

# PPS

## the system



- More natural Sampled Sounds through analog filtering
- Additive Synthesis plus analog filtering
- Dynamic natural Sampled Sounds through velocity keyboard
- 24 Channel Event Generator
- System Components selectable according to personal needs

# The PPG Music Computer System

The PPG System is a Music Computer System designed with the musician in mind. Using the PPG System is a purely musical experience which means that despite the highly developed technology used specialised computer skills such as programming are not necessary. Control of the WAVE TERM is carried out by softkeys programmed by the factory with which you can also call up HELP texts designed to assist in using the WAVE TERM. The function of every softkey can be immediately recognised by illuminated words on the monitor screen.

PPG develops instruments for making electronic music but which doesn't necessarily have to sound electronic. For years now PPG has been successfully developing instruments which produce dynamic sounds thus avoiding the static nature associated with so many synthesizers. In 1979 PPG built the now legendary WAVE-COMPUTER which had approximately 1800 waveforms. Even today most synthesizers work with just five waveforms. In addition to this the WAVE-COMPUTER produced the sounds digitally and did not just store them digitally as is the case with many "digital" synthesizers today. In 1981 came the WAVE 2 which was the foundation stone of PPG's development today.

Digital sound production based on Wavetables with provision of analog control of all functions such as envelopes, filter etc.

It is this principle which makes the PPG System so flexible and means that in PPG Synthesizers the Wavetables can be controlled by envelopes, either completely or partly. In addition to this sampled sounds need not be simply called up in their original form but can be modulated using the envelopes (loudness and filter) in the same way as synthesizer sounds. This is how exciting and natural sounds can be produced using electronic means.

PPG's second foundation stone was the development in 1982 of the WAVE 2.2 and WAVE TERM. The WAVE 2.2 has been further developed and as the WAVE 2.3 is PPG's new instrument of 1984. However, the WAVE 2.2 can still be integrated into the System, which is something not simply a matter of course when considering the speed of today's technical development. Many keyboard players buy a new instrument every two years or so just to keep up with developments. PPG is trying to go a new way which is more in the interests of the musician — new hardware developments will be brought on to the market which enable the musician to extend his system without having to sell his "old" instrument. The deciding factor is that all system components are firstly compatible and secondly always have the latest developments than to the software which controls all functions.

Due to this factor the WAVE 2.2 of 1982 (Version 0) is very different to the WAVE 2.2 of today (Version 4, 1984). The new software for the WAVE TERM is delivered as a new diskette and can be simply inserted into the computer. New software for the other System Components are delivered as EPROMS and these are also simply inserted into the corresponding instrument.

You can work with the PPG System in two important ways:

1. Individually Creating Your Own Sounds. These sounds range from simple synthesizer sounds to complex orchestral sounds. Every sound can be played on the keyboard and be modulated by the analog pots. Even complex natural sounds (sound sampling) can be modulated using the envelopes.

2. Composing. Every note can be combined with every sound and using the UPDATE procedure every note can receive its own colour and loudness. You no longer have to be a keyboarder in order to be a composer with synthesizers.

The PPG Music Computer System currently has the following System Components:

The WAVE 2.3 (or WAVE 2.2), an 8 Voice Polyphonic Keyboard in its own right

The WAVE TERM, the central control unit of the PPG Music Computer System

The EVU (Expansion Voice Unit) and

The PRK (Processor Keyboard)

The PPG System has been conceived with the musician in mind allowing him to choose the System Components he requires for his personal needs.

The WAVE 2.3: a complete synthesizer on its own.

The EVU: is controlled by other System Components.

The PRK: controls sounds produced by either the WAVE 2.3 or EVU.

The WAVE TERM: stores data and loads it into all other System Components and provides information to the monitor screen thus facilitating and easing composition and creation of individual sounds.

## Here are some possible combinations using the PPG SYSTEM COMPONENTS:

The WAVE 2.3.

The WAVE 2.3 is a further development of the legendary WAVE 2.2. It is an instrument in its own right, an 8 Voice Sound Polyphonic Synthesizer, and it can be used together with the other PPG System Components allowing the realisation of musical ideas. The WAVE 2.3 has the normal synthesizer waveforms such as sawtooth (ramp), square wave, sine etc and in addition has a further 1800 waveforms and also two natural sounds. The integrated Sequencer has 8 Channels (Voices) with UPDATE Multi Parameter Mixing. The Sequences are recorded using the WAVE 2.3's Keyboard and 8 different sounds are possible in any one Sequence.

The other System Components cannot be used on their own.

### The Combinations

1. The WAVE 2.3 together with the WAVE TERM.

With the WAVE TERM you can:

load natural sounds such as drums, bass or bark of a dog into the WAVE 2.3 or record 8 bit natural sounds yourself and modulate them (play them backwards, merge (combine) them etc) or load 12 bit sounds (supplied by PPG on a special diskette) into the WAVE 2.3 and modulate them using every possibility available on the WAVE 2.3 (these modulations to the 12 bit sounds can be stored without erasing the original sound).

You can also:

Create your own Waveforms (by entering harmonics), combine them into Wavetables and if required have the computer calculate the intermediate values, (these Waveforms and Wavetables can then be stored in the WAVE TERM on diskette) or create Resonator Curves and use them to control Wavetables or the loudness of 8 bit natural sounds or create 8 Voice compositions.

In addition the Sequences recorded using the WAVE 2.3 Keyboard can be first stored, then recalled, corrected, extended and/or changed or modulated. Using the monitor screen exclusively, that is without the WAVE 2.3 Keyboard, to create compositions is ease itself. Any single note can be assigned to any one of the 8 sounds at any time. Every Voice can be assigned its own UPDATE parameter (loudness, filter, waveform etc) and every note can be assigned its own UPDATE value. The composition can be a combination a several Sequences, whereby every Sequence can have its own tempo (speed), its own Sound Program and even its own basic pitch. In addition every note in every Sequence can be assigned its own UPDATE parameter.

2. WAVE 2.3, WAVE TERM and EVU:

This is an ideal combination. The EVU can be loaded with either 8 bit sounds recorded and modulated using the WAVE 2.3 and WAVE TERM, or with 12 bit sounds (provided by PPG). Many interesting sounds can be made

for example by playing the WAVE 2.3 and EVU oscillators simultaneously thus creating completely new sounds. The EVU can also be loaded with Sequences created using WAVE 2.3 and WAVE TERM. This way you can record and replay 16 Voice Sequences. This combination also provides a REAL TIME SEQUENCER.

3. WAVE 2.3, WAVE TERM and 2 EVUs:

Both EVUs can be loaded with different sounds. The Sequencer allows 24 Voice Sequences to be recorded and replayed.

4. WAVE 2.3, WAVE TERM, EVU and PRK:

This combination contains every item in the System Components currently available. The PRK has variable touch adjustable using several parameters and can thus control WAVE 2.3 and EVU sounds. The REAL TIME SEQUENCER stores every sound and touch (velocity) nuance played on the PRK.

5. The WAVE 2.3 and the PRK:

The PRK dramatically extends the WAVE 2.3's sound program. The natural sounds stored in the PRK can be used. The PRK's variable touch allows a very flexible combination and controlling of all available touch allows a very flexible combination and controlling of all available parameters and makes this combination to be particularly recommended for those used to a piano's touch.

6. EVU and PRK:

This combination is to be recommended for keyboard players who do not wish to record or modulate sounds themselves. The sound possibilities correspond to the WAVE 2.3/PRK combination. However, in this combination the EVU Sequencer can only be used to replay Sequences.

7. WAVE 2.3, PRK and WAVE TERM:

This is a combination suitable for musicians who wish to make use of the PRK's touch while playing and also have the WAVE TERM's sound modulation flexibility together with its monitor screen and storing facilities while composing. In addition the facilities of the WAVE 2.3 and PRK can be combined. The REAL TIME SEQUENCER can be used in this combination.

8. WAVE 2.3, EVU and PRK:

If you use this combination you can play 16 voices simultaneously using the WAVE 2.3 and PRK Keyboards. The PRK's natural sounds are also available. If a Keyboard Split is programmed on the PRK you can play the WAVE 2.3 from one half and the EVU from the other. If no Keyboard Split is programmed the sounds from WAVE 2.3 and EVU sound simultaneously together on one key.

The System Components WAVE 2.3, EVU and PRK are all factory supplied with programs which can be modulated and changed at will. The data can be recorded on to cassette. Similarly your personal programs (Sound Programs and Sequences) can also be recorded on to cassette. The same data can of course also be stored and loaded using the WAVE TERM.

The PPG System can represent and modulate every music parameter:

1. Length of sounds can be influenced by how long a note is held, by envelopes, by GATE lengths in Sequences and using LOOPS with natural sounds (sampling).

2. Pitch can be determined or modulated using the basic tuning of sounds, by using the bend wheel or the modulation wheel, by using an envelope or the Keyboard, or by entering appropriate values in the semitone or octave columns (EDIT mode) with the Sequencer.

3. Loudness can be determined using pressure on the WAVE 2.2 and 2.3 Keyboards, with every note of the PRK, by using the UPDATE mode with Sequences and by using envelopes.

4. Sound colour can be determined using Waveforms, the filter, envelopes and by recording and modulating natural sounds (sampling).

