



INSTALLATION GUIDE

Revision 2026.1

SANDED. AUSTRALIA

Shop 8, 190-192 The Entrance Road, Long Jetty, NSW 2261
+61 2 4339 9580 info@sanded.com.au sanded.com.au

gbox Hawai'i

PO Box 424, Hanalei, HI 96714
+1 808 639 5303 info@gbox-surf.com gbox-surf.com



gbox-surf.com

@ info@gbox-surf.com

 gbox-surf.com

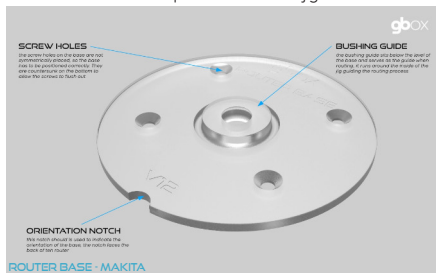
START HERE



This guide will use our Starter Kit as the starting point, as it contains everything needed.

The kit includes three sets of side and a center box with foam collars, and the full routing system, as defined below.

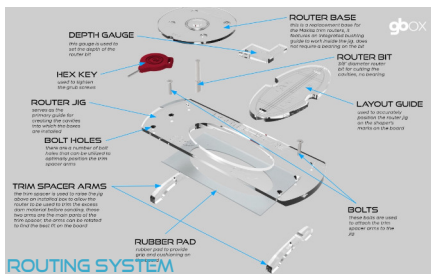
1. **ROUTER BASE:** this replaces the existing router base and is needed for the new system, it fits the Makita trim routers.
2. **ROUTER JIG:** the jig is the primary means for both placement and routing of the box cavity.
3. **TRIM SPACER:** used to trim down the dam of the box after installation using the router. Attaches to the router jig.
4. **LAYOUT GUIDE:** the layout guide fits inside the jig and positions the jig on the shaper's marks.
5. **DEPTH GAUGE:** used to set the initial depth of the router bit in the router.
6. **ROUTER BIT:** this bit performs the actual guiding and routing operation.
7. **HEX KEY:** used to adjust the screws in the box, and to attach the trim spacer arms to the jig.



ROUTER BASE INSTALLATION

For a Makita trim router, install the router base that accompanies the system.

The **GBOX** routing system ships with a replacement router base for Makita trim routers. Before proceeding, it needs to be installed on the router



The standard base that ships with these routers is too narrow

for safe use on the GBOX router jig. The replacement base adds the extra width needs for a stable installation. Plus, it adds a bushing guide that eliminates the need for a bearing on the router bit. Installation steps.

1. Remove the existing base saving the countersunk screws.
2. Position the base on the router using the notch in the base. The notch faces the router's back.
3. Re-apply the screws but don't initially fully tighten them.
4. Tighten the screws.

Now, we can proceed to the next step, which involves setting the depth of the router bit.

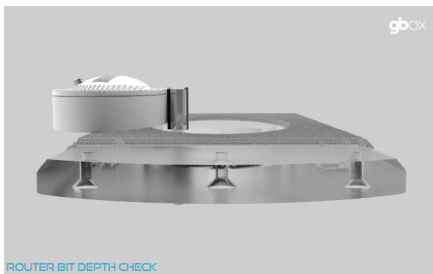


ROUTER BIT SETUP

There are two steps to the bit depth setting process.

First, use the provided depth gauge. Place the gauge on the bottom of the base with the router base facing up, as shown in the illustration. Now, adjust the bit's depth until it touches the underside of the gauge. After the initial depth has been set, proceed to the second step to check the accuracy of the setting.

Second, place the router jig on the base with the base facing



ROUTER BIT DEPTH CHECK

upwards. Set the bottom of a box on the rubber pad on the bottom of the jig alongside the router bit. Check the bit's depth and adjust if necessary; it should be roughly 1/32" [0.8 mm] above the lip of the box, as shown in the illustration.

We always want the box flange to end up below the lip of the cavity. This makes for the strongest and tightest installation. Attention to depth is critical as it can severely impact the installation process. Due to the length of the box, it is essential to consider any rocker on the bottom of the board when setting the depth. Ensure that the ends of the box end up slightly below the lip of the routed cavity. This might require setting the depth a little deeper to meet this requirement.

After setting the router bit depth, we strongly encourage making a test rout in scrap foam. This will help verify that the correct depth has been set before routing a board.

NOTE: if needed, the depth gauge can be skipped in favor of the second step.

For this routing system only the recommended routers will work as the base is designed specifically for them.

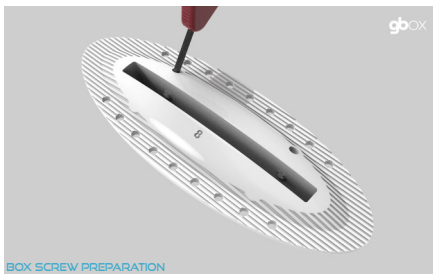


ROUTER BIT DEPTH CHECK

We recommend the MAKITA trim routers shown here because they are very effective and easy to handle. The custom base for these routers features an integrated bushing guide, which is critical for this system. These bases use a router bit that has no bearing, making them much more inexpensive.

We provide a replacement base with an integrated guide bushing and additional width for your safety and peace of mind. This base enhances stability and support, making your experience safer and more enjoyable.

Router Bit - 1/4" shank diameter x 3/8" cutter width x 3/4" cutting depth.

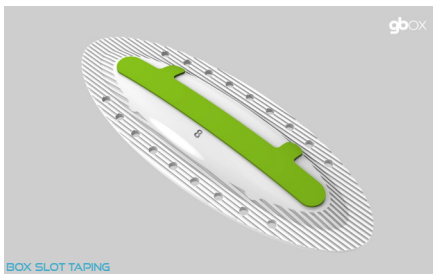


BOX SCREW PREPARATION

BOX PREPARATION

Firstly, ensure that the screws are either removed or turned down into the box so that they are protected from being touched during the sanding process. This is very important if the trim spacer is used to remove the excess dam material.

The box's slot needs to be covered with masking tape. The tape must be at least 3/8" wide and compatible with the resin system. We recommend 3M 233+ or 301+ masking tape. The screw holes should be filled with a small amount of clay. Be



BOX SLOT TAPING

careful not to leave any clay residue on the dam, as this could interfere with the adhesion of the glass. NOTE: The original GEARBOX die-cut tape can also be used as it fits and is ideal for finishing. Tape can also be used over the screw holes; for this purpose, 1/4" wide tape is ideal.

Lastly, remove the foam collars from the bottom of the boxes. These must be installed before the boxes.

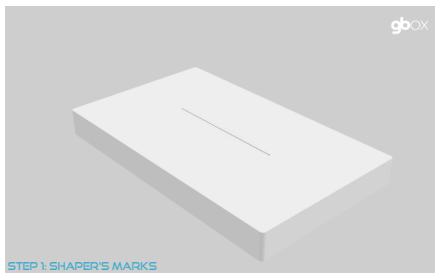
START INSTALLATION PROCESS

STEP 1: SHAPER'S MARKS

As part of the setup, the blank must have the shaper's marks and fin layout lines, for the desired fin setup.

After a surfboard has been shaped, the shaper will lay out a series of marks on the tail of the board where the fin system is to be installed.

The laminator will then utilize these marks to correctly place



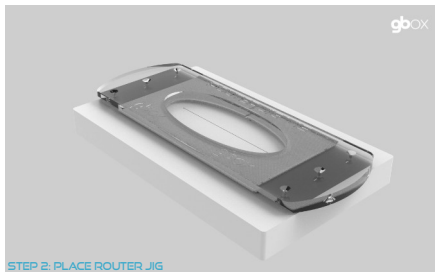
STEP 1: SHAPER'S MARKS

the boxes for the fin system.

The back and front marks are key indicators in the installation process. The typical approach is to measure the back marks, with a front mark also established to indicate the amount of toe-in. Connecting these two dots with a line aids in the installation of the boxes.

For the GBOX system, it is also helpful if the shaper's marks are placed 4 1/2" [114 mm] apart, as this matches the layout in our guide.

STEP 2: PLACE ROUTER JIG



STEP 2: PLACE ROUTER JIG

Place router jig on the marked surfboard blank, roughly lined up with the marks.

There is an arrow pointing to the rail of the board. This is not strictly required, as the jig is fully symmetrical, but it is a good habit to help stay oriented.

NOTE: the jig can also be held in position with double-sided tape that has been applied to the bottom ends of the jig.

STEP 3: INSERT LAYOUT GUIDE

Next, place the **layout guide** inside the router jig.

The layout guide aids in placing the jig exactly on the shaper's marks. It features a meticulous arrangement of lines, crosshairs, and windows on its surface, all designed to align with the marks. For side boxes, the inner lines (closest to the stringer) mirror the inner faces of the box slot, serving as a guide for placement. The window and crosshairs are positioned over the BACK shaper's mark, enhancing visibility. For center boxes, the centerline is the key to accurate



STEP 3: INSERT LAYOUT GUIDE

placement.

The detailed illustration of these lines shows what each line represents.

Here are the steps in the process.

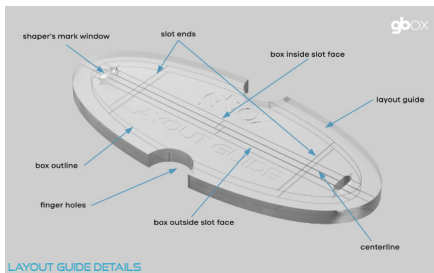
1. place guide within router jig
2. for a side box, the inner line (closest to the stringer) and crosshair are used
3. adjust the jig and guide until the crosshair is on the BACK shaper's mark; the window makes it easier to see the mark
4. align the inner slot face with the line between the shaper's marks
5. for a center box, use the centerline and crosshair positioned on the shaper's mark

The key takeaway for this task is that you always work with the BACK mark for an individual box.

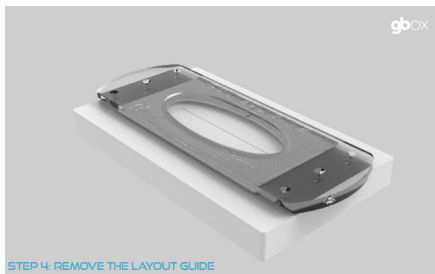
Layout Guide Details

The layout guide is used to accurately position the router jig on the shaper's marks. It has markings that help this process.

1. **Shaper's Mark Window:** these windows make it easier to align the guide on the marks
2. **Slot Faces:** lines that delineate the faces of the slot, which are crucial for aligning side boxes
3. **Centerline:** primarily used when installing center boxes
4. **Box Outline:** this serves to show where the actual outline of the box will be, also the ends of the slot are shown



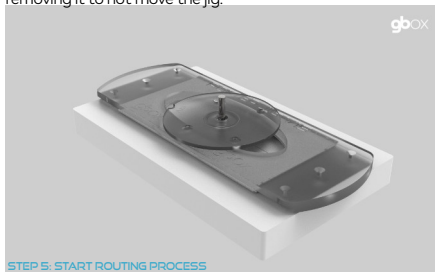
LAYOUT GUIDE DETAILS



with these marks

5. Finger Holes: a pair of finger holes on the sides of the guide make it easy to remove

The guide has a tight fit in the jig, so be careful when removing it to not move the jig.



If double-sided tape is being used to anchor the jig, the jig will have to be lifted slightly while being positioned so as not to get stuck down.

STEP 4: REMOVE LAYOUT GUIDE

The layout guide can be removed once the router jig has been positioned on the shaper's marks.

STEP 5: START ROUTING PROCESS

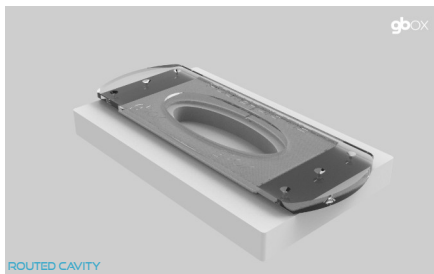
Start the router and plunge it into the foam until the router base rests on the router jig.

Move the router assembly towards the edge of the jig until the guide bushing contacts the inner surface of the jig.

Now, meticulously follow around the inner edge of the jig with the router bushing in a clockwise direction. This precise movement should leave a clean perimeter. Next, carefully slide the router around within the jig to remove the excess foam left behind by the initial routing process. Remember, do not push too hard on the jig during this process, as you do not want to move it.

If a center box is being routed and a stringer is present, it is advisable to make shallow passes along the stringer's length to remove wood slowly. Once complete, follow the procedure described above by following the guide perimeter.

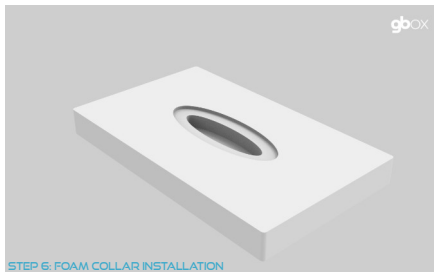
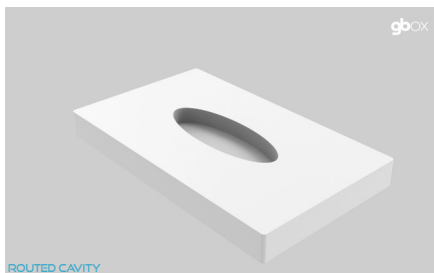
Ensure there are no pieces of foam left in the cavity that



might need to be routed away.

Turn off the router.

WARNING: ALWAYS WAIT FOR THE ROUTER BIT TO STOP SPINNING BEFORE REMOVING IT FROM THE JIG. THIS WILL HELP PREVENT ACCIDENTALLY NICKING THE JIG.



NOTE: Check the cavity depth with a box before removing the jig. If necessary, make the cavity deeper.

Finally, remove the router jig and repeat the process for the remaining boxes.

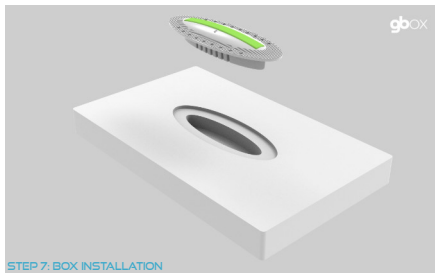
ROUTERS ARE INHERENTLY DANGEROUS TOOLS, SO PLEASE BE CAREFUL WHEN ROUTING AND STAY SAFE. WEAR EYE PROTECTION.

STEP 6: FOAM COLLAR INSTALLATION

The first thing that will be installed is the foam collar.

Prepare a mixture of resin for the installation process. DO NOT color the resin.

Here are the steps in the process.



STEP 7: BOX INSTALLATION

1. coat the inside of the cavity with resin
2. coat the sides and bottom of the foam collar
3. push the collar into the cavity, ensuring it is all the way down
4. coat the top and inside surface of the collar with resin
5. pour about a 1/4" of resin into the middle of the foam collar

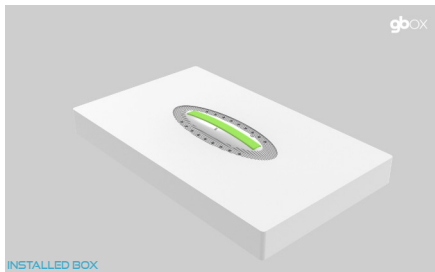
STEP 7: BOX INSTALLATION

With the foam collar installed the box can now be added.

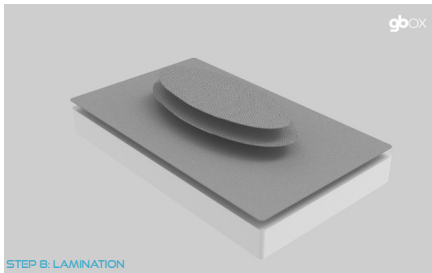
1. push the box down into the cavity, making sure it goes all the way down flush with the collar
2. brush up any excess resin, leaving a thin film over the box flange and dam

With the box installed, it should be slightly below the cavity's lip at its lowest point.

Ensure no excess resin is left on the surrounding foam or the box. This will result in a cleaner installation when laminating



INSTALLED BOX



STEP 8: LAMINATION

over the box.

Now, continue installing the remaining boxes for the chosen fin setup.

If the boxes are installed without pre-potting, proceed straight to the lamination process.

STEP 8: LAMINATION

We can proceed with laminating once all the boxes are glued in.

Prepare some extra 4 oz football patches that will be placed over the boxes once the bottom lamination has been applied. We recommend adding at least one additional layer, but two are better.

DO NOT PLACE THESE PATCHES UNDER THE MAIN LAMINATION!

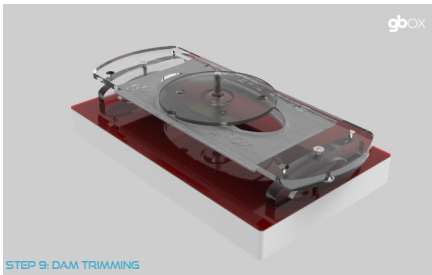
They should be placed **ON TOP** of the primary lamination. If two patches are used, they should be different sizes. The larger one would go down first, followed by one 1/4" smaller.

We place the patches on top of the primary lamination for a stronger installation. During the sanding process, the edges of the patches will be sanded and serve as indicators of the sanding depth. If the patches were under the primary layer, there is a risk of sanding through the primary layer at the edges of the patches. This would weaken the whole installation.

See the above image for a visual.

If the boxes are being installed during the lamination process, follow the instructions for installing the foam collar and box before proceeding with the lamination. This can all be done at the same time.

Once the glass has been laminated over the boxes, run a finger around the bottom of the dam to remove excess resin and flush out any air bubbles. The extra layers of cloth can be applied at this time or after the primary layer has kicked off.



STEP 9: DAM TRIMMING

STEP 9: DAM TRIMMING

To facilitate the sanding process, we provide a unique trimming operation.

As part of our routing system, we provide a TRIM SPACER to remove the excess dam material before sanding the board. It is utilized after the board has been hot-coated and before sanding.

The trim spacer is designed to sit underneath the router jig and raise it by a fixed amount off the bottom of the board. It bolts directly to the router jig, with an arm on each end. The trim spacer arms can be rotated or relocated, if needed, to avoid adjacent boxes. The arrow on the jig points towards the rail of the board.

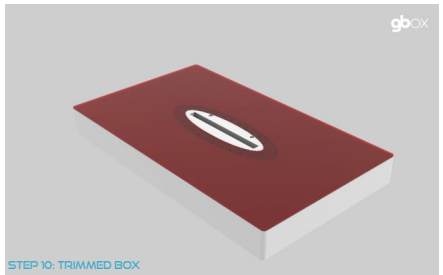
Once the jig and spacer have been assembled and placed on the board, the trimming operation can proceed.

WARNING: BEFORE PROCEEDING, ENSURE THE ROUTER BIT'S BOTTOM IS ABOVE THE BOTTOM OF THE BOARD. IF NOT, THE ROUTER BIT MUST BE ADJUSTED, OR A SMALL SPACER CAN BE PLACED BETWEEN THE TRIM SPACER AND THE ROUTER JIG. THE BOTTOM OF THE ROUTER BIT SHOULD BE AT LEAST 1/16" (1.5MM) ABOVE THE BOTTOM OF THE BOARD. ALSO MAKE SURE THE ASSEMBLY IS STABLE AND NOT PRONE TO TIPPING.

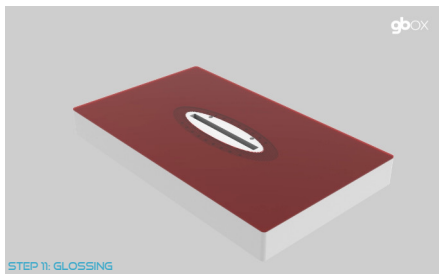
Place the router on top of the jig and make small passes around perimeter of the dam, removing the excess material. Following the jig edge is unnecessary as we are not routing that far out. We recommend going slowly and taking off small amounts at a time. Ensure the spacer and jig do not move during the process.

WARNING: IT IS CRUCIAL THAT WHEN THE BOXES WERE PREPARED FOR INSTALLATION, THE SCREWS WERE EITHER REMOVED OR TURNED DOWN WELL INTO THE BOX, AS WE DO NOT WANT TO RUN INTO THEM IN THIS TRIMMING PROCESS

See the end of this document for more details on the trim spacer.



STEP 10: TRIMMED BOX



STEP 11: GLOSSING

STEP 10: GLOSSING

Now that the board and boxes have been sanded, if a gloss coat is going to be added, that is the final step.

If a gloss coat is to be applied after the sanding, we need to ensure that the boxes' slots are covered first.

The slot can be covered with 3/8" masking tape. The screw holes can be filled with a piece of clay or covered with tape.

Once all of the boxes have been covered, the glossing process can proceed. After the application of the gloss coat, the board can now be polished as the final step of the process.

The masking tape over the box slots should have been removed during the gloss process before the gloss completely kicked off. This smooths the polishing process.

After polishing, a deburring tool can be used to clean up the edges of the box slots to remove any burrs from the sanding or glossing.

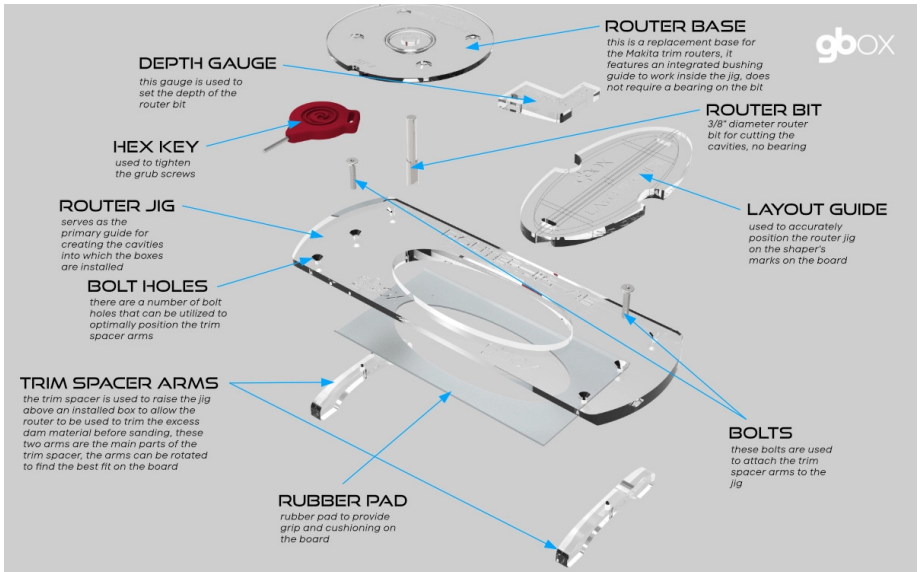
Congratulations an installation has been successfully completed!

PLAM INSTALLATION

For a PLAM install please see the website for details.

<https://gbox-surf.com/install/#install-post-lam>

ROUTING SYSTEM DETAILS



TRIM SPACER DETAILS

