

# KODEN

## Black Box Echo Sounder

# CVB-20A

## A high performance black box Ethernet Sounder

### FEATURES

#### DHCP client

DHCP client functionality is built in, and IP address and the subnet mask can be automatically acquired from the DHCP server.

#### UDP

UDP communication protocols insures an easy connection.

#### Initializing

An initial value of the control value of 50 items is transmitted to the unit from the host unit to start operation.

Existence notification: Transmitted mutually every ten seconds.

Control value change: Transmitted arbitrarily from the host unit.

Sounder image: Data is transmitted sample line by sample line.

Maintenance command: Provided.

#### Control items

Accepts settings of 50 items such as sensitivity, depth range and the screen mode, etc. by the control command.

#### High-speed repetition cycle

Sounder Image Packet consists of only 1460 bytes (sounder image portion). Data is transmitted for every sounding pulse transmission.



The host unit builds a Sounder image screen by accumulating this data. Because of compactness of the sounder image data, a high-speed repetition cycle comparable to a stand-alone sounder can be achieved.

#### High sensitivity

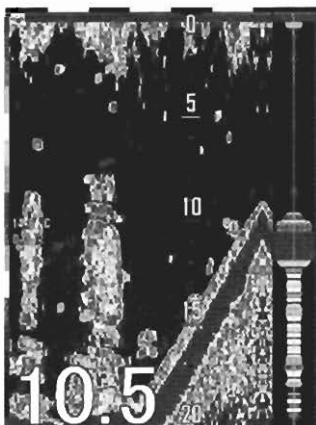
A higher rate of sounding pulse transmission and a unique interference rejection system greatly enhances the echo detection ability. Newly developed log receiver provides low noise echoes due to a wide dynamic range. These features help the operator to detect fish in a more simple and a quicker way.

#### Mixed echo mode

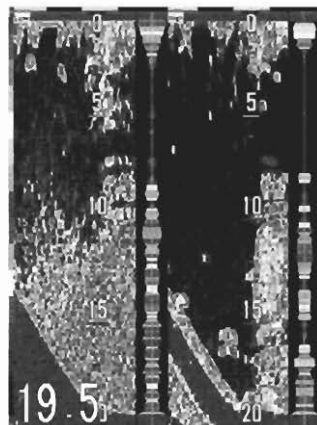
Finding school of fish often requires expertise backed by long-term experience. In this sounder Koden's unique processing method allows the operator to find those weak "hard to find" echoes quickly by combining high and low frequencies echoes at the same time.

### SOUNDER IMAGE EXAMPLES AT THE HOST UNIT

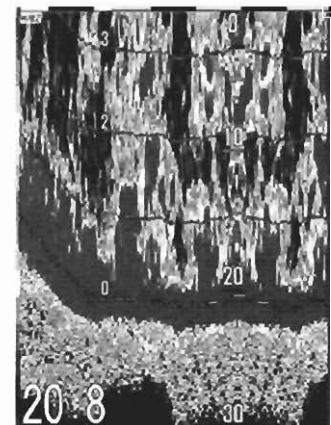
High frequency with A scope



Dual frequency with A scope



Bottom zoom

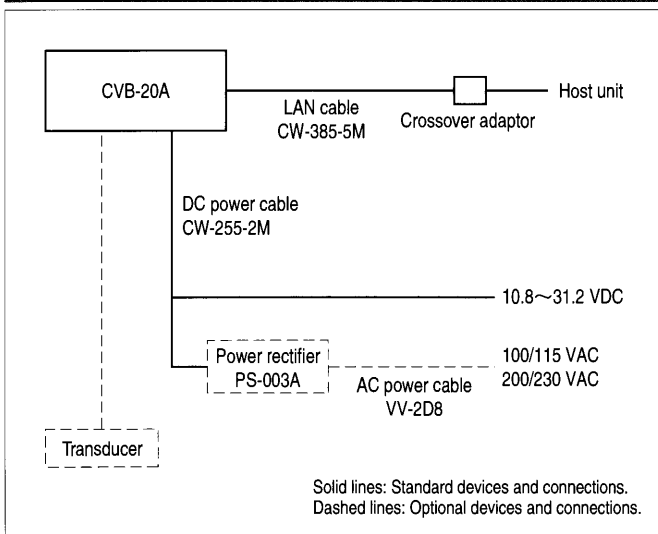


NOTE: Scale and lettering can be freely arranged at the host unit by received data from the black box sounder.

## SPECIFICATIONS

Communication system	Ethernet (10 base-T)
Protocol	UDP Existence notification, Sounder image, Control value, Maintenance command
Frequency	50/200 kHz
Output power	60/600 W or 0.1/1 kW (Low/High)
Output level	32 Levels
Depth ranges	2.5 to 10 (2.5 step), 10 to 100 (5 step), 100 to 400 (10 step), 400 to 1000 (50 step), 1000 to 1200 (100 step) (Meter / Japanese Fathom / Fathom / Italian Fathom / Feet / Auto range) 10 to 20 (5 step), 20 to 60 (10 step), 60 to 400 (20 step), 400 to 1600 (40 step), 1600 to 4000 (200 step) (Feet)
Bottom ranges / Zoom ranges	2.5, 5, 7.5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 180, 200 (Meter / Japanese Fathom / Fathom / Italian Fathom) 10, 15, 20, 30, 40, 50, 60, 80, 100, 120, 140, 180, 200, 220, 240, 260, 280, 320, 360, 400, 450, 500, 550, 600, 650 (Feet)
Image shift	Auto or Manual
Presentation modes	Normal image, Normal image dual frequency, Mix/Normal image, Bottom zoom image, Bottom zoom dual frequency, Bottom/Normal image, Zoom/Normal image, Bottom discrimination / Normal image
Alarm	Depth alarm, Fish alarm
Interference rejection	3 steps (OFF, 1, 2)
Level rejection	15 steps
Controls	Gain, STC
Auto function	Depth range, Shift, Gain
Sampling data size	640 (640 x 2 for dual frequency)
Speed & water temp.	By Triducer (To be supplied by owner)
Power supply voltage	10.8 to 31.2 VDC
Power consumption	25 W or less (at 24 VDC)
Operating temperature	-15°C to +55°C
Water protection	IPX3 (Drip-proof grade)

## CONNECTIONS



## EQUIPMENT LIST

### Standard equipment

Item name	Type name	Weight/Length	Quantity
TX/RX unit	CVB-20A	2.4 kg	1
Transducer connector plug	LTWBD-08BFFA-L180		1
DC power cable	CW-255-2M	2 m	1
LAN cable (Crossover)	CW-385-5M with Crossover adaptor	5 m	1
Spare parts			1 set
Installation manual	CVB-20A.I/M.E		1

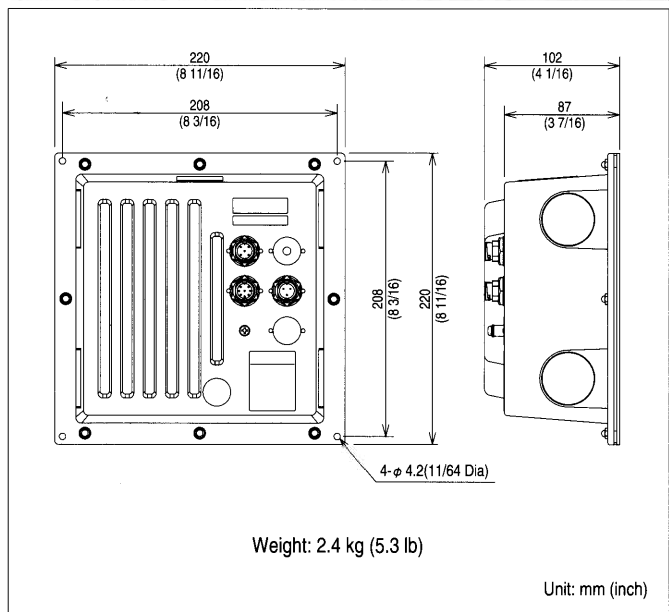
### Options

Item name	Type name	Remark	Weight/Length
Power rectifier	PS-003A	With 2 fuses	2.8 kg
AC power cable	VV-2D8-3M	Stripped leads on both ends (for power supply)	3 m
Inner-hull kit	MFB-04 (for TD-500T-2B)	600 W use only	1.2 kg
Inner-hull kit	MFB-04W (for TD-501C)	1 kW use only	1.5 kg
Kingston kit	MFB-05W (for TD-501C)	1 kW use only	0.83 kg
Cable gland for TD-501C	CG-1	Steel hull	1.5 kg
	CG-3	Wooden hull	2.5 kg
	CG-16	FRP hull	0.9 kg
	CG-19	Wooden/FRP hull	1.0 kg
Side Installation Materials	SL-2	All kinds of hull (for TD-501C)	2.5 kg

### Available optional transducer type

Item name	Cable length	Frequency, Power	Material	Installation type
TD-500T-2B	9 m	50/200 kHz, 600 W	Plastic	Through-hull Inner-hull
TD-500T-3B	9 m	50/200 kHz, 600 W	Bronze	Through-hull
TD-501T-3B	9 m	50/200 kHz, 1 kW	Bronze	Through-hull
TD-501C	9 m	50/200 kHz, 1 kW	Rubber molded	Inner-hull
* TD cable connector (CW-838-0.5M) required				Bottom-hull Broadside

## DIMENSIONS AND WEIGHT



• Design and specifications are subject to change without notice.

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**Safety precaution**

To ensure proper and safe use of the equipment, please carefully read and follow the instructions in the Operation Manual.

For details, please contact: