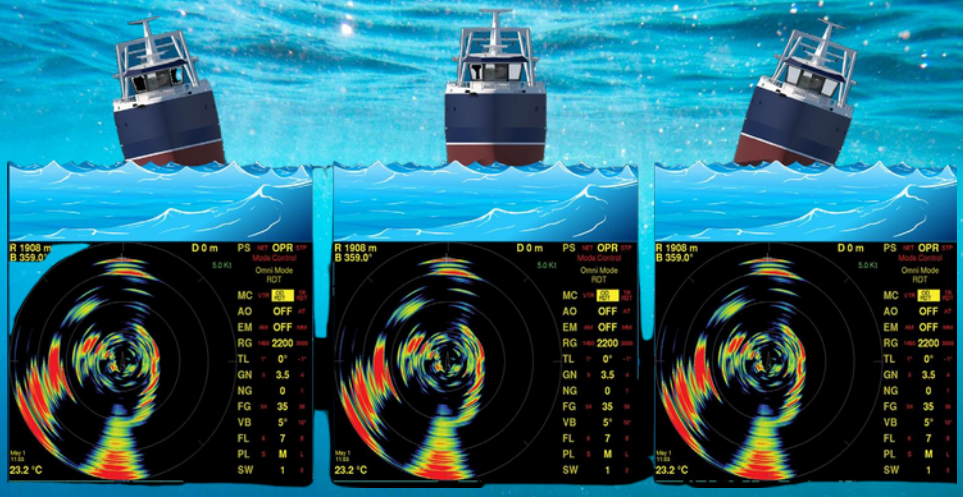
MAQ SONAR

MAQ SONAR COMPANY
DIV OF HELO ENTERPRISES INC.
WWW.MAQSONAR.COM

THE INVENTORS OF THE OMNI SONAR

360° STABILIZED OMNI SONAR

FLEXIBLE ELECTRONICS ALLOWS THE USE OF A 22KHz, 60KHz OR 90KHz TRANSDUCER FOR COMMERCIAL AND SPORTS FISHING



22KHz DISPLAY SHOWS DETECTION WITH SHADED TRANSMITTERS IN 6 FATHOMS OF WATER

MAQ SONAR DETECTS SMALL SCHOOLS AND INDIVIDUAL FISH EVEN IN ROUGH SEAS

www.maqsonar.com **(613) 984-9000** **sales@maqsonar.com**

JOYSTICK AND KEYPAD

On/Off Switch Push Button - LED Indicator
Sonar Control Push Button
Cursor (range, bearing, depth)
Audio Control - Volume (Speaker not supplied)

PROCESSOR UNIT

Power Supply 230V/50Hz-60Hz @ 1A, 115V/50Hz-60Hz @ 2A
Industrial Computer System
Interface ITI, GPS & External Synchronization
Monitor *NOT SUPPLIED*
Corrosion Protection Sealed unit with anti-condensation heater and circulating fans

TRANSCEIVER UNIT

Power Supply 230V/50Hz-60Hz @ 2.5A, 115V/50Hz-60Hz @ 5A
Transmitters 64 Channels
Receiver 32 Channels (256 pre-amplifiers)
Corrosion Protection Sealed unit with anti-condensation heater and circulation fans

TRANSMITTER UNIT

Power Supply 230V/50Hz-60Hz @ 2.5A, 115V/50Hz-60Hz @ 5A
Transmitters 96 Channels EACH
Corrosion Protection Sealed unit with anti-condensation heater and circulation fans

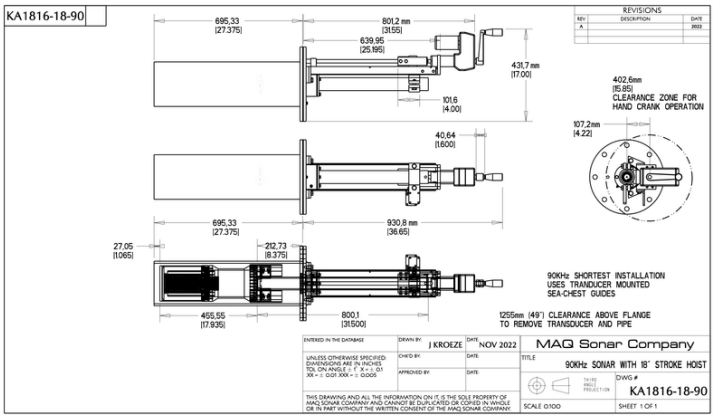
TRANSDUCERS

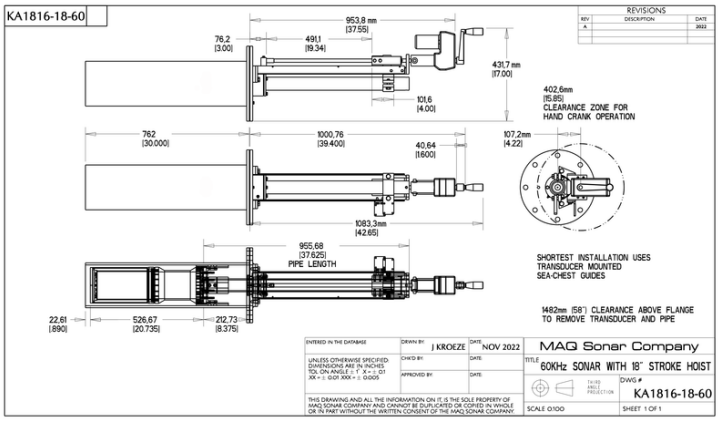
Vertical Beam
- 6°, 12°, 18°, 24°, 30°, SHADED 8°, 16°, 24°, 32°, and 40° Transmit, 5°, 10° and 20° Receive
- Tilt - Up 10° to 45° Down

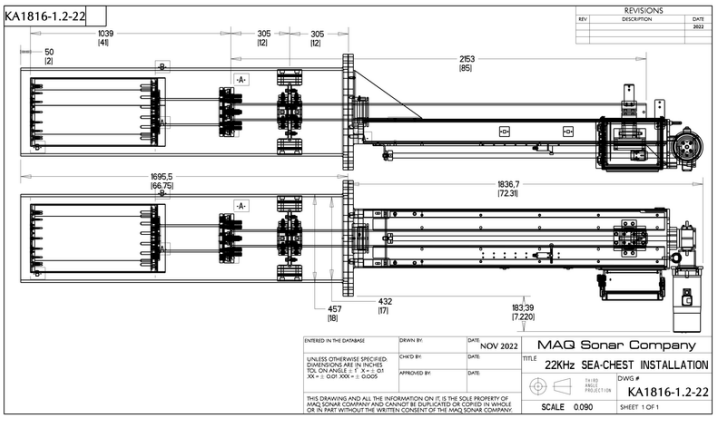
Horizontal Beam
- Transmit - OMNI 360°@210dB and RDT 360°@216dB
- Receive - 256 PRE-Amplifiers.

Frequencies Sea-Chest (NOT SUPPLIED)
- 90KHz 204mm (8") Nominal O.D.
- 60KHz 204mm (8") Nominal O.D.
- 22KHz 458mm (18") O.D.

Protective Shield
- 60KHz, 90KHz - ABS Shield
- 22KHz - (Optional) Stainless Steel Shield (10% loss in range)







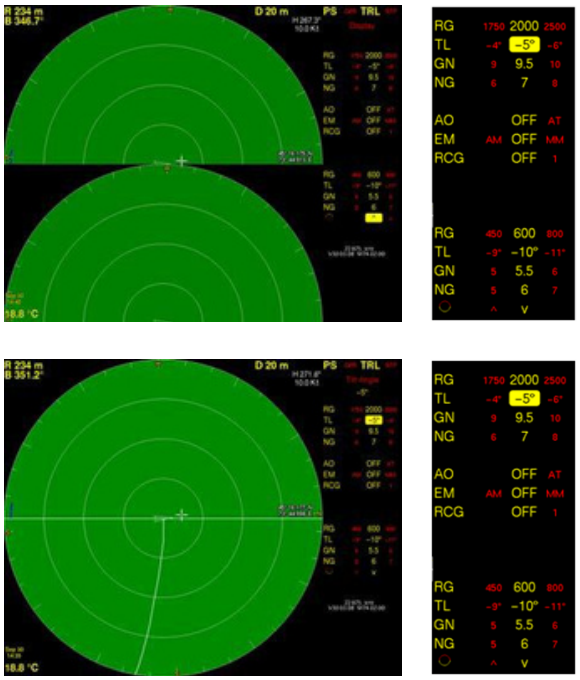
HOIST (2 POSITIONS)			
Type	**Speed**	**Stroke**	**Voltage**
90KHz	12s & 24s	0.45m (18") or 0.9m (36")	24VDC@10A
60KHz	12s & 24s	0.45m (18") or 0.9m (36")	24VDC@10A
22KHz	6s & 12s	1.2m (48")	24VDC@1A &230/440VA C-3PH 1 1/2 HP

TECHNICAL FEATURES

- When stabilization is activated, both the horizontal and vertical omni beams will be electronically stabilized for pitch and roll. The beam stays on the target independent of the vessel movement. This maintains contact with the target even in rough seas.
- Non-stabilized systems have reduced probability of detection as wave heights increase.
- MAQ'S transducers design uses a thinned array of 256 elements which produces better transmit/receive beams by reducing cross talk between elements. This controls side lobe levels for better shallow water performance on hard to detect targets. While still producing the power requirements for long range detection.
- Vertical profile display has the sonar systems resolution of 5° to accurately display the targets vertical density.
- 60KHZ and 90 KHZ transducers are protected by a reinforced ABS shield.
- 22KHZ transducer has an optional stainless steel shield.
- Electronics are enclosed in rugged steel sealed cabinets to prevent corrosion and are cooled using heat pumps.
- Common electronics for all frequency transducers. Change the transducer for different fishing applications.
- Transducer hoists use ball-screw electric actuators for efficient (high-speed) retraction.
- Optional RDT feature allows greater detection distances by increasing the transmitters effective output power by 4 times.
- Much of the electronic hardware development is downward compatible to ensure existing systems can be repaired or upgraded for new features.

TRAWL MODE DUAL DISPLAY

Simultaneously operate the Sonar with two separate range, tilt angle, gain and filter settings.



OPERATING FEATURES

- Stabilization is included with all systems
- Stabilization can be enabled or disabled
- High resolution display
- The latest features are provided with free software upgrades
- Optional rotational direction transmission (RDT on 22KHZ)
- Ships own doppler nullification
- Captains chair joystick control
- Operator adjustable vertical beam widths
- Automatic target tracking
- Event marker displays fish heading and speed
- Vertical profile and zoom modes
- Peak detection to display most dense part of fish school
- Propeller noise rejecter
- Bow-up or north-up display
- Programmable tonnage readout
- Water temperature sensing within 0.1°C or 0.2°F
- Interfacing with popular net monitoring systems
- Trawl modes bow and stern views
- Multi-language control panels
- Pre-set selection settings by keypad control unit
- Wind speed interface and display
- In circuit fault locator and fault indicator

USER CONTROLS ALLOW EASY SONAR OPERATION

Captains Joystick

USB Keypad

MAQ SONAR SYSTEMS

MAQ Sonar's proven design has been reconfigured to a fully stabilized system. These systems have improvements to sensitivity with increased circuitry to support stabilization. While working in rough seas stabilization increases detection capabilities of fish targets, this allows MAQ's narrow beams to work near surface and in shallow water. An analogue front end is used to preserve the signal sensitivity which allows excellent small target detection capabilities.

The stabilized electronics can be used with either a 90KHz, 60KHz or 22KHz transducer but only the 22KHz has the RDT option. The RDT (Rotational Directional Transmit) 22KHz sonar uses additional Transmitters (one per element) to provide the high powered OMNI stabilized 6° vertical transmit beam.

MAQ 90KHZ, 60KHZ OR 22KHZ STABILIZED OMNI SONAR

SPECIAL FEATURES

- 360° receiver stabilized.
- Transmission is quadrant stabilized. It provides narrow beam transmit stabilization for calm and shallow water and broad beam (shaded) transmission for rough water performance.
- Shaded transmit reduces shallow water reverberation.
- All MAQ stabilized transducers are compatible with these electronics featuring 256 receiver and 64 transmitter channels.
- Chose one of these 3 frequencies.

HOISTS NOT SHOWN

Processor

Dimensions
H 52cm (20.24")
W 37cm (14.7")
D 21.3cm (8.4")

Transceiver

Dimensions
H 60.96cm (24")
W 55.9cm (22")
D 26.7cm (10.5")

90KHz

L 46cm (18")
Ø16.83cm (6.625")

60KHz

L 53cm (20.75")
Ø16.83cm (6.625")

22KHz

L 109.22cm (43")
Ø 35.56cm (14")

MAQ 22KHZ RDT STABILIZED OMNI

SPECIAL FEATURES

- Narrow beam fully stabilized shallow water performance in all situations.
- Receiver transmitter and RDT stabilized (360°).
- Featuring 256 receiver and 256 transmitter channels.
- **The 22KHz stabilized system can be upgraded to RDT stabilized.**

HOIST NOT SHOWN

Processor

Dimensions
H 52cm (20.24")
W 37cm (14.7")
D 21.3cm (8.4")

Transceiver

Dimensions
H 60.96cm (24")
W 55.9cm (22")
D 26.7cm (10.5")

RDT Transmitter (x2)

Dimensions
H 60.96cm (24")
W 55.9cm (22")
D 26.7cm (10.5")

Junction Box

Dimensions
H 35cm (13 - 3/4")
W 30cm (11- 3/4")
D 17cm (6 - 3/4")

22KHz

L 109.22cm (43")
Ø 35.56cm (14")

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