



assembly manual

Version 2



The **world's first**

harmonic table

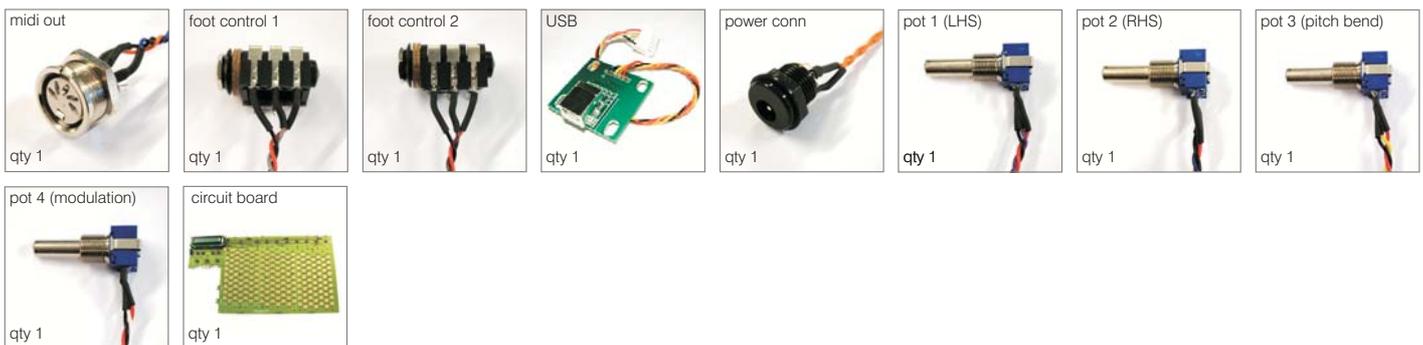
Mechanical parts



Fixings



Electronics



Tools



1. Build feet & assemble to base

6 Minutes

you will need



step 1



Push M6 fixing into foot until head is level with surface.

step 2



Stick rubber pads onto underside of feet using double sided tape.

step 3



Screw feet into threaded inserts on underside of base in 4 corner positions.

step 4



The completed foot installation.

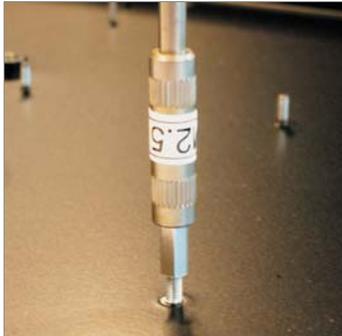
2. Install standoffs and nylon washers into base

7 Minutes

you will need



step 1



Install standoffs onto threaded studs in base using nut driver.

step 2



Install a nylon washer on each threaded standoff.

step 3



N.B. Take care not to shear threads by over tightening standoffs.

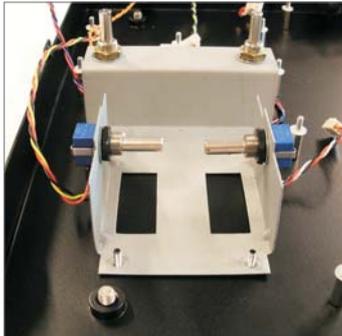
3. Install felt strips for wheel stops

3 Minutes

you will need



step 1



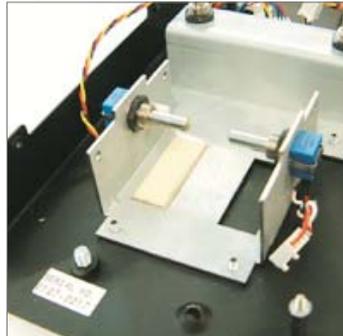
Install the wheel chassis as a location guide for the rubber strips

step 2



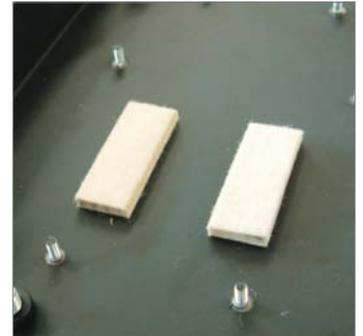
Peel back off felt strip

step 3



Install felt strips and apply pressure

step 4

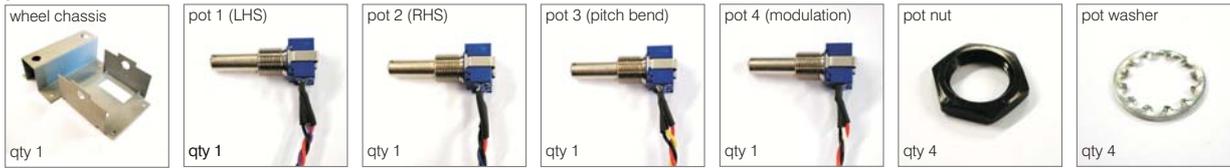


Felt strips in place on chassis

4. Install pots into wheel chassis

5 Minutes

you will need

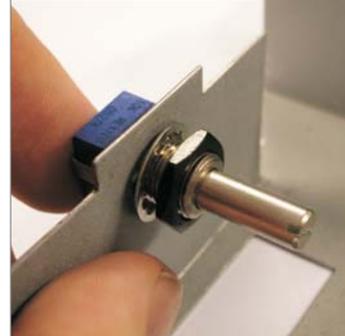


step 1



Load pot ensuring location lug lines up with keyway in the wheel chassis

step 2



Insert pot, spire washer and nut. Tighten with adjustable spanner.

step 3

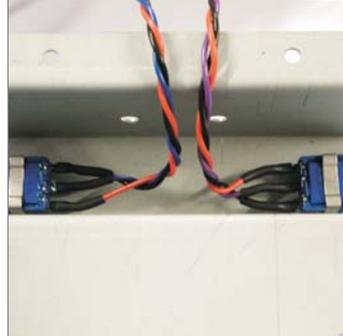
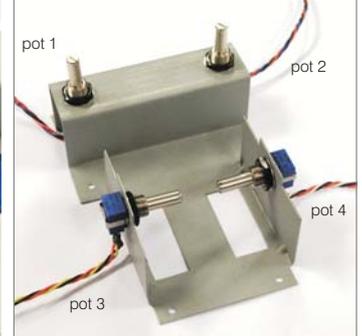


Image shows pot 1 & 2 orientation.

step 4



The completed pot installation.

5. Install spring stops

2 Minutes

you will need



step 1



Install a M3 x 20 screw through the wheel and insert a spring stop.

step 2



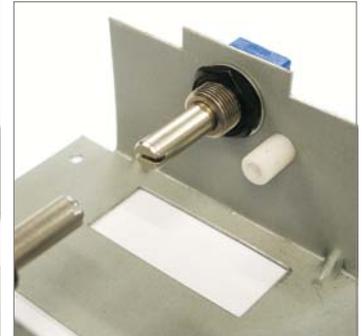
Tighten screw to pull spring stop across.

step 3



Install a M3 x 6 screw through the chassis and insert a spring stop.

step 4



Tighten screw to pull spring stop across.

6. Install wheels onto wheel chassis assembly

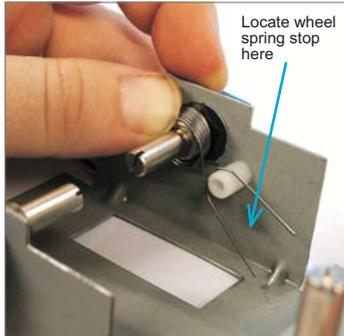
5 Minutes

you will need



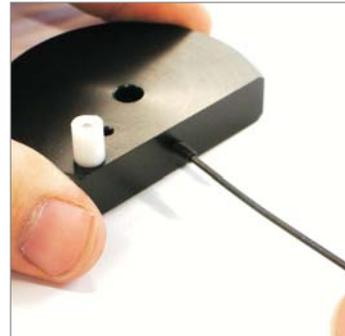
Please Note:
The pot orientation, must be set with groove at a horizontal position, also insure the wheel flat is parallel to pot groove.

step 1



Install spring over pot

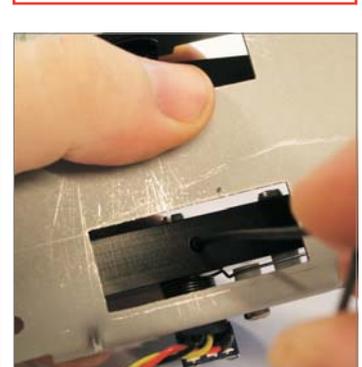
step 2



Partially install grub screw into both wheels using allen key



Install wheels onto chassis,



Tighten grub screws from underside of the assembly

7. Install midi out & foot control into base

5 Minutes

you will need



step 1



Remove nut from connector, insert body through hole, replace nut and tighten.

8. Install USB and power connector into base

4 Minutes

you will need



step 1



Insert M3 nut and nylon washer onto each of the USB mounting studs.

step 2



Insert USB into aperture, insert fixings and tighten.

step 3



Remove nut, insert power connector, replace nut and tighten.

Please Note:
Earth connection requires machine screw and two washers to be installed into threaded insert

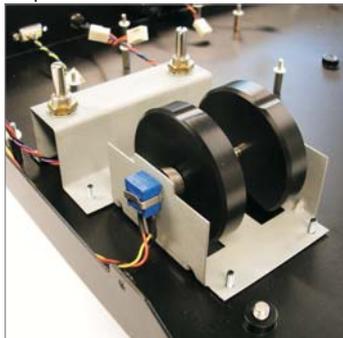
9. Install wheel chassis assembly into base

2 Minutes

you will need



step 1



Install the wheel chassis assembly onto the base.

step 2



Apply a M3 nuts and shakeproof washers to each stud and tighten.

10. Install circuit board and standoffs into base

5 Minutes

you will need



Please Note:
Ensure that the four standoffs in the centre of the board are not installed

Visually inspect that PCB is sitting flat / horizontal on the standoffs

step 1



Install circuit into base assembly

step 2



Install nylon washers, excluding the four standoffs in center of the board

step 3

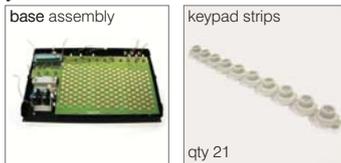


Install f/f standoffs (finger tight).
Clean PCB connectors with IPA (isopropyl alcohol).

11. Installing keypad strips to the circuit board

5 Minutes

you will need



Please Note:
Visually inspect that the spacing between the keypads.

step 1



Install keypad strips

step 2



Completed stage.

12. Install key collars into chassis

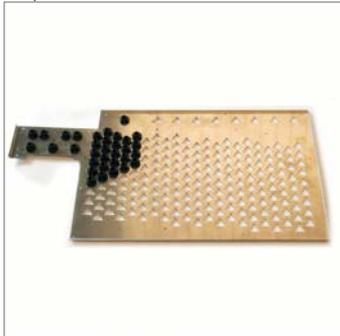
15 Minutes

you will need



Please Note:
Visually inspect that the spacing between the collars appear even / regular and that all are correctly snapped into position

step 1



Install key collars to the chassis

step 2



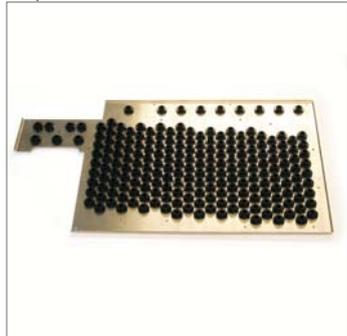
Note: Orientation of collars, reference next page.

step 3

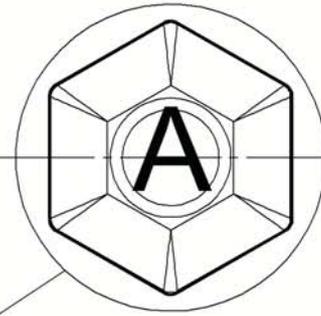
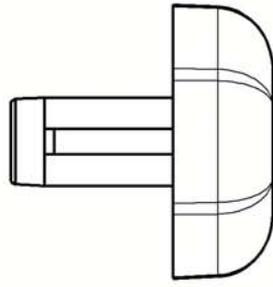


Install collars again reference key collar orientation diagram.

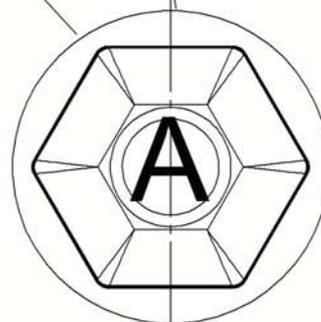
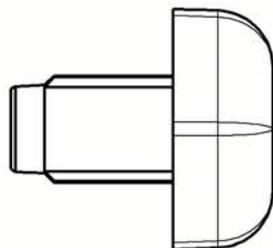
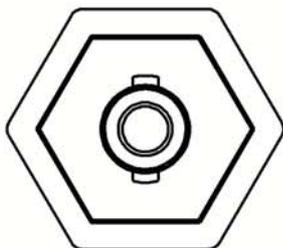
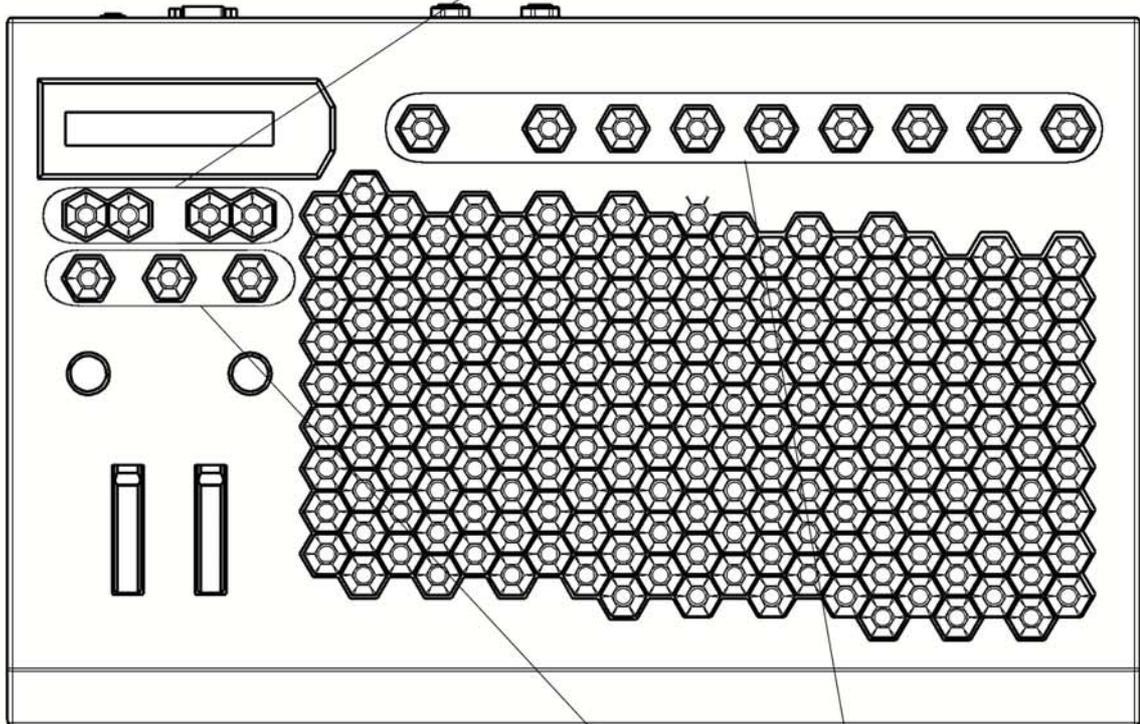
step 4



Completed sub assembly.



LOCATION
ORIENTATION



LOCATION
ORIENTATION

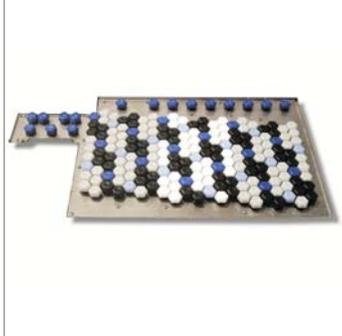
13. Install keys into chassis

10 Minutes

you will need



step 1



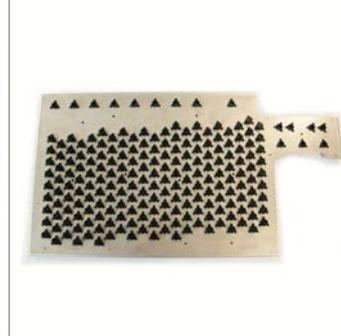
Install keys, reference key pattern diagram below.

step 2



Flip key chassis over and install key plugs to all the keys.

step 3



Completed stage.

Please Note:
Once all the keys and plugs are installed, test all keys move under their own weight - flip the chassis repeatedly ensuring all keys move freely, if any stick or dont move, replace.

14. Install control keys into chassis

5 Minutes

you will need



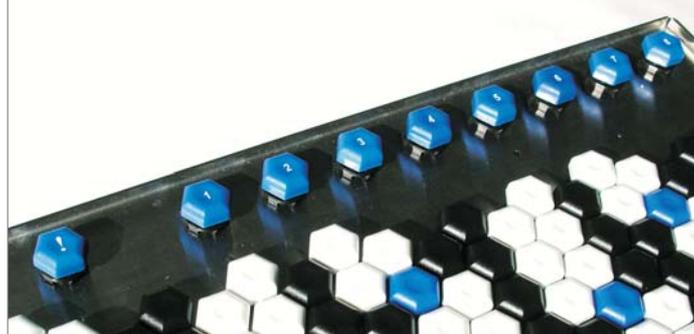
N.B. Ensure the plug is flat inside the key and that the key moves freely

step 1



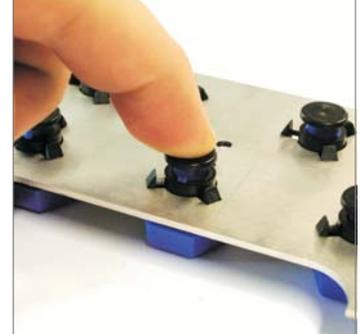
Install left control keys.

step 2



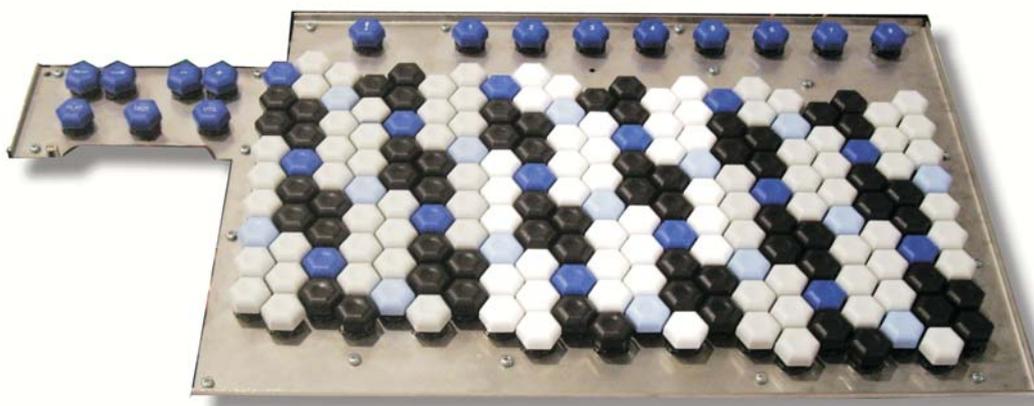
Install top control keys.

step 3



Flip chassis over a install key plugs.

Key pattern diagram



15. Insert MIDI, foot control, wheel and knob connectors into PCB

4 Minutes

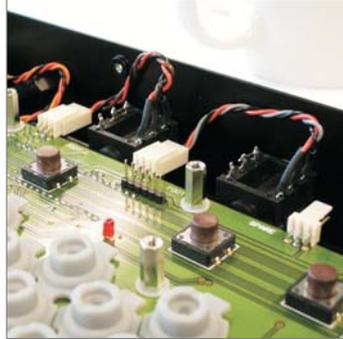
Please Note:
All connectors are push fit into their receptacles on the PCB

step 1



Insert MIDI connection onto PCB.

step 2



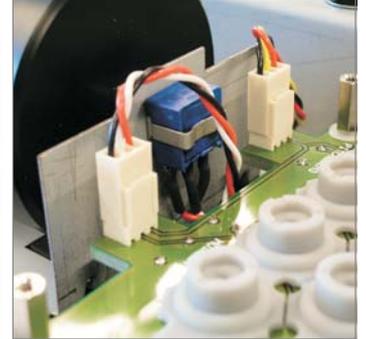
Insert foot control connectors onto PCB

step 3



Insert knob pots connectors onto PCB

step 4



Insert wheel knobs connectors onto PCB

16. Install power and USB connectors into PCB

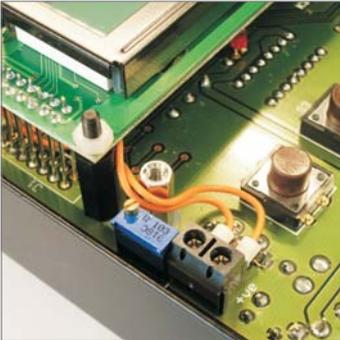
4 Minutes

you will need

screwdriver



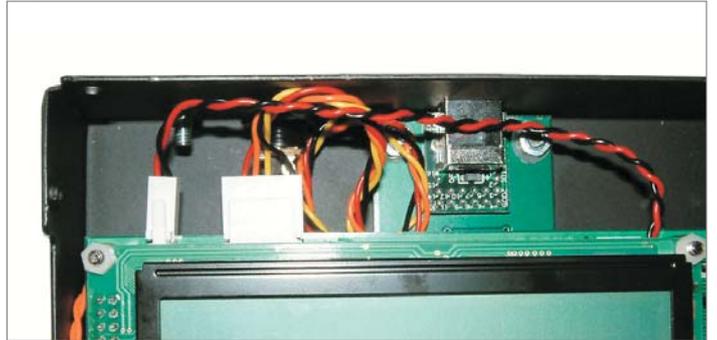
step 1



Insert power leads into connector and tighten with screw driver.

Note: Leads can go to either terminal. Ensure that wires are tucked behind pillar to prevent crushing on assembly of the chassis.

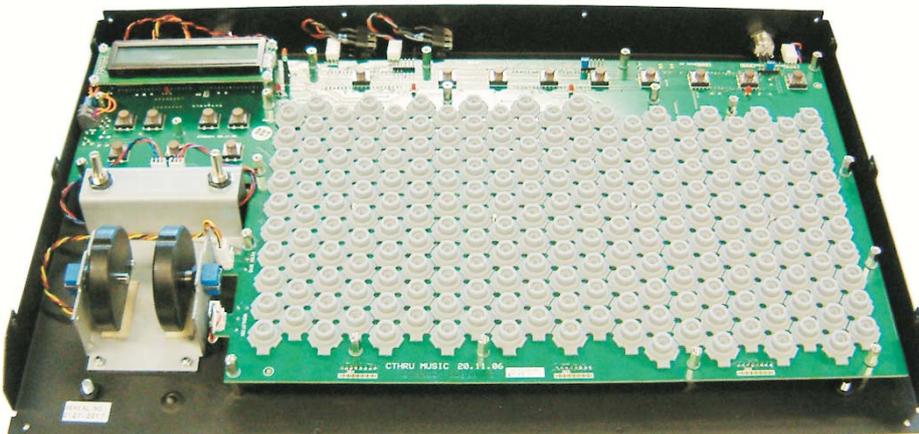
step 2



Insert USB connector to PCB

Completed connector assembly process

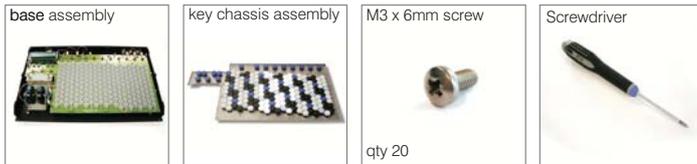
Please Note:
Visually inspect all before moving forward to next stage



17. Install key chassis into base

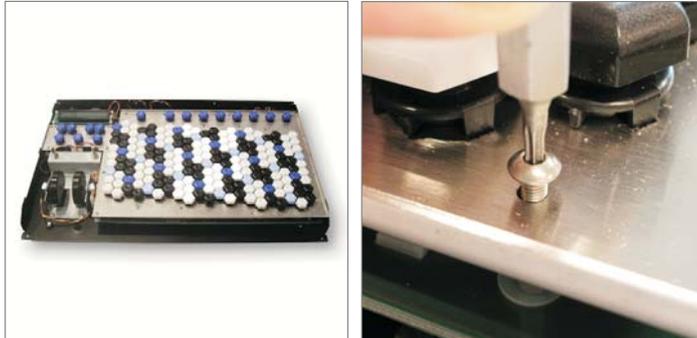
5 Minutes

you will need



Please Note:
Ensure that the loaded inner chassis is installed by lowering it parallel to the PCB.

step 1



Place key chassis assembly over base assembly

Install M3 x 6 screws to fix the the key chassis in place

18. Install cover onto base

5 Minutes

you will need



Please Note:
Check that the wheels do not touch the cover before installing fixings. Also check and adjust LED alignment.

Install fixings finger tight and visually inspect prior to tightening.

step 1



Place lid over base assembly

step 2



Install 12 M3 x 6mm screws into the back and sides of the unit

Tap M3 holes in the front underside of the unit to remove paint. Then install 4 M3 x 6mm t/p screws

19. Install grub screws into knobs

2 Minutes

you will need



step 1



Partially install grub screw into both knobs using allen key

step 2



Roll rubber O-ring down knob into recess.

20. Install pre-assembled knobs

2 Minutes

you will need



Please Note:
Turn pots to off position and the install grub screws at 3 O'clock position.

step 1



Install assembly knobs

step 2

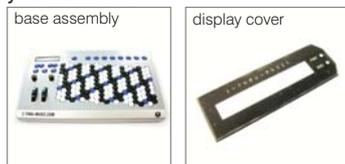


Tighten grub screws using a 2mm allen key

21. Install LCD surround onto cover

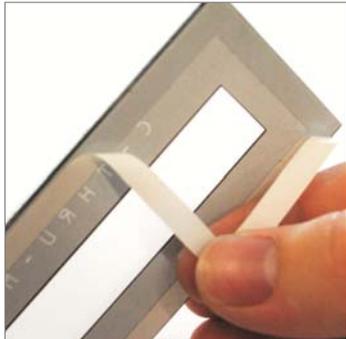
2 Minutes

you will need



Please Note:
Use jig to correctly align display cover.

step 1



Peel off back of the display cover

step 2



Align the display cover with the LEDs and apply even pressure.

N.B. Ensure the display cover is mounted parallel to the top and side faces of the keyboard. If necessary produce a template to do this.

22. Completed keyboard

TOTAL = 1 Hour 41 Minutes

