ADCP Workhorse Mariner (600kHz)

Attention:

Please note that operations of the Acoustic Doppler Current Profiler requires experienced scientific staff on board. The system is not operated by the ship's crew. Announce operations with the Acoustic Doppler Current Profiler to AWI-Logistics prior to the cruise and clarify the data transfer after the cruise.

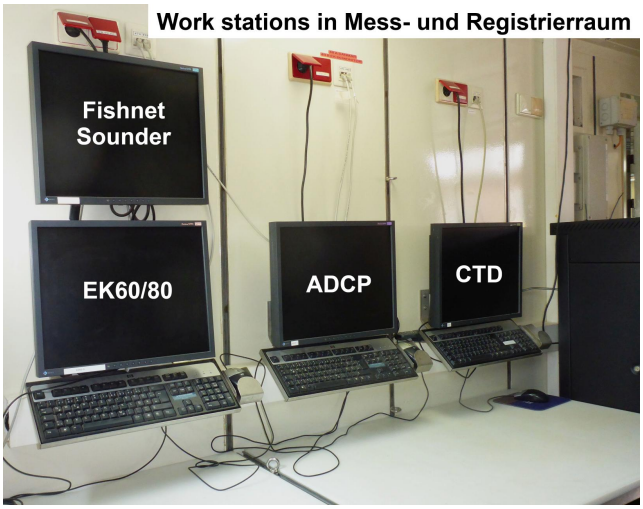
Summary

The WorkHorse Mariner is designed to measure real-time current profiles of coastal, inshore, and open ocean water current structures from temporary or permanent mounting in a vessel. It gives fine along-track resolution thanks to RDIâ€™s superior low-noise data, including bottom tracking.

Manufacturer	Teledyne RDI
Model	WHMVM600-RE-UG10
Serial No.	Transducer S/N 38129
Type	current profiler
REGISTRY-Link	REGISTRY (11172)

Location of ADCP computer

Work stations in Mess- und Registrierraum



Transducer Frequency

600_kHz

Contacts

Name	Institution	Role
Ralf Krocker	Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research	Device Contact
FIELAX GmbH	FIELAX Gesellschaft fÃ¼r wissenschaftliche Datenverarbeitung mbH	Device Contact

Components

The transducer of the Workhorse Mariner 600 kHz is hull mounted in the keel of RV Heincke. The angle between the ship centerline and transducer centerline is 45° direction starboard. The electronics chassis and the operator PC are situated in the Mess- and Registrierraum on the main deck. The data acquisition and processing software VmDas and the synchronizing software Easy2Sync are installed on the computer.

Position

Info	xyz-position of the 600kHz transducer from Alignment Survey Report RV Heincke (January 2016) The transducer is hull mounted in the keel of RV Heincke. The operators PC and the electronic chassis are situated in the Mess- and Registrierraum.
X	42.829 m (Positive X-axis is forward and along the vessels centerline. Origin is ship stern.)
Y	0.526 m (Positive Y-axis is portside of centerline)
Z	0.077 m (Positive Z-axis is upwards of basis)

Data logging, storage and archiving

Logged parameters

Parameter	O2ARegistry Output Type	Unit
current velocities in depth range up to 50m	current speed	m/s

Central geographical ship's position and time standard

The GPS position of the Trimble GPS receiver antenna is stored in the data files. The position is NOT centralized to the ADCP transducers. Time synchronisation is achieved via NTP.

Rawdata storage on board

The data acquisition and processing software VmDas creates rawdata on the local drive of the computer. Every hour the software Easy2Sync copies the data to a local backup file structure. Every 3 hours the software Easy2Sync synchronizes the backup data to the directory structure of the mass storage. Attention: Deleting files in the directory structure of the mass storage will also delete these files in the backup file structure with the next synchronization run. But: As long as these files are not removed from the local rawdata drive these files will be copied again to the local backup file structure with the next backup run and to the directory structure of the mass storage with the next synchronization run.

root directory	C:\ADCPData\ or C:\ADCPDataBackup\ or: xdc\home\scientists\data\ADCP\...
directory name	CruiseNo e.g. HE507
file name	CruiseNoVVV_RRRRRR.ENR, CruiseNoVVV_RRRRRR.ENS, CruiseNoVVV_RRRRRR.ENX, CruiseNoVVV_RRRRRR.LTA, CruiseNoVVV_RRRRRR.N1R, CruiseNoVVV_RRRRRR.NMS, CruiseNoVVV_RRRRRR.STA, CruiseNoVVV_RRRRRR.LOG, CruiseNoVVV_RRRRRR.VMO with: VVV = version No., RRRRRR = running No. e.g. HE507_3012_000000.*
Data volume (MB per day) ca	350
Number of files per day ca	35

DShip

The ADCP data are not transferred to DShip.

Data archiving on land

After consultation with the data scientist and AWI Logistics the ADCP data including meta data may be transferred to PANGAEA (https://www.pangaea.de/).

Documentation

- ADCP 600kHz support (User Manual, 2 MB)
- ADCP workhorse mariner datasheet (Article, 308 kB)

- ADCP workhorse mariner manual (Article, 1 MB)