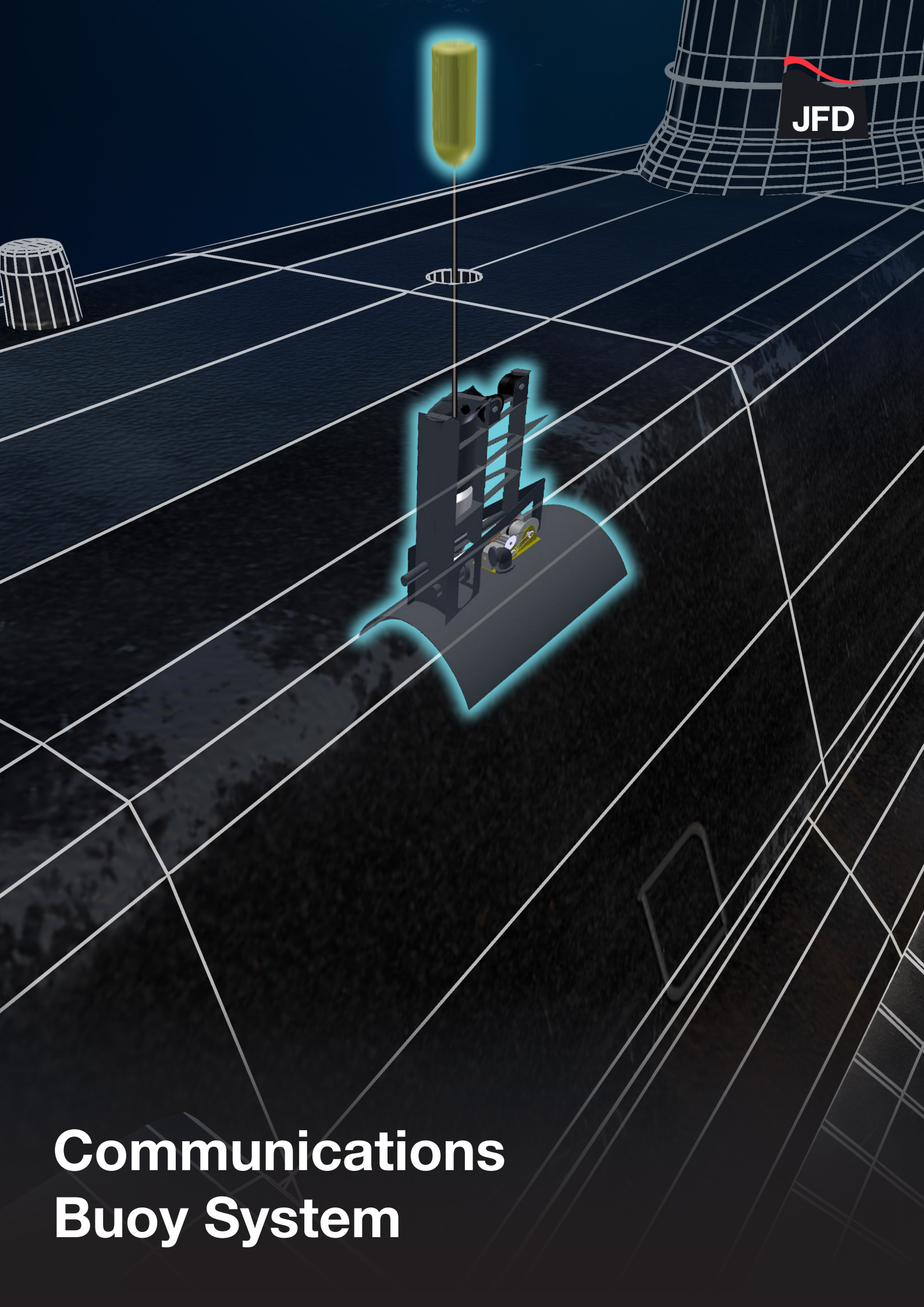



# Communications Buoy System

# Communications Buoy System

## OVERVIEW

The Communications Buoy System allows a buoy to be deployed from the submarine at depths and speeds up to 250m and 2knots respectively.

Proven on in-service platforms, the JFD communications buoy system is reliable and offers navigation and communications functionality.

The system consists of the following elements:
- Communications Buoy
- Umbilical
- Winch System
- Control Console

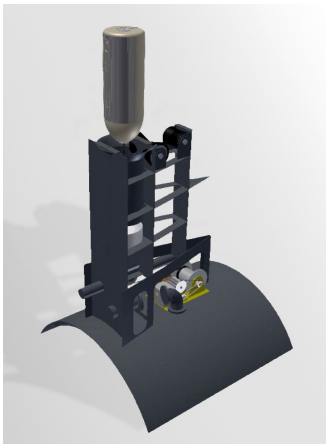
## SPECIFICATION

- Design depth - 250msw
- Test depth - Client Preference
- Max operating speed - 2knots (head on +/-45°)
- Approximate operational limiting sea state - 3

## COMMUNICATIONS BUOY

The buoy is fitted with a GPS Receiver and a VHF antenna to allow communication and positioning. Information is fed back to the submarine Navigation Computer and Radio Communications System via an optical umbilical.

The buoy also includes an Iridium system for Satellite Communications, enabling text and call functionality.



## UMBILICAL

The optical fibre umbilical is designed with the following:
- Allows >350m umbilical, attenuation not an issue
- Umbilical cross section minimised
- Allows data transmission with expansion capability
- 220VDC power transmission reduces diameter
- Spare copper conductors included
- Bend radius minimised governed by the fibre optics jacket
- Vectran braid utilised for strength to minimise weight
- Connectors fitted at each end, allows easy replacement of umbilical if cut or damaged

## WINCH

The winch design is bespoke for the release and recovery of the Buoy and umbilical. It features:
- Modular design simplifies maintenance and reduces down time
- Hydraulic drive system
- Pneumatic or hydraulic Cutter (for emergency release)
- Proven subsea winch mounted externally with electrical penetrator through PH
- GRP bend restrictor to protect umbilical from exceeding bend radius
- Pneumatic or hydraulic latching system to minimise tension on winch when stowed
- Automatic spooler to optimise stowage on winch drum

## CONTROL CONSOLE

The control console is internal to the submarine and enables the operator to have full control over the deployment, use and recovery of the communications buoy.

The console interfaces with the platform systems, including hydraulic, pneumatic, electrical and communications.

This can be supplied as a fully self-contained console or as a set of components for integration within the client's console design.

## FUTURE UPGRADES

The communications buoy system is able to be tailored and upgraded to meet current and future requirements.
- The buoy design itself is scalable to allow integration of additional or alternative systems
- Significant upgrade of available bandwidth is possible through the existing umbilical
- Increase in design depth
- Increase in operating sea state
- Potential for change to electric operation of the winch system (winch drive, cutter, latching system)