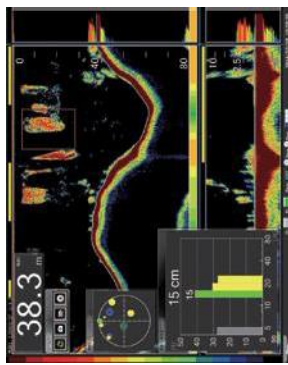


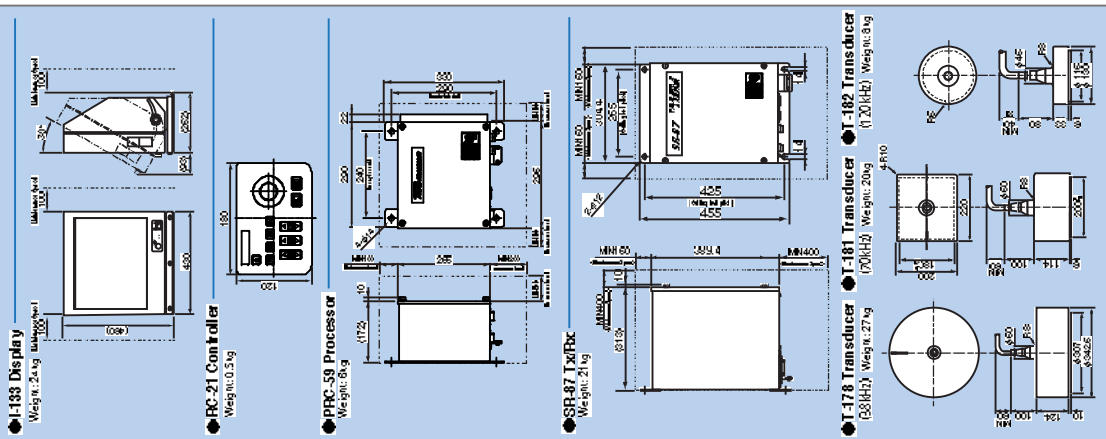
Fish Sizing Echo Sounder

KSE-300

Sizing Echo Sounder with Split-beam transducer



Dimensional outline drawing and Weight



Specifications

Display : LCD Display 1280x1024(SXGA)
Operation : Operated by RC-21 controller
Transducer
 Pulse width: 0.30/0.11/202.4ms
 Output level: 0 ~ 10 (10 steps)
 Tx cycle: Pinging time multiplied by 2 ~ 5 times or synchronized by an external unit
 ※ Pinging time (sec) = Measurement range (m) / (Sound velocity (m/s) * 2)
 Minimum Tx cycle: 133(ms) ※ Depending on contents of the processing

TVE Processing

200g(R/S), 40g(R/T/S), Rat, CONV (Traditional way)
 TVG Volume: 0.0 ~ 10.0 ※ Operative when CONV Mode
 Displayed sensitivity: 0.0 ~ 10.0
 Displayed bottom sensitivity: -10.0 ~ -10.0
 ※ Change of the sensitivity deeper than seabed

Display Functions

Normal screen: Normal fish finder screen
 Enlarged dual screen: Enlarged screen of normal screen or enlarged dual screen of bottom fixed of normal screen
 A-scope screen: A-scope corresponding to normal screen and enlarged dual screen
 Depth display: Display for bottom value of each fish finder
 Navigation display: Display for longitude/latitude, vessel speed, and water temperatures
 Net depth display: Display for water depth value of fish finder screen (Max: 4 units)
 Water ten post display: Water temp. of ship bottom etc... displayed by water temp. from external device
 Fish size graph: Display for fish-size graph of selected area
 Traces display: Display for trace graph of selected area
 ※ Only when connecting with a split beam
 ※ Only when connecting with a split beam

Number of screen display

Max. 3 displays (4 frequencies + frequency difference)
Scale : Meter, Fathom, Feet, Hiro
Range : 10 ~ 3000 (Meter Scale)
Original range: Arbitrary range value settings *10 (scale) steps
Automatic bottom track: Auto range mode, auto shrink mode
Shift : Variable with less than max. range in 1/3 steps
Display color: 7 color colors
Color pattern: 8 types
Marker : White, Blue, Green, ground color omission, CH-
 Marker : Mini B, Mini E, Mini G, Mini H
Screen read speed: 3, 2, 1, 1/2, 1/4 times
Screen read direction: Normal (left direction), Invert (right direction)
Interference elimination: 4 types (weak, medium, strong, linear plateau)
Discrimination: Horizontal discrimination 1 ~ 30
Bottom level: Color display (16 or 64 steps)
Recording function: Vertical discrimination 1 ~ 20

Recording function

Display: JPEG format, Resolution: 1280 x 1024
 Raw data recording: Sonic format, compatible with KFC-3000
 External interface: Synchronized output (TTL push/pull),
 Navigation information input/output (corresponding to NMEA 0183),
 Net depth: Sonic net under or tie ring input

Language

Japanese, English
Power supply: Processor Single phase AC100V ~ AC220V/50/60VA
 SH-1: AC100V ~ AC220V/50/60VA
 SH-2: AC100V ~ AC220V/50/60VA
 SH-3: AC100V ~ AC220V/50/60VA

Operational

Temperature: 5 ~ 45°C
 Humidity: 5 ~ 95% RH
 Processor: 5 ~ 45°C
 SH-1/2/3: 5 ~ 35°C
 Remarks: Try to no condensation and avoid water and salt air.

SAFETY PRECAUTION: Please be sure to read the instruction Manual before operating.

Specifications are subject to change without prior notice for development



KSE-300

Fish Sizing Echo Sounder

New KSE series offers efficient fishing and resource management!

New features

- Fish length graphs are more smoothly displayed in higher definition
- Higher definition is achieved by an increased data amount that's 1.5 times more than before, as well as by a reduced pulse width
- Operability is greatly improved through a dedicated controller
- Multi-screen
Up to 10 types of e-chograms can be simultaneously displayed
- A function to record raw data is available as a standard feature
- Introduction of an ultra-high-precision digital TVG as leading-edge technology
- Improved interference elimination and image discrimination
- Frequency difference method
This is effective for extracting the target fish school
- This feature is available on a system with two or more frequencies

Frequency difference method

The "frequency difference method" is a function used to draw images by extracting only the data showing the difference between frequencies A and B.



Frequency A Frequency B Frequency Difference

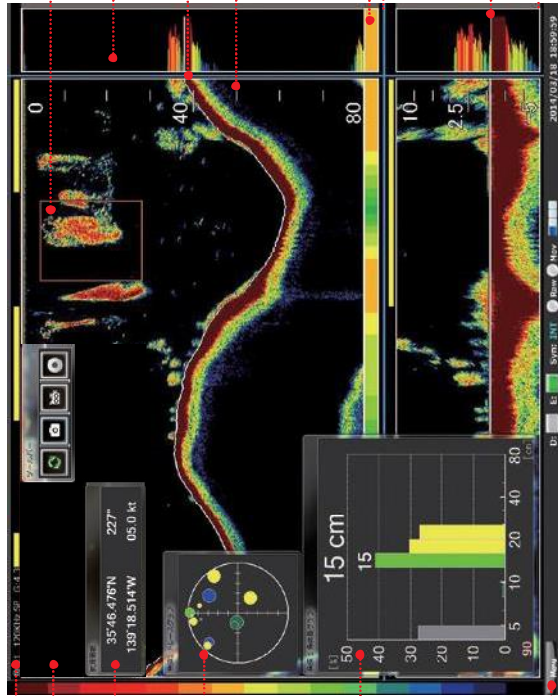
Raw data recording

To meet the requirements of users who wish to use this system not only for select fishing and resource management but also for biomass evaluation, a new function to record raw data has been added. The data can be recorded with one click in a USB flash drive. In compliance with the KFC series, analysis software corresponding with EchoView is required.



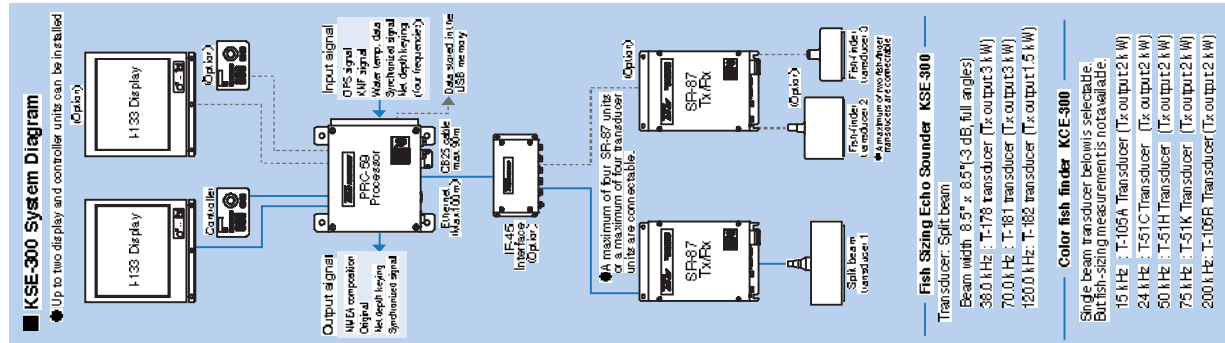
USB Memory
Please observe the recording capacity of the USB drive.

Recording setting screen



- Frequency and value of gain
- Water depth value
- Navigation data
- Trace graph (for every one ping)
This function displays the distribution of individual fish length data according to your ship's center. The fish size is shown as a bubble mark in the same color as the fish length graph. The information obtained from the graph is useful for the estimate of fish species and behavior.
- Fish-size graph
The graph shows fish length estimated using the split-beam method. The vertical axis shows the number of current fish length detectors, while the horizontal axis shows the fish length. This graph allows users searching fish length to easily select and display the school that is the subject of inquiry.

- The fish length of the school within the range you selected can be measured in three other ways available to select the ranges)
 - A. Scope
 - Sea bottom (displayed in solid unit)
 - Scale
- Sea bottom level (The sea bottom level is color displayed based on the seabed information result in addition to the underwater echogram.
Enlarged sea bottom display (Sea bottom fixed display)
Sea a bottom



Dedicated controller (RC21)

Power Key, User key, Mobility and optional button operation

Tracball, Right/Left key

Gain/Shift/Range adjustment

Multi-screen

Max. 5-screen display
The size and position of each window can be changed freely

Interference elimination

The images below show the interference elimination function of the KSE-300. Frequency: 70 kHz, recorded in an actual sea area in the order of OFF, ON, OFF.

Interference elimination OFF
Interference elimination ON
Interference elimination OFF

Menu button

The usage of the folder icon is displayed

Lookbar

When a fish school is selected, and raw data is recorded, these are saved in the USB memory in JPEG format so that they can be viewed on any computer.