

UC-1 INSTALLATION INSTRUCTIONS.

The basic idea behind the UC-1 sequencer is to replace the PRO-ONE's 8021 micro computer chip with a separate and more powerful microprocessor board. The new board is connected to the PRO-ONE with help of an IC-socket and a DIL ribbon-cable. This arrangement has several advantages over the original digital interface included in the PRO-ONE design. (Access to the keyboard, front panel switches and LFO a.o.) The sequencer hardware is a straight forward standard design based upon a 6502 micro processor and standard memory devices. Precautions shall be taken when handling the button & display board. The display contains a CMOS circuit and hence can be damaged by static electricity. Before you start to work with the installation please read this brochure. Look at the pictures and the components. Make sure that you understand how the UC-1 shall be installed. Remember that if you make a mistake when drilling the holes, it can be difficult to hide. If you are in doubt, please contact us or our local representative for further explanations.

Preparation.

- Convince yourself that the PRO-ONE is fully operational. This is to avoid confusion if the unit does not work after the conversion. Pay extra attention to the sequencer, the arpeggiator and triggering.
- Pull off all PRO-ONE knobs.
- Open the PRO-ONE and remove the top.
- Remove the PRO-ONE PCB from the top cover.

PRO-ONE keyboard trim.

On each key of the PRO-ONE keyboard there are two pin formed mouldings pointing upwards. Use a side cutter and cut off these pins on keys F0 to B0. These pins interfere with the UC-1 front panel cable and they must be removed to ensure free key movement.

Computer board mounting holes.

Locate the UC-1 drill template. Place the PRO-ONE chassis with the back panel towards you. Put the template on the PRO-ONE bottom inside the chassis so that the arrowed front edge touches the back panel and so that the right edge touches the threaded nut for the right rubber foot. This defines the correct position for the UC-1 computer board. With a sharp spike, mark off the cross points in the corners of the large figure (A). See picture (1). Remove the template and drill four holes 3.2 mm (1/8').

Tape interface mounting holes.

Now on the template cut out figure B from the large figure. Fold along the dotted line. This forms the drill template for the UC-1 tape interface and external clock PCB. Hang this 'new' template over the edge of the PRO-ONE back panel. Put it in a position so that its left edge meets the screen printed vertical line to the right of the CV IN socket hole. Mark off four cross points. See picture 5. Drill four 11 mm (7/16') holes.

Front panel mounting holes.

On what remains of the original template sheet cut out figure C. This is the hole guide for the UC-1 front panel. Place the template on the plastic strip between the keyboard recess and the PRO-ONE front panel. Point 'Y' shall be aligned vertically with the holes 'LFO frequency' to 'OSC A frequency' on the PRO-ONE panel. Fix the strip with adhesive tape, so that it won't slip when you mark for the holes. Mark off the cross points and the corners of the inner rectangular area. See picture 6. This step is the most critical one, so don't make the holes if you are not 100 percent sure. Take an extra look at the UC-1 parts and the pictures if necessary. Then drill four 3.2 mm (1/8') holes in the corners. Drill four 6 mm (1/4') holes in the points marked 'X' on the template. With a spike or other

sharp tool draw guidelines between these holes, so that you get the equivalent pattern as on the template drawing. Now comes the tricky part of the job. That is to cut out this rectangular area between the 6 mm holes. There are various ways to do this. One elegant method is to use one of those nibbling tools used for metal panel cut outs. It is very easy to cut in the plastic material with one of these. Another way is to use a hand jig saw with a round saw blade (supplied with the kit). A third method would be to drill several small holes along the guidelines and then cut the remaining material with an ordinary side cutter. Anyhow the hole doesn't have to be very precise, as it will be covered by the UC-1 front panel.

UC-1 front panel installation

When you have made this cut out it is time to begin the assembly. Locate the bag containing the mounting details. To mount the front panel refer to picture 3 and figure E on the template sheet. The figure shows the following: (1) black screw, (2) UC-1 front panel, (3) PRO ONE front, (4) threaded spacer, (5) UC-1 front panel PCB and (6) M3 nut. On some PRO-ONEs the plastic material can be a little thicker causing the panel screws to be too short. If so it is possible to countersink the spacers by carefully heating them and then retightening one or two more revolutions. After the spacers have cooled down, do a final retightening. Due to the limited space these nuts do not use lock washers. Use 'Loctite' or similar instead to secure the nuts.

PRO-ONE PCB interface socket.

Locate and remove the 8021 micro computer chip from the PRO-ONE PCB. Its place will be taken by the DIL ribbon cable coming from the UC-1 computer board. This cable will be connected to an extra IC-socket soldered to the 8021 PCB pads on the underside of the PRO-ONE PCB. Do not remove the original socket. It will be useful in a service situation as it will be more convenient to use the 8021 rather than the UC-1 with its cable. This means that the new socket will stand on its pins which may be regarded as weak which it isn't. Try and see. Due to difficulties to get hold of 28 pin DIL connectors the UC-1 kit exists in two versions. If your version contains a 24 pin socket it should be soldered to pads 1 to 12 and 17 to 28 of the 28 pin socket. See picture 4. Then insert the supplied 2 pin DIL plug between pins 10 and 13 in the original 28 pin socket. This connects the PRO-ONE LFO to the UC-1 system. If the supplied socket is a 28 pin, then the 2 pin DIL plug isn't needed.

PRO-ONE PCB reinstallation.

Reinstall the PRO-ONE PCB. Before doing that it can be wise to check that infamous PRO-ONE panel screw, so that it won't short cut any of the pins of U114 (4049). Improve the insulation if necessary.

UC-1 computer board installation.

Mount the UC-1 computer board on the PRO-ONE chassis with the UC-1 transformer to the left as seen from the PRO-ONE keyboard. Refer to pictures 2 and 3 as well as figure D on the template sheet. Figure D shows (1) 113 nut, (2) lock washer, (3) UC-1 PCB, (4) threaded spacer, (5) lock washer, (6) PRO-ONE chassis and (7) M3x16 screw. Fasten the ground cable (yellow/green) with an extra lock washer to the left front screw on the UC-1 board. Connection of the UC-1 power leads to the PRO-ONE's is carried out with help of two special IDC-connectors (red plastic). To use these cut off the pretinned ends on the UC-1 leads. Locate the IDC-connector over the UC-1 lead and the PRO ONE's simultaneously. Press the parts together with a suitable pair of pliers. Connect one UC-1 lead to the lead coming from the PRO-ONE's power switch (centre tag). The other UC-1 lead goes to the PRO-ONE fuse holder (power cord side). Fasten the UC-1 power cable to the PRO-ONE chassis with two adhesive tie anchors and long cable ties. Place one quite close to the UC-1 transformer terminal pins. Secure the leads to the wiring harness at the PRO-ONE power switch with two short cable ties. Check and if necessary wire up

the UC-1 transformer pins for the appropriate voltage (instructions on the transformer label). Install the ribbon cables on the UC-1 computer board. The 16 pole DIL and 8 pole DIL shall point towards the PRO-ONE back panel and the DIL cable to the right seen from the PRO-ONE key board.

Tape interface etc. installation.

Mount the tape interface and external clock PCB to the back panel. It is fastened with the socket nuts in the 11 mm holes previously drilled. See picture 2 and 3. Connect the 8 lead ribbon cable coming from the UC-1 computer board to the interface.

Final assembly.

Place the PRO-ONE top on the chassis and connect in turn: PRO-ONE transformer lead, UC-1 DIL ribbon cable, PRO-ONE keyboard cable and finally the UC-1 front panel 16 lead ribbon cable. Assemble the PRO ONE.

**Push on the PRO-ONE's knobs.

New labels.

Attach the UC-1 labels. The 'ARPSEQ OFF' label over the old 'SEQ2 PLAY' text. The 'LFO/EXT' label over old 'SEQ 1'. Attach the TAPE etc label underneath the interface sockets on the PRO-ONE back panel.

Switch on.

Switch on the unit and the UC-1 display will respond with 'SQ 0'. The PRO-ONE will operate as usual.

Final tests.

Every UC-1 is throughout tested when manufactured, but to check the installation the following tests are recommended.

Check that all PRO-ONE keys and switches work.

If they don't work properly, check the mounting of the new IC-socket and the DIL plug used to replace the PRO-ONE 8021 micro computer. Also check that the UC-1 ground cable has been mounted correctly.

Check that all UC-1 buttons and display work.

If not check that the ribbon cable coming to the UC-1 front panel PCB has been mounted correctly.

Check that the tape interface works.

If not check that the ribbon cable coming to the interface PCB have been mounted correctly.

In case of difficulties please contact the manufacturer or the local representative below.

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