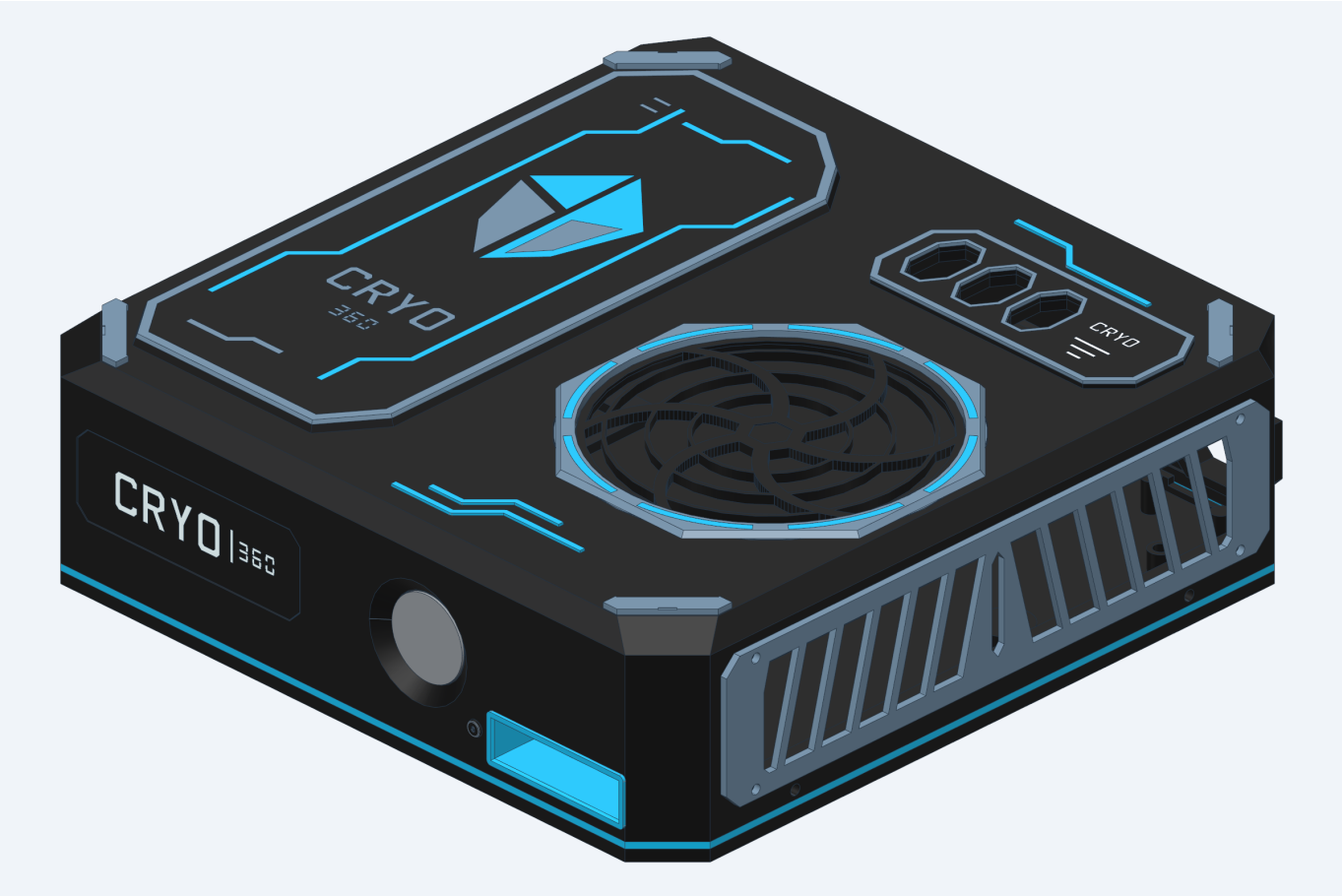
Build it, step by step

Ice-core custom edition / full magnetic panel / turbine-style guard



Actual project CAD. Electronics and the flexible power ribbon are omitted from this view.

An installation guide for the current print set

Start with the fitted Xbox 360 S / Trinity donor used for this project. This guide covers the case transfer, optional laptop-size HDD, front controls and removable artwork. Reuse a sound, already fitted base and seam ring.

Find the job	Page	Find the job	Page
Shopping list	2	Power ribbon and glue	8-9
Printed parts / preparation	3-4	R6 / R5 sync options	10-12
Base, board and HDD	5-6	Magnets / theme accents	13-14
Front badge and USB	7	Close, test and service	15-16

Everything to collect

Shopping checklist for one case with one HDD carrier and one bare 2.5-inch drive.

Qty	Item	Where it goes
4	M3 x 5 machine screws	Through the 3 mm tray into the HDD bottom holes.*
10	M3 x 6 machine screws	2 direct motherboard mounts + 8 side-intake screws.
4	M3 x 8 machine screws	Whole upper shell to the base; two per side.
3	M3 x 20 machine screws	Carrier legs + motherboard at A/B/C (page 5).
9	Short M3 heat-set inserts	5 upright board supports + 4 horizontal closure bosses.
16	8 mm diameter x 2 mm disc magnets	Magnetic roof only; placement and polarity on page 13.
4	About 16 mm adhesive rubber feet	Four shallow underside base recesses.
1 set	Adhesives and insulating tape	Fixed prints, magnet pockets, power tabs and ribbon; page 4.

Screw total: 21. Use M3 x 0.5 thread and flat-bearing pan/button heads. Measure length under the head. The printed seats are not countersunk.

*** HDD length:** M3 x 5 through the 3 mm tray projects about 2 mm into the drive. Confirm the actual drive permits this engagement; the screw must clamp the tray before its tip bottoms out. Page 6 shows the stack.

Insert fit: bores are 4.6 mm diameter; 5.5 mm deep upright and 5.0 mm deep horizontally. Pick an insert whose maker specifies this pilot and whose length fits. M3 names the inside thread, not the outside size.

> **No HDD carrier?**
>
> Use 13 x M3 x 6 (5 board + 8 vents) and 4 x M3 x 8. Omit the M3 x 20 and M3 x 5 screws. The 9 inserts and roof magnet quantity stay the same.

No DVD mounting hardware, printed RF bridge, M2.5 adjuster, extra sync pin or purchased return spring is required by this current print set. Keep the actual donor RF board.

Choose the printed pieces

Open the complete 3MF as a project. Its saved plates keep the parts, colors and supports together.

Current file: 3MF/CRYO_360.3mf

Plate	Parts to identify	Use
1	Black upper shell	Fitted front and rear; new stationary turbine-style fan guard.
2	Fan / sides / cyan accents	Angled side intakes, gray/cyan fan ring, cyan USB liner and roof tracers.
3	Panel / badge / roof trim	Full black/cyan/gray panel, black/white front badge, service-vent console and corner caps.
4	HDD carrier	Optional bare 2.5-inch drive mount.
5	Black base	Same fitted motherboard mounting geometry.
6	Cyan seam ring	One ring between the base and upper.
7	R5 + R6 sync choices	Use one carrier system and one S/M/L button.

Multipart means one finished item: keep the colored children of a badge or artwork in their existing alignment. Do not spread the letters, crystal or white backing around the print bed.

Choose one sync mechanism: **R6 carrier + one button**, or **R5 carrier + separate spring + one button**. S, M and L are reach alternatives, not three buttons installed together.

Before slicing

Confirm the saved printer/nozzle matches your machine and map project colors to the loaded PLA spools. Inspect each needed plate for missing features or supports. STEP files are assembly/editing references, not a single object to print.

Prepare the bench and donor

Work with the supply unplugged. Keep the original cooling and control electronics together.

1 Keep the reused parts together

You need the fitted motherboard, original heatsink/retention and fan, actual RF/front board, round touch-power assembly and its ribbon, original external supply, and the existing compatible HDD harness if a drive is fitted. Keep the heatsink and X-clamp assembled.

2 Record connections before transferring them

Photograph the ribbon connector orientation and latch, fan lead, RF connection and drive leads. Release latches before withdrawing ribbons; grip the reinforced end or plug housing. This is a mechanical transfer of the existing working setup, not a DVD-deletion or firmware procedure.

3 Clear print residue and dry-fit

Remove accessible supports and loose strings. Clean holes, magnet pockets, the USB passage and sync moving gaps. Dry-fit means check the fit without glue or final tightening. Preserve the already fitted port edges and board support heights.

4 Gather hand tools

Use the matching hand screwdriver, small file/deburring tool, flush cutters, soft brush, calipers/ruler, labeled screw cups and a fine glue applicator. A new base also needs suitable heat-set insert tools; an already fitted base does not.

Use	Adhesive / restraint
Fixed printed inserts	Plastic-compatible adhesive, applied only at the fixed mating surfaces.
Magnets	Adhesive compatible with your filament and plated magnets; thin application in the pocket.
Power tabs / ribbon	Non-corrosive electronics adhesive for tabs; insulating-tape straps or small edge tacks on the insulated narrow strip.

Low-temperature hot glue is an option for fixed contacts in this PLA trial after a scrap heat/bond check. Keep the hot nozzle off the ribbon and print. Keep contacts, spring gaps and shafts clear. Follow the selected adhesive's full cure time before loading the joint.

Base, seam ring and board mounts

Top view: FRONT is closest to you; all rear sockets point away from you.

REAR SOCKETS



FRONT / POWER + SYNC

1 **Prepare the empty base**

Install 5 vertical and 4 horizontal inserts square and flush, using their maker's installation method. Let them cool. Stick the four feet into the underside recesses.

2 **Seat the colored seam ring**

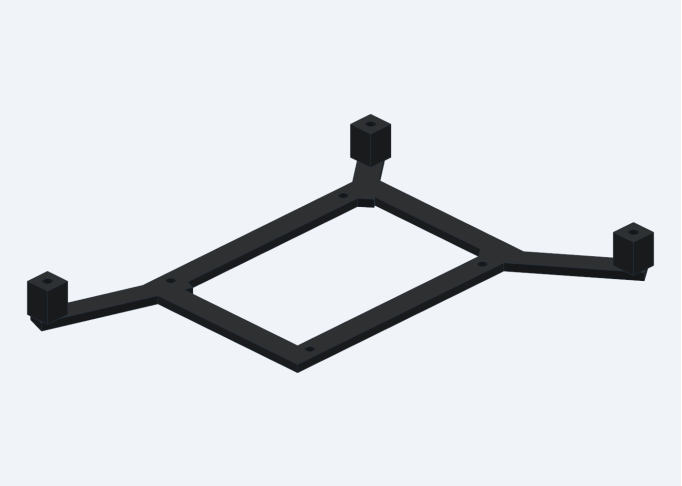
Lay the ring flat on the exposed outer perimeter ledge, around the raised black rim. The upper rests on this ring. The motherboard rests on the black supports.

3 **Lower the board evenly**

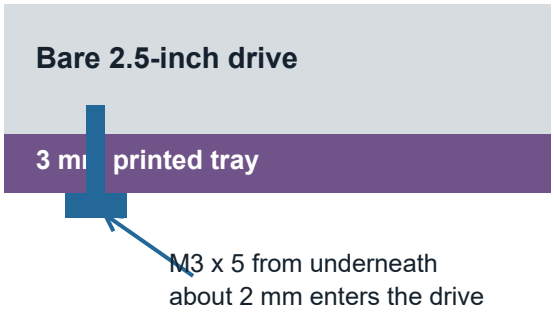
Align A-E and the rear sockets. The board must sit flat on all five supports without screws pulling it down. Lift it and clear an obstruction if it rocks; do not add spacers.

Install the board and optional HDD

The drive sits above the tray; the three carrier legs sit on top of the motherboard.



Carrier underside: three legs and four drive screw holes.



Cross-section, not to scale.

1 Fasten the drive to the loose carrier

Point the drive connector toward the rear. Match its four bottom holes to the tray (61.72 x 76.6 mm pitch). Use four M3 x 5 screws from underneath, subject to the actual drive's allowed engagement. Do not use the long carrier screws in the drive.

2 Put the carrier at A/B/C

Its three legs rest on the top of the PCB at those pads. Start three M3 x 20 screws through legs and board into the base inserts. Fit two M3 x 6 at D/E. Start all five by hand, check the stack sits naturally, then snug gently.

3 Refit the original electronics and leads

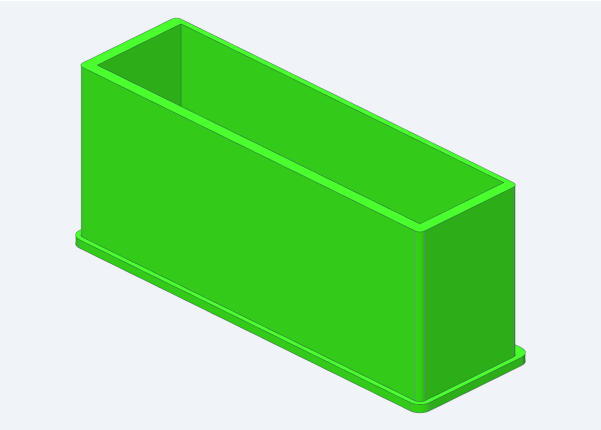
Seat the original RF/front board straight in its original connector. Reconnect the fan and compatible HDD harness. Route slack away from fan blades, the closing seam and the four side screw paths. Keep the RF ribbon connector accessible.

Without the carrier

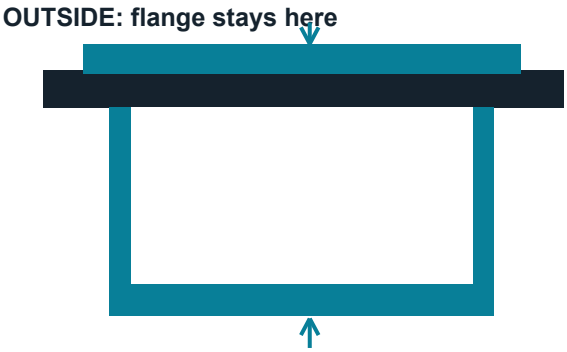
Use five M3 x 6 screws through the board at A-E. The actual RF board remains required; the omitted printed RF bridge and clamps do not get added back into this build.

Fit the front badge and USB liner

Work on the upper off the base. Glue the stationary parts only after a dry fit.



USB liner shape shared by all cases; guide color only.



Section schematic, not to scale.

1 Insert the USB liner from outside

Put the long tunnel through the opening first. Its wide flange stops on the outside black front surface. The thinner 0.7 mm wall is the floor; the thicker 1.4 mm wall goes above the sockets.

2 Check a real USB plug, then bond

With power unplugged, rest the upper on its fitted base and seam ring. Check a plug seats fully without forcing the liner into the socket. Remove the upper, then apply small glue dabs to the fixed flange/shoulder contact. Keep the passage and socket-facing end clear.

3 Glue the badge around its perimeter

Keep the badge's black/white print together. Put it into the outside recess with readable lettering; the white carrier faces inward. Bond the black perimeter to the case ledge. Keep opaque glue off the white light-transmitting area.

What holds the badge?

Adhesive at the fixed perimeter ledge. The front badge has no snap clip, screws or magnets. The roof magnets are separate. The white lettering can transmit added light, but this print set does not include an LED kit or wiring.

Ribbon trim: the exact reference

Use the original marked photo. If your ribbon is already trimmed like this, skip the cut.



Use the short transverse mark

The short red arrow/mark at the lower left indicates the cut. The long red stroke follows the U-loop and right-hand tail being removed; it is not a lengthwise cutting path.

This exact ribbon trim was reported working by the owner on 5 November 2026. Preserve the junction connecting the round power sensor to the wide blue-ended connector branch.

The photo does not establish a cut location for a different ribbon revision. Do not shift the cut farther down the retained strip just to shorten it.

1. **Disconnect before trimming**

   Unplug the supply and disconnect the loose ribbon. Match the photographed ribbon and orientation before making the pictured transverse cut.

2. **Preserve the two retained branches**

   Keep the round sensor, narrow power strip, their junction and the connector tail connected. Remove only the marked lower loop/right-hand tail.

3. **Inspect the cut edge**

   Insulate exposed cut material so it cannot touch adjacent metal. Keep connector contacts uncovered. Use page 9 for routing; it is not a new cut position.

Power control: glue here, leave this free

The large power control is the original fixed touch assembly. The small sync button moves.



Original installed photo, correctly oriented.
1 fixed narrow strip / 2 free connector tail / 3 round control.

1 Seat the original round control

From inside, place its touch face outward in the circular seat. Secure the three fixed outer mounting tabs/contact areas, not the sensor or light ring.

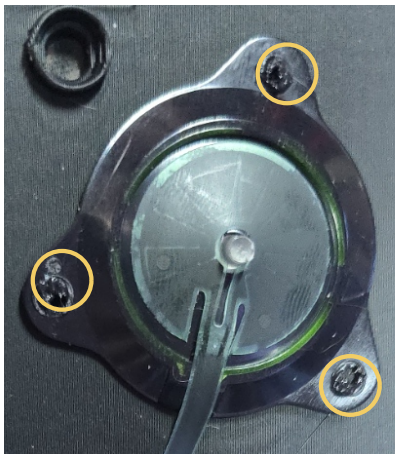
2 Secure the narrow strip

Lay it flat along the inside wall in the photo's alignment. Use sound original adhesive, small insulating-tape straps, or small edge tacks on the insulated stationary strip.

3 Leave the wide tail free

Do not glue the bowed blue-ended connector branch. It must reach and unplug from the RF/front board without pulling on the fixed strip or power control.

Three fixed tabs are visible in the original before-cut detail below. Glue their contact faces against the printed seat; no additional power-button screws are specified.



Original photo detail.

Yellow rings identify the three fixed tabs.

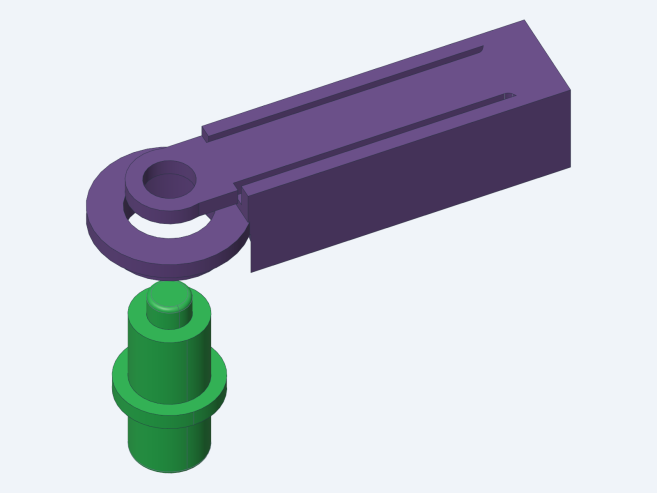
Keep glue off the central sensor and light ring.

Glue control

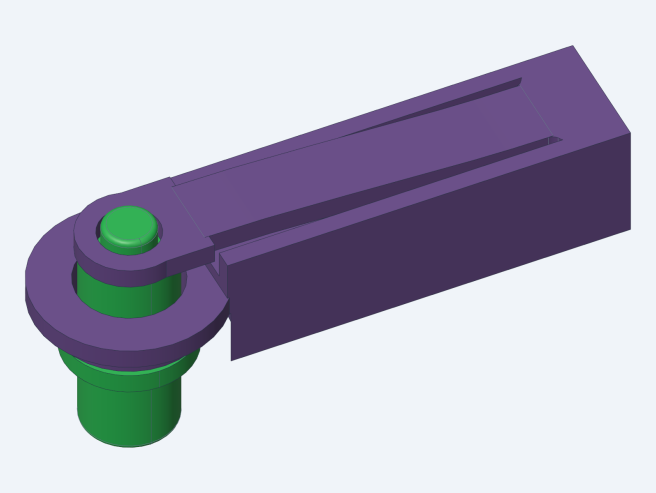
Use tiny dabs of plastic-compatible, non-corrosive electronics adhesive at fixed contacts. Scrap-tested low-temperature hot glue is an option for this PLA trial. Keep the nozzle off the flex; keep glue off contacts, the ribbon exit, light ring and moving sync parts. Let it cure fully.

Sync option A: integral R6 spring

Plate 7: one R6 carrier/tongue + one S, M or L button. No separate spring root fastener.



R6 before assembly: purple frame + tongue are one print.



After assembly: narrow tip passes through the spring loop.

1 Clear the supports and release gap

Remove accessible supports around the round cap and button flange. The tongue remains attached at its far end. Its side slots and underside gap must be open; gently lift and release it. If fused to its backing, fix the print before installation.

2 Feed the button while the parts are loose

Use your already fitted button length, or start with S. Feed the narrow rear tip through the round carrier bore, then through the spring loop. Its shoulder lifts the tongue slightly. Do not stretch the loop over a long button that is already seated.

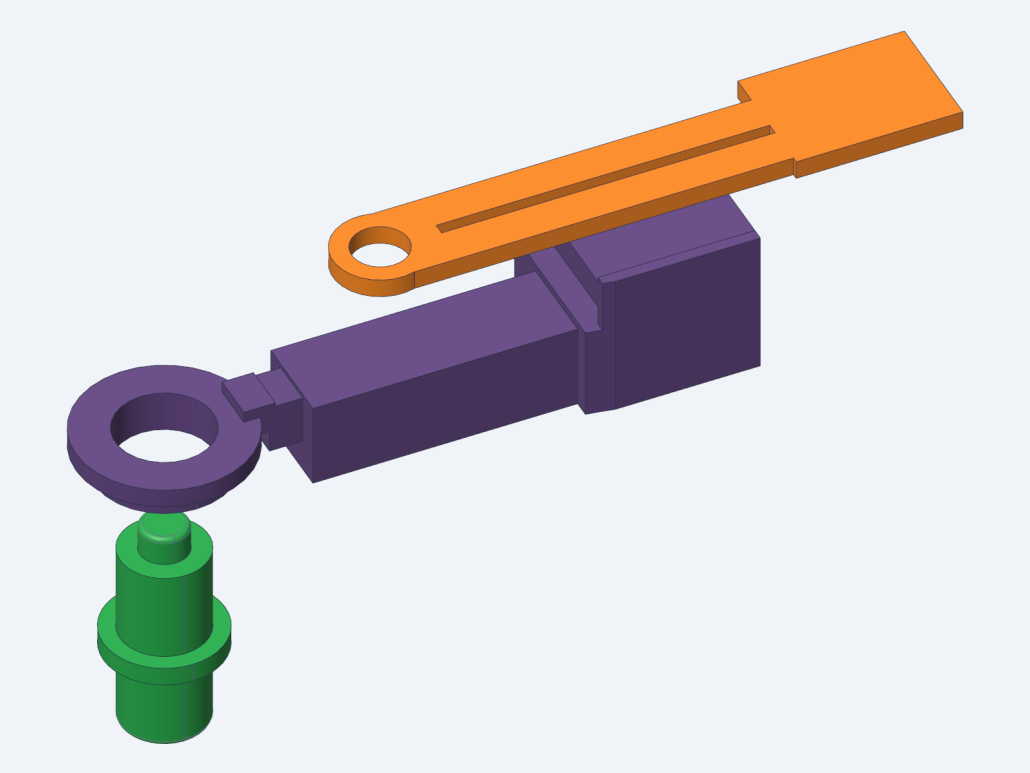
3 Check movement on the bench

Hold the rigid frame and press/release the button. The shaft must slide and the tongue must spring back. The solid backing stays rigid; only the tongue and loop flex. Then follow page 12 to set reach and attach it to the case.

> **Do not glue the spring**
>
> The R6 tongue is already joined to the carrier. Glue goes only on the fixed outer carrier-to-case joint later. Keep the shaft, loop, side slots and underside gap clear. These CAD poses show movement, not a spring-life test.

Sync option B: slotted R5 spring

Plate 7: R5 carrier + separate two-arm spring + one S, M or L button.



Purple = rigid carrier / orange = separate spring / green = button. Colors explain the parts only.

1 Slide the root into the hood

Clear the carrier slot and keep the two spring arms separate. Slide the long rectangular spring tab into the open end of the hood. The round spring loop belongs over the button end; the hood holds the far root down.

2 Feed the button through both holes

While loose, feed the narrow rear tip through the carrier bore and then the spring loop from the nose side. The shaft shoulder gently preloads the spring. Do not pull the loop over an already seated long button.

3 Test, then fit the case

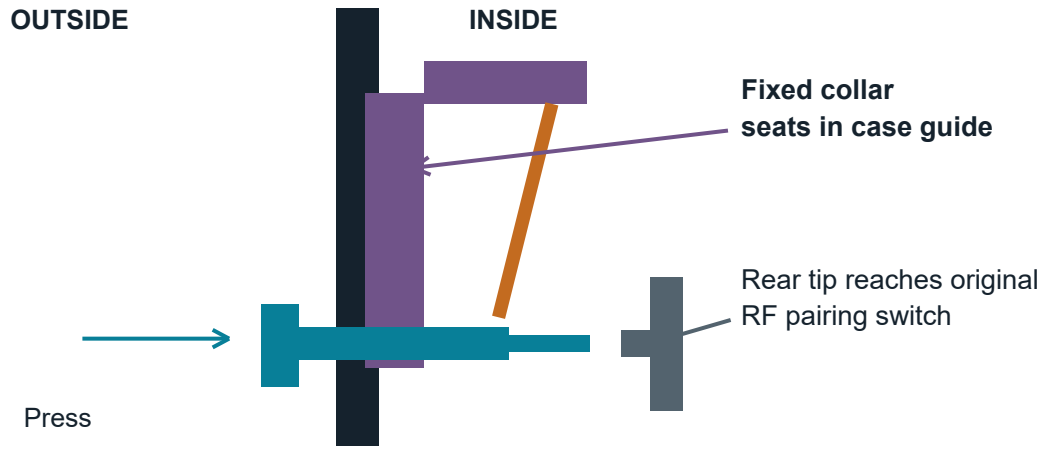
The root is held by the hood and captured once the button is through the loop. Check free movement and return. Continue on page 12 for tip selection, carrier seating and glue.

The slot retains the root

Do not glue the R5 spring root and do not add a pin or screw. Glue only the fixed carrier-to-case joint. Keep the hood slot, two arms, loop and shaft free of adhesive.

Fit and test the sync button

One small nose shows outside. The carrier and spring stay inside, pointing upward toward the roof.



Functional side schematic, not to scale. The spring returns the nose outward.

1. **Seat it from inside, nose first**

   Remove the retired mechanism and loose old glue at the fixed joint only. Insert the new nose through the small front hole. Seat the round carrier spigot fully in the existing guide; point the long holder up toward the roof.

2. **Set the reach with the upper seated**

   With power unplugged and the RF board fully seated, dry-fit the upper on its seam ring. Hold the carrier fixed during this test. At rest the switch must be released; pressing must click it. Try S, then M, then L only if needed. Each adds 1 mm inward reach; the outside nose stays the same size.

3. **Bond the stationary collar only**

   Remove the upper and apply small adhesive dabs around the outer fixed collar/guide joint. Keep glue out of the central bore, spring, loop and gaps. Hold the carrier fully seated until set; allow full cure.

4. **Test without supporting it with your finger**

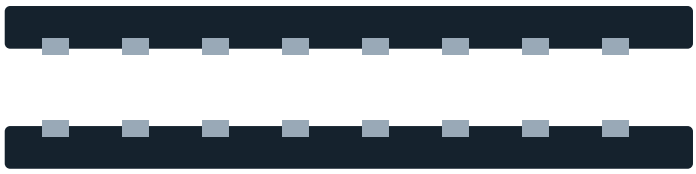
   Press and release repeatedly. The button must return fully and release the switch on its own. Repeat with the complete upper seated. Then confirm actual controller pairing; a mechanical click alone is not an electrical pairing test.

If it binds only when installed, check seating and tip length. Choose the shortest working tip; do not shift the RF board to meet it. Both current options are print-and-fit mechanisms; final return force and long-term durability still need the physical check.

Fit the magnetic roof

16 disc magnets: 8 mm diameter x 2 mm thick. Test polarity before gluing.

Part	Count	Position
Case roof	8	Upward-facing pockets around the left opening
One complete artwork panel	8	Underside pockets; keep its 4 molded locating pegs clear



Full artwork panel: 8

Case roof: 8

Layer schematic. Count table is authoritative; dots are illustrative pairs.

1. **Dry-fit the plastic before magnets**

   Check the panel/surround sits on its plastic ledges and the four locating pegs enter freely. Remove support residue only. Magnet pockets are 8.4 mm diameter x 2.2 mm deep.

2. **Pair, mark and glue the first side**

   Pair each case magnet with the magnet for the directly opposing panel pocket. Mark their outward/non-mating backs so the attracting faces remain identified. Test each pair at its actual pocket before glue. Fix the case magnets with a thin adhesive layer and let them cure.

3. **Glue the mates in the correct orientation**

   Recheck attraction, then glue the corresponding panel magnets. Keep faces slightly recessed and adhesive off the plastic ledges. Let both sides cure separately before bringing them together; wet glue must not bond the removable panel to the case.

Each additional complete artwork panel needs 8 more magnets. The logo and trim stay with that panel. The complete upper shell still uses four M3 x 8 side screws; only the artwork roof panel(s) lift magnetically.

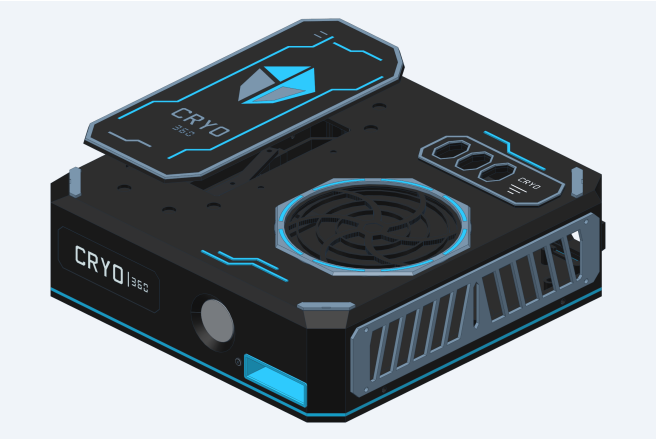
To remove the artwork, lift the complete panel vertically off its four pegs. Avoid prying against the fixed console or fan trim.

Finish this case's exterior

Dry-fit every accessory to its matching seat. Keep all ventilation openings clear.



Actual CAD roof layout for this edition.



Roof detail. Removable artwork stays unglued to the case.

1. **Gray/cyan fan surround**

   Keep its two color volumes as one print. Dry-fit the ring in the matching roof seat, then glue the fixed underside. The six swept ribs form a stationary guard; the actual fan remains below.

2. **Service-vent console**

   Keep black/gray/white together. Align its three chambers with the roof vents before gluing the fixed perimeter. Keep all airflow passages clear.

3. **Cyan tracers and silver corner caps**

   Match each tracer to its roof recess and glue its fixed contact. The corner caps glue onto their matching flat roof corners. No extra screws go into these decorative parts.

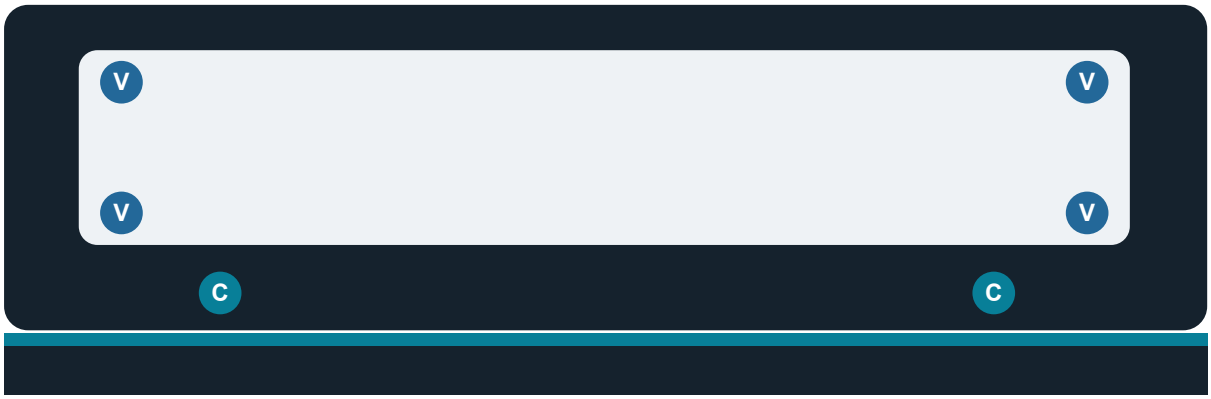
4. **Crystal panel and front badge**

   The crystal, angular lettering and panel colors are co-printed. The complete panel locates on four pegs and eight magnet pairs. The smaller CRYO front badge glues around its black perimeter.

Use the saved multipart print groups for color. Cyan and silver accents are colored plastic; glow requires a separate lighting installation. These decorative parts need adhesive, with no additional screws.

Vents, closure and final assembly

The motherboard sits on black supports. The whole upper sits on the colored seam ring.



ONE SIDE: 4 x V = M3 x 6 vent screws / 2 x C = M3 x 8 closure screws

Repeat on the other side. Side-view schematic; locations are simplified.

1. **Fit both side intake panels**

   Use four M3 x 6 screws per panel, from outside into the shell's printed pilots. These holes do not take inserts. Start straight and snug gently; stop if plastic begins to strip.

2. **Connect the free power-ribbon tail**

   Support the upper beside the base, close enough for the free tail. Insert the reinforced end into the original RF/front-board socket in its recorded orientation, then secure its latch. Do not hang the upper from the ribbon.

3. **Lower the upper onto the seam ring**

   Guide the rear openings around their sockets. Keep the ribbon away from the sync tongue, fan and seam. The upper must sit flat without the screws pulling it down. Confirm the power and USB openings still align.

4. **Close with four M3 x 8 screws**

   Fit the two lower closure screws on each side into the horizontal base inserts. Start all four before snugging. These are separate from the eight vent screws. Lower the full magnetic artwork panel onto its four locators and check it sits evenly.

To reopen later: disconnect power, remove the four closure screws, lift only far enough to access the ribbon connector, release its latch and unplug it. The magnetic artwork panel alone can lift without removing the whole upper.

First test and build record

Test the complete assembly before declaring the build finished.

Check	Pass condition / if it fails
Mechanical fit	Upper rests flat; feet steady; no wires trapped. If it rocks, reopen and find the obstruction.
Touch power	Original power control turns the console on/off. If not, unplug power and inspect the free ribbon's seating and latch.
Sync return / pairing	Button returns without finger support, switch releases at rest, and a controller pairs. If it binds, check carrier seating, glue clearance and tip length.
HDMI / USB / Ethernet	Actual plugs seat fully and function. A plug housing must not bottom on the print before its connector engages.
HDD, if fitted	Drive is recognized; tray secure; no cable under the fan or seam. Check actual drive screw engagement if a screw will not clamp.
Cooling / removable roof	Stock fan runs unobstructed; vents open; magnetic panel locates and holds. Observe the first operating session for heat-related distortion or interference.

Known fit: the project owner confirmed the board sits flat, the front USB sample fits, and the accepted rear/HDMI plug works. Theme styling and spring geometry were checked digitally; each printed assembly still needs the functional checks above.

Record your build: Date _____ Filament _____
Sync: R5 / R6 Button: S / M / L HDD model: _____
Insert size/product: _____ Adhesive: _____

Files and evidence

This guide matches the current 3MF, STEP/STL inventory and PARTS_LIST.md in this case folder. R5/R6, roof and front-control dimensions were checked against source. Ribbon photos are the original owner references; no traces, pin numbers or substitute cut positions were inferred.

External material references: HGST drive mounting example, section 5.3.2; 3M polyimide tape; Dow electronics adhesive example. Product examples do not certify your drive or an adhesive bond to this print.

For an already trimmed ribbon, follow the routing step only. For the printed spring, preserve the return gaps. For this current build, use this guide instead of archived RF-fixture or glued-root spring pages.