



222 Metro Center Blvd. | Warwick, RI 02886  
Phone (401) 921-5170 | Fax (401) 921-5159

## **STRATABOX QUICK START GUIDE**

**About This Guide** – This guide can be a useful tool for the inexperienced operator to be able to power-up and run the system in a manner that will provide a depth output with strata information under most conditions. Users of the Stratabox should really read over the Operations Manual to have a better working knowledge of the entire system and all its features.

**System Overview** - The basic Stratabox system consists of a single black box type module available in either our standard 10Khz version or optional 3.5Khz version. Also, our 3510 model is basically a dual module in a ruggedized case which can operate at either 3.5Khz or 10Khz. The 10Khz version utilizes a lightweight and portable line in cone style transducer. The 3.5Khz version utilizes a piston style transducer either by itself or in configurations of two or four transducers. It is designed to provide the user depth and sub-bottom profiling in areas as shallow as 2m (10Khz version only) and in areas with water depth to 150m for the 10Khz version and up to 800m for the 3.5khz version. For the purpose of this guide, operation of any of the Stratabox models is defined unless otherwise specified.

### **Stratabox Start Up**

- **Install the supplied Windows based Stratabox software on a suitable PC or laptop computer. The software can be loaded on multiple computers. Do not run the software at this time.**

*Note: Operation of Stratabox with the computer will require from two to four available COM ports, depending on application. USB adapters are not recommended. Consult the Operation Manual for further details.*

- **Connect your transducer to the TRANSDUCER connector of the Stratabox. For Model 3510 users, the 10Khz/3.5Khz transducer('s) should only be connected to their appropriate connector.**
- **Connect the Stratabox supplied Data Cable from the Stratabox DATA connector to the laptop/PC COM 1 input.**

*Note: COM 1 is preferred, but any available COM port should work.*

- **Connect the Stratabox supplied power cable from the Strabox POWER connector to a suitable DC power source of 10-30VDC. For the basic Stratabox, there is no power switch so the unit will turn on once power is applied. For the Model 3510, you must select either 3.5Khz or 10Khz operation via the power switch. Verify that the STAT LED is blinking at a once per second rate.**
- **Start up the Stratabox application by double clicking the Icon on the Windows Desktop. During start up view the Sensor Status window located on the left side of the screen about 1/3 from the bottom. Once the status window indicates a “SENSOR:IDLE” message, you**



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are now ready to start pinging and operate the system. Also, you should notice that the STAT LED is now solid green.

*Note: If you do not get to a “SENSOR:IDLE” message it is typically due to some computer related issue. Double check your cable connection to the computer and also note that if you are using a COM port other than COM 1 you will have to change your settings in the “Edit”, “Configure Sonar Port” menu for it is defaulted to COM . Also, verify that some other application is not using the COM port you assigned for Stratabox.*

- You are now ready to begin Stratabox operation.

## Stratabox System Operation

### Bottom Depth Acquisition -

- To start system operation (pinging), toggle the GREEN transducer icon located on the toolbar. The RED transducer icon will stop pinging. The system status window will indicate that you are pinging.
- Set your Color Control. For the purpose of this guide it is assumed that the “Ocean” pallet is used.
- Set your Units. For the purpose of this guide it is assumed that Meters is used. The Sound Velocity value displayed on the bottom of the screen should also be checked and modified (under the “Edit” “User Preferences” menu) if sound velocity data is available. Defaults are 1500m/s or 4800ft/s.
- Set up your basic operating parameters. They are: DC GAIN and RANGE. Your DC GAIN can be set to 5db to start and your RANGE should be set appropriately based on your water depth. If water depth is unknown than you may need to start with deeper ranges and more GAIN in order to find the bottom, then scale back as needed. Other parameters under the “Gain and Range” field are Zoom Range and Shift Range. Your Shift Range should be kept at 0 for now. Your ZOOM Range field can only be accessed when you select one of the zoom modes under the “View” menu.

*Note: Auto All feature is only recommended for users who are using the Stratabox just to provide depth readings. Due to the precise nature and various conditions/applications associated with subbottom profiling, Manual Mode is recommended.*

- Check and see if you are obtaining a valid depth in the depth display. If not then you should slowly increment your DC GAIN just to the point where you start to digitize on the bottom. For most conditions that would be in the range of 10 - 20dB. At this point your bottom return color should be dark red or brown.

*Note: You can also view the Amplitude display on the right side of the Normal Display window to check for the bottom echo return strength. Once the vertical edge of the amplitude display is straight it indicates that the gain level is appropriate for digitizing.*



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### **Subbottom Profiling** –

- Obtaining good subbottom data with the Stratabox is accomplished by manipulating just a few controls. Mostly just DC GAIN and Bottom Trigger TVG (Time Varied Gain). Once you digitize on the bottom (as defined above) you can then add BT GAIN (bottom triggered) to better accentuate your sub-bottom record. Again, you want to increment slowly. Typically .2 to .3 works well under most conditions. Of course bottom type ultimately determines performance for areas where there is softer sediment there will be more bottom penetration than areas with hard sediment such as coarse sand.
- Auto TVG can be set active (default) for most conditions. Under difficult survey conditions such as rough seas/ hard sediment bottom types or areas where a target is deep below soft sediment you can also use the BT Start feature. To do so turn off your Auto TVG so now your BT Start feature can be used. Simply enter a value of where you want your TVG to being,

*Note: For sub-bottom profiling less gain is always better so as to not "wash out" your data. Especially if you are using post processing software you can always add gain later but you cannot subtract gain from the record.*

### **Shallow Water Operation** -

- In shallow water there may be many multiple bottom returns so the best plan is to use a very low DC Gain setting. Start with 2 or 3db and look on your display and determine if you have obtained a bottom return. If not present slowly increase the DC Gain until you see a bottom return present on the display. A digitized depth may be difficult to obtain but subbottom information can still be obtained.
- Increase the BT GAIN to 0.1 or 0.2db then you should start to see some sub bottom layering if any is present. Dependent on the bottom type a second third or fourth bottom return may be present and cannot be avoided.

*Note: Water depth is always a limiting factor on bottom penetration results as some of the subbottom data may be hidden by the 2nd bottom return or multiple returns. The 2<sup>nd</sup> bottom return can be processed or filtered out in post processing in some instances. But for best results a lower DC Gain value will always provide the best results.*

**Additional System Features** – The system Operations Manual covers all features not included in this guide. The Operations Manual is available in .pdf format on the Stratabox Installation CD. It is also accessible from the Stratabox Operator Interface via the “HELP” tab on the tool bar.

**END OF GUIDE**