

E-Billy

User Manual

Please read this manual carefully before using the E-Billy electric bike repair stand. Failure to follow the precautions described in this manual can cause damage to the stand and personal injury.

Safety Precautions

- ◆ Before proceeding with any operation described in this manual, make sure you understand the instructions. If you have any trouble whatsoever, contact us at info@dbd-tools.com. We are here to help you.
- ◆ The stand must be plugged into an undamaged and grounded power outlet with a proper cable. If you live outside the EU and didn't receive a power cable suitable for your country's power outlets, contact us and we will send you one. **Do not use damaged extension cords.**
- ◆ The stand is designed for indoor use only. Make sure you don't operate it in wet or damp conditions.
- ◆ For cleaning the stand use a cloth and isopropyl alcohol.
- ◆ Do not modify any part of the stand. Doing so can cause serious injury.
- ◆ Do not operate the stand without the safety covers in place. Doing so can cause serious injury.
- ◆ Keep the work area clear of obstructions.
- ◆ The stand is designed for lifting bicycles, do not use it for other purposes.
- ◆ Do not stand on any part of the stand except the base plate.
- ◆ Before operating the stand make sure there are no people in the stand's work area.
- ◆ Do not wear loose clothing or any accessories that could get caught in moving parts. Keep long hair organized and out of the way.
- ◆ When operating the stand don't touch any of its parts except the remote control.
- ◆ Before attempting any repair operation to the stand, find a suitable manual for the intended operation or contact us to help you.

Assembly and Installation

Required tools (not included):

- ◆ 2.5 mm hex wrench
- ◆ 5 mm hex wrench
- ◆ 6 mm hex wrench



ATTENTION: DO NOT UNSCREW THE SCREWS HOLDING THE BOTTOM SUPPORTS TO THE ALUMINUM MAIN FRAME OF THE STAND AS THIS CAN CAUSE BEARINGS TO GET MISALIGNED, CAUSING DAMAGE TO THE MOTOR.



ATTENTION: DO NOT ADJUST ANY OF THE SCREWS ON THE CARRIAGE WITHOUT CONSULTING THIS MANUAL'S MAINTENANCE SECTION. IMPROPER ADJUSTMENT CAN CAUSE TOO MUCH PLAY OR TIGHTNESS AND EVEN DAMAGE THE STAND.

For your convenience, E-Billy is shipped almost completely assembled, with very few steps left for you to complete before using it:

1. Find a suitable space where you have enough room to work on bikes comfortably.
2. Unpack the base plate (optional) from its separate box and put it in your selected spot with the mounting holes oriented away from you (**figure 1**). If you wish to secure the stand directly to the floor, you need to drill holes and install anchors according to the schematic at the end of this manual.
3. Unpack the main box and locate the clamp assembly (separate box). It includes two remote holders that are to be mounted on both sides of the clamp (see **figure 2**). Place the remote holders onto the clamp holder and mount the assembly to the carriage of the stand using the four included M8 screws and washers (**hardware bag 1**) and a 5 mm hex wrench. Tighten the screws to 20 Nm.
4. The clamp box also contains a remote. Unpack it and connect it to the spiral cable with the matching connector, then place it onto the remote holder you mounted in the previous step. It attaches magnetically.

5. Lift the stand upright and move the box out of your way to make it easier to position the stand on the Base Plate.
6. Position the lower supports of the stand on top of the mounting holes of the Base Plate / floor as shown in **figure 3**.
7. Locate the included M10 and M8 screws (four each) and washers (**hardware bag 2**). Put the washers onto the screws, then insert the screws into the holes of the lower supports and thread them into the base plate / floor. Using 6 mm and 5 mm hex wrenches, tighten the screws to following specification:
M10: 40 Nm
M8: 20 Nm
8. Use a 5 mm hex wrench to level the stand with the leveling screws in the corners of the base plate and eliminate any wobble.
9. Locate the power supply bracket in the power supply box and mount it to either the top cover or motor cover of the stand (depending on which power plug you will be using), with the included M4 screws from the same box and a 2.5 mm hex wrench. See **figures 4 and 5**.
10. Plug the power supply unit into an electrical socket and one of the three power plugs on the stand (**figures 4 and 5**).
11. You are now ready to use the stand!

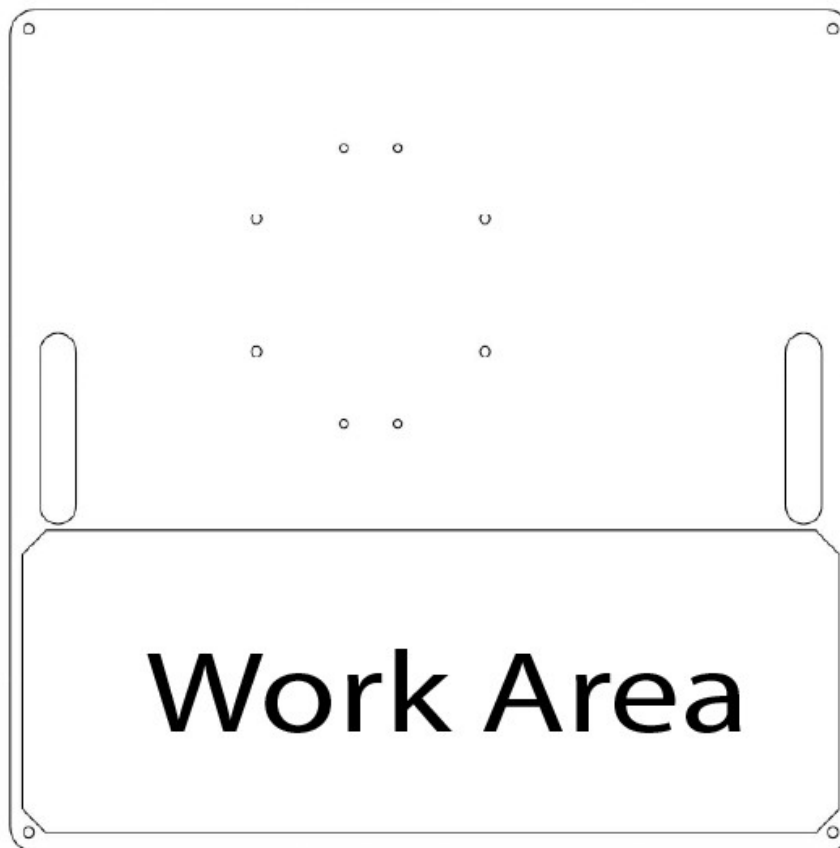


Figure 1: Base Plate orientation

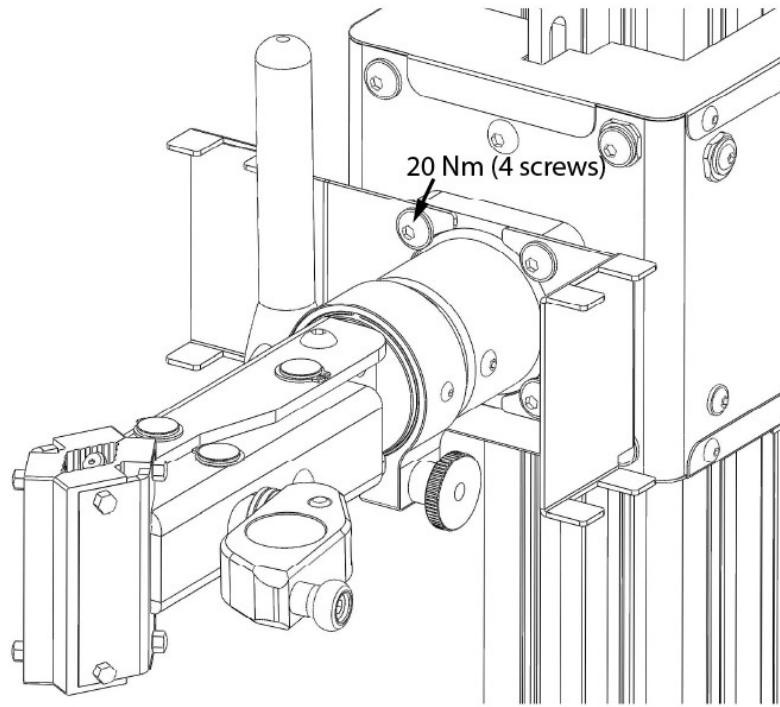


Figure 2: Remote holder mounting position

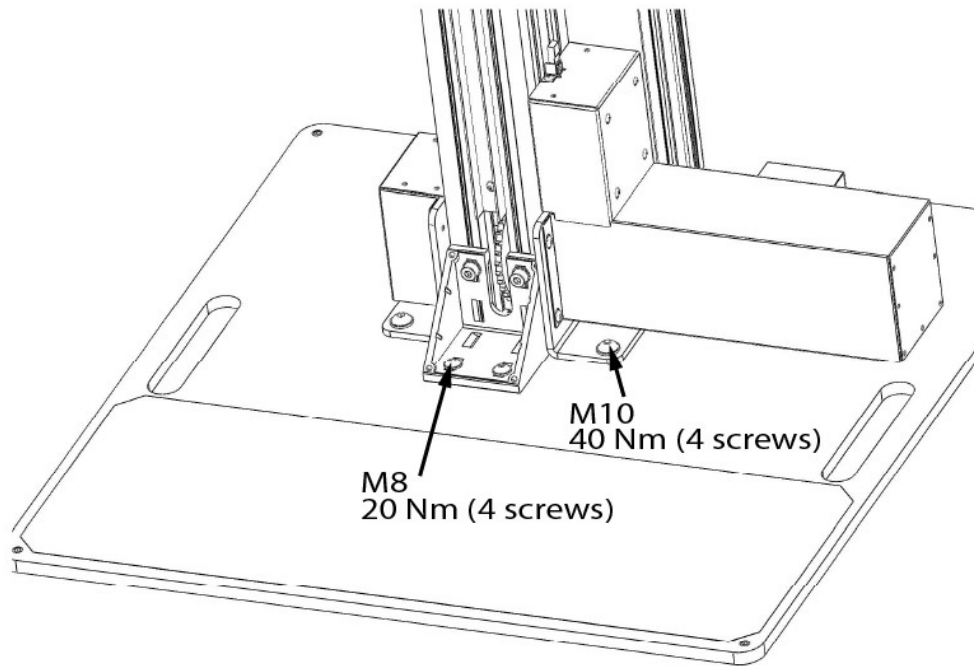


Figure 3: Stand mounting screws

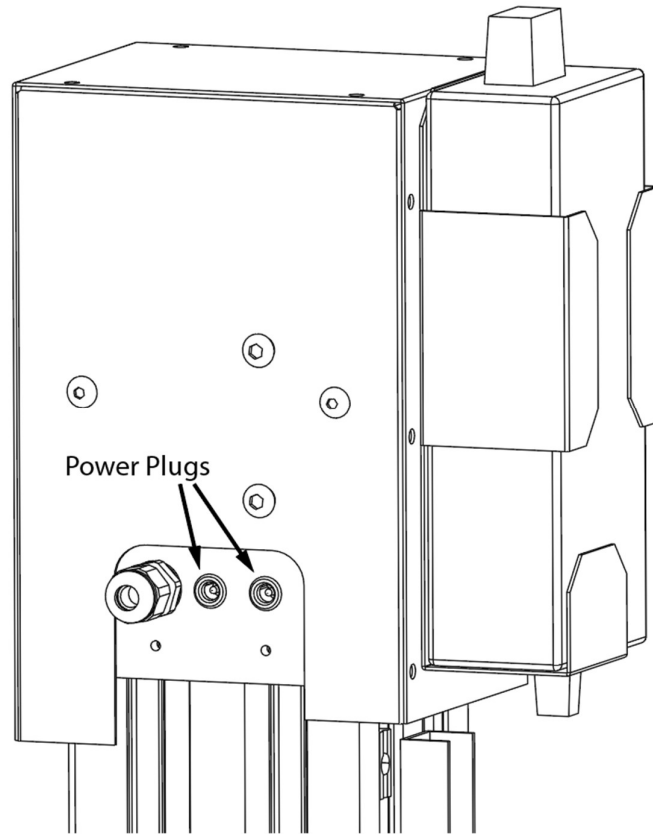


Figure 4: Top power plugs and power supply bracket

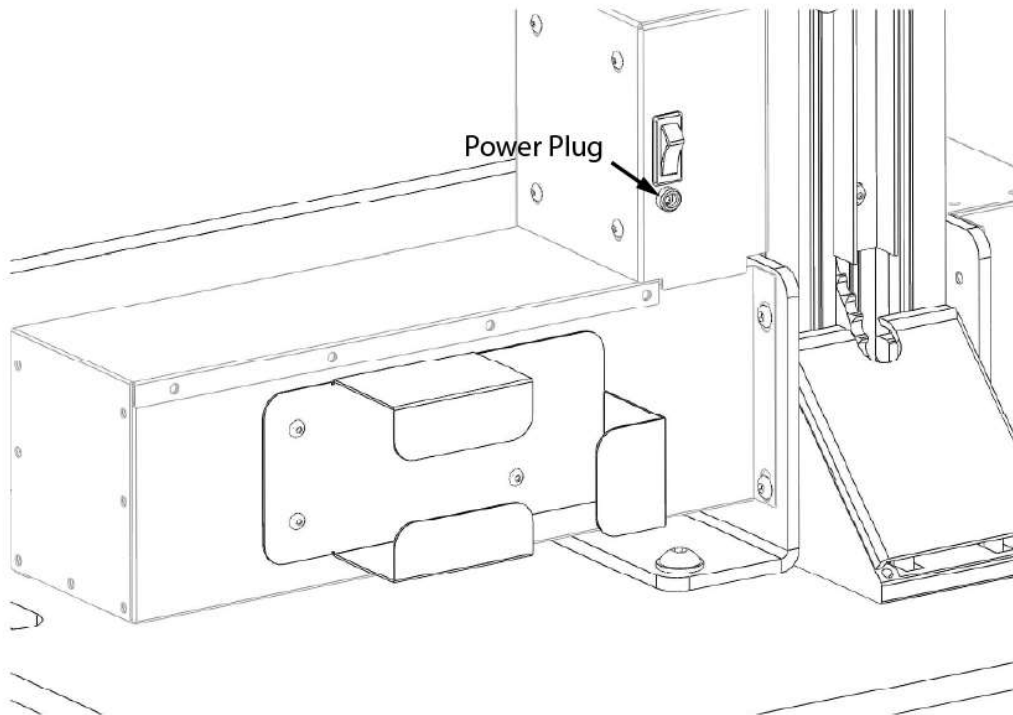
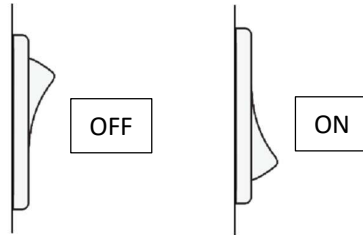


Figure 5: Bottom power plug and power supply bracket

Operation

Power

Turn E-Billy on by pressing the power switch on the back side, just above the motor cover. The lights on the remote will illuminate.



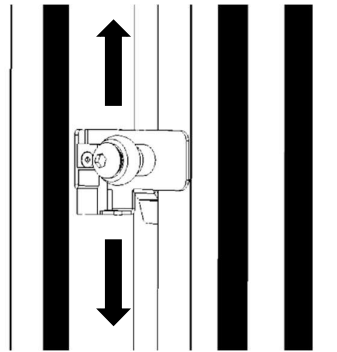
Remote Control

The two buttons on the remote have multiple functions. Refer to the following table for descriptions of button actions.

Press and hold a single button	The stand moves in the selected direction slowly until the button is released, a limit switch is reached, or the overload mechanism is triggered. Useful for precise positioning of the clamp height when clamping a bike.
Single button press	The stand moves in the selected direction until a limit switch is reached or the Auto-Stop / overload feature is triggered. Single press also stops the stand movement during automatic operation.
Press and hold both buttons	Reset the stand after the overload feature is activated (button lights blinking). Enter Auto-Stop sensitivity adjustment (see Troubleshooting)

Limit Switches

There are two limit switches on E-Billy that control how far the carriage can move. The top limit switch is user adjustable for setting your perfect working height. To adjust the height, lightly pull on the adjuster knob and move the switch to the desired height. The bottom limit switch is fixed and prevents damage to the electronics enclosure.



Limit switches sense metal objects within their measurement range – therefore, the metal tabs on the carriage covers must be positioned 1-2 mm away from the sensor. Limit switches are accompanied by bump stops that prevent damage in case of limit switch failure. They should be 3-5 mm away from carriage covers when the stand is in uppermost and lowermost positions. See **figures 6 and 7**.

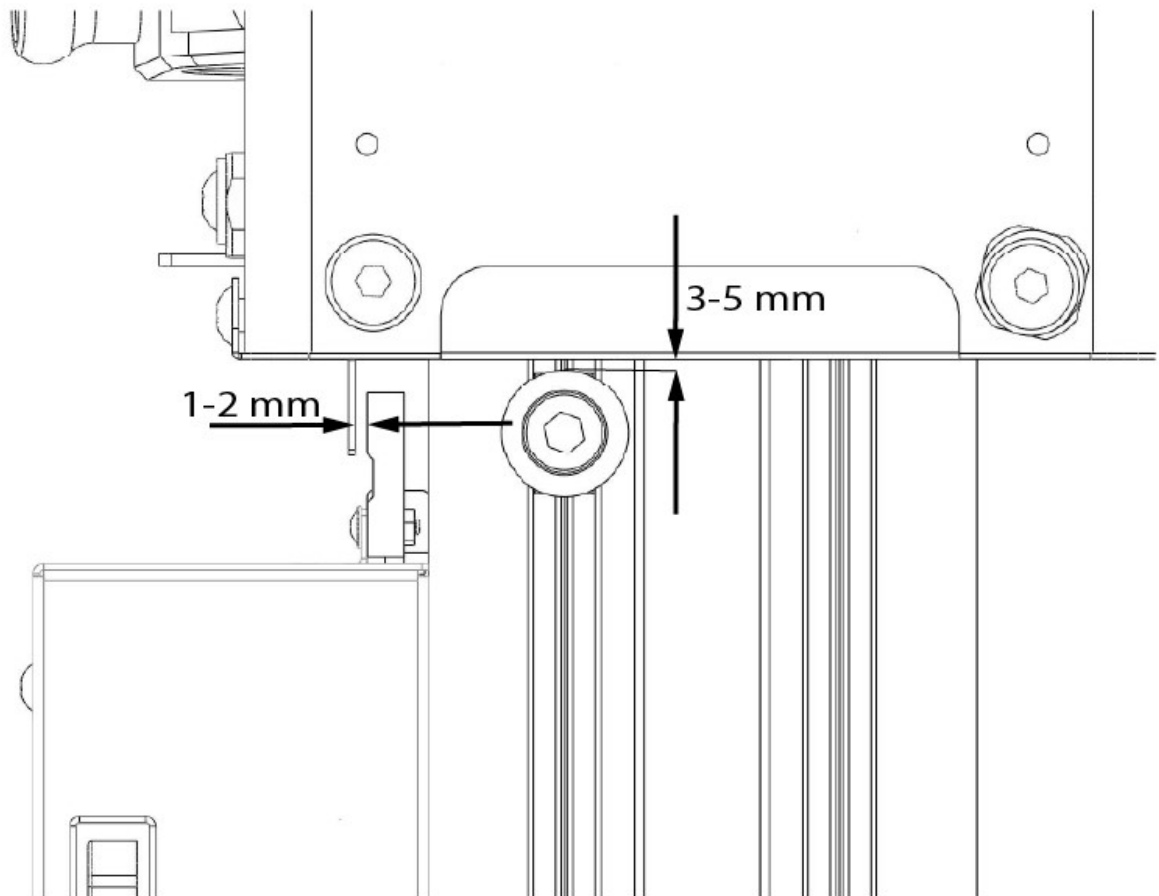


Figure 6: Bottom limit switch and bump stop

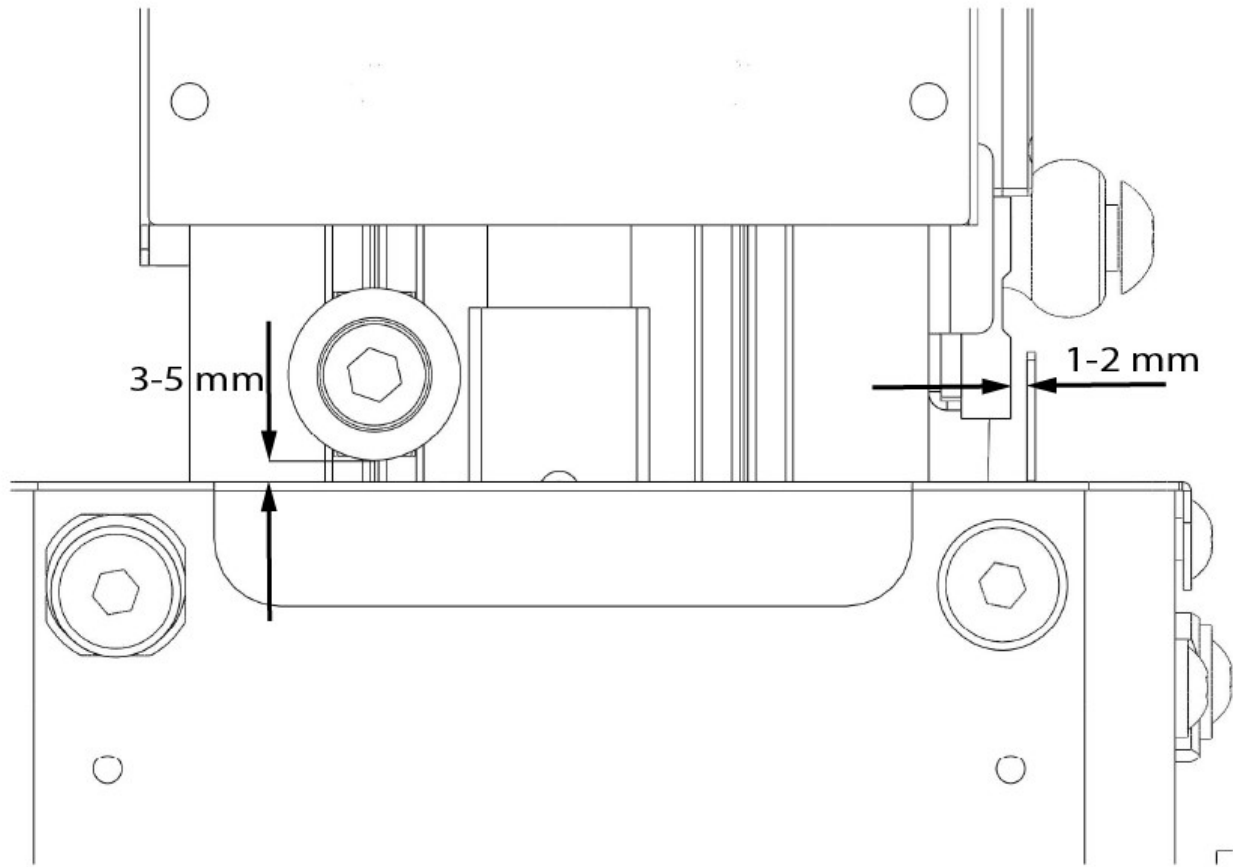


Figure 7: Top limit switch and bump stop

Auto-Stop

E-Billy is equipped with an electronic Auto-Stop feature. When lifting a bike, it limits the lifting capacity of the stand to protect components and ensure operator safety. When lowering a bike, it stops the stand when the bike touches the ground or an obstacle is encountered, allowing automatic operation with no reduction in safety.



ATTENTION: BEFORE LOWERING A BIKE, MAKE SURE ITS WHEELS ARE PARALLEL TO THE GROUND. FAILURE TO DO SO CAN CAUSE DAMAGE TO THE BIKE OR STAND.

Working with E-Billy

- ◆ Bring the bike you will be working on close to the stand. If clamping by the seatpost, make sure it is clean to prevent unwanted slip. Dropper seatposts may need degreasing.
- ◆ Bring the clamp to a suitable height to clamp the seatpost of the bike you will be working on. Press and hold a button on the remote to achieve slower movement for better precision.
- ◆ Release the rotation handle (**figure 8**, number 1) so that the clamp can adjust its position to the bike's seat/frame tube angle.
- ◆ Place the bike's seatpost/frame between the clamp pads.
- ◆ Close the clamp by flipping the clamp handle 180° (2) and tighten the clamp by rotating the clamp handle clockwise (3).
- ◆ Close the rotation handle (4). It should be tight enough not to let the bike rotate under its own weight but light enough so you can open and close it with one hand easily. Overtightening may cause damage to the mechanism.
- ◆ Adjust the top limit switch to a desired working height. You can also manually stop the stand at any height, use of limit switches is not necessary.
- ◆ Single press the up button of the remote. E-Billy will lift your bike to the height set by the top limit switch or until you stop it by pressing either of the two remote buttons.
- ◆ Perform your service procedures on the bike. Use the rotation feature to position the bike so that your work is made easier.
- ◆ Before lowering the bike **make sure its wheels are installed**. Use the rotation feature to position the bike parallel to the floor. If you don't do this the auto stop feature will stop the bike partially off the ground making it more difficult to unclamp or even cause damage to the bike or stand.
- ◆ Single-press the down button of the remote. E-Billy will lower your bike onto the floor and automatically stop when it touches the ground.
- ◆ Unclamp the clamp handle and remove the bike from the stand.

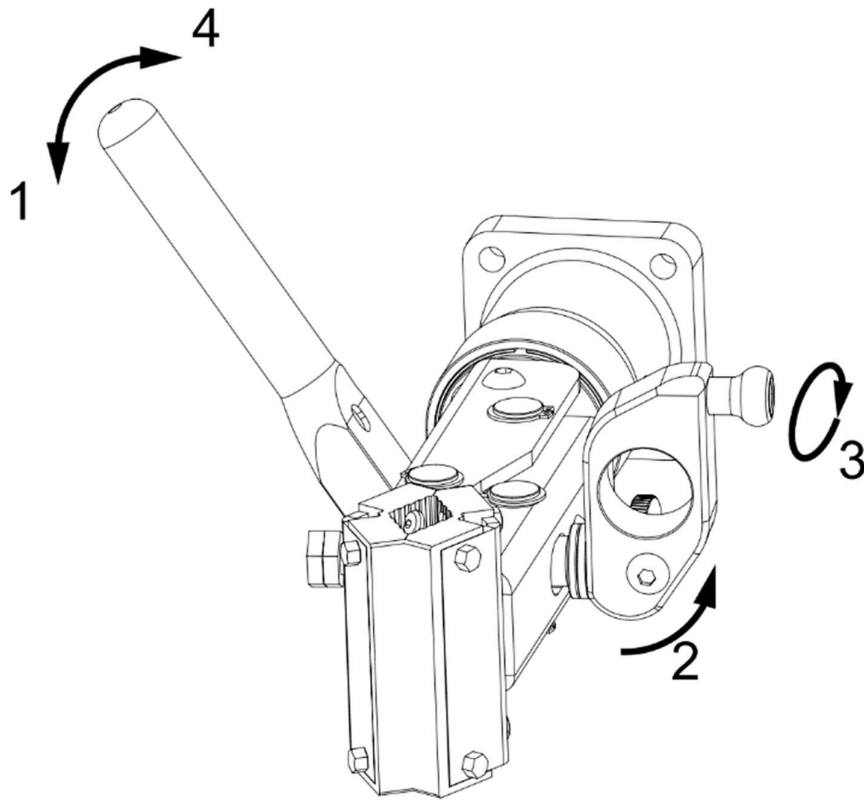


Figure 8: Clamp operation

Maintenance

E-Billy is designed to require very little regular maintenance. The following table lists the maintenance procedures and frequency.

Procedure	Frequency
Clean any spilled liquids off the stand.	Daily.
Wipe the main aluminum frame to remove any dirt that might interfere with the carriage rollers. Use isopropyl alcohol and a clean shop towel. Unplug the stand for this procedure.	Weekly/as required. Example: If you use compressed air on a bike and blow dirt onto the stand, clean the stand before moving it, otherwise marking of the aluminum frame can occur.
Lubricate the rotation handle screw and contact surface. See figure 9 . Remove the screw, inspect it for damage (excessive tightening) and apply white lithium grease to both contact surfaces (screw body and eye bolt hole). Reinstall the screw, wipe off the excess grease and use a small amount of it on the contact surface between the rotation handle and the brass insert.	Monthly.

<p>Apply friction paste to the clamp rotation assembly. Undo the two screws on the side of clamp holder (4 mm hex wrench) and the two on the rotation collar (2.5 mm hex wrench). Pull the clamp out of the clamp holder (may require some force) and apply friction gel to the knurled surface. Replace the clamp and all the screws (be careful to align the grooves with the screw holes, do not forcefully tighten the screws). The screws only prevent axial movement, so they only need to be tightened lightly.</p>	<p>As required (if the clamp starts to rotate under load even though the rotation handle is closed tightly enough - it should be possible to close with very little effort and hold the bike in place). Also perform lubrication of rotation handle screw (see above).</p>
<p>Lubricate the clamp hardware. Apply white lithium grease to the eye bolt and under the plastic spacer (figure 10).</p>	<p>As required (if clamp operation becomes rough).</p>
<p>Lubricate the chain. You can use bike chain lube. Do not lubricate while the stand is moving. Lubricate the exposed parts of the chain (front and back of the stand), move the stand up or down a small distance and lubricate the part of the chain that was previously hidden behind the upper and lower covers. Move the stand all the way up and down a few times. With the stand at rest, wipe the excess lube off the chain.</p>	<p>As required (chain is dry or starts to rust).</p>

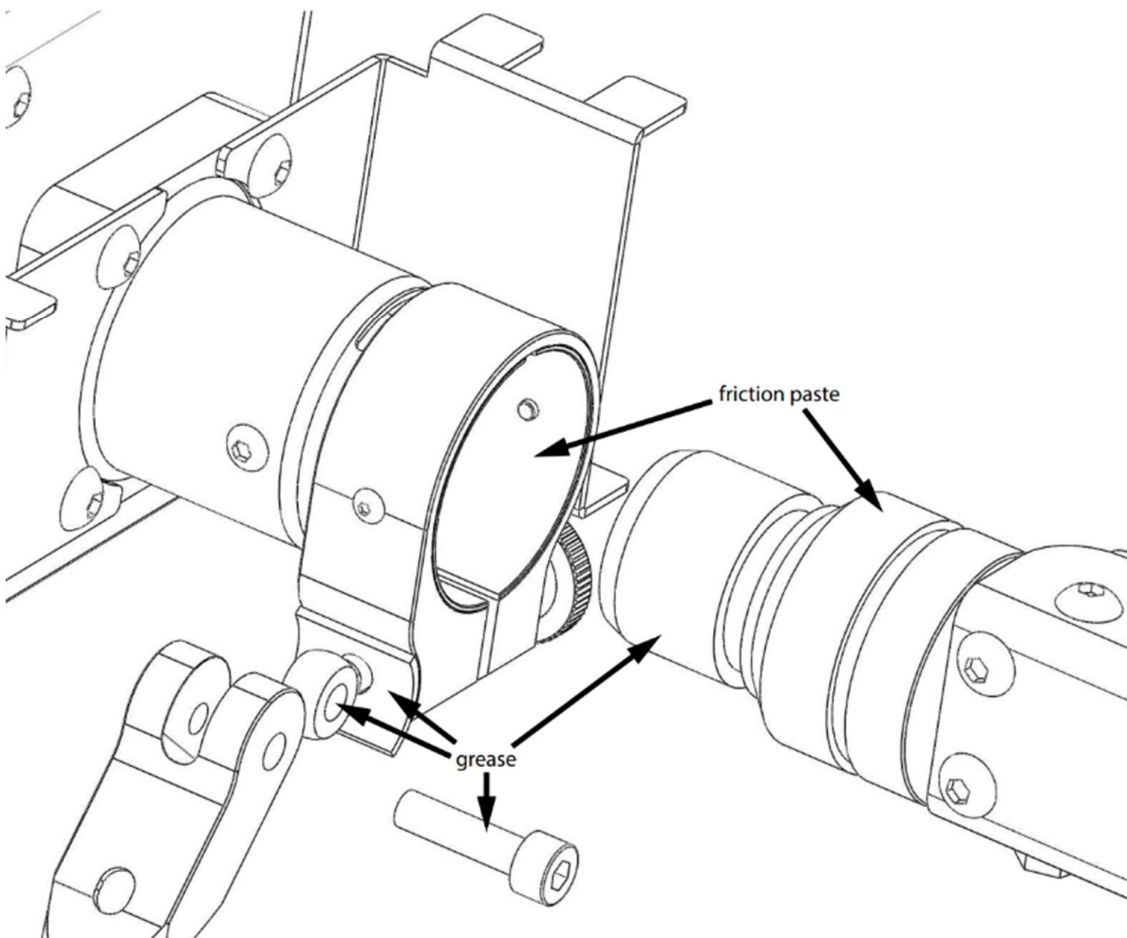


Figure 9: Clamp Holder grease and friction paste locations

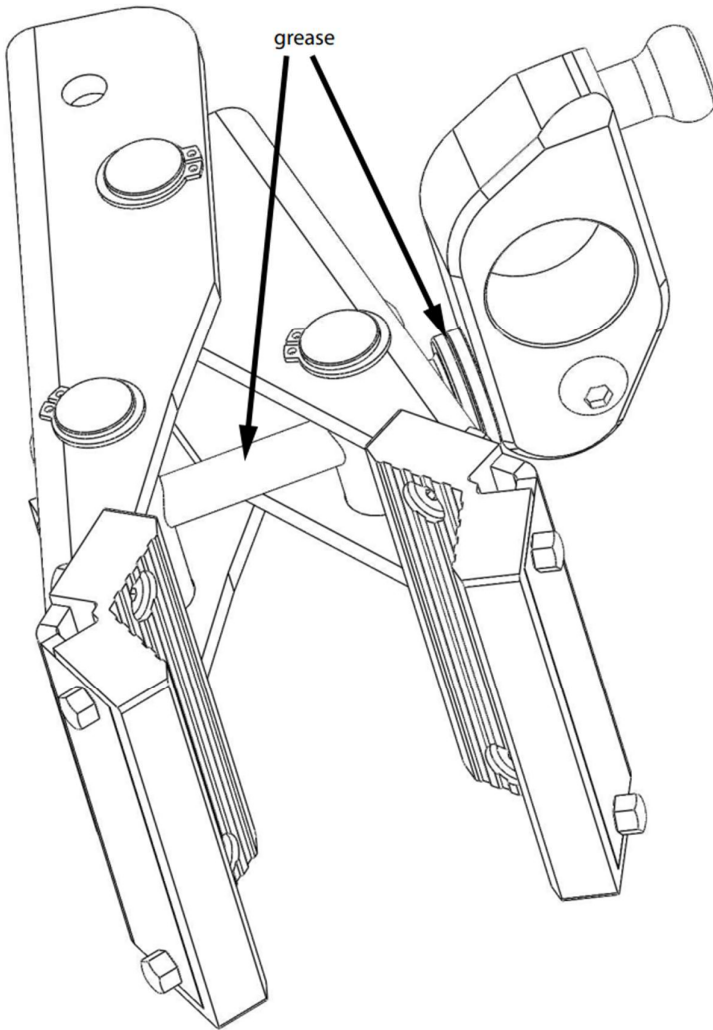


Figure 10: Clamp grease location

Troubleshooting

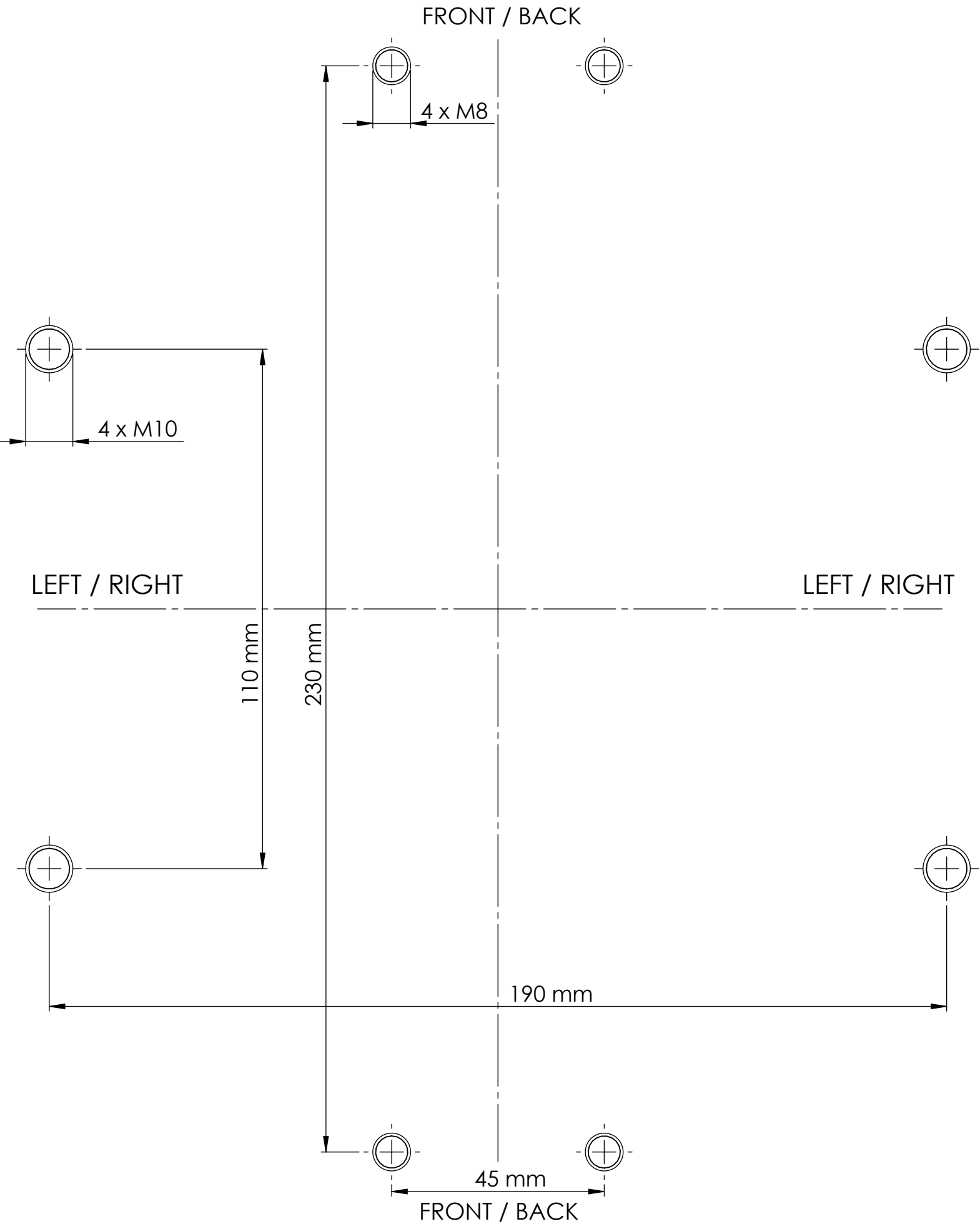
The following table lists possible issues and solutions to them. If your problem is not listed or these procedures do not solve your problems, contact us for help.

Symptom	Description	Solution
Lights on the remote are turned off. The stand doesn't work.	The stand is turned off or doesn't receive power.	Make sure the stand's power switch is on, the power supply unit is plugged into a functioning power outlet and one of the three power plugs on the stand.
Lights on the remote are blinking continuously.	Overload safety feature stopped the stand, preventing its further operation.	Remove any obstacle or too heavy load that caused the overload. Press and hold both buttons on the Remote for 5 seconds to reset the stand.
Lights on the remote are turned on, the stand only moves in one direction.	One of the limit switches may be covered by a metal object, preventing movement in that direction. One of the limit switches may be connected poorly or is defective.	Make sure the limit switches are not covered by a metal object.
Lights on the remote are turned on, the stand doesn't move at all.	One of the limit switches may be connected poorly or is defective.	Check the top limit switch's connection at the top of the stand.

<p>There is damage to the stand’s main aluminum frame.</p>	<p>Spots and scratches in the anodized finish may indicate foreign objects between the rollers of the Carriage and the aluminum frame.</p>	<p>Move the carriage to a comfortable working height. Unplug the stand. Clean the main aluminum frame with a clean shop towel and isopropyl alcohol. Remove the screws holding the upper and lower carriage cover (3 mm hex wrench). DO NOT ADJUST ANY OTHER SCREWS ON THE CARRIAGE. Slide the lower carriage cover to the bottom of the stand, be careful not to scratch the profile. Get a large zip tie (long enough to go around the main frame). Slide the upper carriage cover out of the way and place the zip tie under it to hold it in place. Inspect the rollers. They can be rotated by hand. Clear any particles embedded in the rollers (16 rollers total) and clean them with isopropyl alcohol. Use compressed air to blow any loose particles out of the carriage. Reinstall both carriage covers.</p>
<p>The stand stops on its own while moving downward, without a bike touching the ground or a metal object triggering the bottom limit switch.</p>	<p>Auto-Stop sensitivity needs to be decreased.</p>	<p>With no bike clamped in the stand and a position where neither of the limit switches is triggered, press and hold both remote buttons for 5 seconds. The lights start blinking in a pattern that indicates the currently set sensitivity level of Auto-Stop – there are 10 levels. Example: 5 blinks = level 5. Press the up button to increase Auto-Stop activation force (reduce sensitivity). Confirm the setting by holding both buttons until they stop blinking. Test the stand and adjust again if necessary. We recommend adjusting by a maximum of two levels at a time.</p>
<p>The Auto-Stop feature stops stand movement too late, pushing the bike into the ground.</p>	<p>Auto-Stop sensitivity needs to be decreased.</p>	<p>With no bike clamped in the stand and a position where neither of the limit switches is triggered, press and hold both remote buttons for 5 seconds. The lights start blinking in a pattern that indicates the currently set sensitivity level of Auto-Stop – there are 10 levels. Example: 5 blinks = level 5. Press the down button to decrease Auto-Stop activation force (increase sensitivity). Confirm the setting by holding both buttons until they stop blinking. Test the stand and adjust again if necessary. We recommend adjusting by a maximum of two levels at a time.</p>

This concludes the E-Billy User Manual. If you have any other questions, you can contact us at info@dbd-tools.com.

1:1 MOUNTING PATTERN



CHECK DIMENSIONS AFTER PRINTING

E-Billy

Add-Ons Manual

Please read this manual carefully before using E-Billy Add-Ons. Failure to follow the precautions described in this manual can cause damage to the stand and personal injury.

Safety Precautions

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- ◆ The stand is designed for indoor use only. Make sure you don't operate it in wet or damp conditions.
- ◆ For cleaning the stand use a cloth and isopropyl alcohol.
- ◆ Do not modify any part of the stand. Doing so can cause serious injury.
- ◆ Do not operate the stand without the safety covers in place. Doing so can cause serious injury.
- ◆ Keep the work area clear of obstructions.
- ◆ The stand is designed for lifting bicycles, do not use it for other purposes.
- ◆ Do not stand on any part of the stand except the base plate.
- ◆ Before operating the stand make sure there are no people in the stand's work area.
- ◆ Do not wear loose clothing or any accessories that could get caught in moving parts. Keep long hair organized and out of the way.
- ◆ When operating the stand don't touch any of its parts except the remote control.
- ◆ Before attempting any repair operation to the stand, find a suitable manual for the intended operation or contact us to help you.

Assembly and Installation

Required tools (not included)

For your convenience, E-Billy's Add-Ons are shipped mostly assembled, with very few steps left for you to complete before using them.

Required tools for installing each Add-On:

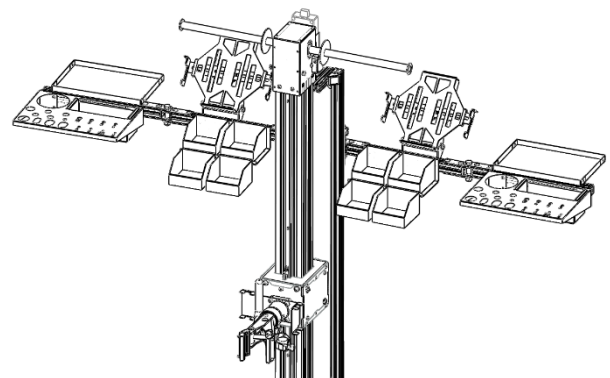
- ◆ Support Frame – 5 mm hex wrench
- ◆ Tool Tray – 4 mm hex wrench
- ◆ Part Tray – 4 mm hex wrench
- ◆ Laptop / Tablet Holder – 4 mm hex wrench
- ◆ Small Parts Organizer – 4 mm hex wrench
- ◆ Towel Holder – 4 mm hex wrench
- ◆ PowerPort USB Charger – 2 mm hex wrench
- ◆ Clamp Extender – 5 mm hex wrench, 13 mm wrench

The following Add-Ons require the use of Support Frame with Hinged Arm:

- ◆ Tool Tray
- ◆ Part Tray
- ◆ Laptop / Tablet Holder
- ◆ Small Parts Organizer

Position of the Support Frame

By default, the Support Frame comes assembled so that it is positioned on the left side of the stand looking from the front - we find this configuration handier. It can, however, be reconfigured to the other side if you prefer. To do this, the mounting pieces at the top and bottom need to be reassembled with their position mirrored horizontally. When doing so, refer to the adjustment guidelines described in the next section.



Support Frame and Hinged Arm

The Support Frame comes pre-assembled and consists of the vertical support and hinged arm. The following procedures must be completed to install it:

1. Turn E- Billy off.
2. Remove the rear plastic cover from the bottom of the stand (Figure 1 - A)
3. Unscrew the rear two M8 screws holding the stand to the floor / Base Plate (Figure 1 - B)
4. Position the vertical support on the bottom holes and insert the two longer M8 screws included with the Support Frame (Figure 2).
5. Thread in the screws enough to hold the vertical support in place but don't tighten them yet.
6. Insert the included shorter M8 screw into the mounting bracket at the top of the vertical support and thread it into the groove nut on E-Billy (Figure 3 - A).
7. Make sure the vertical support is positioned vertically and tighten all three screws you inserted previously.
8. Replace the plastic cover you removed in step 2.
9. Slide the groove nuts of the hinged arm into the rear groove of the vertical support. You may have to loosen them slightly (Figure 4).
10. Tighten the bottom screw of the hinged arm carrier, then unthread the screw by about half a turn. **It is only used for guiding the arm along the groove – the position of the arm is secured by the plastic star nut.**
11. Install the included plastic cover on the top of the vertical support (Figure 3 - B).
12. **IMPORTANT:** After installing the Support Frame, move E-Billy's limit switch all the way up until it stops against the top assembly. Then, using the hold function of the remote, move the stand up until it stops at the limit switch. Ensure there is a small gap between the carriage and the part of the vertical support mounted to the stand. Repeat with automatic operation. See Figure 5.

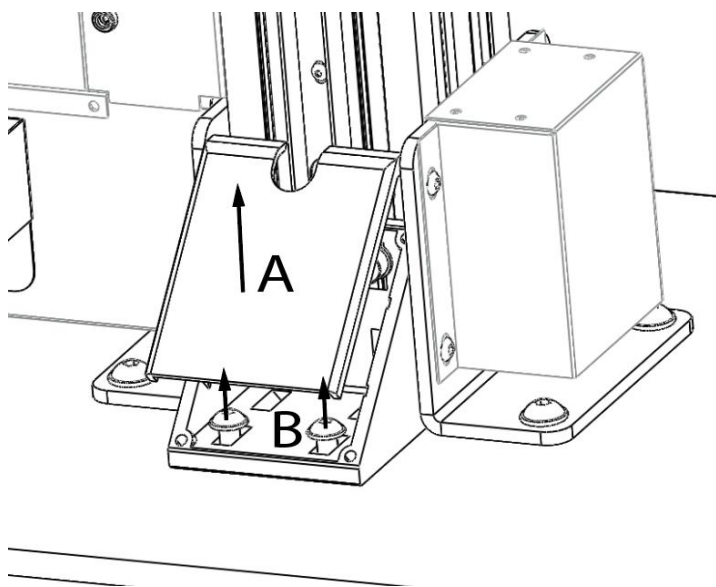


Figure 1

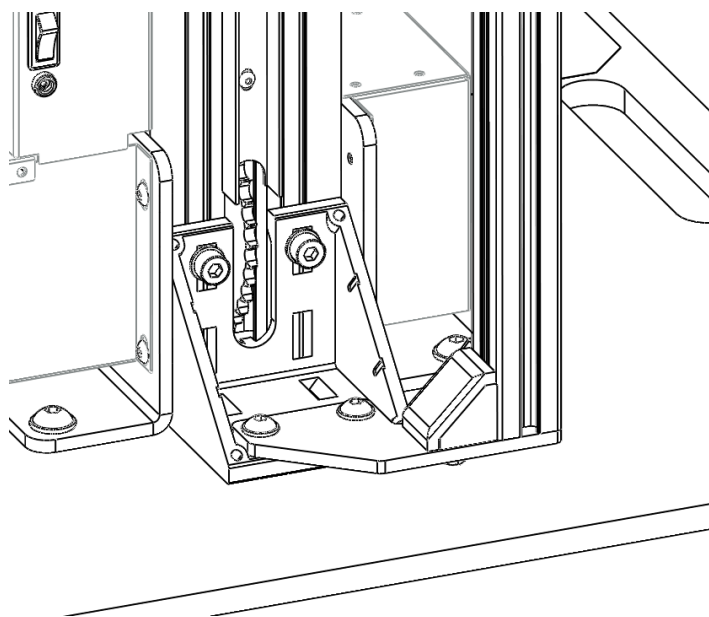


Figure 2

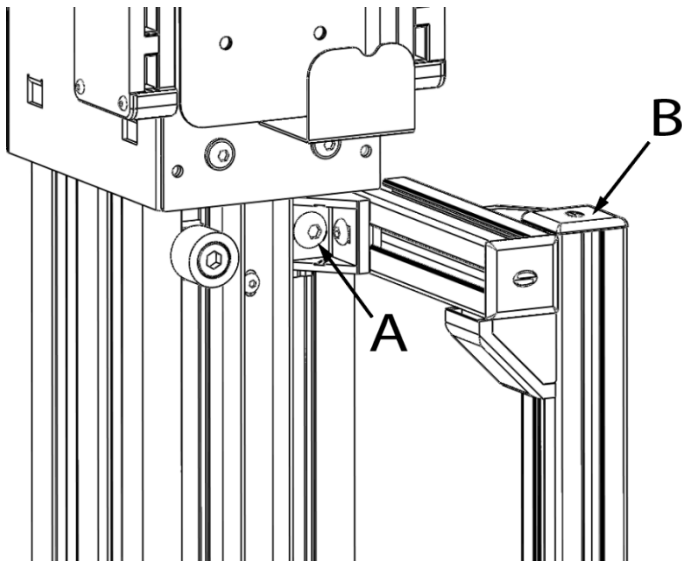


Figure 3

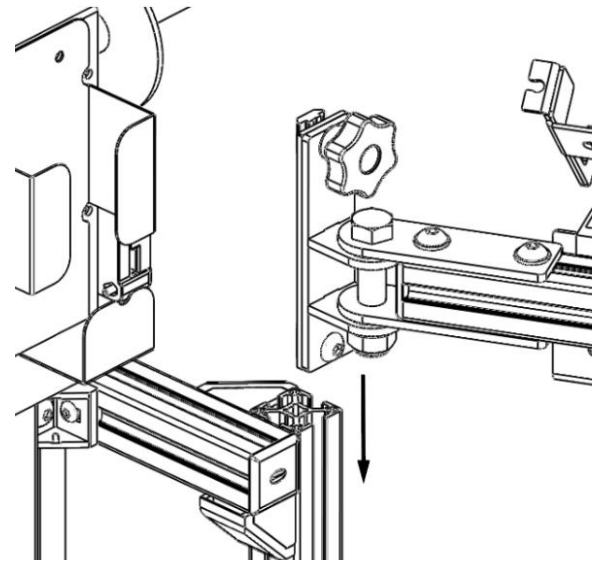


Figure 4

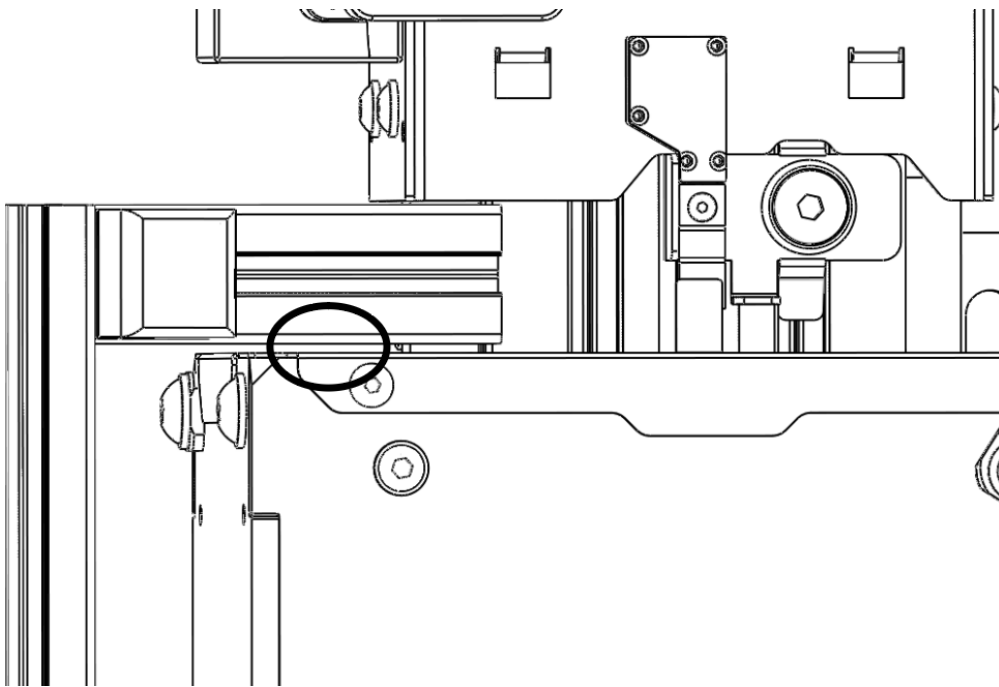


Figure 5: With the limit switch and carriage all the way up, ensure there is a gap between the horizontal support and carriage

Notes:

- ◆ The hinged arm's hinge tightness can be adjusted with two 19 mm wrenches by tightening or loosening the hinge screws slightly.
- ◆ The hinged arm's **weight capacity is 5 kg**. DBDtools is not responsible for any damage caused by overloading of the arm.
- ◆ Add-Ons requiring the support frame can be mounted on the hinged arm in any configuration you prefer.
- ◆ Due to the manufacturing tolerances required for assembly, the hinged arm may sag slightly under load. This is corrected by slightly unthreading the M8 screws holding the arm segments together, positioning the arm segments slightly upwards and retightening the screws.

Installation of Add-Ons requiring the Hinged Arm:

The Tool Tray, Parts Tray, Small Parts Organizer, Laptop/Tablet Holder and optionally the Towel Holder are mounted to the hinged arm with the use of groove nuts that come pre-installed on these Add-Ons (except Towel Holder).

1. Move the hinged arm to a comfortable height.
2. Unthread the groove nuts on the Add-On you are installing slightly (not all the way off).
3. Slide the Add-On's groove nuts into the groove of the hinged arm segment (Figure 6). Tighten the bolts with a 4 mm hex wrench. You can place the Add-Ons however you like it best. See Figure 7 for a sample mounting configuration.
4. For notes on each individual Add-On see the next section.

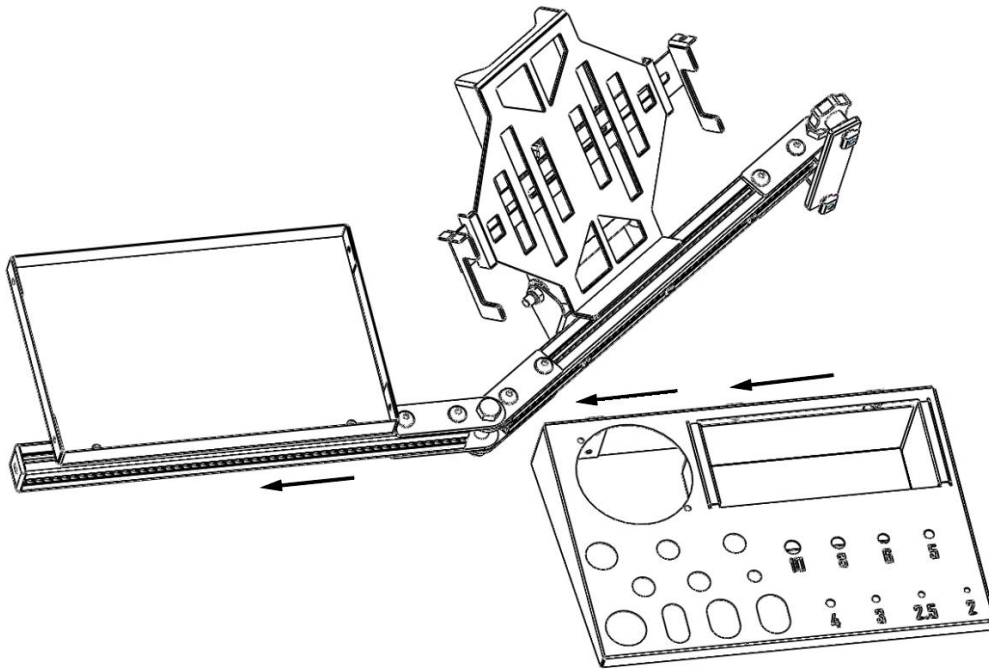


Figure 6: Installation of Add-Ons to the hinged arm

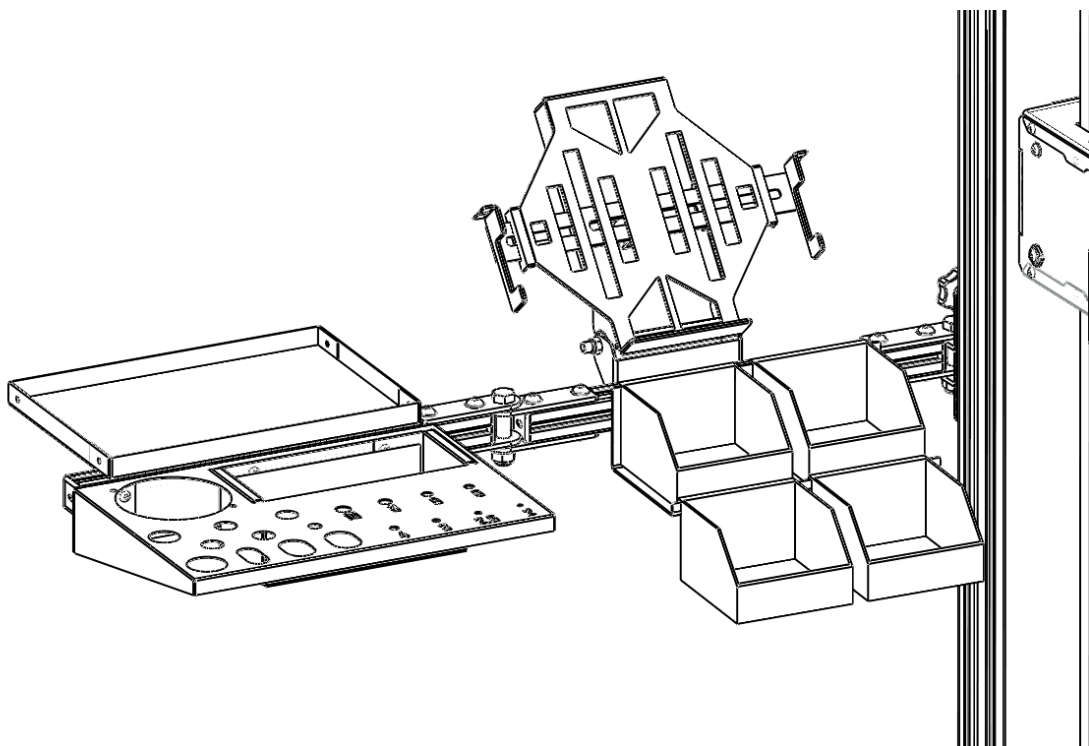


Figure 7: Example Add-On layout

Tool Tray

The Tool Tray allows you to always keep your most used tools close. It includes:

- ◆ Marked cutouts for hex wrenches from 2 mm to 10 mm
- ◆ Mixed-size cutouts for various tools
- ◆ Spray compartment
- ◆ Magnetic cup for keeping small bolts and other metal pieces secure

Notes:

- ◆ The spray compartment metal strip is inserted from the bottom by slightly bending the side flanges.
- ◆ The magnetic cup and spray compartment need to be removed to tighten the bolts holding the tool tray to the hinged arm

Part Tray

The Part Tray is useful for putting down anything you need close at hand. Parts removed from the bike can stay close, especially if you only need to put them away for a short time or have your hands full – for example headset spacers while holding the fork at the same time.

Laptop/Tablet Holder

When you need your electronic devices close, the Laptop/Tablet Holder is the perfect solution for laptops and tablets from 10 to 16 inches. Perform software updates or watch videos on technical procedures without relocating to a dedicated spot in the shop.

Notes:

- ◆ The hinge tightness of the Laptop/Tablet Holder must be sufficient to prevent a heavy laptop from moving it under its weight. The hinge can be tightened by two 13 mm wrenches.
- ◆ The plastic star knob on the back is used to tighten the side arms of the holder.
- ◆ The holder is shipped in such a configuration as to be mounted on the back side of the hinged arm (Figure 7). If you wish to mount it to the front side of the arm, you must unthread the nut from the hinge bolt, remove the bolt, turn the mount around and reassemble the hinge.
- ◆ The cutouts on top of the side arms are for securing the coiled USB cable (shipped with the PowerPort USB Charger) so there is no tension being applied to the end of the cable and your device's charging port.

Small Parts Organizer

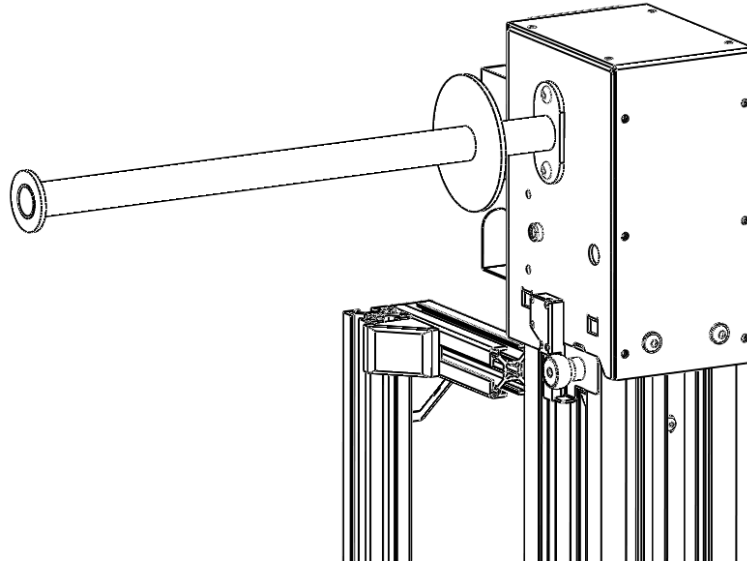
The small parts organizer allows you to keep small parts and tools within your reach. Cable end caps, air pressure gauges, brake pads and any other often-used parts or tools can be stored right next to the work area for quicker access.

Installation of Add-Ons not requiring the Hinged Arm:

See each Add-On for installation instructions.

Towel Holder

The Towel Holder is mounted to the either side of E-Billy's top assembly with the two included M6 bolts using a 4 mm hex wrench. Optionally, it can be mounted to the Vertical Support (purchased separately) with the two included groove nuts. This allows you to mount it at your preferred height.

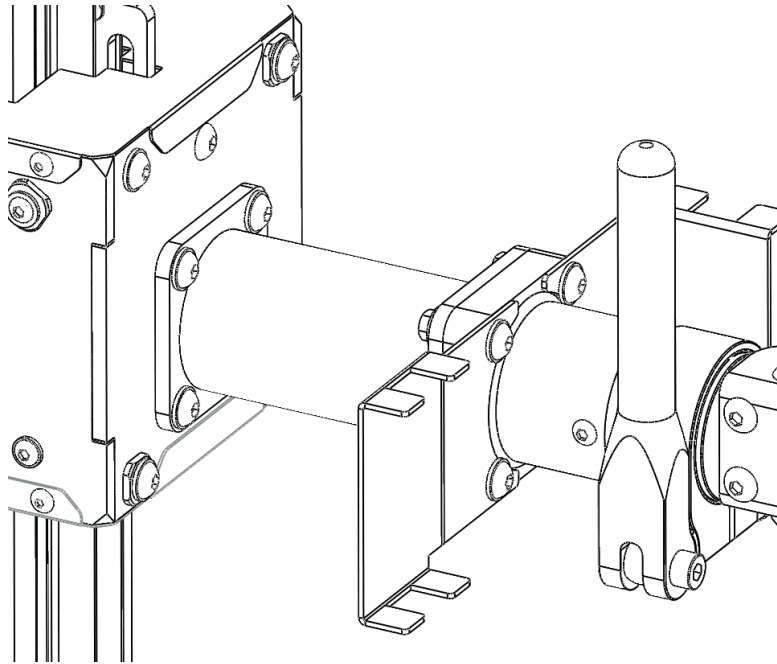


Clamp Extender

The Clamp Extender gives you an extra 12 cm of space between the stand and the bike, allowing for better access to the other side of the bike.

Installation:

1. Remove the clamp and both remote holders from the stand using a 5 mm hex wrench. The bolts you remove will not be used for the extender, however the washers will be reused.
2. Place the clamp on one side of the Clamp Extender, together with both remote holders.
3. Insert the four included M8x30 bolts through the four previously removed M8 washers, remote holders, clamp and extender.
4. Place the four included M8 washers on the bolts from the back side.
5. Thread the four included M8 nuts onto the bolts.
6. Make sure the clamp is straight and tighten the nuts with a 13 mm wrench while holding the bolts with a 5 mm hex wrench.
7. Place one of the included M8 washers on one of the included M8x16 bolts, then position the whole clamp assembly over the threaded holes on E-Billy's carriage and insert the bolt into one of the top two holes. Tighten it just enough to hold the clamp assembly securely on the stand.
8. Insert the other three M8x16 bolts with washers into the holes.
9. Make sure the clamp is straight and tighten all four bolts.

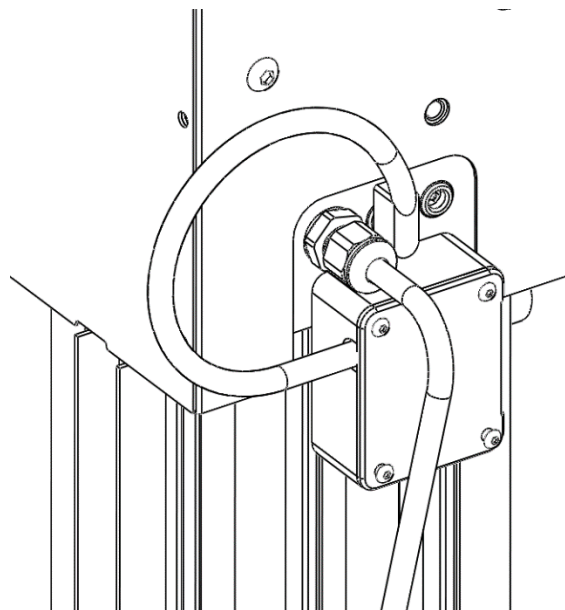


PowerPort USB Charger

Allows you to charge two electronic devices at the same time. Includes one coiled USB cable, one USB C adapter and one Lightning adapter. It mounts to the top of the stand and plugs into one of the power plugs on the stand's top assembly.

Installation:

1. Place the USB charger's top two bolts over the M4 threaded holes on the side of E-Billy's top assembly facing the USB ports backwards.
2. Use a 2 mm hex wrench to tighten the two bolts. Do not overtighten them.
3. Plug the USB charger's cable into one of the two power plugs available on the stand's top assembly.



This concludes the E-Billy Add-On Manual. If you have any other questions, you can contact us at

info@dbd-tools.com.