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RESEARCH LABORATORIES, INC.

Unpacker Release Note	Release v3.13.5	August 26, 2019

Summary of Unpacker Release v3.13.5: Unpacker Release v3.13.5 contains the following changes.

I. Changed functionality	Updated unpacking for Aquadopp II ACM files.
II. Enhanced functionality	Added a Settings screen that groups software settings onto a single screen.
III. New functionality	Added a 'Check for Update' feature to check for Unpacker software updates.
IV. Enhanced functionality	Created new Help files and added the ability to open Help from within Unpacker.
V. General update	Enhanced the Browse functions for Source folder and Destination folder to be full directory browsers.
VI. General update	Added support for Sea-Bird 41PLUS CTD files (ITP integrated sensor only).
VII. General update	Applied minor display changes to Unpacker user interface.

I. Changed functionality: Unpacker Release v3.13.5 has changes required to correctly unpack Aquadopp II data. Unpacker Release v3.13.5 can be used to reprocess any Aquadopp II data file to correctly convert all binary files to text.

Note - Do not use Unpacker version Release v3.13.5 on decimated files. This release is not certified to work with decimated files.

In Previous Unpacker versions, Aquadopp II binary data was handled according to Nortek Data Format 1 (DF1), as recommended by the sensor manufacturer.

McLane recently discovered that all binary data files collected by all Aquadopp II hardware and software versions are recorded in Nortek Data Format 2 (DF2).

Aquadopp II data files (e.g. Axxxxxxx.DAT) unpacked by Unpacker Release v3.12 and earlier contain nearly entirely correct data. However, some of the Aquadopp II data fields are not unpacked into the text file. Additionally, the text files created by Unpacker 3.12 and earlier omit data that is contained in the Aquadopp II data files.

In Unpacker Release v3.12 and earlier, all fields are correct except magnHx, magnHy, and magnHz. These fields represent Acceleration data fields. The Magnetometer data is not reported in the text files produced by version 3.12 and earlier, however, the data remains in the unpacked (e.g. Axxxxxxx.DAT) files.

Unpacker Release v.3.13.5 unpacks and reports all Aquadopp II binary data files. See **McLane TSB 2019-03** for details about unpacking Aquadopp II data previously processed with Unpacker Release v3.12 and earlier.

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II. Enhanced functionality: In Unpacker Release v3.13.5 software settings are in a single Settings screen which is accessed by clicking the Settings button.

Figure 1: Unpacker Settings

III. New functionality: Unpacker Release v3.13.5 has a 'Check for Updates' feature on the Settings screen. The user can click the 'Check for Updates Now' button or set automatic update checks on software startup. If a more current Unpacker software version is detected, the system prompts to upgrade. The upgrade is installed if accepted by the user. The most current Unpacker software can also be downloaded from the Profiler software menus on the McLane website.

Figure 2: Check for Updates

IV. Enhanced functionality: Unpacker Release v3.13.5 contains new Help files which can be accessed from within the Unpacker Settings.

Figure 3: Unpacker Help

V. General update: In Unpacker Release v3.13.5, the Browse functions for the Source folder and Destination folder are full directory browsers.

Figure 4: Full Directory Browser

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VI. Changed functionality: In Unpacker Release v3.13.5, unpacking the Sea-Bird 41Plus CTD was combined into SBE 41CP as these models now function in the same manner. The SBE 41CP CTD is integrated with the Ice Tethered Profiler (ITP).

Figure 5: SBE 41CP, and 41Plus CTD File Unpacking

VII. **General Update**: Unpacker Release v3.13.5 has minor display changes to improve usability.