



# META DIFAR SONOBUOY



# INTRODUCTION

## ■ ***META DIFAR Sonobuoy was***

- Developed for MPA, Helo & Warship in ASW ops
- Received an R&D Certificate for SSQ-53D(3) from MND Korea in 2012
- SSQ-53F will be developed until 2021

## ■ ***Same as SSQ-53F Performance with AGC Function***

- CSO : Constant Shallow Omni provides acoustic information at a fixed depth(13.5m)
- CO : Calibrated Omni sensor provides acoustic information detected at a selected depth and the operating acoustical bandwidths in 20 KHz

## ■ ***Core Technologies : Acoustic Sensor, Signal Processing, etc***

## ■ ***Advantage : Various Option***

- Long Shelf Life : 7 years in Sealed Container
- Selectable Operating Life : Up to 9 Hours
- Unpacked Storage Life : 6 Months ( minimum )
- Package : Ship Application System ( +Training )
- Core Technology Transfer



# SPECIFICATIONS

## GENERAL DESCRIPTION

<b>Description</b>	DIFAR, passive, directional
<b>Function</b>	Search, Localization, Surveillance
<b>Dimensions</b>	36.00 in ( 914 mm ) long 4.875 in ( 124 mm ) diameter
<b>Weight</b>	9.5 kg
<b>Power Source</b>	Seawater activated battery ( main power source ) Lithium battery ( EFS display and memory )
<b>Stabilization Time ( after splash )</b>	Up to 100 seconds ( shallow ) 130 seconds ( medium 1 ) 160 seconds ( medium 2 ) 240 seconds ( deep )
<b>Operating Life</b>	0.5, 1, 2, 4, or 8 hours ( 9 hours optional ) preselectable
<b>Scuttling Time</b>	At 8 hours, regardless of operating life
<b>Shelf Life</b>	7 years in sealed container
<b>Unpacked Storage Life( minimum )</b>	6 Months

## TRANSMITTER CHARACTERISTICS

<b>Frequency Range</b>	136 MHz to 173.5 MHz
<b>Transmission Channels</b>	99 preselectable, with EFS display
<b>Transmitter RF Power</b>	1W minimum
<b>EFS Selections</b>	RF Ch, Life Time, Depth, Sensor and AGC
<b>CFS Selections</b>	RF Ch, Life Time, Sensor and AGC

## SENSOR CHARACTERISTICS

### DIFAR

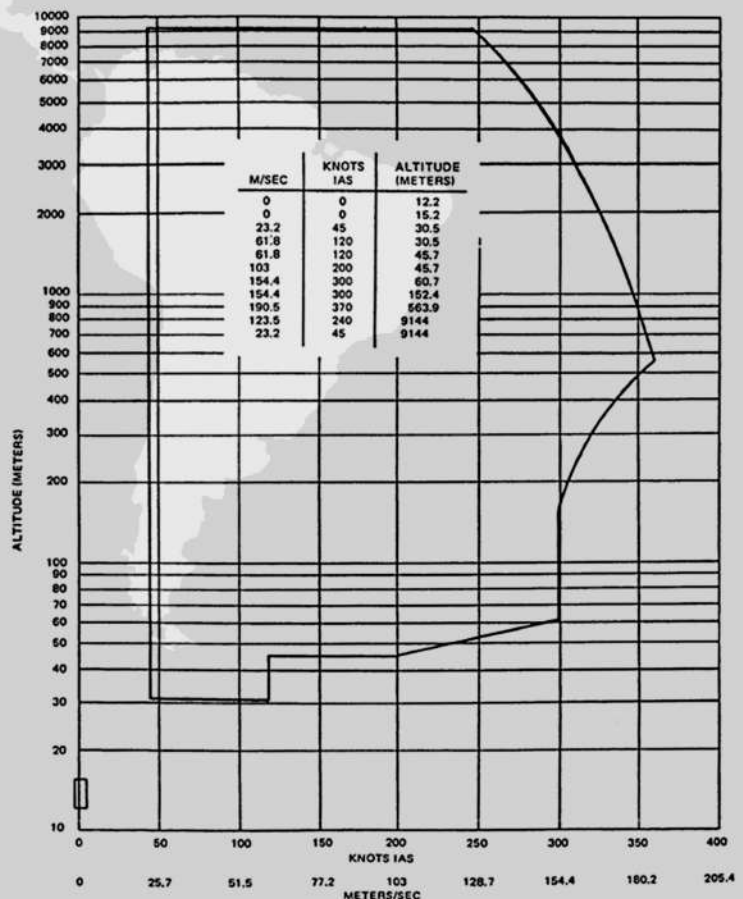
<b>Acoustic Frequency</b>	5 Hz to 2400 Hz Range
<b>Sensitivity, Directional</b>	122 ± 3 dB rel 1 μ Pa at 100 Hz to 40 KHz pk dev
<b>Sensitivity, Omni Directional</b>	122 ± 3 dB rel 1 μ Pa at 100 Hz to 25 KHz pk dev

**CSO Sensor/Audio Frequency** 30 Hz to 5 KHz pk dev

**CO Sensor/Audio Frequency** 5 Hz to 20 KHz pk dev

**Operating Depth** 30 m, 50 m, 120 m and  
300 meter, preselectable

**Descent Time( in water )** 40 seconds ( shallow )  
65 seconds ( medium 1 )  
100 seconds ( medium 2 )  
180 seconds ( deep )



# Sonobuoy Application for ship

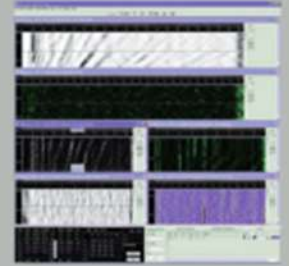
META Sonobuoy & Integrated Mission System



Support an Acoustic Signal Analysis Training



Mission System (Analysis S/W) Upgrade



## Why META Sonobuoy & Application for Ship?

### ■ **The Best Cost-effectiveness**

- “You can protect the territorial seas with minimum cost”

### ■ **High Performance**

- “Equivalent to the world's best sonobuoy”

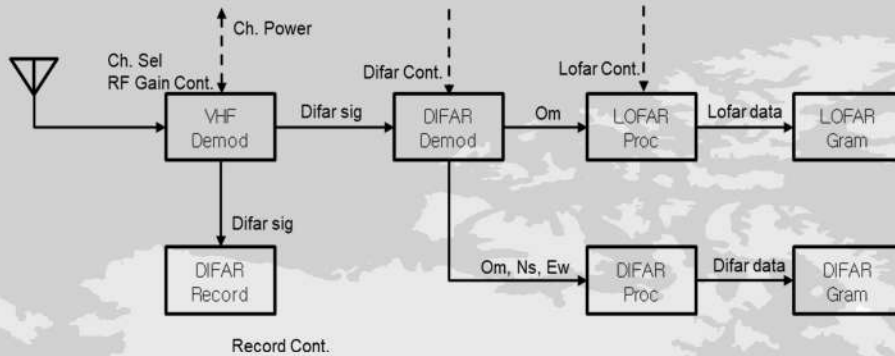
### ■ **Satisfy the Customer Needs**

- “We can provide customized sonobuoy [depth control, etc]”



# META Integrated Mission Systems

## SYSTEM COMPOSITION



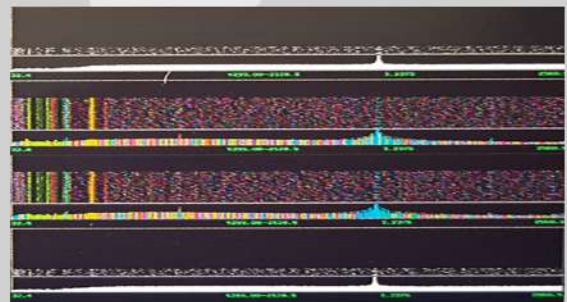
## Major Feature & Advantage

- ***Sonobuoy Can be Operate on Warship without any Modifications***
- ***RADAR, EO/IR Information Input & Management available***
- ***Easy to Decoding and Operation***
- ***Acoustic Training Support Available***

## Composite Display Mode



- Total Information Management
  - Ship Sensor & Sonobuoy
- Multi Function Display Panel
- Easy to Identify Color Screen



- DIFAR, LOFAR, ALI Function
- Max 8 buoy monitor (can be expanded)
- A Signal of Interests Zoom-in, Saving Data & Replay, etc



# META NETWORKS,

META NETWORKS CREATE AND DELIVERS  
HIGH TECHNOLOGY ASW SOLUTION FOR NAVY

THAT OPERATE UNDER CHALLENGING CONDITIONS  
- ON THE OCEANS, IN THE UNDERWATER, IN DEFENCE

META DIFAR SONOBUOY & APPLICATION FOR SHIP,  
WILL DEFEND YOUR COUNTRY FROM THE THREAT  
OF SUBMARINES!