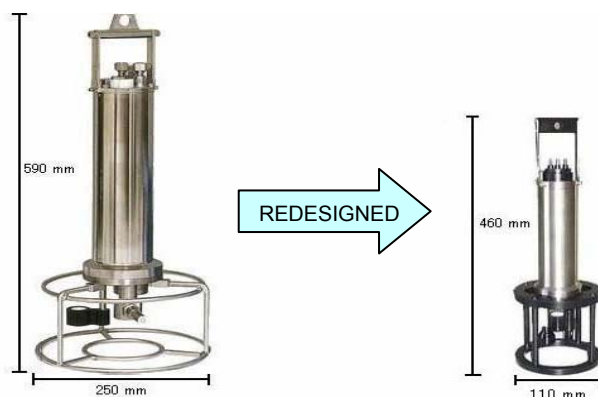


The conventional Alec Electronics MEMORY STD had enjoyed an enviable reputation since its introduction in 1990. Now a new unit, the COMPACT-CTD, has been developed incorporating the excellent features of the MEMORY STD. Alec Electronics has succeeded in reducing its size and adding multi-functions in a user-friendly design.

The Alec Electronics MEMORY STD has been completely redesigned and is now called the

COMPACT-CTD



Special features:

- No cable required due to built-in large memory capacity
- Wet mate-able plug (patented) prevents water leakage
- Rechargeable Lithium-Ion battery pack
- Calendar/time memory
- Simple connection between the instrument and PC through an interface box
- 16-bit high resolution
- Light and portable (2 kg in air & 1.5 kg in water)
- Optional Chlorophyll/Turbidity sensor available
- Titanium pressure case – no corrosion

DESIGNED FOR DEPLOYMENTS BASED ON BOTH DEPTH AND TIME TRIGGER MODES

It is also:

- Possible to acquire time-series data at a fixed depth (max. 600 m)
- Possible to alter measurement pitch for both modes

Light-weight and easy to handle

The COMPACT-CTD has been developed based upon the fundamental design criteria of the compact and lightweight COMPACT series of instruments. The size and weight of the sensors, electronic circuits, power modules and pressure case have been drastically reduced while improving on the original functionality of the larger MEMORY STD unit. The unit's dimensions are 60 mm in diameter and 400 mm in height (the diameter of sensor guard is 110 mm). The COMPACT-CTD weighs 2 kg in air and 1.5 kg in water. It is small and light enough to be operated from small boats by one person without a winch. It can be moored with just a small float and can be attached to ROVs, water samplers, etc. without any difficulty. The COMPACT-CTD proves that good, reliable, multi-parameter instruments do not have to be large and cumbersome.

No leakage

The COMPACT-CTD had been designed to avoid complicated operation and maintenance issues that can cause data acquisition problems. A wet connector (patented technology) is used for data transfer and battery charging. Since there are no penetrating parts, there are no leakage problems. The pressure case does not have to be opened to access the data transfer connector, or for charging the battery.

Auto-zero compensation for depth offset and pilot lamp features are included as well. The titanium pressure case inhibits corrosion for long-term observations.



Patented Wet Connector

Built-in Memory

While it was necessary to transfer the profiling data before the next deployment in the MEMORY STD, the COMPACT-CTD has a built-in 2M-byte flash memory that enables multiple casts. For example, the COMPACT-CTD can take 190 profiles to 100 m depth with 10 cm depth pitch without the need for data transfer. In time trigger mode with 0.2 second measuring intervals, the COMPACT-CTD is capable of 10 hours of measurements. The flash memory is non-volatile which prevents data loss on power failure. As a safety feature, a flashing LED indicates that the memory is full.

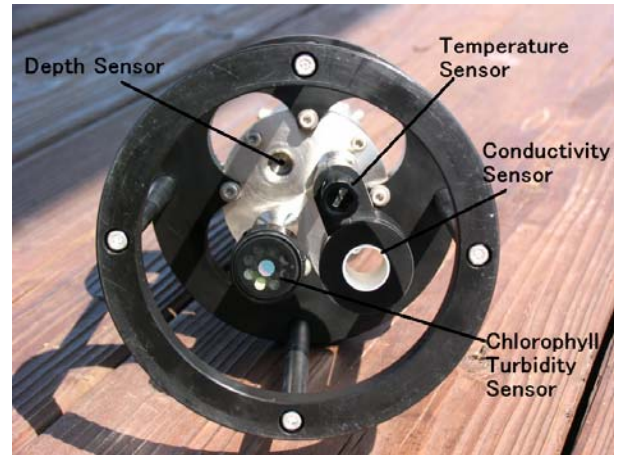
Built-in lithium-ion battery

The use of a lithium-ion battery contributes to the small size of the COMPACT-CTD. The COMPACT-CTD is equipped with a 7.4VDC 1500mAh lithium-ion battery pack which weighs 80g. The voltage of the lithium-ion battery is 3 times greater than nickel-cadmium and nickel hydride batteries. Also the energy density of this rechargeable battery is better than other types of batteries. The charger stops automatically after fully recharging the battery and the battery can withstand approximately 300 discharge/charge cycles.



Optional sensors

The COMPACT-CTD measures temperature, salinity and depth, and an integrated chlorophyll/turbidity sensor is available as an option. With the addition of this optional sensor, the COMPACT-CTD is broadly applicable not only to the physical oceanography field but also to the fields of marine biology and fisheries.



Optional sensor shown



Personal computer control system
 The COMPACT-CTD system consists of the sensor unit, an interface box and data transfer cable. All setup, transfer & data saving, as well as data processing and display can be done on a personal computer with Alec's Windows software. The Compact-CTD can be used onboard under severe environments with a dustproof/splash-proof laptop.

General Specifications

Sensors

Parameters	Type	Measuring Range	Resolution	Accuracy	Time Constant
Depth	Semiconductor Pressure Sensor	0 ~ 600m	0.01m	0.3%FS	0.1sec.
Temperature	Thermistor	-5 ~ 40°C	0.001°C	±0.02°C	0.1sec.
Salinity (Conductivity)	UNESCO Formula (Inductive Cell)	0 ~ 40 0 ~ 60mS/cm	0.001 0.001mS/cm	±0.03 ±0.02mS/cm	0.1sec.
Turbidity (option)	Back-scattering Light	0 ~ 1000FTU (Formazine)	0.03FTU	±2% of measured data or Zero-drift ±0.3FTU	0.2sec.
Chlorophyll (option)	Fluorescent	0 ~ 400µg/l (Uranine)	0.01µg/l	±1 of measured data or Zero-drift ±0.1µg/l	0.2sec.

General Specifications (Continued)

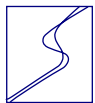
Hardware

Measuring mode	Depth-trigger mode	Time-trigger mode
Interval	0.1, 0.2, 0.5, 1 m	0.1, 0.2, 0.5, 1 sec
Memory type	2M-byte Flash memory	
Recordable capacity	0.1m pitch→100m depth 190 times (approx.)	200,000 data (approx.)
Power	Rechargeable lithium-Ion battery Usable for approx. 10 hours continuously	
Weight	2.0 kg in air, 1.5 kg in water	
Dimension	Φ60mmx460mm(H), Φ110mm sensor guard	
Material	Titanium	
Others	Calendar memory function	

Interface

Transfer time	About 12 min (Full data)
Charging Time	Within 3 hours approx.
Weight	1.1 kg approx.
Dimensions	170x169x66mm
Material	Die-cast Aluminum
Power	Alkaline battery, (4) AA (Approximately 40 hours of use)
	AC100 ~ 240V (Communication/Charging)
RS232-C cable	5m standard (Max. 20 m)

For more information, please contact:



Rockland Oceanographic Services Inc.
Oceanographic Instruments and Consulting

Toll Free: (877) 370-1688 Fax: (250) 370-0234

Email: info@rocklandocean.com

Web: www.rocklandocean.com
www.alecvictoria.com

ALEC ELECTRONICS CO.,LTD.

7-2-3 Ibukidai-Higashimachi, Nishi-ku, Kobe,
Japan 651-2242 TEL +81 78-997-8686 FAX +81 78-997-8609
Web site www.alec-electronics.co.jp
E-mail info@alec-electronics.co.jp