



Figure 1-2 Tone output

IC SM-305 includes shift register, octave divider, and harping matrix functions.

The data that had been transferred to the shift register is now transferred to the harping matrix.

There the 12-tone octave divider and sound is produced in accordance with the data. Refer to figure 1-2.

Harping Matrix

SM-305A produces 3 footage groups.

Footage Group-1	4'	2-2/3'	2'	1-1/3'
Footage Group-2	8'	5-1/3'	4'	2-2/3'
Footage Group-3	16'	10-2/3'	8'	5-1/3'

SM-305B produces 2 footage groups.

Footage Group-4	1-3/5'	1'	2/3'	1/2'
Footage Group-5	4/5'	1/3'	1/4'	1/8'

Footage groups used in the CX-3 are as listed below.

SM-3054-I	Footage group-3	(But without 10-2/3')
SM-3054-II	Footage group-1	
SM-3058	Footage group-4	(But without 2/3' or 1/2')

(Refer to the Harping matrix — footage group chart)

In other words, the top octave divider produces 12 frequencies — C# (4434.96Hz) D, D# ... B, C (8372Hz) etc. For example, to get 4' C, which is 4 octaves lower, the 4186Hz is divided by 32 to obtain 130.81Hz (C). This note centered around VDD/2 is sent to tone out and from there to each of the fixed filters.