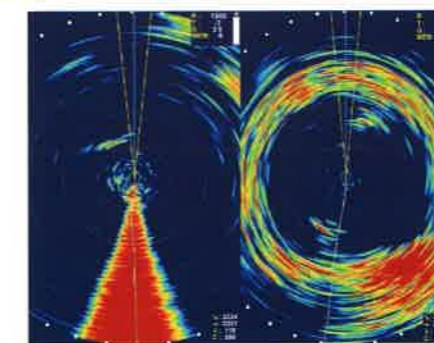


Photo of transducer

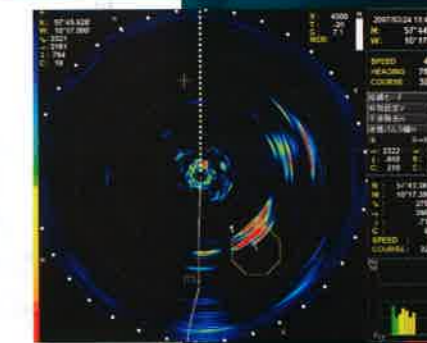
KCS-3221Z Sample pictures



Enlarged vertical picture Mode



Dual view Mode



Fish school information