

Sideways Sound Effects by Gordon Horsington

This sideways ram utility will allow you to use sound effects from Basic using star commands (eg. *ZAP) instead of the Basic ENVELOPE and SOUND commands. It will also allow you to display the ENVELOPE and SOUND commands used to make those sounds and design or modify your own sound effects.

This utility can only be used in unprotected sideways ram. You cannot "blow" it onto an EPROM or use it in write protected sideways ram. The sideways ram interpreter uses zero page memory locations &70 and &71. These memory locations must not be used by your Basic program. None of the commands, except *DESIGN, use any other part of the main memory of the computer and all the sound effects can be freely used from within your Basic program. The utility can be disabled by typing *NOSOUNDS and re-activated by pressing the break key.

Make sure you save any program in memory before using the *DESIGN command. This part of the program is written in Basic and may overwrite any other program in memory. The sideways ram interpreter will check to see if you have saved your program before running design. When it is running you use the cursor keys and shift key to alter the ENVELOPE and SOUND parameters and the copy key to play the sound. Press the escape key to leave the program. When the program stops the tape filing system will be selected. You will need to type *DISC if you are using discs.

Many of the sound effect commands have an optional argument. This argument specifies the sound channel the command uses. For example, *ZAP 1 zaps on channel 1 and *ALARM 2 sounds an alarm on channel 2. If no argument is required the command uses only channel 0. If the argument is optional but not used channel 1 is used. The command *SILENT <channel> must have an argument in the range from 0 to 3 specifying which channel is to be silenced. For example *SILENT 2 will silence channel 2.

To display the ENVELOPE and SOUND parameters of a particular effect type *EXPLAIN before typing the command. For example:

```
>*EXPLAIN
>*ZAP 1
```

```
ENVELOPE 1,1,-4,127,10,131,101,141,127,-1,0,-127,126,126
SOUND &11,1,0,100
```

```
>
```

All commands may be abbreviated using a minimum of three characters followed by a full stop and may be preceded with an optional X (or x). For example *des. *XDE. and *xdes. are all equivalent to *DESIGN

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The following commands are available and can be listed by typing *HELP SOUNDS or *H.S.

- *ALARM (<channel>) .. Channels 1 to 3 may be used
- *BELL (<channel>) ... Default channel 1
- *BOING (<channel>)
- *DESIGN Sound and Envelope designer
- *ENERGY (<channel>)
- *EXPLAIN Display Envelope and Sound commands
- *HEHE (<channel>)
- *LOSER (<channel>)
- *NOSOUNDS Disable Sideways Sound Effects
- *RATTLE (<channel>)
- *SHOOT Channel 0 only
- *SILENT <channel> ... You must specify channel 0-3
- *SIREN (<channel>)
- *SURF Channel 0 only
- *TWEET (<channel>)
- *UFO (<channel>)
- *WINNER (<channel>)
- *ZAP (<channel>)
- *ZOING (<channel>)
- *ZONK Channel 0 only

