ELECTRO-HARMONIX

VOCODER

Operating Instructions

The Electro-Harmonix VOCODER is a top-of-the-line, highly sophisticated, state-of-the-art electronic musical device that will produce many of today's popular "musical speech" and "robot speech" effects in the studio or on stage. Among the artists now using this type of effect are Queen, Talking Heads, Frank Zappa, Kraftwerk, Electric Light Orchestra, Cars, and Herbie Hancock. Careful attention to the proper setting up of the VOCODER's five switches and five slider controls and you will have an unearthly chorus derived from your own voice, split into as many notes as your guitar or other instrument can play -- or the attention-grabbing, obedience-demanding sound of Darth Vader! No other musical accessory can produce these effects, and no other product on the market can give them to you for so little money.

How to Use

1. Plug in the VOCODER's AC cord into the wall.

2. Plug VOCODER Output into amplifier, power amp, or mixer input, and turn amp on.

3. Turn VOCODER Power On by pushing switch to the Right. LED will go on. (Note: Once the VOCODER Power is On, the device is warming up, and Power should be left On throughout an entire concert or studio gig. In between songs, turn the Standby/Effect switch Left, to the Standby position. During songs, both Standby/Effect and Effect/Bypass should be set on Effect. When Effect/Bypass is Right, on Bypass, the VOCODER chooses either microphone or music signal to process, according to how the Mic/Music switch is set. Effect/Bypass can be switched manually on the front of the box or with an optional Effect/Bypass footswitch connection at the back of the box.)

4. Plug guitar, organ, synthesizer, or other instrument into the Music Input. (See Additional Options below.)

5. Plug a good quality, medium to high impedance (600+ ohm) dynamic microphone into the Microphone Input and turn on. (See Additional Options below.)

6. To set the proper levels for instrument and microphone sources, move all 5 sliders to the far Left. Throw the Hi Boost switch Right into Boost position, the Bypass switch Right into Bypass, and the Standby switch Right into Effect.

7. First, set Mic/Music switch to Music. Play on your instrument, with as much treble brightness as possible, moving the Music Sensitivity slider (on the top line) to the Right, until distortion occurs. The correct level is just slightly to the Left of that position.

8. Second, set Mic/Music switch to Mic. Speak or sing into the microphone, moving the Microphone Sensitivity switch (on the bottom line) to the Right, until feedback occurs. The correct level is just slightly to the Left of that position. At this point the Level LED should glow moderately only when a voice signal is present.

9. Finally, turn the Effect/Bypass switch Left to Effect. This overrides the Mic/Music switch, and allows the VOCODER to synthesize both inputs.

10. At this point you are ready to speak or sing into the microphone while playing your instrument or synthesizer, for the special VOCODER effect. A certain amount of practise in this operation will be necessary, since the coordination of voice and instrument is different from ordinary musical accompaniment. Instead of strumming or playing rhythmically, you should phrase your guitar or other instrument to follow your breathing as you sing or talk. Instead of playing and singing exactly simultaneously, you should play a moment before starting to sing -- in a kind of reggae involvement. And with instruments that do not have infinite sustain, such as guitar, you will have to compensate for the normal attack and decay of the instrument by singing a little softer at the beginning of the note, and a little louder at the end of the note. Your voice provodes the envelope for the VOCODER-synthesized sound, and your instrument provides the notes.

11. It may be necessary to put your mouth very close to the microphone. Experiment with this distance. For intelligible "musical speech" you will have to pronounce your words very distinctly.

12. With guitar chords, or any other polyphonic input, your voice will be split up into the notes of the instrument, with the instrument's rhythm, frequencies, and tone. The Electro-Harmonix VOCODER operates by filtering 14 separate bands of speech input, rectifying the resulting audio signals, and using these DC levels to set the gain on a second array of 14 filters which control the harmonic content of the music input.

13. If you play a single note on guitar, tone generator, or other instrument, the instrumental note will follow the pattern of your voice as it comes through the microphone. This effect is an electronic simulation of the effect produced by the mechanical "voice box" type of accessory. But the Electro-Harmonix VOCODER, as a true "vocal synthesizer," has many more capabilities than the earlier device.

14. Now you are ready to take off and experiment with all the subtleties of your Electro-Harmonix VOCODER. The Hi Boost switch will usually be set to the Right, to compensate for the treble losses which occur with close directional miking. The Music Blend switch (on the top line) turned to the Right increases the amount of instrument signal which is mixed with the VOCODER output. The Microphone Blend switch (on the bottom line) turned to the Right increases the amount of microphone signal which is mixed with the VOCODER output. (Note: Mixing a small amount of direct microphone signal with the VOCODER output may significantly increase the clarity of consonant sounds.) The Compression switch turned to the Right limits the microphone signal's dynamic range. This is especially useful when headphones and a mixing board are used, but may cause some feedback unless microphones are well isolated from monitor speakers.


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STANDBY
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BYPASS
MIC
MUSIC
SENSITIVITY
BLEND
MUSIC
LEVEL
POWER
ON
OFF
HI BOOST
COMPRESSION
SENSITIVITY
BLEND
MICROPHONE