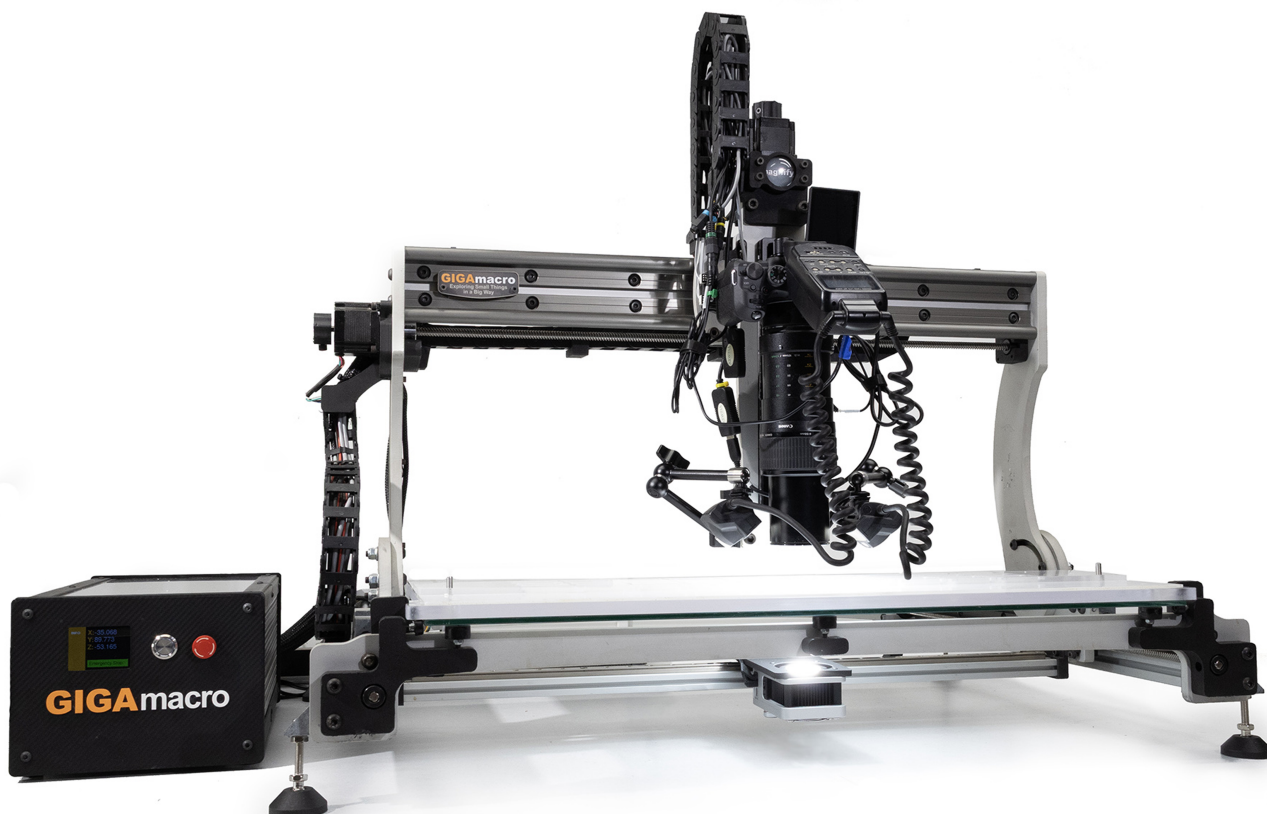


GIGAmacro Magnify2 Installation & Setup

GIGAmacro™

Exploring Small Things in a BIG Way



magnify²

User Guide: Installation & Setup

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Version: 3.2

Version Date: November 12, 2025

Suggestions, improvements and updates to: web@gigamacro.com>

TIP

Tips and hints are indicated like this.

WARNING

Warnings are indicated like this.

! IMPORTANT

Critical or important items are indicated like this.

Welcome to Your New GIGAmacro Magnify² system!

Congratulations!

Within an hour or so you will have set up and be running the most advanced gigapixel macro imaging system available today.

Your system will ship in a number of separate components, depending on the exact configuration and options that you ordered.

We *may* also schedule the glass scanning table for separate delivery from a local supplier, to avoid damage in transit.

You will receive a large crate containing the [Magnify²](#) robotic system; there will also be a capture/processing computer, an LCD screen, camera and lens options and the Magnify² control box.

You will need plenty of space to unpack and a large desktop area to set up your Magnify² system. You will need help to lift and move the larger items.

Your system is preconfigured with the software already set up on the computer and camera and computer settings completed.

The principle we adopt is to prevent the computer or camera from being interrupted, eliminating “sleeping” or “hibernating”, restarting, operating system updates, etc. while the system is running photo capture. Though Windows 11, like Windows 10, does not allow you to **prevent** updates entirely, the system should notify you before any updates are applied. This should allow you to apply the updates after your Project has completed.

All of the GIGAmacro software, user guides, receipts and licenses are located in the appropriately named folders in the C:/GIGAmacro directory of your computer. Other software is installed in the default location for the application, with an icon in the System bar of your computer.

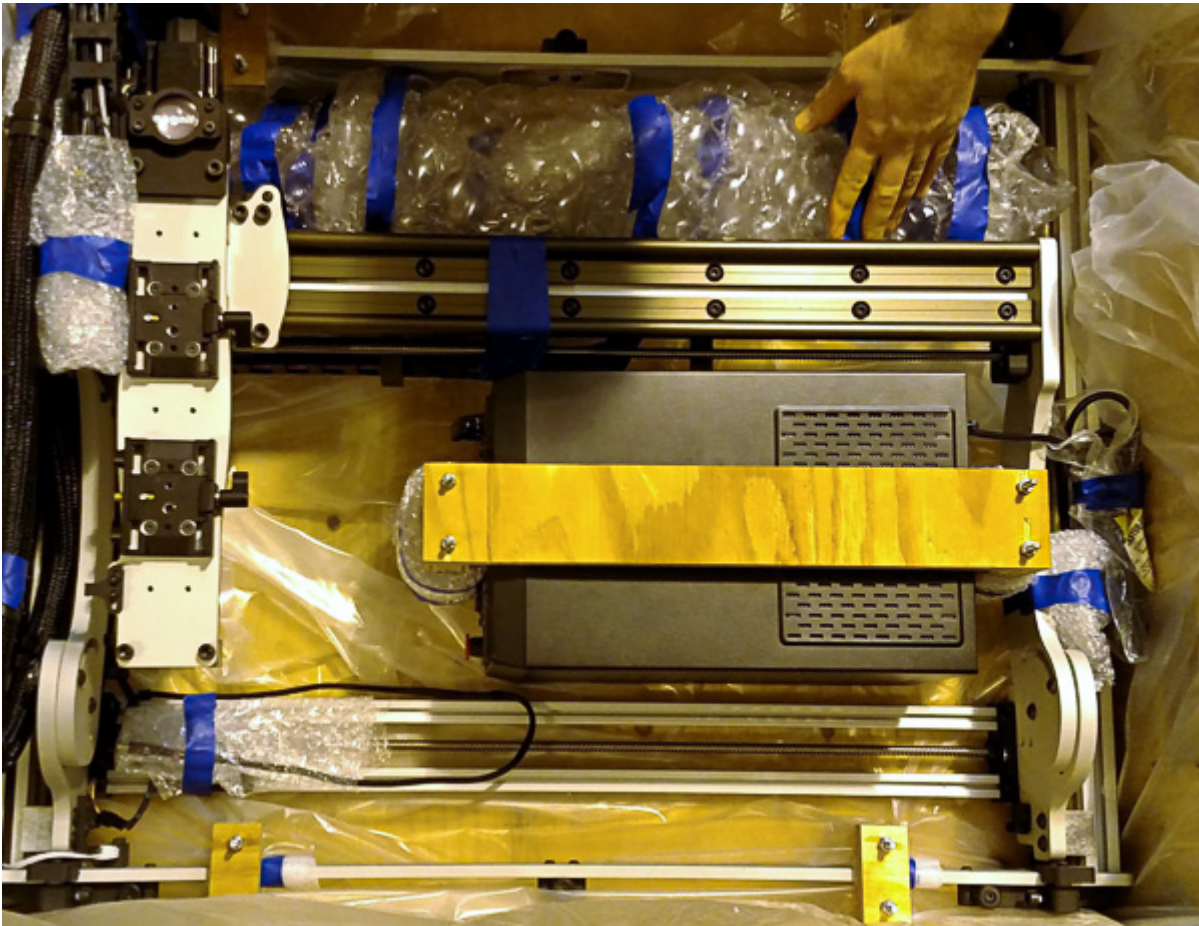
Uncrating Your System

Your system will arrive in a number of packages. The large wooden crate contains the rig and needs special attention to unpack.

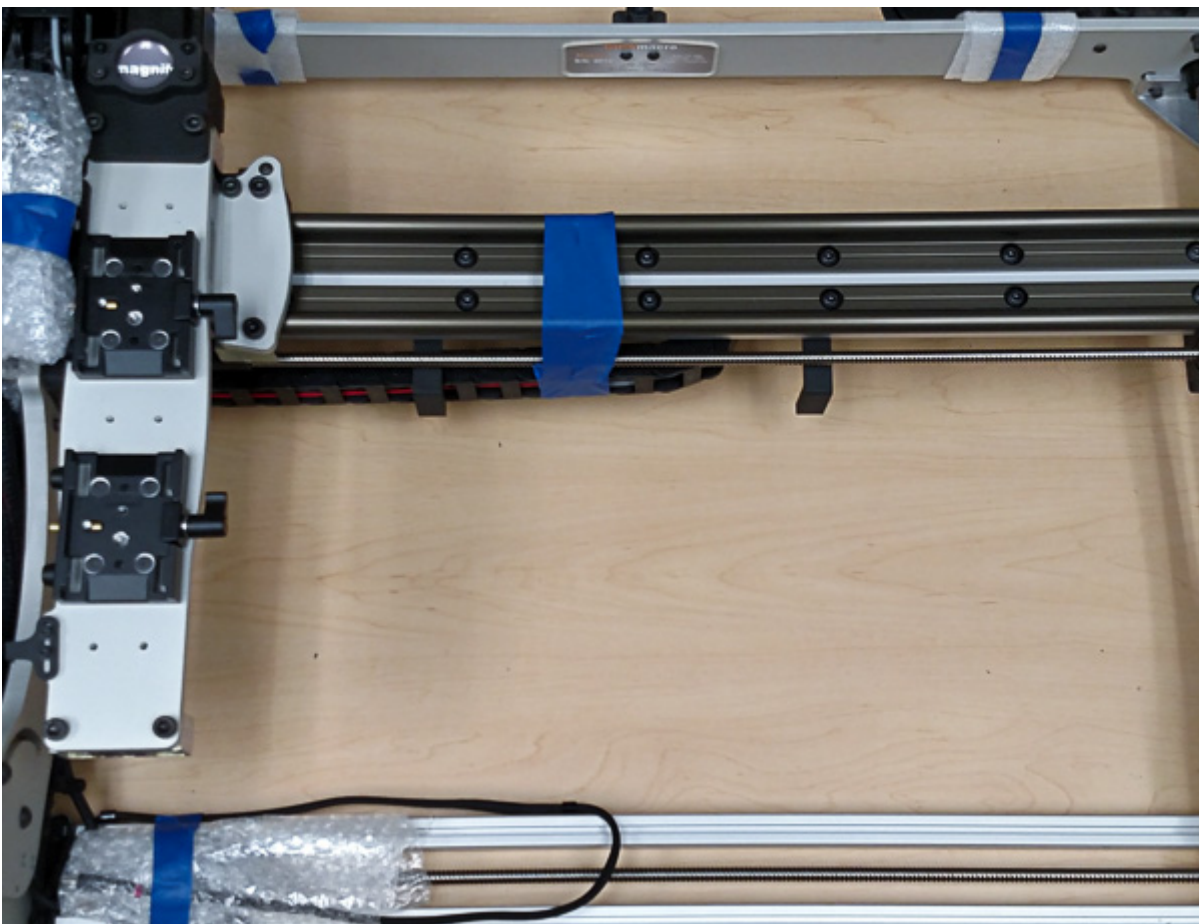


Please check to see if the crate has been damaged or mishandled; if there is any apparent damage, please take photographs and email them to us.

The securing screws on the side of the crate are marked with RED paint, these should be removed and the lid will then lift off.



Remove the nuts holding the wooden securing straps and then lift off the straps. You will then be able to lift the rig out of the crate (this requires two people) and place it on a convenient surface.



Carefully remove all packing materials

💡 TIP

Ensure that there are no bolts, screws or small items wrapped in any of the packing materials before you dispose of them.

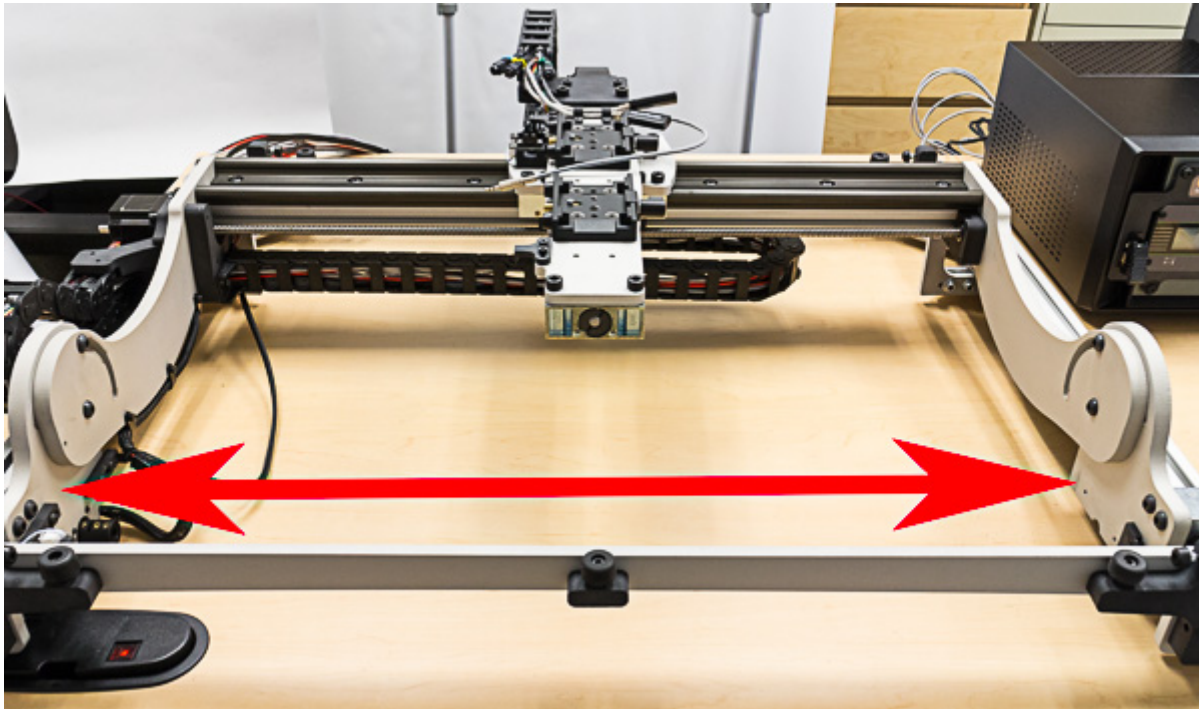
Checking Your Shipment

Unpack and identify all items.



Camera, lens(es), flash and any optional equipment

(you may not have everything in the photo, or you may have additional items, depending on the options ordered).



TIP: The Magnify² may have the optional backlight flash system installed, in the area shown by the red arrows, above.



The Magnify² Control Box (bottom picture):

The computer and LCD screen.

There will usually be a small desktop computer (and, depending on options ordered, there may be a second processing computer.)

You will also have a small toolset, comprising Allen keys, a wrench and other tools which are required to remove or install the shipping locks and secure the gantry in its vertical position, and to set up the Magnify².

Camera and Lenses

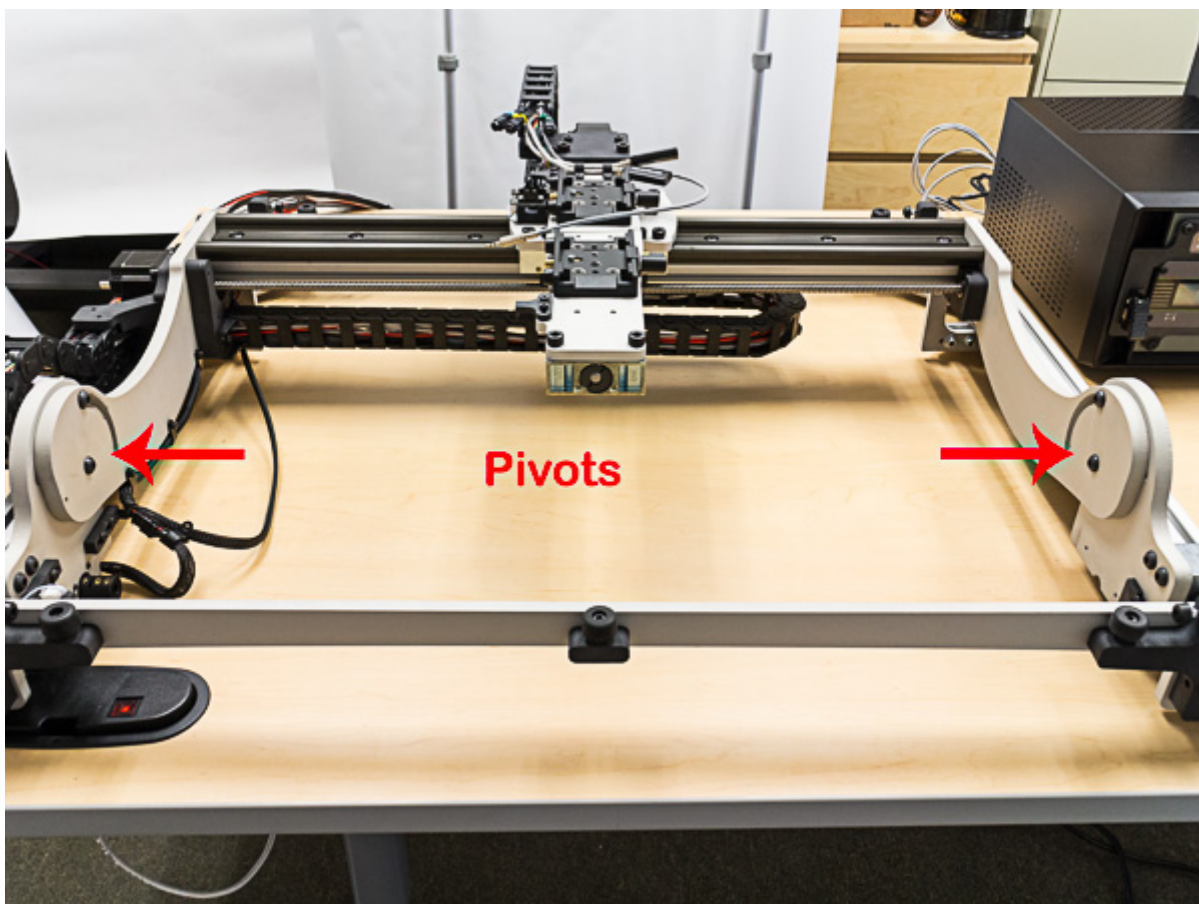
The standard camera model provided is the Canon R100. Put the camera equipment and computer equipment to one side, out of the way until needed.

Setting Up the Magnify² Rig

Place the Magnify² rig on the working surface (you will need to be able to work at the front, sides and back during setup). Note the orientation, with the arms and gantry folded towards the back in shipping configuration.

💡 TIP

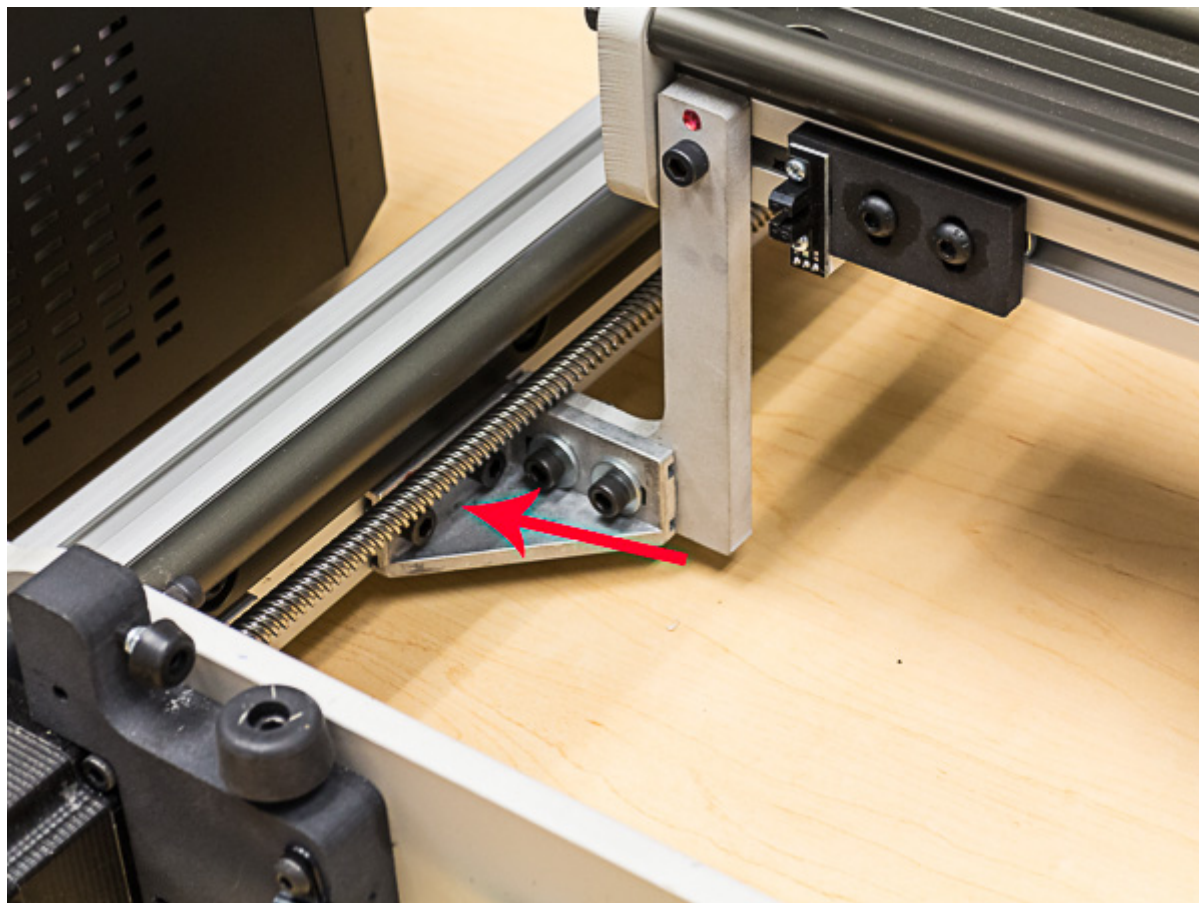
You will need help to lift the Magnify² out of the crate.



Removing Shipping Locks

Locate the tool set and identify the shipping locks, one at each side, at the back of the unit.

(The views below are from the **back** of the rig).



Each shipping lock has **THREE RED DOTS**, each beside a bolt that needs to be loosened.

⚠ WARNING

ONLY LOOSEN bolts that have a red dot. All other bolts should be left untouched.

Locate the appropriate sized Allen key and loosen each bolt that has a red dot; **do NOT remove the bolt**, it is only necessary to rotate the bolt a half to three quarters of a turn. Once the bolts are loosened, hold the shipping lock and gently shake it, and the securing lugs should release from the frame leaving you holding the lock.

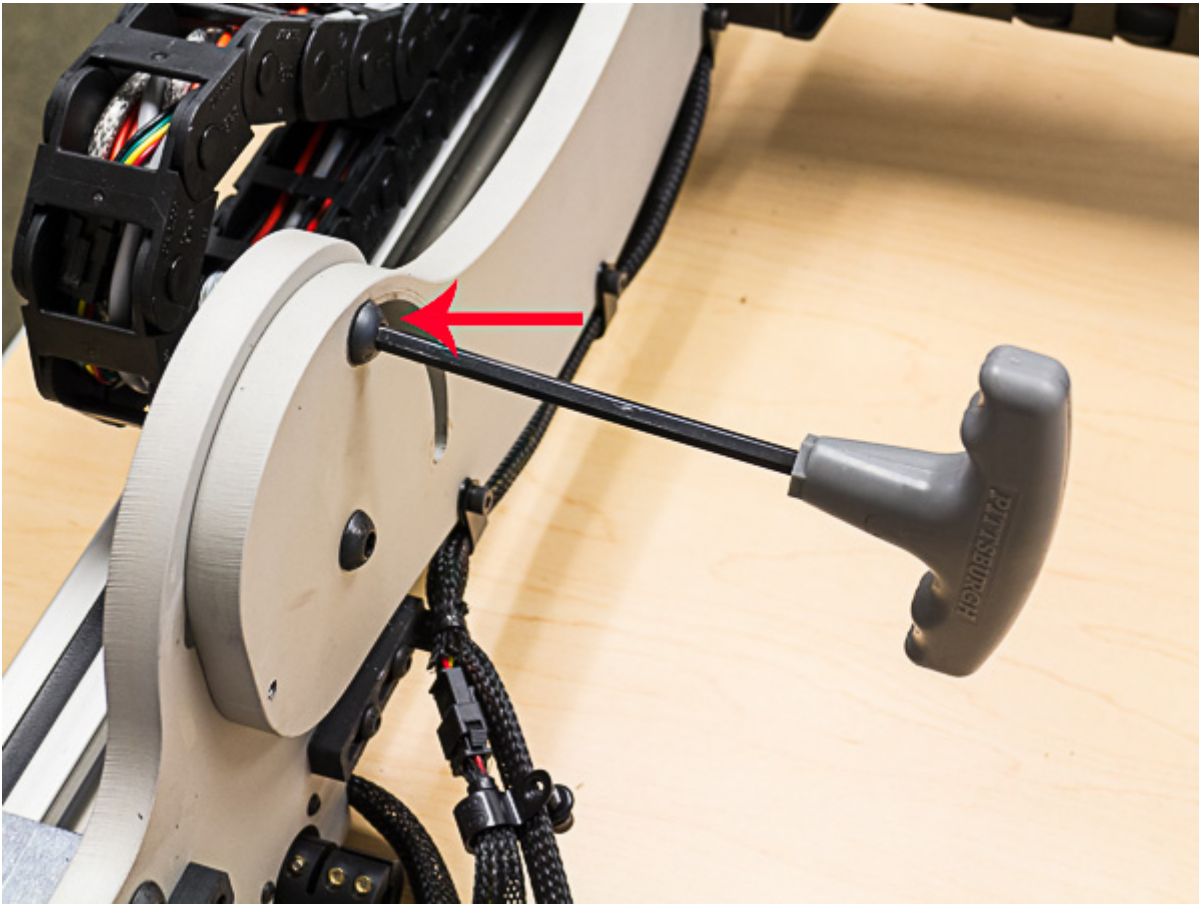
Repeat the process for the shipping lock on the other side of the rig.



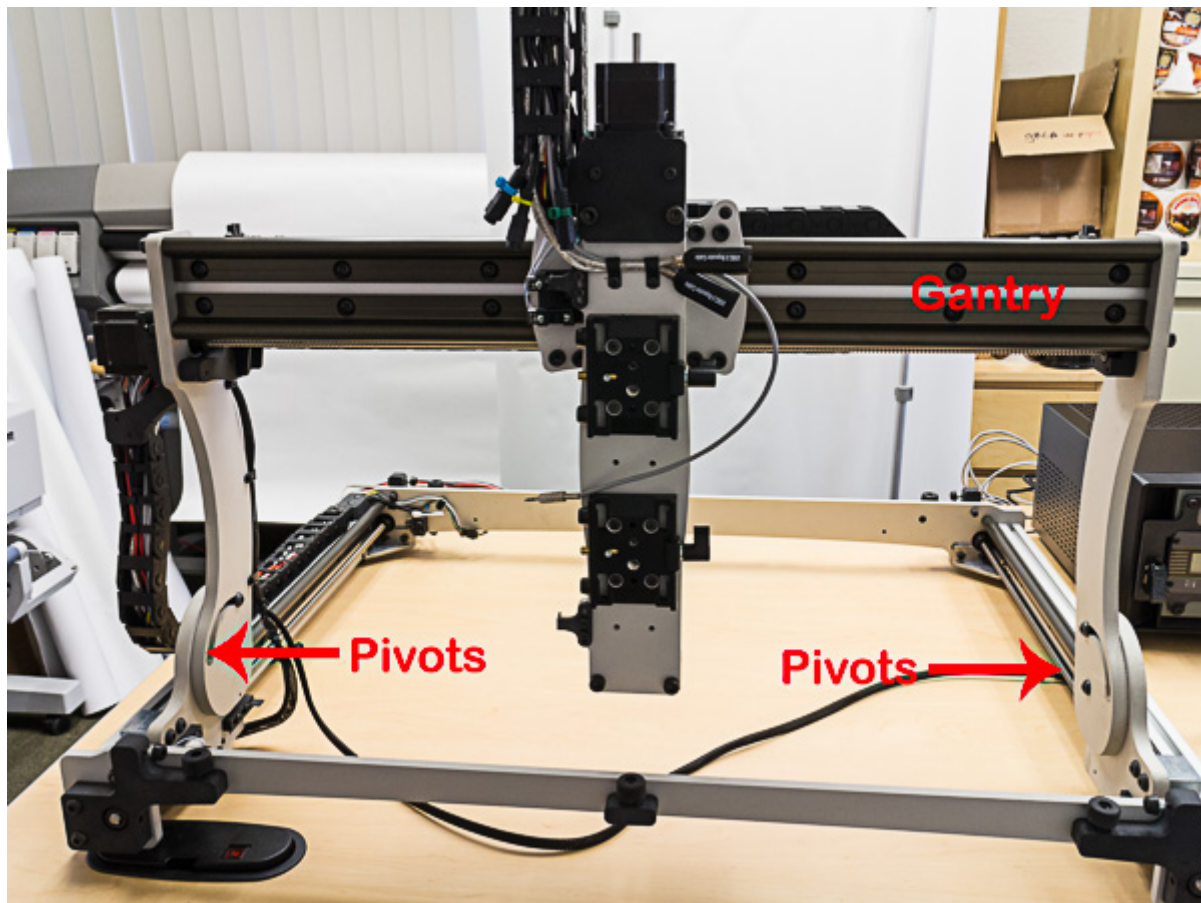


Erect the Gantry

From the front of the Magnify², locate the bolt on the left arm pivot and using the appropriate Allen key and wrench, slightly loosen the bolt. Do the same for the matching bolt on the right pivot arm. The center bolt may also need to be slackened on each side too.



Once the bolts are loose, gently raise the arms and gantry to the vertical position, as in the photo below:



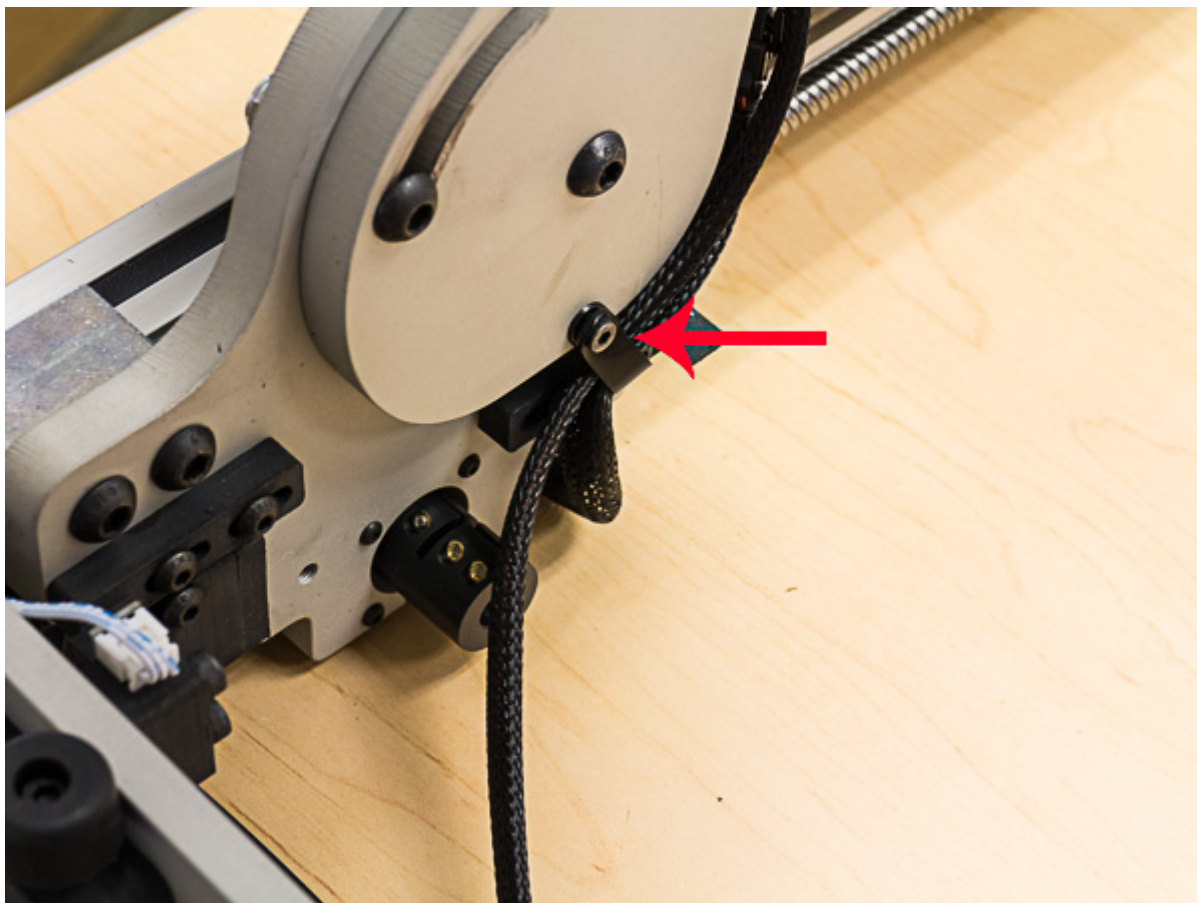
Once the gantry is vertical, tighten the left and right bolts to secure it in the upright position.

Add a second bolt, as per the photos below to each pivot arm (shipped attached to the Magnify² frame, look for a plastic bag secured with tape holding the bolts and nuts).





The Magnify² frame should now be set up. One final detail is that on the left (from the back) pivot arm is a small clip that secures the cable powering the back-light flash. Use the appropriate sized Allen key to secure the clip containing the cable, to the pivot arm. Ensure that the cable runs along the side, and **not the face**, of the pivot arm.



Camera, Lens and Flash

You are now ready for the camera and flash equipment. The camera, lens and flash are assembled, secured to the clamp complete camera assembly is then attached to the slide on the front of the gantry (see photos, below).

Attach the lens to the camera (the standard system is a Canon R100 with the MPE-65 macro lens, shown below). If you are using a lens with a Canon "EF", or legacy, mount you will need the included converter to attach an EF lens to a Canon R series camera.

💡 TIP

Ensure that the power adapter is installed in the camera with the power cord emerging from the battery compartment. On cameras with a movable screen, make sure that the LCD screen is rotated so that the screen is viewable when the camera is mounted on the rig.

The camera is secured to the Arca-style Camera Mounting Plate by a screw, and you will need a small coin (a quarter will do), or screwdriver to tighten the screw.

Camera Mount and Adjustment Options



- Horizontal Clamp Knob**
Loosen to attach camera. Tighten to secure camera. Lens should be centered.
- Vertical Adjustment Knob**
Loosen and move camera up and down on rail as needed.

Camera Mounting Plate



Mount the Camera Assembly

The Camera Mounting Plate is attached to the Slide Clamp on the Z axis plate by carefully locating the Arc-style mount into the slot and tightening the Horizontal Clamp Knob. Ensure that the lens is centered vertically when mounted on the rail.





TIP

Drive the rig high enough on the Z axis to give yourself plenty of clearance to maneuver the camera

assembly. Move the flash head arms well clear of the vertical slide during mounting.

Camera Mount and Adjustment Options



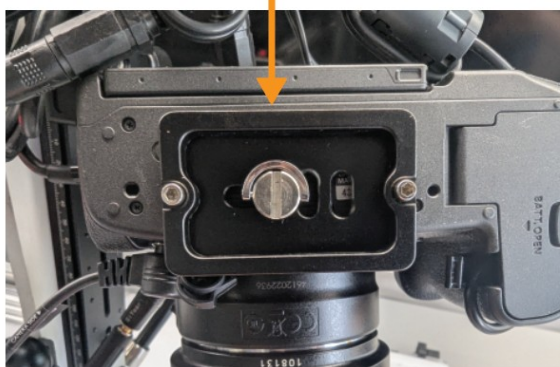
Horizontal Clamp Knob

Loosen to attach camera. Tighten to secure camera. Lens should be centered.

Vertical Adjustment Knob

Loosen and move camera up and down on rail as needed.

Camera Mounting Plate



Connect Flash to Camera

Locate the camera flash system. Check that the flash control unit has the power supply installed and that the external power cord is coming from the battery pack cover.

Attach the flash control unit to the camera and gently tighten the securing ring.

Attach the flash heads to the mount screws on the ends of the arms (see arrow, below) and tighten finger tight.

Attaching Flash Heads to Adjustable Arms

1. Loosen knob on adjustable arm.
2. Rotate the screw from adjustable arm to thread into the flash head.



Canon MT26EX Flash Settings for GIGAmacro



Power Setting

1/16 or less

Use dial and SEL button to change power setting. This allows for a quick recharge of the flash between photos and reduces heat.

Manual Mode

Press Mode Button to Switch between ETTL and Manual

Additional Settings if Configuring a New Flash Unit (Custom Functions)

Press CFn Button to Change

1. Turn off Power Savings Mode
2. Turn off Beep / Sound

💡 TIP

NB The settings for the MT-26 Flash are not "sticky", that is each time the flash is powered on you must set the flash to manual mode and choose the power settings.

Locate the cables to connect the camera to the rig; each is color coded to match the terminals at the top of the Z axis. Connect the camera and flash power cables to the rig. Connect the USB cable from the camera to the rig NB there are **two** USB connectors on the rig; ensure you choose the one connected to the rear of the Control Box. Finally, connect the remote trigger cable to the camera and the rig.

Control Box Connections

The Control Box can be located either to the left or to the right of the Magnify² rig, or underneath the desk if preferred.



The Control Box should be located in a position that is convenient for quick access to the power switch and the Motor Rapid Stop button (red, on the right of the Control Box.)

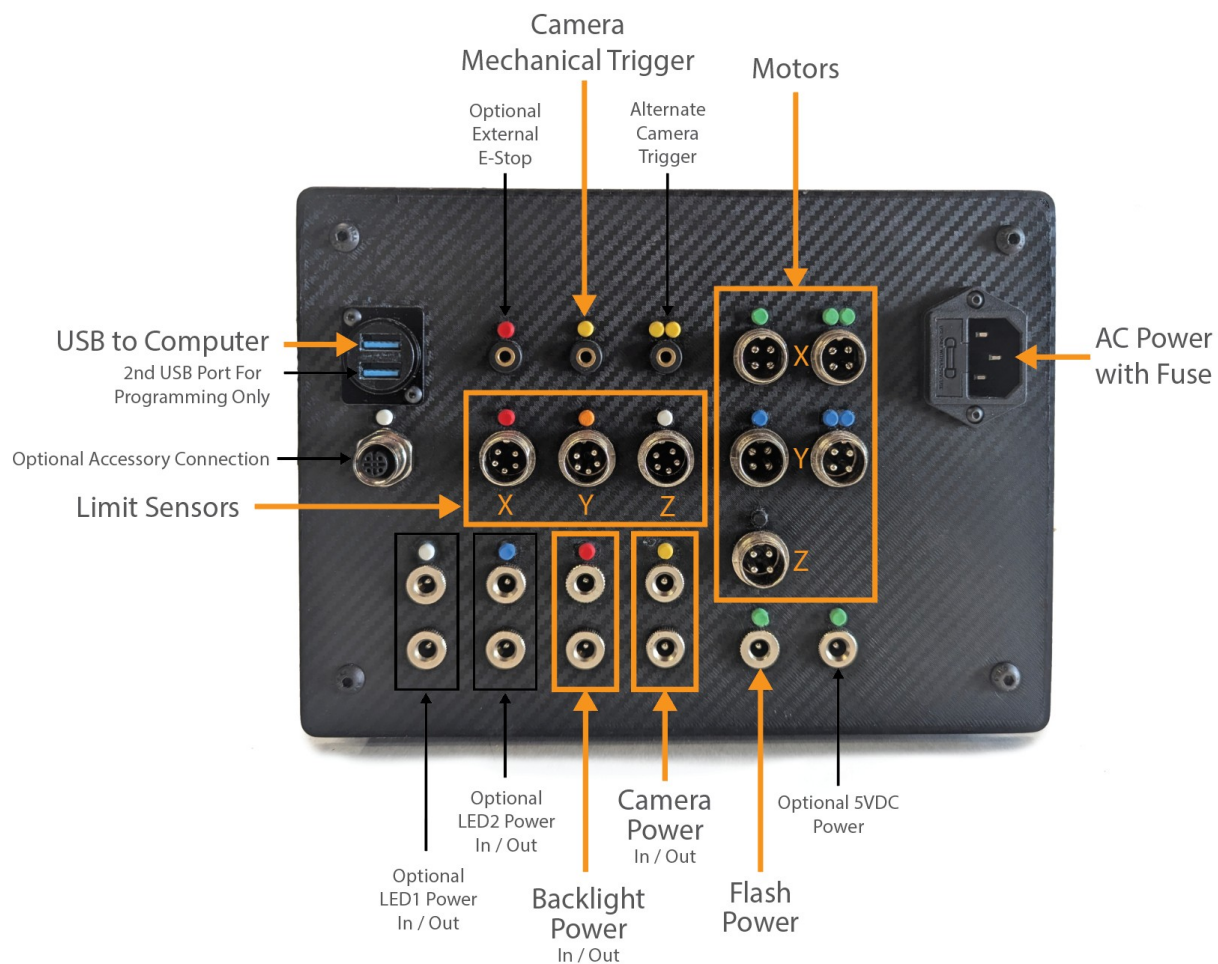
⚠ WARNING

Be cautious of floor placement: Do not place the Control Box where it is possible to kick or knock the power buttons.

With the Control Box in place, it is time to connect the cables from the rig to the control box. Below is an illustration of the rear of the Control Box with all connections marked. Each individual cable plug is color coded to its socket on the Control Box.

💡 TIP

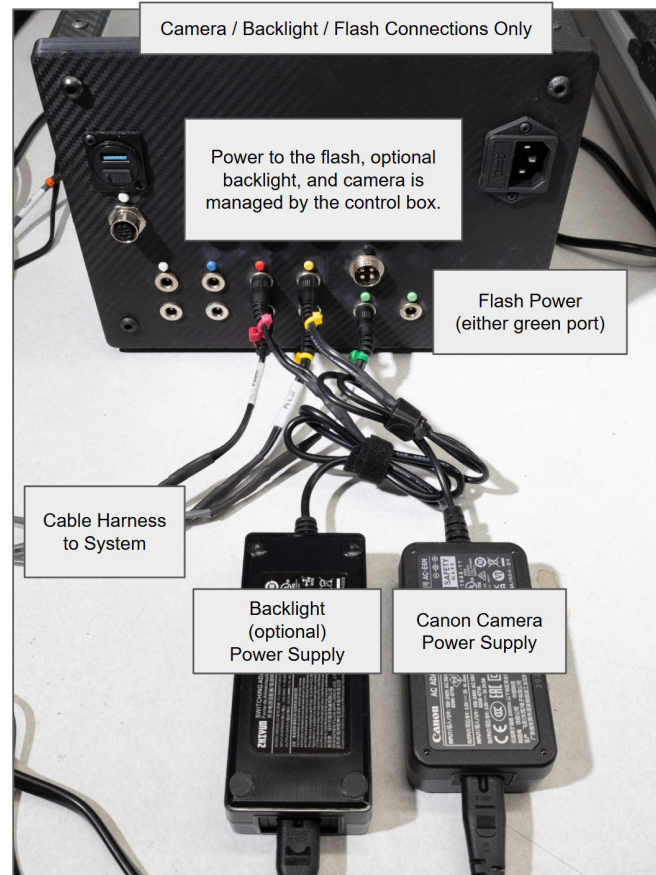
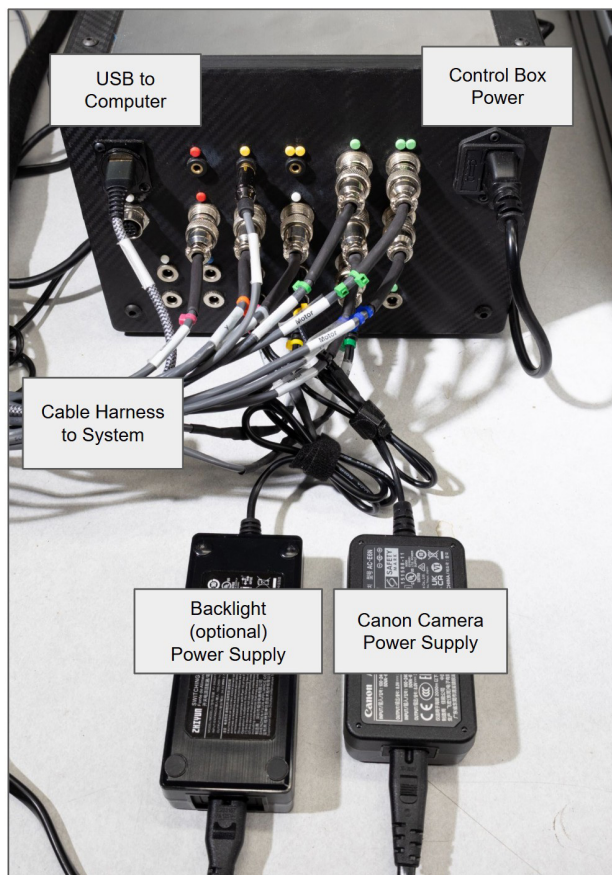
N.B. Some cables have a single color tag and some have double color tags. Take care to connect a cable with a *single* color tag to a socket with a *single* tag of the same color.



Locate the flash, camera (and optional backlight) power supplies. Connect each to the appropriate color coded socket.

Locate and connect the AC power cable.

Finally, connect the computer using a USB cable to the Control Box. Use the top of the two USB connectors - the lower one is used only for programming the Control Box



Computer Settings

Turn on the computer, in the Taskbar, locate the icon for DSLR Remote Pro and double-click it. You should see the DSL Remote Pro window shows that it is connected to the camera, and displays the camera settings. Locate the icon (on the desktop, lower left corner above the start logo) for GIGAmacro Capture and double-click to start the program.

💡 TIP

Once Capture starts, click the Live View button and arrange Capture, Live View and DSLR Remote windows to the size and position to your personal preference, the layout should be "sticky".

You should now have two programs running, DSLR Remote Pro (which shows "Connected" and the camera data) and GIGAmacro Capture. In the latter, you should now be able to use the mouse to press the "Left", "Right", "Top", "Bottom", "High" and "Low" Motor Control Buttons to drive the Magnify² in each of the six axes of movement. If you do not have movement, check out the Troubleshooting appendix.

Locate the glass scanning table, ensure that it is clean and undamaged. The glass may have been shipped to you separately. Again, this is a task that is easier with two people: carefully lower the glass into position and, if necessary, adjust the side buffer stops so that the glass is both square with the frame and held in place by the buffers. If you need to adjust the buffers DO NOT turn the rubber buffer; instead use a wrench to carefully adjust the nut behind the buffer. There are four rubber buffer adjustment points, one close to each corner, and one in the middle of each side of the Y axis.

Next Steps

Congratulations!! You are ready to make your own spectacular high-resolution, super-sharp macro images.

We would love feedback on what worked well for you, what we could improve in packing, shipping or setup instructions.

Please now study the “Operation & Workflow User Guide” that will instruct you in a workflow that we have found to be successful for most people and situations. You will, of course, find your own variations, modifications and improvements that are tailored to your particular needs once you are familiar with the Magnify² and its operation.

We value you as a [GIGAmacro](#) customer and look forward to being your partner in image making for many years to come.

Appendices