



ALTIMASTER NEPTUNE

Manual

Issue D

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Introduction

Congratulations on buying an Altimaster Neptune.

Neptune information is constantly being updated.

Please refer to our website, www.alti-2.com, for the latest information.

Software Upgrades

The Neptune has an Infrared interface which allows you to update the built-in software as new versions become available. Software updates are available free of charge from our website:

http://www.alti-2.com/neptune_updater.htm.

Customer Support

Neptune has a considerable number of options and facilities covering, alarm settings, log book, manual mode, DZ offset, contrast, flip, backlight etc etc, and there are hundreds of combinations of settings.

If you have ANY problems or question, please call or e-mail us. We will do our best to help you get the most out of your Neptune.

386-943-9333

info@alti-2.com


We may have Altimaster Field Support at your drop zone. Check our online Altimaster Field Support locator: http://www.alti-2.com/field_support_locator.htm.

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The needle can stick during both ascent and descent – a visual cross reference with the ground should be used in combination with the altimeter.



Manual

 A close-up photograph of a blue Alti-2 altimeter held in a person's hand. The monochrome LCD screen displays a menu with the following options: "Options 1", "Options 2" (which is highlighted with a black rectangular cursor), "Modes", "Log Setup", "Upload", and "Exit". To the right of the screen, there is a vertical column of three buttons: a top button with an upward-pointing arrow, a middle button labeled "SELECT", and a bottom button with a downward-pointing arrow.	<p>All menus have the same basic operation; the top and bottom buttons move the cursor and the center button selects the highlighted choice.</p>
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BASIC SETUP PROCEDURE

INSERT BATTERY



Remove the two screws securing the battery cover using a Phillips screwdriver.

Be careful not to lose the O ring.

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Insert one type Duracell DL2450 (or equivalent) battery.

(2 batteries are provided – 1 is a spare)

The battery should only go in one way, with the “+” side up, i.e. toward the buttons.



The Neptune will only be waterproof if you fit the o-ring into the groove in the battery cover.

This can be an awkward task and you may wish to use silicon grease or petroleum jelly to help hold the o-ring in the groove.

If you never jump near water you can leave the o-ring out.



Replace the two screws, **DO NOT OVERTIGHTEN!** This can crack the battery cover and cause the unit to lose water resistance.

You can press the battery cover down to seal the o-ring to the body of the unit for maximum water resistance.

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FITTING THE HELMET CLIP



If you wish to use Neptune as an audible altimeter, use the helmet clip and tie wraps provided.

Align the Neptune's speaker with the speaker hole in the helmet clip. Failure to do so may result in inaudible alarms.

Using the "flip" function, Neptune can be fitted with the buttons in either direction, on either side of your helmet. Use the tie wraps to attach the clip to your helmet in desired position, keeping the speaker hole and speaker aligned.



The Neptune is snapped into the clip.

The clip is designed to fit in a recess as shown. If mounted on a non-recessed helmet, we suggest that a rubber band be fitted around the clip to prevent the Neptune from sliding out.



HAND MOUNT

If you wish to use Neptune as a visual altimeter we suggest you use the hand mount provided.

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Lay the hand mount across the back of the Neptune. Line up the four (4) holes with the threaded inserts in the back of the Neptune and insert the screws provided, with the washers between the fabric and the screws.

You may use Loctite to hold the screws securely in place.



If you wish to wear the Neptune on your wrist, like a watch, use the wrist mount provided.

The fabric wrist mount is attached to the back of the Neptune in the same way as the hand mount. The narrow wrist strap is then fed through the channel in the wrist mount.

Metal backplates were previously issued with Neptunes. Do NOT use one of these backplates alone with the narrow wrist strap; this setup will crack the display!

TIME AND DATE

Setting the time and date is typical of many Neptune setup menus. This adjustment is explained in detail to familiarize you with the menu system.



The system starts up in the Ground mode screen. It displays time, date and temperature.

Icons indicate:

- the battery state
- alarms enabled or disabled
- logbook enabled or disabled
- backlight enabled (no icon for disabled)

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Start by pushing the center “menu” button on the ground screen. The main menu will be displayed.

Move the cursor (top or bottom button) to “System” and press “Select” (center button).



In the “System” menu, most of the basic setups are under “Options 1” and “Options 2”.

Move the cursor (top or bottom button) to “Options 2” and press “Select” (center button)



You will now see the “Time/Date” setting option (as well as many others)



The cursor will already be on the “Hours” setting.

Use the top and bottom buttons to increase or decrease the number, then press “Select” and the cursor will move to the next item.

When all entries have been adjusted the system will automatically exit from this screen.

LOGBOOK SETUP

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From the "System" menu, select "Log Setup"

The Logbook setup menu allows to set the starting number of jumps, starting Freefall (FF) time.

If necessary it also allows you to delete the entire logbook.

Method of selection and entry is the same as the "Date and Time" setup.

ALARMS



From the main menu screen, move the cursor down to "Alarms" and press "Select"



Neptune will display the current alarm Group and altitude settings.

If the setting are correct select "OK", if you want to change them select "Edit/Select"

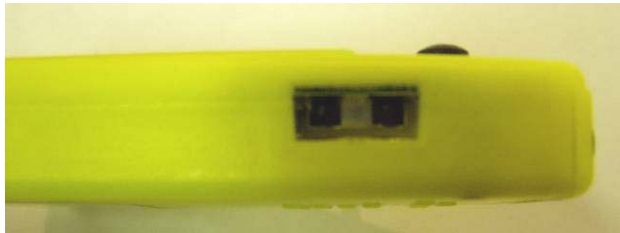
Alarm setup is described in detail under the 'Alarms' section of this manual.

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IR Downloads



The Neptune has a built-in IrDA compliant infrared port (see photograph above) which provides a wireless link to your PC. The IR port allows:

- Neptune software to be updated
- The log book to be downloaded to Paralog.

For Neptune software updates, go to www.alti-2.com. Full download instructions are included with the software.

Instructions on downloading jumps to Paralog can be found in the Log Book section of this manual. Paralog can be purchased online at www.paralog.net.

If you have any questions or problems updating your Neptune, please go to our online Altimaster Field Support locator to see if we have Field Support at your drop zone. If there is none, please call or e-mail Alti-2.

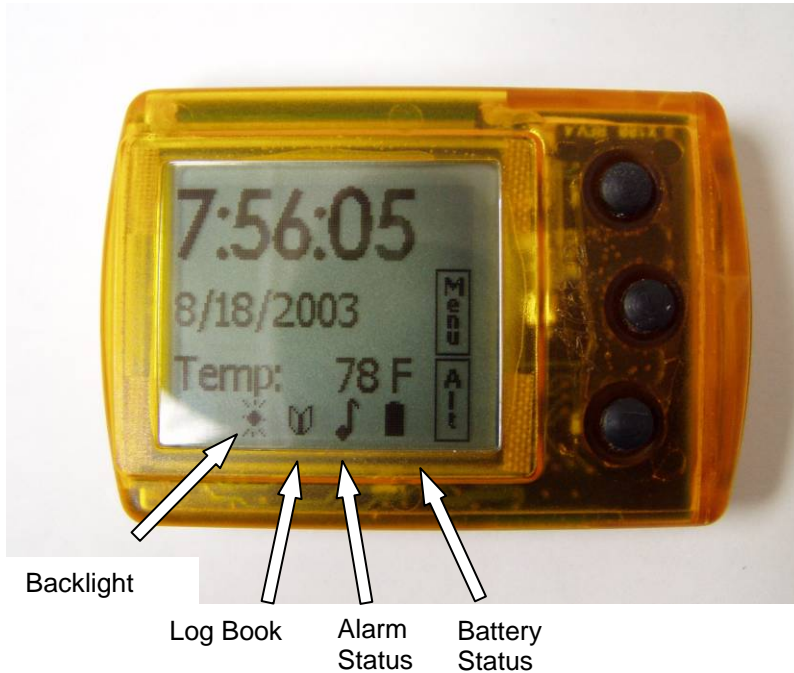
http://www.alti-2.com/field_support_locator.htm
info@alti-2.com
386-943-9333

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Ground Display



The ground display shows time, date and temperature, and also shows status icons for backlight, logbook, alarms, and battery.

The Neptune has a power saving mode which switches the display off after 30 minutes. The Neptune will continue to function as normal; the display can be reactivated by pushing any button. It will also reactivate automatically if the unit switches to aircraft mode.

There is no on/off switch on the Neptune. The two holes on the back of the unit are for the speaker and filter; touching either one could irreparably damage your Neptune.

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Altitude Display



When "Alt" is showed in the bottom right of the screen (in ground mode and aircraft mode), push the bottom button and change to the "Altitude" screen. This shows altitude AGL (above ground level) and also altitude MSL (Mean Sea Level).

Climb Display



The climb screen shows:

- Time to altitude (not shown on the picture above). In version 1.x and 2.x software, exit altitude is assumed to be 13,000 feet and is not adjustable. A software update is being planned in which the target altitude will be adjustable.

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- Current altitude
- Climb Rate
 - In climb mode, you can adjust any setting, look at your logbook, and turn functions on and off up right up until you are ready to exit the plane. You do not have to return to the main screen when you are ready to skydive.
- Temperature

Freefall Display



"Fun Meter"

When the Neptune detects you are in freefall it will switch to the freefall display, regardless of which screen you may be in at that time. The freefall display shows altitude in thousands of feet (or hundreds of meters).

There is also an analog display called the "fun meter". The "fun meter" is a black bar across the bottom of the screen which starts to fill in at 3000 feet and is a complete solid bar at 12,000 feet. The purpose is to give you a quick indication of where you are between 12,000 feet and 3,000 feet.

NOTE: If the analog bar (fun meter" is empty it does NOT mean you are at 3,000 feet, it means you are BELOW 3,000' – check the numbers!!

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Canopy Display



The canopy display shows altitude in feet to a resolution of 10 feet. It also shows rate of descent in feet per second.

The canopy display may be disabled (**Menu > System > Options 1 > Canopy Display**). If you disable the canopy display you will see the freefall display while under canopy.

DO NOT allow the canopy descent rate information to distract you from safely flying and landing your canopy.

Alarms

Neptune's alarm groups each have 3 alarm altitudes, and there are 4 groups which you can select from.

We recommend that alarms are disabled (**Menu > System > Options 1 > Audible > Disable**) if you are using Neptune as a visual altimeter. The alarm icon will change on the ground screen to show that the alarms have been disabled.

If you attempt to check the alarms settings (**Menu > Alarms**) while they are disabled you will see the following screen:

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Select "enable" to activate the alarms, or exit if you wish to leave them disabled.

If the alarms are enabled, **Menu > Alarms** will display the following screen showing the current active group and the alarm altitudes.



To exit without making changes select "OK" or to change the setting select "Edit/Select".

The following procedure shows how to edit and select another group



When you select "Edit/Select," you will see the screen shown on the left. Group 1, named 16-way in this case, is the active group.

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Assuming that we want to set up another group, highlight the group to be edited and press select, in this case group 2.



You will now see the current settings for group 2. The first item is the name; if you wish to change the name press select.



You can now scroll through a list of names. In this case 4-way has been selected. Press select to confirm the new name.



The same method is used to select and change the 3 alarm altitudes.



When the alarm name and altitudes are correct, highlight "Activate Group" and select.

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The menu item will confirm that this group is now active.

Now highlight and select "Exit"



The process is now complete. Group 2 has been set for 4-way, and the arrows confirm that it is the active group.

Log Book

To use the logbook function, make sure it is enabled (**Menu > Log Book > Enable/Disable**). The log book icon on the ground mode screen will confirm that logging is enabled.

A **summary** of your jumps is available (**Menu > Log Book > Summary**), which shows total jumps and total freefall time.

Detailed jump logs can be viewed for the last 10 jumps, and can be reviewed on a jump by jump basis (**Menu > Log Book > View Logs**). You will see the latest jump number displayed. Use the up button to highlight the jump number (Jump 12 in the photograph below), and press the center select button.



The first page of the detail log for the jump shows:

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- Jump #
- Grp: - this is the alarm group you had selected at the time of the jump (even if you have disabled the alarms).
- Exit Altitude
- Deployment altitude
 - Deployment altitude is the altitude at which you were under a fully deployed canopy, not the altitude at which you threw the pilot chute.
- FF: freefall time

When you select “Next” you will see:

- Average velocity
- Velocity at 12,000 feet
- Velocity at 9, 000 feet
- Velocity at 6, 000 feet
- Velocity at 3, 000 feet

Note: The velocities are an average of your velocity within 1000 feet of the reported altitude. This is how fast you were going at that altitude, it is not an average over a large part of your skydive.

These specific velocities and known altitudes allow jumpers to make valid fall rate comparisons. For example, how do you compare the fall rate of a jumper who has a long dive to a formation and then tracks like an anvil, with another jumper who is in the base and knows how to flat track? The averages will be completely different. However, if both jumpers were in the formation and comfortable at 6,000 feet, then the Neptune velocities are directly comparable.

When you select “Next” you will go back to the screen shown above. If you then select “View Next” the counter will go back one jump.

If you have to descend with the aircraft, Neptune may log a jump, in which case you can use **Delete Last (Menu > Log Book > Delete Last)** to erase the jump.

If you encounter any logging errors, please make sure that you have the latest version of software. Your problem may have already been addressed and resolved!

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To **download your jumps to Paralog** (www.paralog.net), you must have an IRdA interface on your computer.

In the Neptune logbook, select the "IR Connect" function to begin the upload process (**Menu > Log Book > IR Connect**).



In Paralog, select *File > Read Neptune*. Refer to Paralog for directions on setting up your preferences in that program.

Next, select 'Start Upload' in your Neptune and align the IR port of the Neptune with the IR port on your computer.



The Neptune should connect with your computer and warble. A popup dialogue box will also appear in the lower right corner of your computer screen. This box says 'Click here to send files to the computer Neptune' – DO NOT click this box!

After connecting with Paralog, your jumps will be downloaded into that program.

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Manual Modes



The “**Set DZ Offset**” (**Menu > DZ Setup > Set DZ Offset**) is intended to allow you to take off at one location and land at another DZ which is at a different altitude. The only function of DZ offset is to enter a number which is either added or subtracted from the AGL altitude that is displayed. The DZ altitude continues to be updated normally.

To cancel DZ offset: **Menu > DZ Setup > Set DZ Offset > Cancel**

“**Manual Mode**” (**Menu > DZ Setup > Manual Mode**) allows you to override ALL automatic functions. It will ask you to enter the current altitude and will then display the altitude that you set. It will display increases or decreases from the altitude you set. The display will NOT time out after 30 minutes, and the DZ altitude will NOT be updated.



Shows manual mode is active

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To cancel manual mode: **Menu > DZ Setup > Manual Mode > Cancel Manual > Disable**

If the altitude on the ground is not zero AGL, select “***I’m on the DZ***” (**Menu > DZ Setup > I’m on the DZ**). This function is useful if, for example, you drive up a hill and then get in the aircraft within approximately 20 mins. The unit may not have updated the DZ altitude. Selecting “I’m on the DZ” causes the unit to fix the DZ at the current altitude. It will then continue to automatically update as normal.

Flip

If you want to wear the unit on your right hand, flip the display upside down by selecting **Menu > System > Option 1 > Flip > Enable**.

Backlight

An electroluminescent backlight is included for night jumps. Use of the backlight will shorten battery life. We recommend that you leave it *disabled* unless you are actually making a night jump, in which case you should put in a fresh battery to ensure that your Neptune will have full power throughout your entire jump.

The menu sequence to enable the backlight is **Menu > System > Options 1 > Backlight > Enable**. The backlight icon will appear on the ground screen to confirm that it is activated.

When enabled, the backlight will stay on for 3 seconds every time you press a button, and will stay on when freefall is detected.

Auto/Econ

This option is does not function in version 1.x software. Neptunes remain in “Auto” mode.

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Demo Modes

There are two demo modes:

Menu > System > Modes > Demo

This will show the following screens in sequence:

- Boot up logo
- Your Neptune Serial Number and Software Version
- Ground
- Altitude
- Climb
- Freefall
- Canopy

Menu > System > Modes > Demo Alarms

The alarm demo will demonstrate the three alarm tones that we use.

Training Mode

The training mode is not active in version 2.x software.

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Specifications

Altimaster Neptune	
Overall dimensions	1.69" x 2.49" x 0.55"
Weight:	1.2 oz (without mount)
Max altitude	30,000 feet MSL
Temperature	-20 deg C to +60 deg C
Max depth (waterproofing)	6 feet for 1 hour
Body material	Polycarbonate
Battery Type	DL2450 (or equiv)
Dial face illumination	Electroluminescence
Alarms	4 groups of 3 altitude alarms

Disassembly

The Neptune cannot be disassembled by the user. Unless specifically described here, all maintenance on your altimeter should be performed by Alti-2, Inc., 1400 Flightline Blvd. Suite E, Deland, FL 32724 Tel: (386) 943 9333 Fax: (386) 943 9303
e-mail: info@alti-2.com

General Cleaning

Wipe altimeter with a damp cloth.

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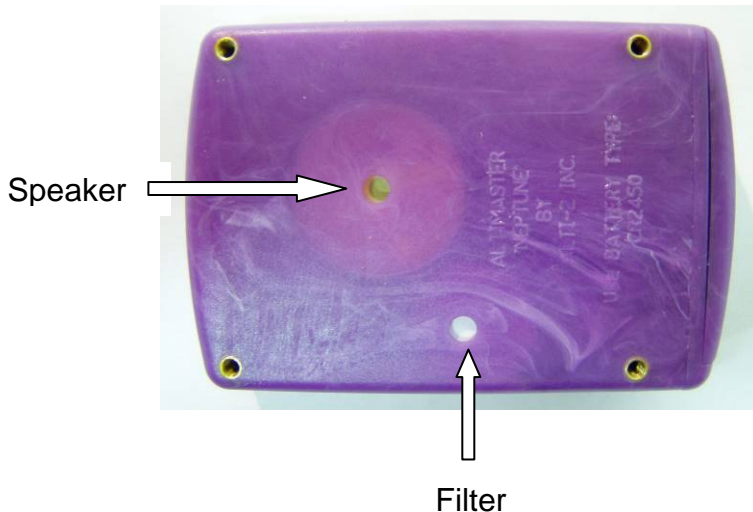


Maintenance after submersion in salt water

WARNING: Salt deposits must be removed from the filter after submersion in salt water. Failure to remove salt deposits may lead to the filter becoming blocked and serious lag may occur in freefall as a result.

To remove salt deposits submerge the altimeter in clean fresh water for at least 30 minutes, agitate occasionally. Remove from water, shake off excess and allow to air dry.

DO NOT touch the filter



The speaker cavity is sealed internally. If water comes out of that area, keep shaking until there appears to no more water in the speaker cavity.

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Servicing

If the altimeter behaves abnormally or unusually, discontinue use IMMEDIATELY and return to Alti-2, Inc.

Alti-2, Inc.
1400 Flightline Blvd.
Suite E
Deland, FL 32724

Tel: (386) 943 9333
Fax: (386) 943 9303

e-mail: info@alti-2.com

Please be sure to include contact information such as Phone Number, Fax Number, and/or email address, and a description of the problem.

Status on your altimeter can be checked by contacting the Alti-2, Inc. Service Department, or by initiating a Request for Repair Status through the Alti-2, Inc. web-page. www.alti-2.com

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