



US Navy Photo

## MK8-E BATHYTHERMOGRAPH DATA ACQUISITION SYSTEM



The MK8-E Bathythermograph Data Acquisition System collects, processes and displays profiles of ocean temperature, sound velocity and salinity from surface ships and submarines.

Sippican's MK8-E is a direct replacement for the MK8 and is the export version of the AN/BQH 7, 7A (EC) COTS (commercial off the shelf) Bathythermograph Data Acquisition System in use by the United States Navy.

The MK8-E is a PC-based system operating in the Windows environment which collects and processes the data and displays it in real time on an

active matrix LCD. The data is stored on hard disk and can be output via the I/O communication port (RS-232 or RS-422) to an external combat system or workstation.

The MK8-E is compatible with all Sippican probes and launchers.

The MK8-E Submarine System is compatible with submarine three-inch signal ejectors and the Sippican Submarine ejector box.



# MK8-E

MK8-E BATHYTHERMOGRAPH DATA ACQUISITION SYSTEM

## MK8-E SYSTEM SPECIFICATIONS

PROBE TYPE	XBT	XSV	XCTD	XCTD-1	SSXBT	SSXSV	SSXCTD
Sampling Rate	10Hz	10Hz	4Hz	4Hz	10Hz	10Hz	4Hz
Vertical Resolution (18cm for T-11 FSXBT)	60cm	60cm	100cm	17cm	15cm	60cm	100cm
System Accuracy	±0.2°C	±0.25 m/sec	±0.035°C* ±0.035 mS/cm ±0.05 PSU	±0.02°C	±0.15°C	±0.25 m/sec	±0.035°C ±0.035 mS/cm ±0.05 PSU
Temperature Resolution	0.01°C	-	0.01°C	0.01°C	0.01°C	-	0.01°C
Temperature Range	-2 to 35°C	-	-2.2 to 30°C	-2 to 35°C	-2.2 to 35.6°C	-	-2.2 to 30°C
Sound Velocity Resolution	-	0.04 m/sec	0.05 m/sec	-	-	0.04 m/sec	0.05 m/sec
Sound Velocity Range	-	1405-1560 m/sec	1405-1560 m/sec	-	-	1405-1560 m/sec	1405-1560 m/sec
Conductivity Resolution	-	-	0.01 mS/cm	0.017 mS/cm	-	-	0.01 mS/cm
Conductivity Range	-	-	20-75 mS/cm	0-70 mS/cm	-	-	20-75 mS/cm
Depth Range	0-1830 m	0-2000 m	0-1000 m	1000 m	0-760 m	0-850 m	0-1000 m
Depth Accuracy	±2%	±2%	±2%	2%	±2%	±2%	±2%

System Depth Accuracy:  
4.6 meters or 2% of depth,  
whichever is greater.  
\*Nominal accuracy  
characterization based on  
XCTD horizontal profiles  
against a calibrated transfer  
CTD (each comparison used  
4pt. smoothing). 95% of  
tabulated data was within  
±0.035° and mS/cm of the  
transfer CTD.

## LAUNCHERS

Sippican launchers are available in three models. Each is compatible with all XBTs, XSVs, XCTDs and shipboard data processing systems.



### DECK LAUNCHER (LM-2A)

The LM-2A is easily installed on the deck of any vessel.



### HAND-HELD LAUNCHER (LM-3A)

The LM-3A provides portability, allows more flexibility in selecting launcher position, and reduces interference with other equipment.



### THRU-HULL LAUNCHER (LM-4A)

The standard launcher for all military vessels. Employs the same basic assembly as the LM-2A, however, the LM-4A is installed below deck for improved safety and increased convenience under heavy weather conditions.

## SPECIFICATIONS

Communication I/O Port  
Serial (1) RS232 Port, RS-422

LCD Color Display-Active Matrix TFT  
Display Size: 10.4" Diagonal  
Colors: 262,144 Colors  
Resolution: 640 x 480

Mass Storage-internal  
Floppy 3.5" 1.44MB  
Hard Disk 1.6GB

Power Supply  
250 Watt  
90-240 VAC (120 or 240 V, factory preset)

Physical Specifications  
Size: 31.9cm H x 53.04 cm W x 45.57 cm D  
Weight: 26.31 kg

### Environmental Specifications

1. Temperature: Operating: +10C to 50°C  
Non-operating: -40C to 70°C
2. Inclination: MIL-STD-2036
3. Vibration: MIL-STD-167-1
4. Structureborne-noise: MIL-STD-740-2
5. Airborne-noise: MIL-STD-740-1

**Sippican, Inc.**

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