



X100  
VHF | DSC | AIS



A new generation of marine communication and safety.  
Integrated VHF and AIS with seamless mobile device  
CONNECT-X command-mic and safety connectivity.  
Built and engineered for the mariners who demand the best.

em-trak 

X100 defines a new horizon of functionality, performance and convenience in marine radio communications and navigation safety. Integrated DSC/VHF radio and high powered AIS Class B combine with a range of innovative functionalities that make your boating safer and more convenient.

#### Overview

##### ENGINEERED & BUILT FOR BOATING LIFE

- Ruggedized, water and weather-proof
- CLEAR-WAVE digital audio processing
- Full colour direct-sunlight visible display
- WiFi & Bluetooth
- NMEA2000 & 0183
- Integrated GPS (external antenna optional)
- Integrated zero-loss VHF antenna splitter – only one antenna required for both AIS and VHF
- Ergonomic intuitive controls and UI
- Flush, desk top, ceiling mounting options

#### X100 Base



## X100

VHF | DSC | AIS

#### CONNECT-X Mobile Device Apps



#### OUTSTANDING FUNCTIONALITIES THAT ENHANCE YOUR BOATING

- CONNECT-X - Transform your smart phone or smart watch into a full feature wireless command mic. You can use to make and receive calls, monitor VHF/DSC, AIS traffic and nav alerts anywhere on your boat.
- VHF/DSC – X100 is a certified Class DVHF/DSC marine radio with a full feature globally certified Class D VHF/DSC radio.
- Chat to anyone on the boat using the Connect-X private intercom functionality.
- Enable MOB function and be alerted to any connected device that leaves the boat.
- High powered AIS that receives and transmits. Integrated navigation alerts and even allows you to go silent and stop transmitting when you want.
- Single system wide phonebook for Vessel DSC, AIS & On-board Intercom for consistent communication by whatever means vessel-wide.
- Wi-Fi Access Point mode for installation standalone, or Station mode for integration within existing vessel Wi-Fi infrastructure for a scalable solution that will meet the needs of solo mariners on small boats to medium to large Motor Yachts and Sailing vessels.
- Streaming of all received AIS data to navigation apps on tablets and phones over Wi-Fi to easily integrate 3rd party navigation apps into your system.
- Autoset DSC “Nature of Distress” when in a MOB situation for quicker triggering of DSC distress following a MOB situation.
- Initiation of DSC calling from: Phonebook, AIS List/Plot or via direct entry of MMSI to make using DSC much more convenient, quicker and feature rich without having to enter MMSI numbers directly.

# Advanced features for enhanced safety and communication

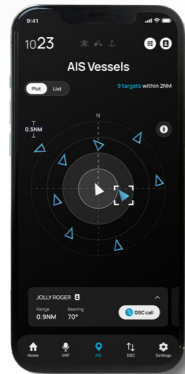
## VHF/DSC

Full feature Class D VHF/DSC radio with advanced Clearwave digital audio processing.



## Wireless Command-Mic

VHF/DSC in your pocket or on your wrist. Use your smart phone or watch as a full feature wireless radio command-mic.



## AIS

AIS Class B. Show all targets, transmit own position, ID vessels, CPA alerts.



## Private Intercom

Connect multiple phones and watches and talk privately to each other or group call.

## MOB

Connect multiple mobile devices. MOB and PLB alerts with locate instructions.

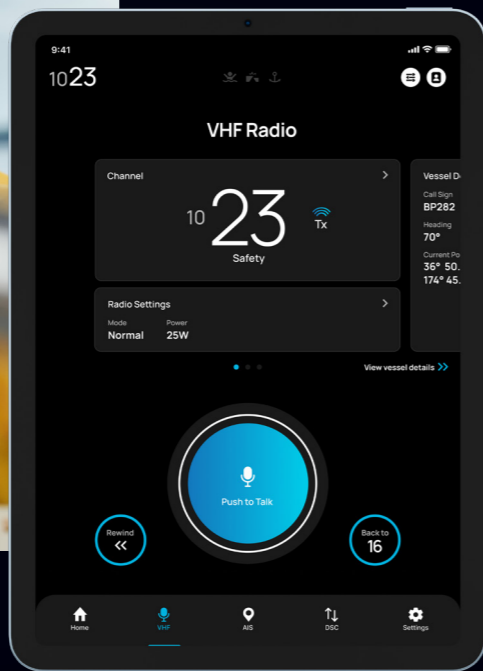


## One Touch Calling

Select any DSC or AIS target and make a direct DSC/VHF call. DSC you can easily use.



- Every feature you will ever want or need



# VHF

## UNIQUE FEATURES

- **Watch: Dual | Tri | Custom Tri** if you need to listen to two channels, whilst monitoring channel 16.
- **Common controls on Fist Mic:** Volume, Channel, Hi/Lo, Dedicated Ch. 16 for single handed operation.
- **Quick channels** for immediate access to commonly used channels.
- **2 way crew Intercom** for integrated, private, communication with crew without transmitting VHF.
- **Public Address** for boat-wide communication with passengers and crew.



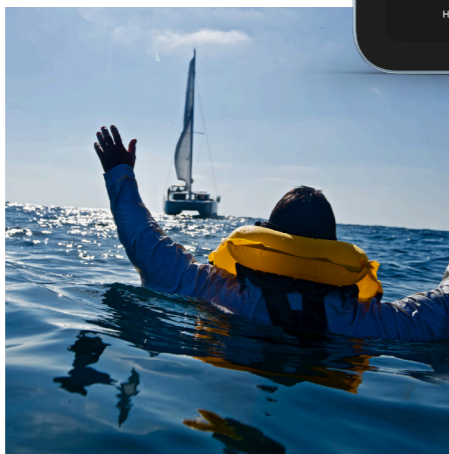
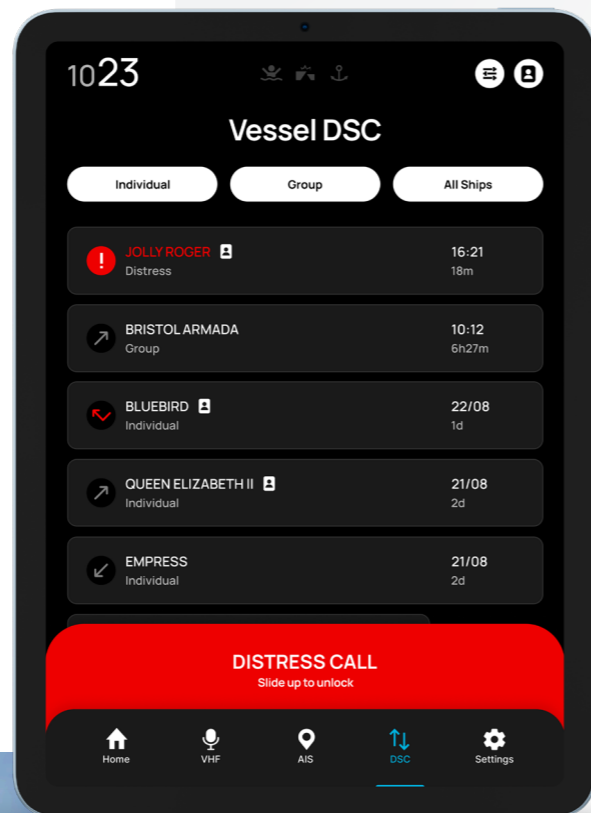
- **Scan: All | Custom | All + 16 | Custom + 16:** Quickly scan only the channels you need for efficient monitoring.
- **Access to registered, country-specific, private & marina channels:** Stay compliant and access local radio channels wherever you are.
- **USA, Canada, International and ATIS channel mappings:** Automatically align with the correct channel settings based on your region, ensuring legal and effective communication.
- **Loudhailer:** Communicate directly with nearby vessels that aren't responding to VHF calls.

# DSC

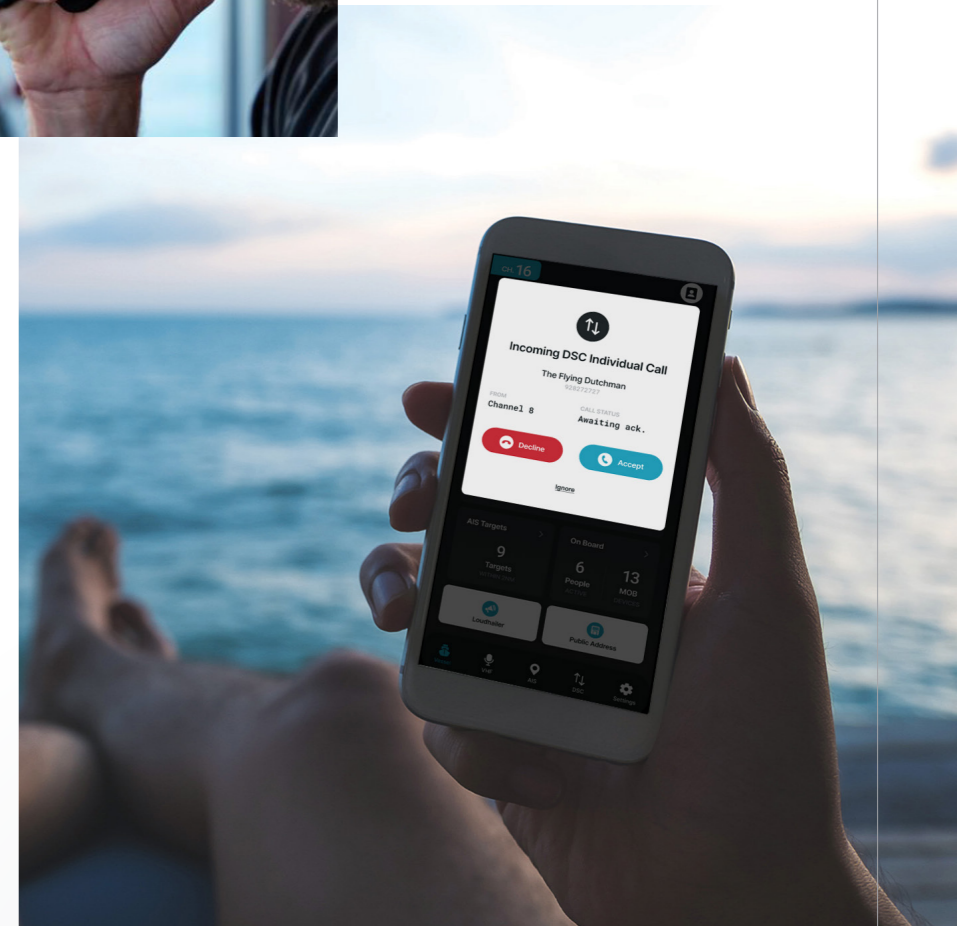


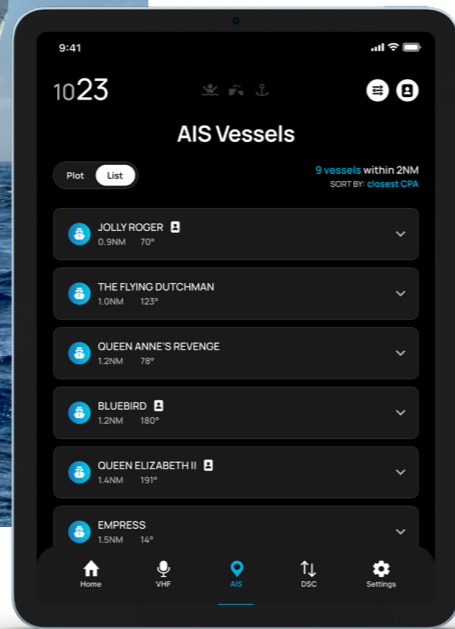
## UNIQUE FEATURES

- NMEA2000 integration** for generation / monitoring of DSC messages from MFD to allow the MFD to initiate outbound DSC messages.
- Quick Calling** for single button calling of AIS targets.
- Individual Routine Call:** One-to-one communication with other vessels without using channels predominantly used for emergencies and urgent communications.
- Safety Call:** Make and receive safety-related announcements to alert nearby vessels of potential hazards.



- Urgency Call:** Make and receive Pan-Pan calls for urgent, but non-life-threatening situations.
- Distress Call:** Send and receive Mayday calls in emergencies for immediate assistance.
- Test Call:** Verify DSC functionality without initiating a real call, ensuring communication reliability.
- Group Call:** One-to-many DSC communication for events like races, simplifying coordination among multiple vessels.





# AIS

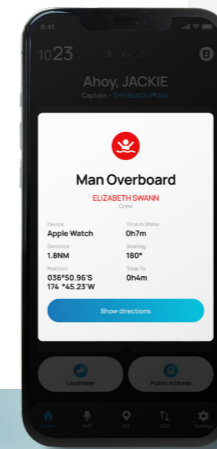


## UNIQUE FEATURES

- **High power Class B** – See and be seen further away to maximize safety.
- **Intelligent scheduling** around VHF transmission such that VHF voice doesn't interfere with AIS and vice versa.
- **Single VHF Antenna** connection for both AIS and VHF Voice/DSC for simple installation.
- **Silent mode with timer** to allow you to set a period during which silent mode is active.

## ■ Display of Vessels, SAR

**Aircraft & SART:** Comprehensive situational awareness to maximize communication opportunities.



# MOB



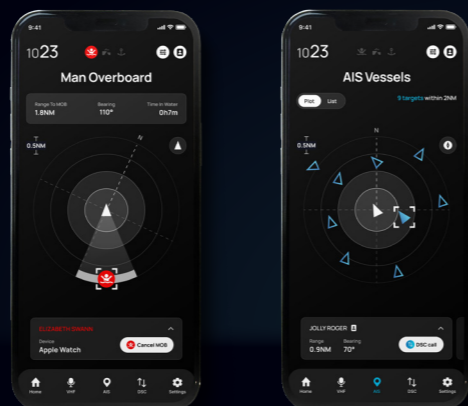
## UNIQUE FEATURES

- **Embarkation and Disembarkation** of devices to allow you to easily configure MOB when setting sail and returning to port.
- **Automatic enrolment** of supported devices to simplify the process of adding new devices.
- **Adjustable sensitivity** of loss of MOB devices to minimise false positives.
- Output of **NMEA2000 MOB** message type to MFD for display of MOB markers on chart plotters.
- **Scalable across entire vessel:** Can integrate with your vessel's Wi-Fi to eliminate communication dead spots, ensuring full coverage.
- **Only critical events shown:** Clear, graphical information aids in prompt and effective MOB recovery.

- CONNECT-X turns your phone into a radio command mic



With the powerful yet free CONNECT-X app, you can wirelessly connect up to 10 mobile devices and turn them into full-function mobile radio command mics allowing you to manage communication, navigation and emergency functions from anywhere onboard.



## Free CONNECT-X app



- Respond immediately to emergencies with instant MOB alerts and recovery locations, as well as CPA, anchor drift and inbound DSC messages.
- Maintain full control over VHF communications from any location on the vessel.
- Privately intercom crew and PA throughout the vessel and loudhail other vessels nearby.

## Specifications you can rely on



### Physical specification – base unit

Dimensions	W249mm, H84mm, D162mm
Weight	700–800g

### General

RF Frequency range TX	156.025–161.425 MHz
RX	156.300–161.925 MHz
DSC	156.525 MHz
AIS 1,2	161.975, 162.025 MHz
Usable channels	INT, USA, CAN, ATIS

### Electrical

Power supply	9.6–31.2 V DC
Operating temperature range	-25°C to +68°C
Antenna impedance	50 $\Omega$
Transmitter output power	VHF: 25W, 1W AIS: 5W

### Audio

Audio output power – internal speaker	5W producing 81 dB @ 1m
External speaker / loudhailer	15W

### Connectivity

NMEA 0183 / NMEA 2000	Ed 3.101
Wireless LAN standards	IEEE802.11 b/g/n
Authentication and encryption	WEP (64/128 bit), WPA-PSK (TKIP), WPA2-PSK (AES)
Bluetooth	4.2 classic and low energy (BLE)

### Certifications

AIS class B SOTDMA	IEC 62287–2:2017
DSC / VHF	EN 301025 v2.2.1 & IEC 62238
NMEA	IEC 61162-1 & IEC 61162-3
Environmental	IEC 60945 "Exposed" + IEC 60529 IP66



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