
VOICE MASTER VERSION 3.05 UPDATE FOR COMMODORE
04/23/86

INSTRUCTIONS FOR USING THE EDITOR PROGRAM.

The speech **'EDITOR'** program is a new addition to the Commodore Voice Master software. It is used to edit the amplitude data of a speech file and can help to significantly improve the sound quality of a word during playback. The speech editor is not difficult to use but does require some preliminary familiarity with the Voice Master (VM). We suggest that you read the manual and practice with VM before using the speech **EDITOR**.

The **EDITOR** program can be loaded from the VM MENU by selecting option #0 or from BASIC by typing **LOAD"EDITOR",8** and then run after loading.

There are two ways to get speech data into memory and displayed in the editing window. One way is to select **#4 LEARN CURRENT WORD** option from the menu and speak into the microphone. The other way is to select **#1 LOAD SPEECH FILE** option. The program will then prompt you to enter the name of a speech data file. Just type the filename (e.g. GREETING) then press RETURN and the speech file will be loaded from disk into memory.

To edit the speech, select **#5 EDIT CURRENT WORD** option and the speech amplitude data will then appear on the screen. Editing the speech data is easily done using three pairs of keys. The first pair of keys, ',' and '.' (or '<' and '>' without shift) will move the editing window left or right, respectively, over the entire length of the speech data (only if there are more than 40 amplitude values). Thus, any portion of a word can be centered within the window for editing. The four cursor control keys which are normally used for screen editing are also used for speech editing. The pair of left and right keys will move the editing cursor across the speech data so that any individual amplitude byte can be selected for editing. The pair of up and down keys are used to raise or lower the editing cursor as desired. Once you have positioned the cursor to the desired position, press the **SPACE** bar to set the amplitude. Move the amplitude byte up to give it more volume and down for less. Lowering the amplitude down to zero will turn the amplitude off for that portion of the speech.

To hear what the edited speech sounds like, select the **SPEAK CURRENT WORD** option in the menu or F1 in the edit mode and the entire word will playback. To playback just a small portion of the word, use the ',' and '.' (or '<' and '>' without shift) keys to position the left amplitude byte where you want speech playback to start from. Now use the left and right cursor keys to position the editing cursor to the amplitude where you want the playback to stop and then press F7. This option can be used to playback any portion of a word which will fit within the editing window.

When you have finished editing a word in a speech file, another word in the same file can be edited by pressing

'Q' for the menu then select **#6 CHANGE CURRENT WORD NUMBER** option and answering the prompt. This can be done for every word in the speech file if desired.

Finally, when you have finished editing use **#2 SAVE SPEECH FILE** option to save the edited vocabulary back to disk.

The best way to explain how the **EDITOR** works is by an example. Select **#4 LEARN CURRENT WORD** and record the spoken word, "six". Press **#3 SPEAK CURRENT WORD** to hear it played back. Next select **#5 EDIT CURRENT WORD** to go into the editor. The display should resemble a sequence of asterisks that correspond to the loudness level of speech. Amplitude is sampled approximately every 18 milliseconds (it will vary depending upon the sample rate). The higher the asterisk is on the screen, the louder the speech is. For example, move the editing cursor to the far left and then to the right a few steps. Press F7 and you should begin to hear the "s" in "six". Continue moving the cursor to the right, pressing F7 each time, until you begin to hear the "i" in six, then move the cursor to the left so that the only sound played back is the first "s" in "six". As you will note, the sibilents, such as "ss" and "sh", tend to be loud on speech playback. The solution is to reduce the volume. Do the following: reduce all the amplitude levels from the start of "six" to the cursor to a value of 3. Now play back the entire word with the F5 key and you should notice quite an improvement. Next repeat the same for the last "s" in "six". Another application is to follow leading plosives (e.g. "t" in "two" or "c" in "cat") with a short gap.

HAPPY EDITING!

IMPORTANT NOTICE TO COMMODORE USERS--VERSION 3.05

New 'time-out' feature (not mentioned in the manual). When the 'LEARN n', 'TRAIN n', or 'RECOG n' commands are used, the recording routines will automatically time-out after approximately 35 seconds if no input to the microphone is present (such that actual recording never begins). The time-out value can be changed in fractional second increments by changing the number in location 3. For example: POKE 3,6 will cause recording routines to wait 2 seconds before timing-out. POKE 3,170 (default value) gives a delay of 35 seconds. When a time-out occurs, a value of 250 will be returned in location 151.

Page 35 of the Owner's Manual discusses voice recognition threshold values, MIN and MAX, with default values of 30 and 300, respectively. Default settings have been changed to 450 for MAX and 50 for MIN. Lower values might be tried after gaining experience

Error in manual, page 37, relating to memory locations for MIN and MAX settings in the VOICE/RECOG program. Change four locations from 45607, 45608, 45609, and 45610 to 45351, 45352, 45353, and 45354, respectively. (The new template area has been shifted downward to \$B100 to \$BD2B.)

Speech created using previous Voice Master programs will not work with the new 3.0 version.

On TRAIN, an overflow occurs if input duration is excessive. The computer will then tell you to reTRAIN.

Error codes are placed in location 151 if an error occurred in speech recording or recognition as follows:

- 250 = Time-out has occurred.
- 251 = Word too long (recognition only). Maximum word duration is 2 seconds.
- 252 = 'Z' key pressed (only while talking).
- 253 = 'Q' or RUN/STOP key pressed when ? appears in the corner of screen.
- 254 = Word not recognized--MIN threshold exceeded
- 255 = Word not recognized--MAX threshold insufficient.

The new Voice Master incorporates several improvements over the previous model: how the voice amplitude information is processed (reduced frequency of calibration), automatic gain control (AGC), and a more finished plastic case. Proper gain adjustment is still required, but it is less sensitive. The level light should glow only occasionally and for loud vowel sounds (such as "ah").

The manual was written primarily for software version 2.19. Machine language program names have been changed. Correct the manual by replacing names as:

VM2.1	to	VM3.0
VM2.1R	to	VM3.0R
VR1.0	to	VR3.0
VM2.1N	to	VM3.0N

Weged in command changes: Replace BLANK (with no index number) with BLANK 255. Others not changed. Replace RECOG (with no index number) with RECOG 0. Others not changed.

* * * Headset: Mike plug is red on later model headsets. (Manual says black). If in doubt, try both and use one that causes level light to glow.