

## Sound Quality Characteristics of the Cicada Sound

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1.

2.1

Head acoustics社 Artificial  
Fig 1

가 Head

가 가

가



Fig 1. The measurement of the cicada sound.

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(Free Field)  
(95dB)  
(Dynamic range) 104dB

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CADA-X Test monitor  
( ), ( ),  
( ), ( )

2.

24.83sone 가

3.37acum 가

0.080 asper 가

가

가

† ;  
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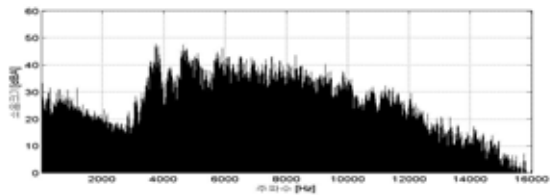
(Fluction strength) 가 0.52 vacil  
 가 가 - -  
 가  
 Table 1 , , 가

Table 1. The sound quality of the 3 kinds of cicada sound.

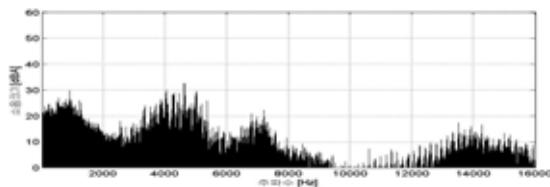
Kinds of icada	dBA	Loudness (sone)	Sharpness (acum)	Roughness (asper)	Fluction Strength (vacil)
Korean Blockish Cicada	<u>73.0</u>	<u>24.83</u>	<u>3.37</u>	<u>0.080</u>	0.12
Robust Cicada	66.8	21.68	2.37	0.074	<u>0.52</u>
Meimuna Mongolica	66.9	21.33	2.81	0.062	0.34

2.3

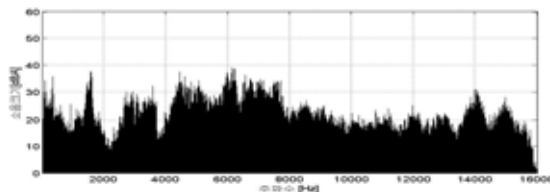
Fig 2-(a) 4,000Hz



(a) Korean blockish cicada



(b) Robust cicada

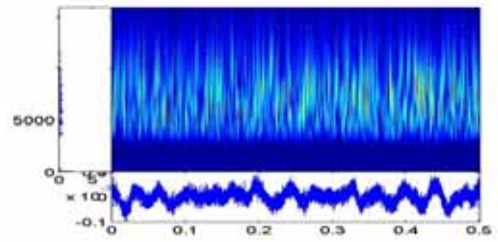


(c) Meimuna mongolica

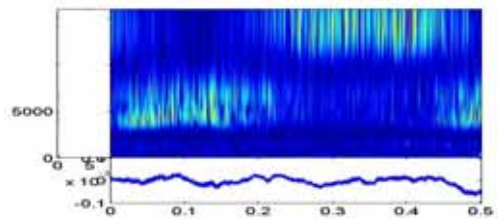
Fig 2. The frequency analysis of the 3 kinds of cicada sound.

2.4

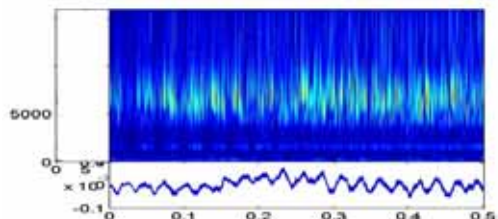
Fig 3 stft(Short Time Fourier Transform)



(a) Korean blockish cicada



(b) Robust cicada



(c) Meimuna mongolica

Fig 3. The time-frequency analysis of the 3 kinds of cicada sound.

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(dBA)가  
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