



TITLE:

The available speech sample rate for EM57000 series

REVISED DATE	:	13, JUNE, 1998
REVISED VERSION	:	1.0
APPLY TO CHIPS	:	EM57000 Series Chip
APPLY TO SOFTWARE	:	ALL EM57000 series coding system above version 2.1

SEE ALSO:

1. EM57000 series provides multi sample rate options for speech playing.
2. The available speech sample rate and corresponding reference melody level is shown as following :

sample rate (Hz)	Musical Key
31,250	
27,778	
25,000	
22,727	
20,883	MI
19,231	#RE
17,857	RE
16,667	#DO
15,625	DO
14,706	SI
13,889	#LA
13,158	LA
12,500	#SOL
11,905	SOL
11,364	#FA
10,870	FA
10,417	
10,000	MI
9,615	#RE
9,259	
8,929	RE
8,621	#DO
8,333	
8,065	DO
7,813	
7,576	SI
7,353	
7,143	#LA
6,944	
6,757	LA



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6,579	
6,410	#SOL
6,250	
6,098	
5,952	SOL
5,814	
5,682	#FA
5,556	
5,435	
5,319	FA
5,208	
5,102	
5,000	MI
4,902	
4,808	
4,717	#RE
4,630	
4,545	
4,464	RE
4,386	
4,310	
4,237	#DO
4,167	
4,098	
4,032	
3,968	DO
3,906	

3. To play speech with above-mentioned sample rate, use the command

```
PLAY SECTION, data
```

where data can be

```
"4K", "5K", "6K", "7K", ..... , "22K"
```

or

```
"#4", "#5", "#6", "#7", ..... , "#22"
```

or

```
integer between #4000 ~ #32000".
```

* compiler will find the value which is nearest to above mentioned sample rate for this play command.

Following are some examples :



A. Play section 1 with 4K Hz sample rate.

```
PLAY SECTION1 4K
PLAY SECTION1 #4
PLAY SECTION1 #4000
PLAY SECTION1 #4100
```

B. Play section 2 with 10870 Hz sample rate.

```
PLAY SECTION2 11K
PLAY SECTION2 #11
PLAY SECTION2 #10870
PLAY SECTION2 #11000
```

4. Note that whenever the play command executed, the Accumulator content will be changed. Please don't try to cross the PLAY command store/use accumulator content, that is don't try to store data into accumulator, execute play command, and then use it after play command !

A. Wrong program :

```
MOV M1      #0
MOV A       M1      ; Content of A will be equal to M1
PLAY SECTION1 10K   ; Content of A will not be equal to M1
                ; it changes after play command.
CAJE #0000B   LEVEL1 ; A != 0, it will not branch to LEVEL1
```

B. Correct program :

```
PLAY SECTION1 10K   ;
MOV M1      #0      ;
MOV A       M1      ; Content of A will be equal to M1
CAJE #0000B   LEVEL1 ; A != 0, it will not branch to LEVEL1
```