UC-1 SEQUENCER DEVELOPMENT REPORT #1 Jan –84.

Improvements of V 1.2 .

Description of fixed bugs or 'semibugs' (i.e. bad functioning).

SINGLE PLAY MODE: The selection of SinGLe PLay mode is indicated by 'SG' on the display. If you then press 'NORML' the single play mode is shut off but 'SG' remains on the display, giving a misleading indication. This has now been fixed.

Still in Single Play mode: If you use the 'TPOUP/TPOD' buttons, the play back speed is reset to normal for every new play back loop you initiate. With V2.0 you can speed up a sequence in Single Play mode and the new speed will remain until you change it or return to normal.

STOP mode: If you use the STOP button to stop and continue play back of a sequence with 'XPOSE' selected, you will find that the 'XPOSE' mode has been reset (shut off), though the display doesn't tell you that. Besides, the last transpose value chosen by the transpose sequence is still there. This bug, which even affects the chain mode in a comparable way, has now been fixed.

In Version 1.2 there is no indication of being in the STOP mode, which can be confusing in some situations. With V2.0 it is indicated by flashing 'STOP' and the display you had when the sequence was stopped.

XPOSE mode: If you have selected 'XPOSE' and play back a sequence, the Clock mode switch (PRO-ONE's 'SEQ' switch) is ignored in V1.2. Very annoying if you work with single step programing in low resolution and forget to switch to the 'LFO' mode before play back. With V2.0 this has been altered so that these switches are always reacted upon regardless of other modes selected.

When recording a sequence the software is so constructed that it waits for every clock cycle to toggle. This was meant to give the user a feeling of the resolution given by a specific clock speed. I.e. if the clock setting is very low the PRO-ONE keyboard will not follow the player if he plays too fast. This is still believed to be good when doing a real time recording, but only irritating in Single Step mode when you probably work with the 'LFO' clock mode and have to set the 'LFO/EXT' switch to 'OFF' to get a decent response from the PRO-ONE keyboard, then back to 'LFO' again to get a useful play back. speed. The V2.0 has been altered so that this 'wait feature' is engaged only in the REALTime record mode.

This completes the description of known 'bug' fixes. Now to the new features of the UC-1 v2.0.

UC-1 V2.0 features.

Improvement of tape storage: The UC-1 V2.0 has a tape verify function called 'TEST'. This works as follows. When you do the save To TAPE procedure the UC-1 V2.0 behaves as the V1.2 until the save has finished. At this stage a 'TEST' prompt starts to flash on the display. Rewind and prepare the tape recorder for play back. Just before starting play back press any button but 'NORML' on the UC-1. The display now becomes steady, indicating that the UC-1 is ready to test the recorded tape. If the tape is OK the UC-1 will finish with the 'DONE' message. If the tape is 'BAD' the UC-1 will tell you so and asks you to do a new 'TEST'. If, for some reason, you don't want to do the tape test, then press 'NORML' which brings you back to the Normal mode again. Unfortunately, for reasons related to the next paragraph, tapes recorded with V1.2 are NOT compatible (and hence not possible to load) with the UC-1 V2.0. Please see the separate instruction sheet on upgrading of old UC-1:s and tapes to V2.0!

In v2.0 the software related to recording of sequences, transpose sequences and chains has been completely redesigned The most noticeable difference compared with V1.2 is that sequences are not erased until you actually record something new. That is: If in V1.2 you enter 'REALT' by mistake the sequence that eventually was recorded will be lost. With V2.0, the erase will not take place until you start recording by playing on the PRO-ONE keyboard. Thus you have to make two successive mistakes to unintentionally destroy a recorded

sequence. In 'REALTime' mode, the display still shows how much memory will be available if you erase the old sequence by starting to record a new one. In extreme situations, this feature (of course) creates new problems: What's to do if you do want to erase a sequence to release memory for another possibly longer sequence?

CLEAR: Clear now means 'clear whole memory or specific sequence number'. When you select CLEAR the display shows 'CLR!' and then expects one of these alternative commands:

Button 1 'STPD '= Erase the whole memory.

Button 3 'XPOSE'= Erase the transpose sequence whose number is displayed when 'CLEAR' is entered.

Button 4 'CHNPR'= Erase the chain whose number. etc.

Button 7 'REALT'= Erase the sequence whose number etc.

Button 8 'NORML'= Return to normal mode without erasing anything.

Furthermore, to simplify future handling of software upgrades, if you press button 6 'TPOUP' in the 'CLEAR' mode the software version installed in the UC-1 will be displayed. Thus, if nothing happens when you press button 6, then you know that the unit has the VI.2 software.

SGLST - Single step.

With UC-1 v2.0 the functions on the UC-1 front panel's fourth row have the following meanings:

Note Programming/Edit Functions:

BACKS = Back step. Is used to step backwards in a sequence that has been or is being recorded. The event number display decrements accordingly.

FORWD = Step forward. The opposite of back step.

DELET = Deletes the event you are currently on. The display is decrement by one.

Time Programming/Edit Functions:
When these functions are used the display temporarily switches to show the number of programmed clock pulses on the event you are on.

+/- = Changes the time programming button's function from plus to minus or vice versa. Also causes the display to show the clock pulses programmed at the event you are on.

ADDI = Adds or subtracts one clock pulse depending on the sign in the leftmost position on the display.

DOUBL = If sign ,+, doubles the number of programmed clock pulses. If sign ,-, resets the number of clock pulses to 1.

For Edit Purposes Mainly:

SGLST = Use of the SGLST button after the mode, as such, has been selected, sets the event pointer to the start of the sequence. Prevents erasure of old sequence if pushed immediately after the single step mode is entered. I.e. the single step Edit mode is entered.

All single step functions have a so called auto repeat facility. That is, if you hold down a button past an initial delay, it will start to behave as if pushed again and again at a certain repeat rate. The repeat rate is conveniently adjusted by the UC-1's clock knob, so that you can step through a sequence at a rather fast rate until the target area is reached, when it can be slowed down.

The single step functions make it possible to delete or replace wrong notes, to insert new notes or- pauses, to prolong or shorten a sequence and to alter the timing of any event in a sequence that has been, or is being, recorded.

Before describing the procedure involved with each desired edit function, it is necessary to mention a few subtle features of the UC-1 v2.0. When you record a sequence you so to speak, add events to the end of what is previously recorded by playing notes on the PRO-ONE keyboard etc. By use of the BACKStep button, you

step back from the end into what has already been recorded. Playing on the PRO-ONE keyboard now will result in an insert of the keys played, starting AFTER the event you stopped BACKStepping at. Then you can use FORWarD to step to the end of the sequence, where the stepping will automatically stop.

Similarly use of the DELETe button at the end of the sequence deletes the last entry, and hence shortens the sequence, if desired. Use of DELETe within a sequence (after back step) deletes the event you are at and sets the step pointer to the event before the deletion. Every time you delete an event, the timing at that event is temporarily preserved, so that if a deletion is immediately followed by an insertion of a new event, the old timing is restored, giving a 'note replace' facility.

Ore more feature: If you press and hold 'the '+/-' button, activity on the PRO-ONE keyboard is not recorded. Suppose that you wish to insert a pause between two notes recorded legato. What you do is: Press and hold the '+/-' button. Press and hold any PRO-ONE key. Release the '+/-' button and finally release the PRO-ONE key whereby this last action will be recorded: /a pause/.

All single step functions can be used to Edit a sequence previously recorded in Single step or Real time mode. To access these funtions for editing, proceed as follows: Enter SinGLe STep mode. Beware not to touch the PRO-ONE keyboard yet or the sequence will be ERASED. Push SGLST and the display shows '001', indicating tha't you are at event number one in the sequence. Now you can step through the sequence and make whatever changes you like. You can, at any event location, return to normal mode without affecting the lenght of the sequence (as opposed to NOTED).

Edit Capabilities And Procedures:

To delete an event at the end of, or within, a sequence:
Push DELET.

To replace a wrong note (time programming retained):
1 BACKS/FORWD as appropriate.
2 DELET.

3 hit the desired PRO-ONE key.
4 DELET the probably unwanted pause introduced when the PRO-ONE key was released.

To insert a new note. Timing has to be programmed if more than one clock pulse is desired:
1 BACKS/FORWD to the event preceding the location of the new note.
2 hit the desired PRO-ONE key.

To insert a new pause between two notes (i.e. legato notes):
1 BACKS/FORWD to the event preceding the location of the new pause.
2 press and hold '+/-'.
3 press and hold any PRO-ONE key.
4 release '+/-'.
5 release the PRO-ONE key.

To inspect or adjust the timing of an event:
1 BACKS/FORWD as appropriate.
2 press '+/-' whereby the number of programmed clock pulses will be displayed.
3 use '+/-', 'ADD1' and 'DOUBL' to make the desired modification.

To shorten a sequence previously recorded:
1 enter SinGLeSTep mode.
2 Don't touch the PRO-ONE keyboard!
3 press 'SGLST'.
4 step FORWarD to the end of the sequence.
5 use DELET (with slow auto repeat maybe) as desired.

To Prolong a sequence previously recorded:
1 do steps 1 to 4 in the previous paragraph.
2 continue the recording in the usual single step manner. If this was a real time sequence, new real time timing can be made through the 'NOTED' function.

In some situations, it may be desired to program a sequence consisting of only one clock pulse per note and with no pauses between notes. This is the case if you want to use the PRO-ONE's original 'CLOCK/GATE' or 'AUDIO' input and supply the timing from a drum machine's sound channel output. This type of programming on the UC-1 is achieved by playing legato-style and by pressing 'NORML' before releasing the last key pressed. So far, so well, but what's to do if you want to repeat

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the same note several times? You can't play the same key several times if you don't re-lease it. That's the paradox. However with the UC-1 there are two ways of doing this:

1. Skip the legato playing for the note to be repeated. Then DELETe the unwanted pause caused by releasing the key.

2. Press and hold '+/-' when releasing the PRO-ONE key and the pause will not be recorded. (This is confirmed by the PRO-ONE continuing to sound even though the key is up).

NOTED.
Noted is a feature where note timing can be programmed separately from note programming, in real time, by playing on, only one key on the PRO-ONE keyboard. To use this feature, record a sequence in any of the two modes. The timing can be completely ignored. Then enter NOTED. The display behaves as in Realtime Record mode and shows the amount of memory available. Now, when you play on the PRO-ONE, you will not hear the notes you play, but the notes in the previously recorded sequence. This will last to the end of the sequenlce where the UC-1 automatically switches to REALTime mode. From this point, you'll hear the notes you actually play. Hence, you can prolong a previously recorded realtime sequence. If the end of the sequence takes you by sur-prise, don't worry if you play too many notes. Just enter Single Step Edit and remove the unwanted notes. If you want to shorten the sequence, press 'NORML' or 'REPT' at the desired point and the sequence will be cut there.

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