

ISCANTM

ELECTRONICS

MODERN APPROACH TOWARD REBREATHING ELECTRONICS ARCHITECTURE

Andrzej Kruczkowski



IScan is a Controller Area Network

system based upon proven ISO standards used in the automotive, aerospace and defense industries.



- IScan is a digital network designed to allow independent devices to communicate and interact with each other.
- ISCAN products are designed to perform reliably in "noisy" environments.

INDEPENDENT TESTS AND CERTIFICATIONS



- FCC
- US Navy
- CE EN14143



HEAD UP DISPLAY



- Independent
- Non-voting
- PPO2 color code blinking
- Alarms
- Standard/Double LED



THE NEW APECS 4

- TFT colour display
- 3000mAh rechargeable battery
- WiFi capable

FEATURE LIST FOR APECS 4 HANDSET

- ISCAN compatible with Shearwater Dive Can system
- Integrated system black box, 96kB of RAM memory
- 8GB SD card for operational log memory
- Integrated compass with concurrent displayed PO2 and depth
- Time and deco is a future option
- Subconn connectors

**FLIGHT
RECORDER
DO NOT OPEN**





MEG 15

- Auto safety-wet sensor
- 1.6 PO2 set point
- Hands free set point adjustment

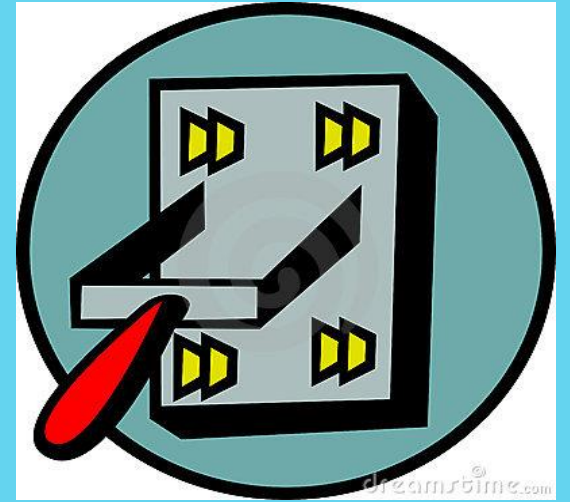
FEATURE LIST FOR APECS 4 HANDSET

- Soft touch, two button intuitive system
- Pre-dive checklist
- Pre-breath countdown timer
- Anti-hypoxia 0.21 PO2 setting
- Automatic set point
- On the fly set point adjustment



FEATURE LIST FOR APECS 4 HANDSET

- Set point quick select
- Displayed 3 sensor mV and PO2
- Average millivolt and PO2 displayed
- No system lockouts
- System can switch power



MEG 15 WITH APECS 4

- Air or 100% O₂ single point calibration
- Full mixed gas capable
- System may be used with any mix of Oxygen
- 4700m Altitude capable
- System is independent of other network devices



FUTURE UPGRADES

ALL FEATURES ARE UPGRADABLE BY USER!!!

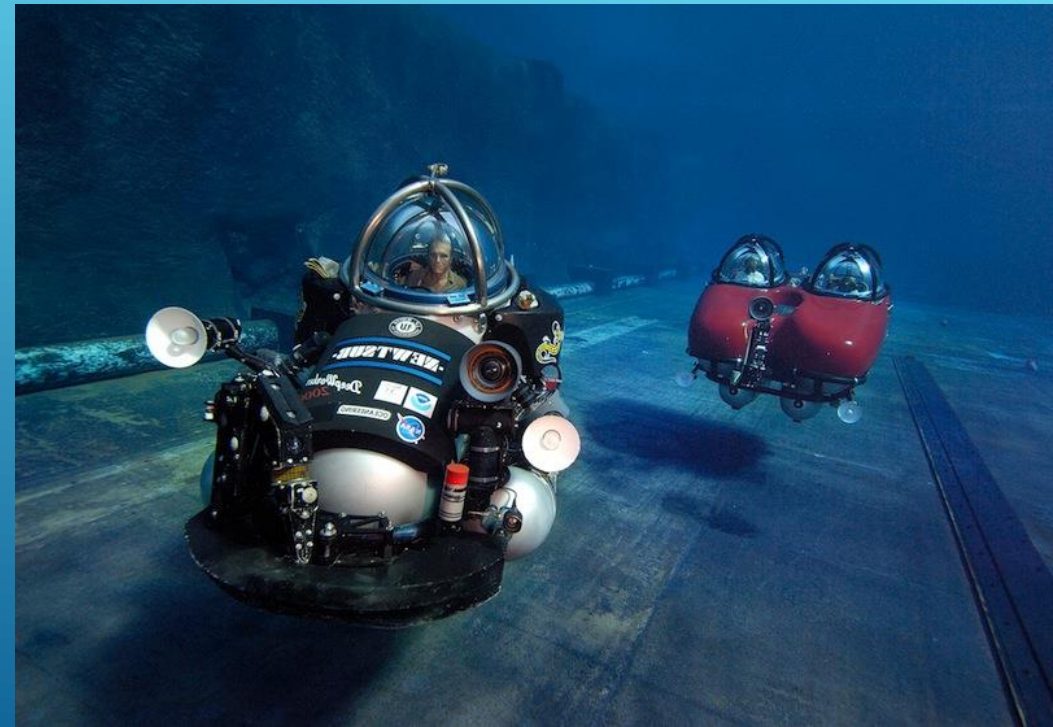
- Dive computer decompression algorithm
- Bailout gas calculator
- CAN based depth pressure sensor
- Depth auto switching
- 2.0 PO₂ set point (DCI therapy)
- VO₂ calculator



FUTURE UPGRADES

ALL FEATURES ARE UPGRADABLE BY USER!!!

- Communication system
- Integration into DPV and submersibles
- Surface umbilical
- Integrated bio metric monitoring
- CAN based CO2 sensor
- CAN based O2 sensor





THE DEMAND FOR MODULARITY

- Different sizes
- Different tasks
- Different environments
- ▶ 😊

CCR PATHFINDER



- Ultra lightweight
- Travel-friendly
- Modular
- Field repairable
- Single O₂ supply
- Diluent = Bailout
- 60m (CE)



Techmeeting 2015, Bratislava, Slovakia

SCRUBBER DURATION

NAVY AND CE TESTS

ISO 9001:2008

BUREAU VERITAS
Certification



Depth	Temp °C	Flow CO2	Diluent	Duration
40m	23	1,35 lpm	AIR	218 min
40m	4	1,60 lpm	AIR	134 min
60m	4	1,60 lpm	16/45	113 min
40m/Variable	10	Variable	AIR	300 min



THANK YOU FOR YOUR ATTENTION