PCM mode to read out the wave data from the waveform memory 25 depending upon the characteristics of the installed sound source 22. On the other hand, for the tones allocated to the CPU, the CPU synthesizing allocation procedure is done in order to generate an allocation command relevant to the detected note-on event in step Sh5 as in step Se7 (Figure 15). Information about the calculation method is included in the allocation command. The voice allocated to both of the CPU and the sound source is processed in steps Sh3 and step Sh4 by the LSI sound source, while the same voice is processed in steps Sh5 by the CPU. These processes are executed in parallel. If the allocation command is available, the detection in step Sh6 results in "Yes", and the synthesizing calculation in step Sh7 is executed to generate a waveform relevant to the allocation command. Unlike the second embodiment, the synthesizing calculation is done by various modes including the FM, harmonics synthesizing, physical modeling and so on. On the other hand, if the allocation command is not available, the detection in step Sh6 results in "No", and the procedure returns.

[0060] In the third embodiment, a voice (tone) can be allocated to both of the CPU and the LSI sound source so that different wave data can be reproduced for the same tone actually. Due to this feature, the third embodiment can also diversify the tones of the system. For summary, both of the first waveform generator and the second waveform generator are coincidently designated so that the controller device operates both of the first waveform generator and the second waveform generator to concurrently create waveforms in parallel manner for a single timbre.

[0061] A fourth embodiment will be explained hereunder. Even though the voice allocation mode is introduced in the embodiments described above, more simple implementation is possible. An event which can be allocated to a certain sound source device is simply allocated to the relevant device upon the event detection, provided that the device is installed in the system. The very implementation is provided in this fourth embodiment. The fourth embodiment assumes that the sound source 22 is installed as shown in Figure 1 or 24, as in the second and third embodiments. With respect to the waveform synthesizing program, the synthesizing process using the selected hardware device (Figures 15 and 16) is replaced with the process shown in Figure 20. More particularly, the synthesizing process using the selected hardware device in step Sa34 (Figure 11) is substituted for the process shown in Figure 20. The substituted process will be described hereunder, while omitting the explanation of the other processes for avoiding duplicated description.

[0062] In this embodiment, upon advancing forward to step Sa34, the synthesizing program runs to execute the synthesizing process using the selected hardware as shown in Figure 20. First of all, the event detection is carried out though this process is not illustrated. In step Si1, voice allocation is executed to create a vacant channel in the LSI sound source. In step Si2, the waveform relevant to the detected event is actually synthesized using the vacant channel. The synthesizing method for this operation is not limited to the FM mode or the harmonics synthesizing mode, but it is possible to use, for example, the physical modeling mode and the PCM mode to read out the wave data from the waveform memory 25 depending upon the characteristics of the installed sound source 22. After the synthesizing, the procedure returns. Thus, in the fourth embodiment, an event which can be allocated to a certain sound source device is simply allocated to this device upon the event detection provided that this device is installed in the system.

[0063] Figure 25 shows an additional embodiment of the inventive musical sound generating apparatus. This embodiment has basically the same construction as the first embodiment shown in Figure 1. The same components are denoted by the same references as those of the first embodiment to facilitate better understanding of the additional embodiment. The storage unit 15 can store various data such as waveform data and various programs including the system control program or basic program, the waveform synthesizing program and other application programs. Normally, the ROM 11 provisionally stores these programs. However, if not, any program may be loaded into a hard disk or else in the storage unit 15. The loaded program is transferred to the RAM 13 to enable the CPU 10 to operate the inventive system of the musical sound generating apparatus. By such a manner, new or version-up programs can be readily installed in the system. For this purpose, a machine-readable media such as a CD-ROM (Compact Disc Read Only Memory) 51 is utilized to install the program. The CD-ROM 51 is set into a CD-ROM drive 52 to read out and download the program from the CD-ROM 51 into the storage unit 15 through the bus 12. The machine-readable media may be composed of a magnetic disk or an optical disk other than the CD-ROM 51.

[0064] A communication interface 53 is connected to an external server computer 54 through a communication network 55 such as LAN (Local Area Network), public telephone network and INTERNET. If the storage unit 15 does not reserve needed data or program, the communication interface 53 is activated to receive the data or program from the server computer 54. The CPU 10 transmits a request to the server computer 54 thorough the interface 53 and the network 55. In response to the request, the server computer 54 transmits the requested data or program to the apparatus. The transmitted data or program is stored in the hard disk of the storage unit 15 to thereby complete the downloading.

[0065] The inventive musical sound generating apparatus can be implemented by a personal computer which is installed with the needed data and programs. In such a case, the data and programs are provided to the user by means of the machine-readable media such as