

The Microlink ML-1 Interface

For Casio CT-1000P



One major problem besetting owners of the Casiotone CT-1000P is that although it contains a comprehensive programmable arpeggio section, synchronisation between the arpeggio pattern and a drum-machine is extremely difficult, if not impossible. Now Micro Musical, who have been distributing the Casio range of keyboards since 1979, have come up with a solution to the problem in the form of the Microlink ML-1 Interface. It took a determined effort on the part of MM's engineers to produce the interface, because the Casio uses a customised 40-pin IC to provide the majority of the instrument's functions. Add to this the fact that the signals from the IC are multiplexed, and you can perhaps begin to appreciate the scale of the task.

The problem has been overcome however by the use of a microprocessor-based interface with a 2K Erasable Programmable Read Only Memory (EPROM). The ML-1 comes on a purpose-designed PCB which is installed inside the keyboard. There are various ways of doing this. You can either install it yourself; get Micro Musical to do it for you; or purchase an already-modified Casio, designated CT1000P PML. The system we had for test came with Microlink already fitted, making installation unnecessary. All the relevant plugs and cables were supplied, and all that was left for us to do was plug them in.

Documentation

The documentation we received with the 1000P consisted of three A4-size instruction manuals. The shortest of the three deals with the modifications that have to be made to the Boss DR-55 drum-machine, while the other two contain details of the interface itself and its use. I must say that I was impressed with the manuals' presentation, and they were clearly and concisely written. Fitting instructions are listed step-by-step, and a list of all necessary tools is also provided. Should any problems occur even after the instructions have been consulted, you can always give Micro Musical a ring, as they are both friendly and helpful.

The ML-1 allows you to use a drum-machine (at the moment only Boss' DR-55 and the Clef Master Rhythm are compatible, but future developments should see other machines incorporated into the scheme) in six different modes of operation in conjunction with the 1000P's arpeggiator. If you don't have access to an external amplifier, this is not a problem since the output of the rhythm-machine can be fed into the Casio's internal amp and speaker. Doing this is simply a matter of plugging a single

(supplied) lead into the foot volume jack socket located at the rear of the 1000P.

Mode One is the simplest mode available. It allows for the drum-machine to be operated normally through the 1000P amp and speaker but with no synchronisation between the two.

In *Mode Two*, the drums and arpeggio accompaniment start simultaneously, while in *Mode Three*, the drum-machine pattern begins in advance of the Casio's accompaniment. *Mode Four* is the direct opposite of this, so that the accompaniment begins first, leaving the percussion to be brought in at any time.

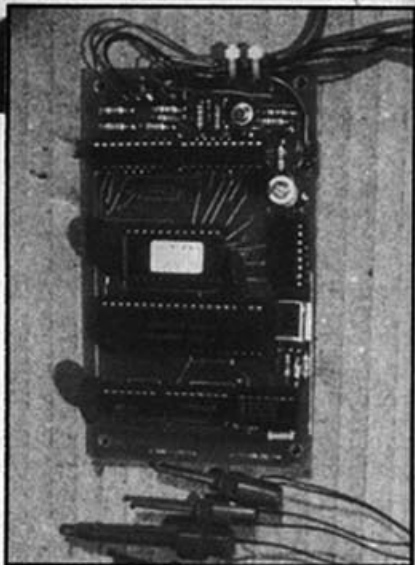
Mode Five is particularly useful for continuously synchronised accompaniment. For instance, if you play an arpeggiated chord on the off-beat, the drum-machine will also play on the off-beat, which certainly gives your music a more human feel, as well as supplying some additional variety to your playing.

The final option - *Mode Six* - allows the previously one-to-one relationship between drum-machine and keyboard to be altered. In this mode, the user has a choice of eight different rhythm variations, each of which allows the accompaniment to be played at a different rate to the percussion, though the two remain synchronised, of course. This mode is probably capable of producing the most interesting effects available from the ML-1 system.

In Use

Connecting the system together proved quite straightforward, and *Mode One* was entered simply by pressing the Start button on the DR-55. To use *Mode Two*, a 16-step pattern has to be programmed into the DR-55, and once this has been done, the 'up-down' and 'memory' buttons on the 1000P arpeggiator are selected in turn. As soon as any note on the lower two octaves of the Casio's keyboard is activated, the rhythm-machine begins playback in synchronisation. Exit from this mode is accomplished simply by re-selecting the 'memory' button. During performance, the tempo of the rhythm can be altered via the tempo control on the Casio's control panel. A nice touch.

All the remaining modes were tried in turn, and again, using them was a simple and trouble-free exercise; I soon got the hang of changing from one mode to another. *Mode Six*, which I found the most fascinating and rewarding system of operation, is accessed by holding down the DR-55's Start button and momentarily pressing the 1000P 'memory' button. The Start button is then released, upon which the Dr Rhythm's LED indicator begins flashing in accordance



with the programmed setting, i.e. if Setting Eight has been selected, the LED will flash eight times.

It goes without saying that to get the best out of the Microlink, a thorough knowledge of both the Casio keyboard (see review *E&MM* September '82) and whichever percussion machine you intend to use is not only desirable but essential. Apparently, an appropriately modified ML-1 can be used not only as an interface to electronic drum-machines but also to bass-line machines or even micro-computers. Seeing that Micro Musical are continually developing new applications for their interfacing equipment, it might be a good idea to contact them if you feel your particular device might sync to the 1000P using a variation on the ML-1 theme. I've yet to try any of these variants (limitations of time, etc...) but hope to bring you news of them in a future issue.

Conclusions

To my mind, Micro Musical have come up with something of a winner in the form of the ML-1 Interface. It offers a comprehensive variety of playing and programming options and is extremely easy to use, the only limitations being those inherent in the design and construction of the keyboard and drum-machine used. Similarly, the documentation supplied cannot be faulted, with the possible exception of the main operation diagram which could perhaps have been a little clearer. I can wholeheartedly recommend the ML-1 system, so if you've got a 1000P and a suitable rhythm-machine, what are you waiting for?

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The Microlink ML-1 interface has an RRP of £75, VAT inclusive, and can be obtained from Micro Musical Ltd., 37 Wood Lane, Shilton, Coventry CV7 9LA. Tel: 0203 616760.

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