

PassivePacker

User Manual

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Overview

PassivePacker, the NCEI Passive Acoustic Data Packager, makes packaging data for submission to NCEI quick and easy. PassivePacker can package both audio data and data products, one dataset at a time.

To begin, the user enters basic deployment and instrument details, and sets the paths to acoustic and ancillary data files. The packager copies all files to the destination location, creating a data submission package in the [Library of Congress BagIt bag format](#). Each ‘bag’ contains all the data and metadata needed for archiving. It also includes bag documentation files, namely a checksum, manifest file that allows NCEI to verify file integrity while ingesting the data.

PassivePacker uses a series of SQLite files to store information on the packages entered by the user as well as user created entries for scientists, projects and sponsoring organizations. These files are used to populate pull-down menus that simplify data entry and ensure consistency. PassivePacker is fairly robust in handling errors, but if the packager does crash, it can be re-launched and packaging resumes with minimal loss of time. Though designed to package files onto an external hard drive, PassivePacker can also create packages on internal drives, and package data already on an external drive (see [Packaging Data in Place](#)).

Large (several hundred GB to TB) datasets will take a long time to complete. PassivePacker may run for 24 hours or more once the user has entered the necessary metadata and initiated PassivePacker’s packaging process. It is recommended to use a dedicated machine to run the packager.

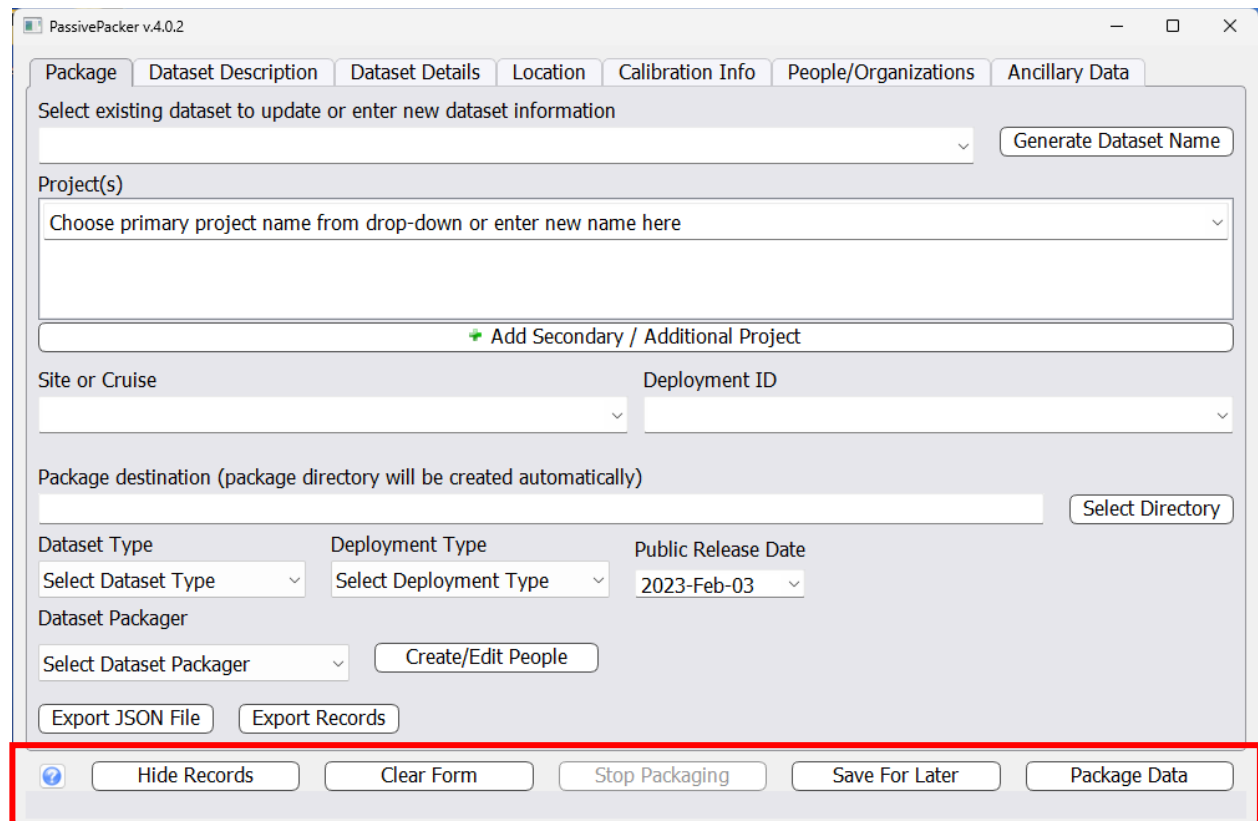
Words of Caution

PassivePacker has some limitations to keep in mind.

1. All data and the created metadata files must fit on the destination drive. PassivePacker does not perform a space check before starting and will crash if the destination drive fills before packaging is complete.
2. Be careful with the dataset name. Though it will warn you, PassivePacker will overwrite existing data on the destination drive if you unintentionally use the same package name more than once on the same destination drive.
3. The NCEI archive has filename character constraints. Only alpha numeric characters (a-z, A-Z, 0-9), underscores, dashes and dots (_ - .) are allowed. If your filenames have other characters, PassivePacker will replace those characters with underscores while copying the files into the data package.

User Interface

PassivePacker’s user interface is composed of multiple tabs used to organize required metadata information. The main control buttons at the bottom are always visible and are used to manage main PassivePacker functions. The main controls include ‘?’, ‘Hide Records’, ‘Clear Form’, ‘Stop Packaging’, ‘Save For Later’, and ‘Package Data’ (*Figure 1.1, red box*).



PassivePacker v4.0.2

Package Dataset Description Dataset Details Location Calibration Info People/Organizations Ancillary Data

Select existing dataset to update or enter new dataset information

Generate Dataset Name

Project(s)

Choose primary project name from drop-down or enter new name here

Add Secondary / Additional Project

Site or Cruise Deployment ID

Package destination (package directory will be created automatically)

Select Directory

Dataset Type Deployment Type Public Release Date

Select Dataset Type Select Deployment Type 2023-Feb-03

Dataset Packager

Select Dataset Packager Create/Edit People

Export JSON File Export Records

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 1.1: Main PassivePacker user interface. The 5 main control buttons are highlighted in the red box.

Main Controls

Help: Click the ? button to open PassivePacker’s user manual. A PDF reader application is required. The manual pdf can also be found in the PassivePacker distribution’s help folder.

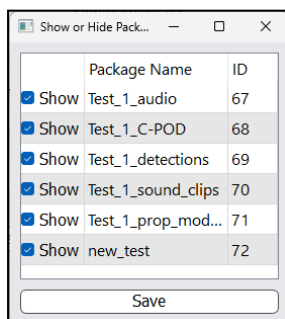


Figure 1.2: *Show or Hide Package Records window.*

Hide Records: Opens the package record show/hide dialog box (*Figure 1.2*). This dialog box allows the user to easily control the display of previous packages in the *Select Existing Record* pull-down menu (*Figure 2, 2*). Records with *show* selected are displayed in the pull-down menu.

Clear Form: Clears all form fields on all tabs.

Stop Packaging: Stops the packaging process at its current point.

Save For Later: Saves entered data for later use. This allows the user to continue working on packaging their data at a later date. This button should be routinely clicked to minimize data loss in case PassivePacker crashes.

Package Data: Initiates the packaging process. This includes saving metadata to a packageData.sqlite file, creating folder structure in destination directory, copying files, and creating the metadata and the bag manifest files. During processing PassivePacker displays update information just below the main control buttons.

Close (The usual “X” for closing windows): Closes data packaging tool. PassivePacker prompts user to save changes before closing.

Don't forget to save often by clicking Save For Later

Package Tab

PassivePacker v4.0.2

Package Dataset Description Dataset Details Location Calibration Info People/Organizations Ancillary Data

Select existing dataset to update or enter new dataset information

2 Generate Dataset Name 6

Project(s) 3

Choose primary project name from drop-down or enter new name here

+ Add Secondary / Additional Project

Site or Cruise 4 Deployment ID 5

Package destination (package directory will be created automatically) 7

Select Dataset Type 8 Select Deployment Type 9 Public Release Date 10

Select Dataset Packager 11 Create/Edit People

Export JSON File Export Records

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 2: The first view presented to the user after opening PassivePacker is the package tab.

1) Package Tab: This is the default opening tab in PassivePacker.

2) Select Existing Dataset: Pull-down list populated with previous package information stored in PassivePacker. Selecting a dataset will populate PassivePacker fields with data from the stored package information. You can use this feature to pre-populate a new package with common data from a previous package. **CAUTION!** Remember to change the dataset name. When saving for the first time a warning dialog box will appear (See [Additional Information and Warning Messages](#)). Click *Create New* to create a new package. Clicking *Update* updates the existing package record's dataset name instead of creating a new record.

3) Project: Name of the project(s) to which data are associated. The first project entry should be the primary project for the dataset. If your dataset is associated with more than one project name, use the "+ Add Secondary/Additional Project" button to add additional project name fields. You can specify as many additional projects as necessary.

4) Site or Cruise: Enter the site or cruise name where data were collected (if appropriate). Only use Alphanumeric characters and dashes for Site/Cruise name.

5) Deployment ID: Enter Deployment ID for the dataset is appropriate.

6) Generate Dataset Name (*button*): Clicking this button generates a dataset name based on the first project, site or cruise and deployment id concatenated with an underscore. Using this button is optional and should only be used when a dataset name of *project_site_deployment id* is appropriate. Dataset names must only contain alphanumeric characters, dashes and underscores. All project name, site and deployment ID entries must conform to this character requirement.

7) Package destination: Set the destination path for the data package using the *Select Directory* button. PassivePacker will create a directory with the unique package name described above.

8) Dataset Type: Use the pull-down menu to select the appropriate dataset type for your data. Currently PassivePacker supports audio, C-POD, detections, sound clips, sound level metrics, and sound propagation model datasets. When you select a dataset type, the appropriate entry form is loaded in the [Dataset Details tab](#).

9) Deployment Type: Use the pull-down menu to select the appropriate deployment type for your dataset. Currently PassivePacker supports stationary marine, multipoint stationary marine, mobile marine, and stationary terrestrial deployments. When you select a deployment type the appropriate entry form is loaded in the [Location tab](#).

10) Public Release Date: Using the pull-down calendar, set the date the data will be released for public access by the archive. NOAA policy specifies that data should be publicly available no later than one year after collection. Contact the NCEI Passive Acoustic Data Manager (pad.info@noaa.gov) with any questions on this matter.

11) Dataset Packager: Name of the person packaging the data. If you're reading this manual, it's probably you! Clicking the *Create/Edit People* button open the dialog to create new entries or edit existing entries (See [Editing People and Organizations](#)). The *Create/Edit People* interface also lets you control whether a person appears in the pull-down menu.

Import/Export Buttons (*red box*)

Import Tethys Record: This function is unavailable in version 4.0.0

Export Tethys Record: This function is unavailable in version 4.0.0

Export JSON File: This button allows users to export the entered information into a JSON-formatted record.

Export Records: This button allows users to export the metadata for all entered datasets as both a CSV file and a JSON formatted file.

Dataset Description Tab

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Package Dataset Description Dataset Details Location Calibration Info People/Organizations Ancillary Data

Deployment Title 2

Deployment Purpose 3

Deployment Description 4

Path to documentation files 5

Select Directory

Alternate site name: 6 Alternate deployment name: 7

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 3: The Dataset Description tab allows users to record deployment metadata.

- 1) Dataset Description Tab:** Information entered on this tab is used in the deployment-level metadata record and can typically be copied from other documentation.
- 2) Deployment Title or Dataset Title:** The full name of the deployment / dataset.
- 3) Deployment Purpose or Dataset Purpose:** Provide a description of the purpose of the deployment / dataset.
- 4) Deployment Description:** Include information on why it was collected, any specific details about its collection that should be known by future data users and anything special that might affect the data usefulness for other analyses beyond those being done by the original scientists.

Deployment Description Example: The U.S. Navy periodically uses a Temporary Maritime Activities Area (TMAA) in the central Gulf of Alaska (GoA), east of Kodiak Island. Current scientific data on affected biological and environmental resources are necessary to conduct analyses required for Navy training, exercise, and technology-acquisition activities. In the summer of 2013, the Navy funded a vessel-based survey (Gulf of Alaska Line-Transit Survey (GOALS)) to fill in the gaps of knowledge on distribution, movements, and densities of marine mammals within this training area. The Marine Mammal Laboratory conducted passive acoustic monitoring during this survey cruise. Directional Frequency Analysis and Recording (DiFAR) sonobuoys were deployed approximately every 2 to 3 hours to obtain an evenly sampled census of marine mammal vocalizations; a total of 186 sonobuoys were deployed. Sonobuoys were analyzed in real time for presence/absence of calls from cetaceans; calls were detected on 80 percent of the sonobuoys, including the study area and transit to Kodiak, Alaska. There were seven confirmed species detected: blue, fin, humpback, killer, sei, North Pacific right, and sperm whales, and additional call detections that could not be classified to species. All sonobuoys were provided by the United States Navy (Naval Operational Logistics Support Center, Naval Surface Warfare Center, Crane Division, and the Office of the Assistant Secretary of the Navy).

5) Path to documentation files: Set the path to the directory containing documentation associated with the data using the *Select Directory* button. The packager will copy all the contents of the specified directory, including subdirectories, into the data package. If a path is not set, the packager will create an empty directory in the bag. These can be left empty or you can manually copy the appropriate files into them later. If additional files are added after packaging, the *Update Bag* function should be used to update the bag's manifest file.

6) Alternate site name: Enter any alternate name for the site. This can be an acronym or another name that the site is commonly referred to.

7) Alternate deployment name: Enter any alternate name that was used for this deployment. This can be an acronym or other name commonly used to refer to the deployment.

Don't forget to save often by clicking Save For Later

Dataset Details Tab

The Dataset Details tab fields vary depending on which dataset type was selected in the Package tab. Audio, C-POD, detections, sound clips, sound level metrics, and sound propagation model datasets are the datasets currently supported by PassivePacker.

Dataset Details: Audio Dataset

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1

Package Dataset Description Dataset Details Location Calibration Info People/Organizations Ancillary Data

Audio Dataset

Platform 2 Instrument type 3 Instrument ID 4

Deployment Time 5 Recovery Time 6 Audio Start Time 7 Audio End Time 8

2010-Jan-01 13:00:00 2010-Jan-01 13:00:00 2010-Jan-01 13:00:00 2010-Jan-01 13:00:00

Sampling Details Data Quality Sensors

Path to audio files 9

Select Directory

Deployment comments (issues with the data, instrument, etc. that future users should know) 10

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 4: The Dataset Details tab when an audio dataset (red box) is selected in the Package tab.

1) Dataset Details Tab: This tab's content changes depending on which type of dataset was selected in the Package tab. The form fields for an audio dataset (*red box*) are shown in the image above.

2) Platform: Select the platform the instrument was mounted on (i.e., mooring, glider, and towed array) by clicking on the arrow to open the pull-down list of platforms to choose from. If the platform needed is not listed, type the platform name directly into the field and the new platform will be added to the list upon saving making it available in future PassivePacker sessions.

3) Instrument Type: Select the instrument used to collect the data being packaged from the pull-down list. If the instrument needed is not listed, you can type the instrument name directly

into the field and the new instrument will be added to the list upon saving the package. Once PassivePacker is closed and reopened, the new instrument will be visible in the pull-down list.

4) Instrument ID: Enter the instrument ID. This is typically an instrument serial number, or other unique identifier. This field can be left when no appropriate value is known.

5) Deployment Time: Enter time the instrument was deployed.

6) Recovery Time: Enter time the instrument was recovered.

7) Audio Start Time: Enter the start time of the first audio file in the dataset.

8) Audio End Time: Enter the end time of the last audio file in the dataset.

9) Path to Audio Files: Set the path to the directory containing the acoustic files using the *Select Directory* button. PassivePacker will copy all acoustic files in this directory and any subdirectories. Your directory should only contain acoustic files from one instrument and only those for this deployment. Currently, only .wav .aif .mp3, and .flac file extensions are supported. If you have a different format, contact the NCEI Passive Acoustic Data Manager (pad.info@noaa.gov).

10) Deployment Comments: Document factors that might be useful to future users and analysis. Note, data quality issues such as interference from other instruments, hardware or software issues, etc. should be documented in the data quality dialog accessed via the Data Quality button.

Metadata Dialogs (*Figure 4, orange box*)

The following three buttons provide access to critical metadata entry dialogs. See [Entering Sampling, Data Quality, and Sensor Details](#) for more information.

Sampling Details: This button opens the sampling details entry form.

Data Quality: This button opens the data quality entry form.

Sensors: This button opens the sensor configuration entry form.

Don't forget to save often by clicking Save For Later

Dataset Details: C-POD

PassivePacker v4.0.2

1

Package Dataset Description **Dataset Details** Location Calibration Info People/Organizations Ancillary Data

C-POD Dataset

Platform 2 Instrument type 3 C-POD Instrument ID 4

Deployment Time 5 2010-Jan-01 13:00:00 Recovery Time 6 2010-Jan-01 13:00:00 Audio Start Time 7 2010-Jan-01 13:00:00 Audio End Time 8 2010-Jan-01 13:00:00

Sampling Details Data Quality Sensors

Path to C-POD files 9 Select Directory

Deployment comments (issues with the data, instrument, etc. that future users should know) 10

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 5: The Dataset Details tab when a C-POD dataset (red box) is selected in the Package tab.

1) Dataset Details Tab

2) Platform: Select the platform the instrument was mounted on (i.e., mooring, glider, and towed array) by clicking on the arrow to open the pull-down list of platforms to choose from. If the platform needed is not listed, type the platform name directly into the field and the new platform will be added to the list upon saving making it available in future PassivePacker sessions.

3) Instrument Type: Select the instrument used to collect the data being packaged from the pull-down list. If the instrument needed is not listed, you can type the instrument name directly into the field and the new instrument will be added to the list upon saving the package. Once PassivePacker is closed and reopened, the new instrument will be visible in the pull-down list.

4) Instrument ID: Enter the instrument ID. This is typically an instrument serial number, or other unique identifier. This field can be left when no appropriate value is known.

5) Deployment Time: Enter time the instrument was deployed.

6) Recovery Time: Enter time the instrument was recovered.

7) Audio Start Time: Enter the start time of the first audio file in the dataset.

8) Audio End Time: Enter the end time of the last audio file in the dataset.

9) Path to C-POD Files: Set the path to the directory containing the C-POD files using the *Select Directory* button. PassivePacker will copy all of the C-POD files in this directory and any subdirectories. Your directory should only contain C-POD files from one instrument and only those for this deployment.

10) Deployment Comments: Document factors that might be useful to future users and analysis. Note, data quality issues such as interference from other instruments, hardware or software issues, etc. should be documented in the data quality dialog accessed via the Data Quality button.

Metadata Dialogs (*Figure 5, orange box*)

The following three buttons provide access to critical metadata entry dialogs. See [Entering Sampling, Data Quality, and Sensor Details](#) for more information.

Sampling Details: This button opens the sampling details entry form.

Data Quality: This button opens the data quality entry form.

Sensors: This button opens the sensor configuration entry form.

Don't forget to save often by clicking Save For Later

Dataset Details: Detections

The screenshot shows the PassivePacker v4.0.2 application window. The 'Dataset Details' tab is active, and the 'Detections Dataset' option is selected and highlighted with a red box. The interface contains several input fields and buttons, numbered 1 through 19 for reference:

- 1: Tab bar area
- 2: Platform dropdown menu
- 3: Instrument type dropdown menu
- 4: Data Quality button
- 5: Analysis Start date/time field
- 6: Analysis End date/time field
- 7: Species or Sound Detected dropdown menu
- 8: Scientific Name (if applicable) text field
- 9: Path to detections files text field with a 'Select Directory' button
- 10: Analysis Time Zone (hours to GMT) field
- 11: Analysis Effort (total sec/hr) field with a 'Continuous' checkbox
- 12: Analysis Frequency (Hz) Min field
- 13: Analysis Frequency (Hz) Max field
- 14: Sample Rate (Hz) field
- 15: Software Name(s) text field
- 16: Software Version(s) text field
- 17: Protocol Citation text field
- 18: Software Description text area
- 19: Processing Description text area

At the bottom of the window, there are five buttons: 'Hide Records', 'Clear Form', 'Stop Packaging', 'Save For Later', and 'Package Data'.

Figure 6: The Dataset Details tab when a detections dataset (red box) is selected in the Package tab.

1) Dataset Details Tab

2) Platform: Select the platform the instrument was mounted on (i.e., mooring, glider, and towed array) by clicking on the arrow to open the pull-down list of platforms to choose from. If the platform needed is not listed, type the platform name directly into the field and the new platform will be added to the list upon saving making it available in future PassivePacker sessions.

3) Instrument Type: Select the instrument used to record audio used in the detection analysis. If the instrument needed is not listed, you can type the instrument name directly into the field and the new instrument will be added to the list upon saving the package. Once PassivePacker is closed and reopened, the new instrument will be visible in the pull-down list.

4) Data Quality: This button opens the data quality entry form. See [Data Quality Details](#) for further information.

5) Analysis Start: Enter the start time of the analysis time frame.

6) Analysis End: Enter the end time of the analysis time frame.

7) Species or Sound Detected: Select the name of the species or sound detected in the analysis from the pull-down list. If your sound source is not in the list, type your source name in the box. PassivePacker will save your entry so it will appear in the pull-down list moving forward.

8) Scientific Name: This field populates automatically based on the species detected. If adding a new species, enter the scientific name of the species here. This field is optional and should be left blank for sounds not caused by a living organism. New entries are stored with the species name so when the species is selected from the pull-down list, this field will populate automatically.

9) Path to Detection Files: Set the path to the directory containing the detection files using the *Select Directory* button. PassivePacker will copy all of the detection files in this directory and any subdirectories. Your directory should only contain detection files from one instrument and only those for this deployment.

10) Analysis Time Zone: Enter the offset from UTC to specify the time zone of the file timestamps. Time zone designators like EST do not work and cannot be entered into the field.

11) Analysis Effort: The total number of total seconds per hour analyzed. Click the continuous button to enter 3600 seconds (60 minutes x 60 seconds/minute).

12-13) Analysis Frequency: Frequency range over which analysis was conducted.

14) Sample Rate: Enter the analysis sample rate in Hz.

15) Software Name(s): Enter the name of the software used to analyze the data. Use a comma to separate multiple software names.

16) Software Version(s): Enter the version of the software used to analyze the data. Use a comma to separate multiple versions (version number order should match software name order).

17) Protocol Citation: Enter the citation or citation DOI for the analysis protocol documentation (i.e., the paper on the technique).

18) Software Description: Write a description of the software used.

19) Processing Description: Enter a description of the process that was conducted to obtain the detections.

Don't forget to save often by clicking Save For Later

Dataset Details: Sound Clips

PassivePacker v4.0.2

1

Package Dataset Description Dataset Details Location Calibration Info People/Organizations Ancillary Data

Sound Clips Dataset

Platform 2 Instrument type 3

Clips Start Time (if relevant) 2010-Jan-01 13:00:00 Clips End Time (if relevant) 2010-Jan-01 13:00:00 4

Path to sound clips files 5 Select Directory

Software Name(s) 6 Software Version(s) 7 Protocol Citation 8

Software Description 9 Processing Description 10

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 7: The Dataset Details tab when a sound clip dataset (red box) is selected in the Package tab.

1) Dataset Details Tab

2) Platform: Select the platform the instrument was mounted on (i.e., mooring, glider, and towed array) by clicking on the arrow to open the pull-down list of platforms to choose from. If the platform needed is not listed, type the platform name directly into the field and the new platform will be added to the list upon saving making it available in future PassivePacker sessions.

3) Instrument Type: Select the instrument used to record the sound clips. If the instrument needed is not listed, you can type the instrument name directly into the field and the new instrument will be added to the list upon saving the package. Once PassivePacker is closed and reopened, the new instrument will be visible in the pull-down list.

4) Clip Start/End Time: If appropriate, enter the start time of the first clip and end time of the last sound clip file. This field is not required.

5) Path to Sound Clip Files: Set the path to the directory containing the sound clip files using the *Select Directory* button. PassivePacker will copy all of the sound clip files in this directory

and any subdirectories. Your directory should only contain sound clip files from one instrument and only those for this deployment.

6) Software Name(s): Enter the name of the software used to create the sound clip, if applicable. Use a comma to separate multiple software names.

7) Software Version(s): Enter the version of the software used to create the sound clip, if applicable. Use a comma to separate multiple versions (version number order should match software name order).

8) Protocol Citation: Enter the citation or citation DOI for the analysis protocol documentation (i.e., the paper on the technique), if applicable.

9) Software Description: Write a description of the software used, if applicable.

10) Processing Description: Enter a description of the process that was conducted to create the sound clip, if applicable.

Don't forget to save often by clicking Save For Later

Dataset Details: Sound Level Metrics

PassivePacker v4.0.2

1

Package Dataset Description **Dataset Details** Location Calibration Info People/Organizations Ancillary Data

Sound Level Metrics Dataset

Platform 2 Instrument type 3 **Data Quality**

Analysis Start 4 Analysis End 5 Audio Start Time 6 Audio End Time 7

2010-Jan-01 13:00:00 2010-Jan-01 13:00:00 2010-Jan-01 13:00:00 2010-Jan-01 13:00:00

Path to sound level metrics files 8 Select Directory

Analysis Time Zone (hours to GMT) 9 Analysis Effort (total sec/hr) 10 ☐ Continuous Analysis Frequency (Hz) Min: 11 Max: 12 Sample Rate (Hz) 13

Software Name(s) 14 Software Version(s) 15 Protocol Citation 16

Software Description 17 Processing Description 18

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 8: The Dataset Details tab when a sound level metrics dataset (red box) is selected in the Package tab.

1) Dataset Details Tab

2) Platform: Select the platform the instrument was mounted on (i.e., mooring, glider, and towed array) by clicking on the arrow to open the pull-down list of platforms to choose from. If the platform needed is not listed, type the platform name directly into the field and the new platform will be added to the list upon saving making it available in future PassivePacker sessions.

3) Instrument Type: Select the instrument used to record audio analyzed for the sound levels. If the instrument needed is not listed, you can type the instrument name directly into the field and the new instrument will be added to the list upon saving the package. Once PassivePacker is closed and reopened, the new instrument will be visible in the pull-down list.

4) Analysis Start: Enter the start time of the analysis time frame.

5) Analysis End: Enter the end time of the analysis time frame.

6) Audio Start Time: Enter start time of first audio file analyzed.

7) Audio End Time: Enter end time of first audio file analyzed.

8) Path to Sound Level Files: Set the path to the directory containing the sound level metric files using the *Select Directory* button. PassivePacker will copy all of the sound level metric files in this directory and any subdirectories. Your directory should only contain sound level metric files from one instrument and only those for this deployment.

9) Analysis Time Zone: Enter the offset from UTC to specify the time zone of the file timestamps. Time zone designators like EST do not work and cannot be entered into the field.

10) Analysis Effort: The total number of total seconds per hour analyzed. Click the continuous button to enter 3600 seconds (60 minutes x 60 seconds/minute).

11-12) Analysis Frequency: Frequency range over which analysis was conducted.

13) Sample Rate: Enter the analysis sample rate in Hz.

14) Software Name(s): Enter the name of the software used to create the sound levels. Use a comma to separate multiple software names.

15) Software Version(s): Enter the version of the software used to create the sound levels. Use a comma to separate multiple versions (version number order should match software name order).

16) Protocol Citation: Enter the citation or citation DOI for the analysis protocol documentation (i.e., the paper on the technique).

17) Software Description: Write a description of the software used to create the sound levels.

18) Processing Description: Enter a description of the process that was conducted to obtain the sound levels.

Metadata Dialogs (*Figure 8, orange box*)

The following three buttons provide access to critical metadata entry dialogs. See [Entering Sampling, Data Quality, and Sensor Details](#) for more information.

Data Quality: This button opens the data quality entry form. Information entered here should be specific to the quality of the sound level metric measurements. For example, if the sound level metrics processing included frequencies that were not calibrated or there are other reasons the sound level values should not be trusted, note the issues in the data quality description.

Don't forget to save often by clicking Save For Later

Dataset Details: Sound Propagation Models

PassivePacker v4.0.2

1

Package Dataset Description Dataset Details Location Calibration Info People/Organizations Ancillary Data

Sound Propagation Models Dataset

Platform 2 Instrument type 3

Model Start Time 4 Model End Time 5 Modelled Frequency (Hz) 6

2010-Jan-01 13:00:00 2010-Jan-01 13:00:00

Path to sound propagation models files 7 Select Directory

Software Name(s) 8 Software Version(s) 9 Protocol Citation 10

Software Description 11 Processing Description 12

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 9: The Dataset Details tab (1) when a sound propagation model dataset (red box) is selected in the Package tab.

1) Dataset Details Tab

2) Platform: Select the platform the instrument was mounted on (i.e., mooring, glider, and towed array) by clicking on the arrow to open the pull-down list of platforms to choose from. If the platform needed is not listed, type the platform name directly into the field and the new platform will be added to the list upon saving making it available in future PassivePacker sessions.

3) Instrument Type: Select the instrument used to create these models. If the instrument needed is not listed, you can type the instrument name directly into the field and the new instrument will be added to the list upon saving the package. Once PassivePacker is closed and reopened, the new instrument will be visible in the pull-down list.

4) Model Start Time: Enter the start of modelled timeframe is appropriate.

5) Model End Time: Enter the start of modelled timeframe is appropriate.

6) Modelled Frequency: Modelled frequency range.

7) Path to Sound Propagation Model Files: Set the path to the directory containing the sound propagation model files using the *Select Directory* button. PassivePacker will copy all of the sound clip files in this directory and any subdirectories. Your directory should only contain sound propagation model files from one instrument and only those for this deployment.

8) Software Name(s): Enter the name of the software used to create the models. Use a comma to separate multiple software names.

9) Software Version(s): Enter the version of the software used to create the models. Use a comma to separate multiple versions (version number order should match software name order).

10) Protocol Citation: Enter the citation or citation DOI for the analysis protocol documentation (i.e., the paper on the technique).

11) Software Description: Write a description of the software used.

12) Processing Description: Enter a description of the process that was used to create the models.

Don't forget to save often by clicking Save For Later

Entering Sampling, Data Quality, and Sensor Details

The sampling details, data quality and sensor details are critical information that ensure the long-term usability of archived data. Please complete this information!

Sampling Details

The screenshot shows the 'Sampling Details' window for 'Channel 1'. It includes the following fields and controls:

- Channel Time:** 2010-Jan-01 13:00:00 to 2010-Jan-03 13:00:00
- Sensor Number:** 3
- Sample Rate (Hz):** 244
- Sample Bits:** 12
- Recording Duration (sec):** 66
- Recording Interval (sec):** 7.0
- Continuous:** ☒
- Time Range (highlighted in red box):** 2010-Jan-01 13:00:00 to 2010-Jan-03 13:00:00
- Bottom Buttons (highlighted in orange box):** Add Sample Rate, Add Duty Cycle, Update Times, New Channel, Duplicate Channel, Remove Channel, Renumber Channels, Save

Figure 10.1: Sampling details window presented when the user selects the Sampling Details button in the “Dataset Details” tab.

1) Sampling Details Window: The *Sampling Details* button (e.g., Figure 4, orange box) on the [Dataset Details tab](#) opens this window. Buttons along the bottom allow the user to add entries for sample rate, gain, duty cycle, and channel (Figure 10.1, orange box). The green “+” button is another way to add an entry, while the red “x” removes entries (Figure 10.1, red box).

2) Channel Time: Enter the start and end time for this channel’s recording. These will be pre-populated with the audio start and end times entered on the Dataset Details tab.

3) Sensor Number: Enter the sensor number for this channel. This number should match the sensor number used in the *Sensor Details* window (Figure 13).

4 & 5) Sample Rate: Enter the sample rate in Hz, sample bits, start time and end time for this sampling rate. Note, PassivePacker will not pack data with a sample rate lower than 1000 Hz. Contact NCEI if you have lower sample rate data.

6) Recording Duration (sec): Length of duty cycle recording time (recorder on) in seconds.

7) Recording Interval (sec): Length of interval (in seconds) between the start time of consecutive audio files. This should match recording duration for continuous recording regimens.

8) Continuous: Check this box for continuous recording. If the box is checked the duration and interval fields are auto populated by PassivePacker. If left unchecked, the duration and interval fields must be supplied by the user.

Time Interval Boxes (*Figure 10.1, red box*)

Enter the duty cycle start and end times. These are pre-populated from the audio start and end times on the Dataset Details tab but should be updated as needed to reflect time interval of the sampling regimen being documented.

Metadata Field Controls (*Figure 10.1, orange box*)

The following nine buttons enable users to include adjust details as necessary to capture the sampling regimen of their deployment.

Add Sample Rate: This button adds a new sample rate entry to the sampling details window.

Add Gain: This button adds a new gain entry to the sampling details window.

Add Duty Cycle: This button adds a new duty cycle to the sampling details window.

Update Times: This will overwrite all sampling detail times to the current audio start and end times specified on the Deployment Info tab. **This cannot be undone!**

New Channel: Click to add a new blank channel tab.

Duplicate Channel: New channels that contain duplicate information can be quickly created by clicking this button. Use the Channel Duplicator window (*Figure 10.2*) to specify the number of duplicate channels to create. The created channels can be modified as necessary to reflect per/channel differences (such as sensor number and channel start and end times).

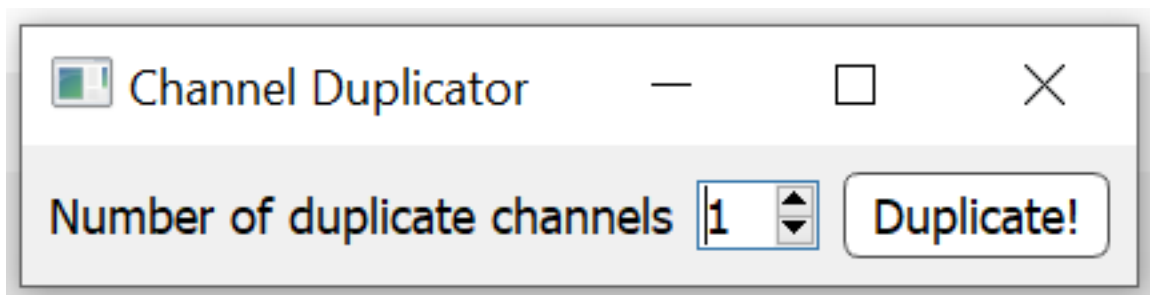


Figure 10.2: Channel duplicator window to duplicate the selected channel tab.

Remove Channel: Remove the channel tab selected. **This cannot be undone!**

Renumber Channel: The order of multiple channels can be changed by dragging the tabs where needed. Once placed in the desired order, the tabs can be renumbered by selecting *Renumber Channel*.

Save: Click *Save* to return to the main packager interface.

Data Quality Details

The *Data Quality* button (e.g., *Figure 4*, orange box) on the Dataset Details tab opens the *Data Quality Details* window used to document data quality and any issues encountered during data collection or analysis. This window is composed of two tabs, the first documents specific quality details while the second documents information about the overall data quality assessment effort.

Data Quality Details Window: Quality Details Tab

The screenshot shows the 'Data Quality Details' window with the 'Quality Details' tab selected. The interface includes a 'Quality Analyst' field with a pull-down menu and a 'Create/Edit People' button. Below this is a 'Select Quality Level' pull-down, a 'frequency (Hz)' range from 0 to 100000, and a 'Time' range from 10/19/2018 to 1/26/2020. A 'Comments' text box is present, followed by a 'Channels' section with 'Select all channels' and '1'. At the bottom, there are 'Add Quality Entry' and 'Update Times' buttons, and a 'Save' button in the bottom right corner. Numbered callouts 1-10 point to various UI elements.

Figure 11.1: Data quality details window accessible to the user from the Dataset Details tab of PassivePacker.

- 1) Quality Details Tab:** The first tab in the *Data Quality Details* window which captures data quality metadata.
- 2) Quality Analyst:** Select the name of the Quality Analyst from the pull-down list. Use the *Create/Edit People* interface to create new people entries or edit existing entries (See [Editing People and Organizations](#)).
- 3 - 5) Select Quality Level:** Select the appropriate quality level from the pull-down list and indicate the frequency in Hz and date/time covered by this quality information.
- 6) Comments:** Enter helpful comments about data quality in the text box.
- 7) Channels:** Specify the channel(s) for which the quality details pertain. The list of channels comes from the entered sampling details so that information must be complete before entering data quality information.
- 8 & 9)** Click on the green “+” button or the *Add Quality Entry* button in the bottom left corner of the window to add additional data quality entries.

10) Update Times: This will overwrite all quality detail times to the current audio start and end times specified in the Dataset Details tab. **This cannot be undone!**

Don't forget to save often by clicking Save For Later

Data Quality Details Window: Additional Quality Information Tab

The screenshot shows a window titled "Data Quality Details" with a blue "1" next to the title bar. It has two tabs: "Quality Details" and "Additional Quality Information", with the latter being selected. The window is divided into three sections: "Objectives" with a text area containing a blue "2", "Method" with a text area containing a blue "3", and "Description of quality assessment (abstract)" with a text area containing a blue "4". At the bottom, there are three buttons: "Add Quality Entry", "Update Times", and "Save".

Figure 11.2: The *Data Quality Details* window captures the objective, method and a quality assessment abstract.

1) Additional Quality Information Tab: The second tab in the *Data Quality Details* window captures text descriptions of data quality.

2-4) Quality Level Metadata: Enter objectives (2), method (3) and the abstract (4) about the quality assessments. Be as thorough as possible, this information is very important to future users. Click *Save* to return to the main packager interface.

Don't forget to save often by clicking Save For Later

Sensor Details Window

The screenshot shows a window titled "Sensor Details" with three sections for different sensor types. Each section has a header label, input fields for Sensor Number, Sensor ID, and Sensor Name, a green "+" button, a red "X" button, and a text area for Sensor Description. The Audio Sensor section also includes fields for Sensor Position (X, Y, Z in meters), Hydrophone ID, and Preamp ID. The Depth Sensor section includes fields for Sensor Position (X, Y, Z in meters). The Other Sensor section includes fields for Sensor Position (X, Y, Z in meters), Sensor Type, and Properties. At the bottom, there are three buttons: "Add Audio Sensor", "Add Depth Sensor", and "Add Other Sensor", and a "Save" button on the right.

Sensor Type	Sensor Number	Sensor ID	Sensor Name	Sensor Position (X, Y, Z in m)	Hydrophone ID	Preamp ID	Sensor Type	Properties
Audio Sensor								
Depth Sensor								
Other Sensor								

Figure 12: *Sensor Details window presented to user after clicking the Sensors button on the Dataset Details tab of PassivePacker.*

Sensor Details Window

The *Sensors* button on the Dataset Details tab allows users to enter details about the sensors used to collect data. There are three sensor types: Audio Sensor (*red box*), Depth Sensor (*orange box*), and Other Sensor (*blue box*). A sensor number, name, ID, position (x,y,z), and description are requested for each one. The Audio Sensor and Other Sensor type have additional fields for entering details for hydrophone ID and Preamp ID or Sensor Type and Properties. To add sensor entries, click on the green “+” button next to the entries or the *Add Audio Sensor*, *Add Depth Sensor*, or *Add Other Sensor* buttons on the bottom left of the window. Click *Save* to return to the main packager interface.

Don't forget to save often by clicking Save For Later

Location Tab

The Location tab fields vary based on the deployment type selected in the Package tab. Stationary marine, multipoint stationary marine, mobile marine, and stationary terrestrial deployments. are those currently supported.

Location Tab: Stationary Marine Deployment

The screenshot shows the PassivePacker v4.0.2 application window. The 'Location' tab is selected, indicated by a blue '1' above it. Within this tab, the 'Stationary Marine Deployment' option is highlighted with a red box. The interface is divided into two main sections: 'Deploy Details' and 'Recovery Details'. In the 'Deploy Details' section, there are input fields for 'Latitude' (labeled with a blue '3'), 'Longitude' (labeled with a blue '4'), 'Bottom' depth (labeled with a blue '5'), and 'Instrument' (labeled with a blue '6'). The 'Recovery Details' section has similar fields for 'Latitude' (labeled with a blue '7'), 'Longitude' (labeled with a blue '8'), 'Bottom' depth (labeled with a blue '9'), and 'Instrument' (labeled with a blue '10'). A button labeled 'Copy Values to Recovery Details' is highlighted with an orange box. At the top of the 'Location' tab, there are dropdown menus for 'IHO Sea Area' and 'Sea Name' (labeled with a blue '2'). The bottom of the window contains a row of buttons: 'Hide Records', 'Clear Form', 'Stop Packaging', 'Save For Later', and 'Package Data'.

Figure 13: The Location tab when a stationary marine deployment (red box) is selected in the Package tab.

2) IHO Sea Area: Select the most appropriate IHO Sea Area for data in the package.

3 & 4) Deployment Location Lat/Lon: Enter the latitude and longitude where instrumentation was deployed in decimal degrees. Values are -90 to 90 and -180 to 180 with southern hemisphere latitude and western hemisphere longitude values being negative.

5) Deployment Bottom Depth (m): Enter the seafloor depth where the acoustic recorder was deployed in meters below sea level.

6) Deployment Instrument Depth (m): Enter the instrument deployment depth in meters below sea level.

7 & 8) Recovery Location Lat/Lon: Enter the latitude and longitude where instrumentation was recovered in decimal degrees. Values are -90 to 90 and -180 to 180 with southern hemisphere latitude and western hemisphere longitude values being negative.

9) Recovery Bottom Depth (m): Enter the seafloor depth where the acoustic recorder was recovered in meters below sea level.

10) Recovery Instrument Depth (m): Enter the instrument recovery depth in meters below sea level.

Copy Values to Recovery Details (*Figure 13, orange box*): Click this button to replicate the Deployment field values into the Recovery fields.

Don't forget to save often by clicking Save For Later

Location Tab: Multi-Location Stationary Marine Deployment

PassivePacker v4.0.2

Package Dataset Description Dataset Details **Location** Calibration Info People/Organizations Ancillary Data

Multi-Location Stationary Marine Deployment

IHO Sea Area
Sea Name Multichannel Audio: ☐

Enter location details for each recorder that recorded data. For multichannel audio, match location to each audio channel. Please provide full location documentation in documents uploaded on the Dataset Description tab. (-90.0 to 90.0 latitude, -180.0 to 180.0 longitude, depths relative to MSL, depth values in -meters)

Latitude: Longitude: Instrument Depth: Bottom Depth:

Latitude: Longitude: Instrument Depth: Bottom Depth:

Figure 14.1: The Location tab when a multi-location stationary marine deployment (red box) is selected in the Package tab.

1) Location Tab: The form fields for a multi-location stationary marine deployment (red box) and non-multichannel audio are shown in the image above.

2) IHO Sea Area: Select the most appropriate IHO Sea Area for data in the package.

3 & 4) Location Lat/Lon: Enter the latitude and longitude where audio was recorded in decimal degrees. Values are -90 to 90 and -180 to 180 with southern hemisphere latitude and western hemisphere longitude values being negative.

5 & 6) Instrument/Bottom Depth (m): Enter the depth in meters of the instrument and the site (“bottom”) at the provided location. Use negative values if below sea level.

Metadata Field Controls (Figure 14.1, orange box)

Add Another Location: Click this button to add additional location rows. All rows left blank will be removed after the *Save for Later* button is selected.

Location Tab: Multi-Location Stationary Marine Deployment with Multi-Channel Files

PassivePacker v4.0.2

1

Package Dataset Description Dataset Details Location Calibration Info People/Organizations Ancillary Data

Multi-Location Stationary Marine Deployment

IHO Sea Area

Sea Name 2 Multichannel Audio: ☒

Enter location details for each recorder that recorded data. For multichannel audio, match location to each audio channel. Please provide full location documentation in documents uploaded on the Dataset Description tab. (-90.0 to 90.0 latitude, -180.0 to 180.0 longitude, depths relative to MSL, depth values in -meters)

Channel: 1	Latitude: 3	Longitude: 4	Instrument Depth: 5	Bottom Depth: 6
Channel: 2	Latitude:	Longitude:	Instrument Depth:	Bottom Depth:

Add Another Location Update Channel Numbers

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 14.2: The Location tab when a multi-location stationary marine deployment (red box) is selected in the Package tab and multichannel audio is selected.

Metadata Field Controls (Figure 14.2, orange box)

Multichannel Audio: Click this box to add channel number labels to each location to facilitate pairing the location to the corresponding audio channel.

Metadata Field Controls (Figure 14.2, blue box)

Add Another Location: Click this button to add additional location rows. All rows left blank will be removed after the *Save for Later* button is selected.

Update Channel Numbers: To update channel numbers, drag and drop locations onto the proper order, and then click the *Update Channel Numbers* button.

Location Tab: Mobile Marine Deployment

The screenshot shows the 'PassivePacker v4.0.2' application window. At the top, there are several tabs: 'Package', 'Dataset Description', 'Dataset Details', 'Location', 'Calibration Info', 'People/Organizations', and 'Ancillary Data'. The 'Location' tab is active, and within it, the 'Mobile Marine Deployment' sub-tab is selected and highlighted with a red box. Below the sub-tab, there are five numbered callouts: 1 points to the 'Location' tab; 2 points to the 'Vessel' dropdown menu; 3 points to the 'IHO Sea Area' dropdown menu; 4 points to the 'Path to navigation / position file(s)' text input field; and 5 points to the 'Description of location derivation using the provided navigation / position file(s)' text area. At the bottom of the window, there are five buttons: 'Hide Records', 'Clear Form', 'Stop Packaging', 'Save For Later', and 'Package Data'.

Figure 15: The Location tab when a mobile marine deployment (red box) is selected in the Package tab.

1) Location Tab

2) Vessel: Enter the name of the vessel used to deploy the instrumentation. If the vessel needed is not listed, type the vessel name directly into the field and the new platform will be added to the list upon saving.

3) IHO Sea Area: Select the most appropriate IHO Sea Area for data in the package.

4) Path to navigation / Position File(s): Set the path to the file or files containing positional documentation associated with the data using the *Select File(s)* button. Multiple files can be selected in the dialog that opens.

5) Description of location derivation using the provided positional documents: Provide a detailed description of the derivation of the locations using the positional files provided.

Location Tab: Stationary Terrestrial Deployment

PassivePacker v4.0.2

Package Dataset Description Dataset Details **Location** Calibration Info People/Organizations Ancillary Data

Stationary Terrestrial Deployment

Location Lat/Lon in Decimal Degrees (-90.0 to 90.0 lat, -180.0 to 180.0 lon)

Latitude: Longitude:

Surface Elevation (relative to sea level)

Instrument Elevation (relative to surface)

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 16: The Location tab when a stationary terrestrial deployment (red box) is selected in the Package tab.

1) Location Tab

2 & 3) Location Lat/Lon: Enter the latitude and longitude of instrumentation in decimal degrees. Values are -90 to 90 and -180 to 180 with southern hemisphere latitude and western hemisphere longitude values being negative.

4) Surface Elevation (m): Enter the surface elevation of the site where the acoustic data was collected. Values entered need to be in meters relative to sea-level. If this an underwater recording (i.e., in a lake), enter the elevation of the water surface.

5) Instrument Elevation (m): If applicable, enter the instrument's elevation. Values entered need be in meters relative to the surface elevation.

Don't forget to save often by clicking Save For Late

Calibration Info Tab

Proper and well documented calibration information is essential for the long-term archival of passive acoustic data and products. As a best practice, NCEI only archives data collected with calibrated instrumentation. The fields displayed change depending on the dataset type selected in the Package tab and the selected calibration state. The image below displays all possible calibration fields.

PassivePacker v4.0.2

1

Package Dataset Description Dataset Details Location Calibration Info People/Organizations Ancillary Data

Calibration State 2

Pre Deployment Calibration Date Post Deployment Calibration Date

Calibrated Pre & Post Deployment 3 2010-Jan-01 4 2010-Jan-01

Hydrophone Sensitivity (dB) Frequency Range (Hz) Gain (dB)

5 6 7

Path to Calibration Documents 8

Select Directory

Calibration Description 9

Hide Records Clear Form Stop Packaging Save For Later Package Data

Figure 17: The Calibration Info tab (1) allows the user to enter calibration metadata.

1) Calibration Info Tab: The fields displayed in the Calibration Info tab change depending on the dataset type selected in the Package tab and the selected calibration state in the Calibration Info tab. The image above displays all possible calibration fields.

2) Calibration State: The pull-down list populated in this field changes depending on the data type selected in the Package tab. For audio and C-POD data types the user is presented with four different calibration options (*Figure 18.1*), and product dataset types have two calibration options (*Figure 18.2*).

Select Calibration State
Factory Calibrated
Calibrated Pre-Deployment
Calibrated Post-Deployment
Calibrated Pre & Post Deployment

Figure 18.1: Audio and C-POD dataset calibration options.

Select Calibration State
Calibration applied before processing
Not calibrated / not applicable

Figure 18.2: Product dataset calibration options.

- 3) **Pre-Deployment Calibration Date:** Enter the date the instrument was last calibrated.
- 4) **Post-Deployment Calibration Date:** Enter the date the instrument was calibrated post deployment (only applicable to the Pre & Post Deployment calibration state).
- 5) **Hydrophone Sensitivity:** Enter manufacturer's hydrophone sensitivity value in dB.
- 6) **Frequency Range:** Enter frequency range in Hz over which calibration is valid (i.e., 20-5000)
- 7) **Gain:** Enter gain value in dB
- 8) **Path to Calibration Documents:** Select the path to the directory containing calibration documents associated with the data using the *Select Directory* button. The packager will copy all the contents of the specified directory, including subdirectories, into the calibration directory in the data package.
- 9) **Calibration Description:** Enter a description of the calibration method and any other details relevant to the instrument's calibration.

People/Organization Tab

The screenshot shows the 'PassivePacker v4.0.2' application window. The 'People/Organizations' tab is selected, indicated by a red '1' above the tab label. The interface is divided into three main sections: 'Scientists', 'Source Organizations', and 'Funding Organizations'. Each section contains a pull-down menu for selection (labeled 2, 3, and 4 respectively) and an 'Add' button (labeled 5, 6, and 7 respectively). Below these are 'Create/Edit' buttons for each section (labeled 8 and 9). At the bottom, there are buttons for 'Hide Records', 'Clear Form', 'Stop Packaging', 'Save For Later', and 'Package Data'.

Figure 19: The People/Organizations tab allows users to edit scientist and organization names.

1) People/Organization Tab: This tab allows users to record and edit scientist, funding and source organizations.

2) Scientist(s): Document key scientists involved in the collection (if audio or cpod) or creation (if product) of this dataset by selecting a scientist from the pull-down list. Add additional scientists from the list by clicking on the *Add Scientist* button (5). Use the *Create/Edit People* interface (8) to create new entries or edit existing entries (See [Editing People and Organizations](#)). The *Create/Edit People* interface also allows the user to control whether a person appears in the pull-down menu.

3) Source Organization(s): Select a source organization for the deployment from the pull-down list (3). Click on the *Add Source Organization* button (6) to add additional organizations. Use the *Create/Edit Organizations* interface (9) to create new organization entries or edit existing entries (See [Editing People and Organizations](#)).

4) Funding Organization: Select the organization funding the deployment from the pull-down list (4). Click on the *Add Funding Organization* button (7) to add additional organizations. Use the *Create/Edit Organizations* interface (9) to create new organization entries or edit existing entries (See [Editing People and Organizations](#)).

5-7 Add Buttons: Click the appropriate button to add additional people or organization pull-down entries.

Pro-Tip: To remove extra scientist, source organization or funding organization pulldown entry boxes, set the entry to the default *Select Scientist/Source Organization/Funding Organization* and click *Save for Later*. The extra entries will be removed upon saving.

Don't forget to save often by clicking Save For Later

Editing People and Organizations

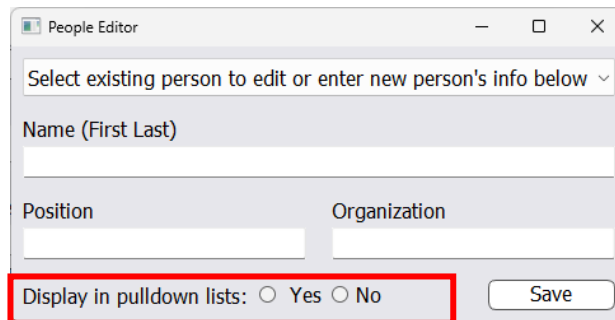


Figure 20.1: *People Editor accessible from the People/Organization tab of PassivePacker.*

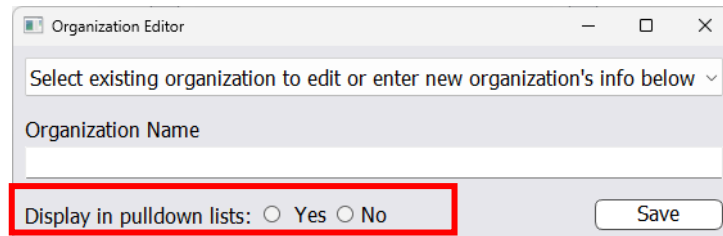


Figure 20.2: *Organization Editor accessible from the People/Organization tab of PassivePacker.*

The *Create/Edit People* (Figure 19, 8) and *Create/Edit Organizations* (Figure 19, 9) buttons in the People/Organizations tab of PassivePacker opens similar dialog boxes. These dialog boxes are used to create new entries and edit existing entries. The *Display in pull-down lists* option (*red boxes*) allows the user to hide a person or organization in the pull-down menus in the People/Organizations tab. Make sure to select the *Save* button (Figure 20.1 & 20.2) before exiting the editor.

How to create a new entry: Enter the new entry's information.

How to edit existing entry: Select person or organization from the pull-down list at the top of the windows to edit existing entry (Figure 20.1 & 20.2). Make any edits to the form fields and then click *Save* before exiting.

Don't forget to save often by clicking Save For Later

Ancillary Data Tab

PassivePacker v4.0.2

Package Dataset Description Dataset Details Location Calibration Info People/Organizations **Ancillary Data**

Path to temperature data files

Path to observational data files

Path to other files you wish to submit

Figure 21: The Ancillary Data tab (1) allows users to set paths to files that complement the dataset (2-4).

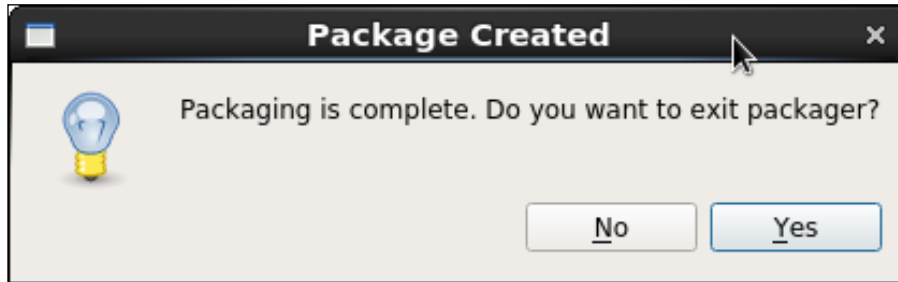
1) Ancillary Data Tab: Information entered in this tab includes any additional information or documentation that compliments the data included in the package.

2-4) Paths to ancillary data files: Set the paths to directories containing the ancillary data types using *Select Directory*. The packager will copy all the contents of the specified directories, including subdirectories, into the bag.

Don't forget to save often by clicking Save For Later

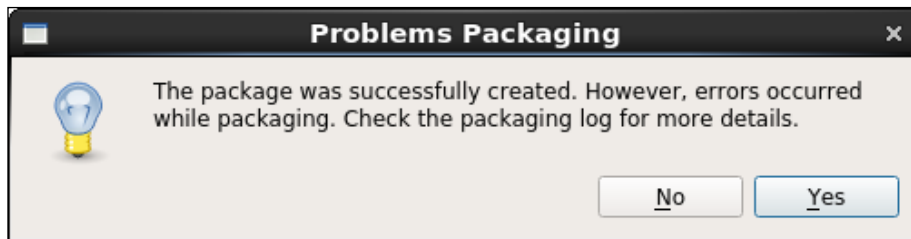
Additional Information and Warning Messages

Package Created



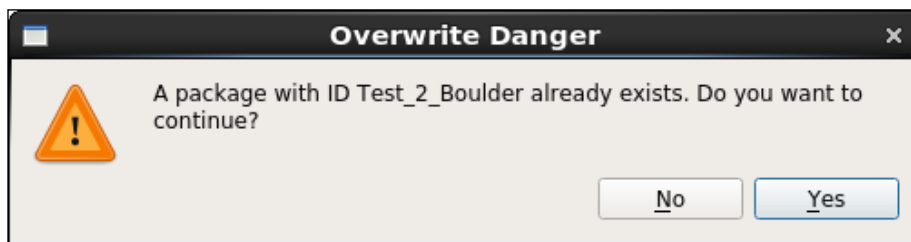
The packaging process completed as expected and there were no issues with any data files. Click *No* if you want to leave the packager open in order to package additional data.

Problems Packaging



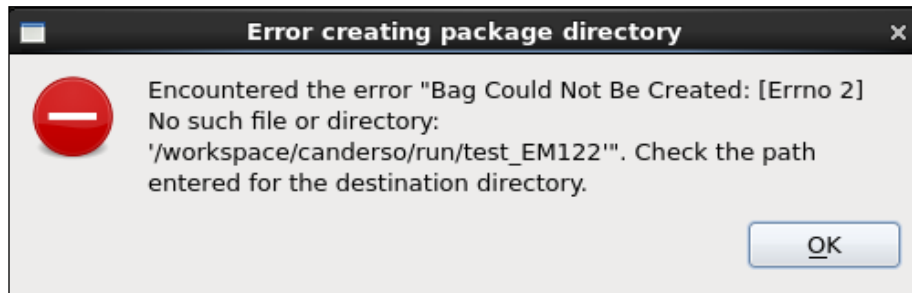
The packaging process is complete, but there was an issue with one or more of the data files. Generally, this dialog is not cause for concern unless there was an error on a large percentage of the files. Check PassivePacker's log file in the package's data directory for more information. Search for the WARNING flag to quickly find the error entries.

Overwrite Danger



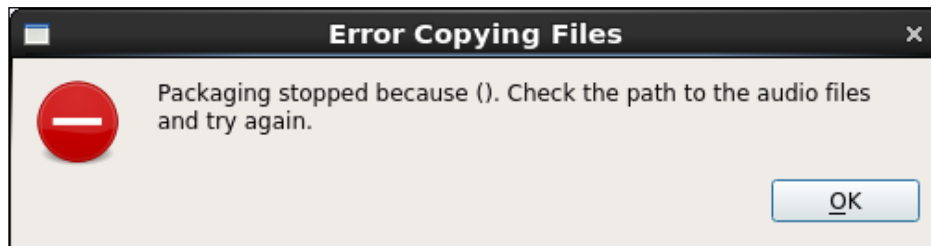
A package with the package name (combination of *Project*, *Site/Cruise*, and *Deployment ID* entries) already exists in the destination directory. This message appears if you start PassivePacker again after an error or other stoppage. If this is the case, click *Yes* and the packager will skip existing files and pick up where it left off. Otherwise, rename the package and try again.

Error Creating Package Directory



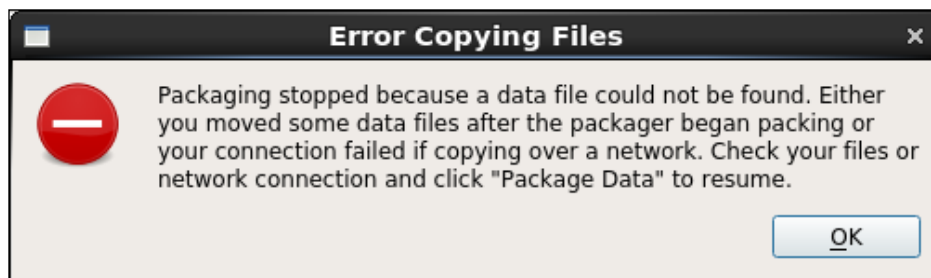
PassivePacker could not create the package directory at the destination. Make sure there is enough space on the destination drive and that you have write permissions. This error will also occur if you used an old package record as a template for the current package and you forgot to update the destination path.

Error Copying Files - no audio files found



The audio files don't exist at the specified *path to audio acoustic files*. Check the path and try again. As a reminder, PassivePacker currently handles .wav, .aif, .mp3, or .flac file extensions for "Audio" datasets.

Error Copying Files - file not found

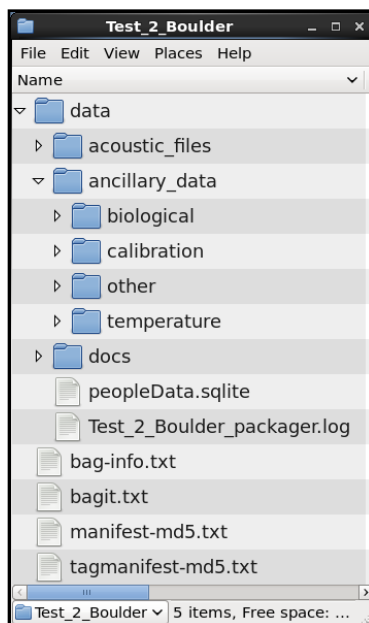


This error occurs when a data file detected during PassivePacker's initial scan of the acoustic file source directory is not found during the file copying step. This usually occurs when network connection is lost while copying files over a network. It may also happen if you accidentally move data files during the packaging process. To resolve, restore the network connection/files and then click *Package Data* to resume packaging. You will get an Overwrite Danger warning, but just click *Okay* to continue.

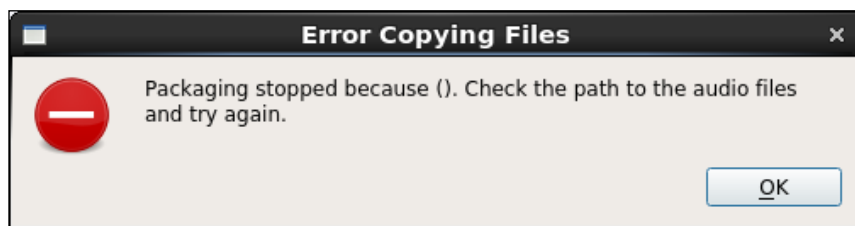
Packaging Data in Place

Although PassivePacker is designed to package data from a source location by copying files to the destination, it can be used to package data in place. This speeds up the packaging process for files already on an external drive that can be shipped to NCEI. To package in place:

- 1) Launch PassivePacker and fill in metadata information as normal.
- 2) Set the package destination to the external drive containing the data files.
- 3) Specify a folder not containing audio files or type “empty” in the *Path to acoustic files* dialog.
- 4) Click *Package Data*. The packager will create an empty bag directory with the proper internal directory structure and initialize the bag documentation and manifest files, and then stop with an error because there are no audio files in the empty source directory.



BagIt directory structure created in the destination path after step 5



This is the error message you will receive because we set an empty directory as source.

- 5) Dismiss the error message and then move your acoustic files into the empty acoustic_files directory. Note: subdirectories are not allowed in the acoustic file's directory and files may need to be rearranged into a single folder.

- 6) In PassivePacker, change the *Path to the acoustic files* from the empty placeholder directory to the package's `acoustic_files` directory. Ancillary data may also be moved into the appropriate directory. Subdirectories are allowed in the ancillary data.
- 7) Click *Package Data* to restart Packager. The packager will skip the instrument and ancillary file copying step and begin processing the data files.

Modifying Menus

The pull-down menus in PassivePacker are populated with information from one of four SQLite files that serve as the backend database. The values listed in some of the menus can be controlled from within PassivePacker's interface while others are not. In general, it is not advised to manually edit the SQLite files but for those who feel confident in their ability, details on editing the files are below. It is highly recommended you make a backup copy of all files before editing. We at NCEI are happy to work with you on needed SQLite file modifications.

All data tables used to populate packager menus contain a "USE" field with either a "Y" or "N" value. Setting the value to "N" will prevent that record from being displayed in the appropriate menu. The deletion of records in the SQLite files is strongly discouraged, set USE to N instead. Many of the entries have associated UUID values that facilitate connection with the NCEI enterprise metadata system and preserving the integrity of the UUIDs is critical. Other entries are values from controlled vocabularies that are needed to facilitate database searching and discovery in the archive.

Modifying Menus within SQLite files

Scientists and Metadata Author

Listing of individual people is set with the *Create/Edit People* interface. Open editor, select person in pull-down menu and set *Display person in pull-down lists* to "no". Bulk changes to the "USE" column can be made in the PEOPLE table within the peopleData.sqlite file.

Source Organizations

Listing of individual organizations is set with the *Create/Edit Organization* interface. Open editor, select organization in pull-down menu and set *Display organization in pull-down lists* to "no". Bulk changes to the "USE" column can be made in the ORGANIZATIONS table within the peopleData.sqlite file.

Select Existing Record

Listing of existing packages is controlled with the Show/Hide Records interface accessible via the "Hide Records" button. Records with "show" checked are displayed. You can also remove an existing package's record from the menu by setting "USE" to "N" in the CRUISE_DATA table within the packageData.sqlite file. You can also delete the records from the packageData.sqlite file if desired.

IHO Sea Area

Sea area names displayed are from the IHO Sea Area controlled vocabulary. The entire vocabulary is contained in the SEAS table of the sourceData.sqlite file. Set "USE" to "N" to limit the list to sea areas relevant for your work.