HOW TO READ
THE MAP OF WOODNOTES

When I was young, I saw a little pretty bird on the mountain. The bird quickly flew away, leaving only sound behind. I looked up in the sky to find the bird but all I could see was tree branches and forest. The bird kept on singing, but I had no idea where it was. I had no other choice than to mimic the sound of the bird and ask my dad the name of the bird. My dad used to tell me which bird it was. **From very young, bird was the tree branches and big forest to me.** This experience made me to visualize the sound of birds like forest.

BIRDS SELECTED CONSIDERING THE SEASON AND HABITAT

I have **selected sixteen birds into four categories** of spring and summer migrant birds, winter birds, summer birds and resident birds. Then I have selected one bird for each season, choosing non-repeating birds. Also, I **sampled the color of the bird, used the complementary color to harmonize the forest with the color of the bird's feather**.

MIGRANT

힝둥새 OLIVE-BACKED PIPIT
진홍가슴 SIBERIAN RUBYTHROAT
검은머리촉새 YELLOW-BREASTED BUNTING
발즁다리 BUFF-BELLIED PIPIT

WINTER

긴꼬리홍양진이 LONG-TAILED ROSEFINCH
상모솔새 GOLDCREST
검은머리쑥새 REED BUNTING
솔잣새 RED CROSSBILL

SUMMER

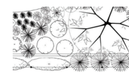
꾀꼬리 BLACK-NAPED ORIOLE
쇠유리새 SIBERIAN BLUE ROBIN
물총새 COMMON KINGFISHER
호랑지빠귀 WHITE'S THRUSH

RESIDENT

진박새 COAL TIT
방울새 ORIENTAL GREENFINCH
곤줄박이 REED BUNTING
동고비 NUTHATCH

INSPIRATION OBTAINED FROM THE BIRD'S EYE VIEW

I think it is the shape of the tree in landscape plan. It sufficiently conveys the sense of tree and forest with its form and at the same time, it is the shape that can be harmonized with the shape of the bird's feather. Therefore, it has developed into the Map of Woodnotes.



MANDALA MADE USING SCALES

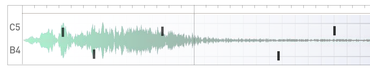
The sound of bird relaxes mind and body. This caught my attention, and I combined this with mandala, which visually represents healing and meditation. I have found the common image from the snowflake image of CYMASCOPE.

EXTRACTING SCALES

I have used the Musebook tuner and Q-base to increase the accuracy in extracting the sound of the birds, figuring out the scale.

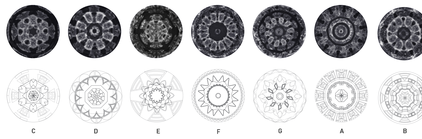
*MUSEBOOK TUNER: The method of getting scale as the bird makes the sound. ◀) → C_B

*Q-BASE: The method of getting the scale after the bird makes the sound, with the time checked.



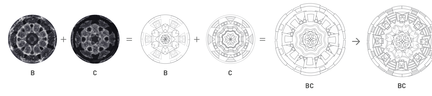
CYMASCOPE

According to an article 'The amazing images that let us 'see' music (and could even help us communicate with dolphins)' from the Daily Mail, UK on Jan. 30. 2013, with the machine called 'Cymascope,' sound can be transformed into image and find out the sound of each scale. The image resembles snowflake. The scale images and video is provided for free on the cymascope website. Using this, I have made the center mandala, and for those with more than two scales, I have combined the mandala of each scale.



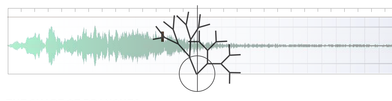
EXPANDING THE SHAPE OF THE MANDALAS IN DETAIL

For those with more than two scales, I have combined the mandala of each scale. The bigger the mandala is, the more elaborate the process was.



BRANCHES MADE ACCORDING TO THE LEVEL OF VOLUME

The below is the volume and branch shape of the sound of nuthatch. If you take a look at the size of the sound, looked from the center, the left has much bigger width compared to the right. I have made it visible with the branch. **The branch rises higher as the sound gets bigger, and it gets horizontal as the sound gets smaller.**



THE SHAPE OF BRANCHES

With the mandala in the middle, the number of first branch represents **the frequency of the bird crying**. To explain the left image, it is a bird that cries 4 times within 30 seconds.

The width between the branches was made according to the angle indicator. The more the bird cries within the 30 seconds, the more branches fill up the mandala. **The number of cries and width of indicator is inverse proportioned**.

FOLIAGE DENSITY REPRESENTING VOCAL RANGE

I have checked the scale range with Musebook tuner, and captured the sound once again with Cubase. **I designed the image to have more and bigger branches and leaves as the range gets bigger**. I also designed the circles to get smaller in proportion and the colors of the leaves to be less variant as the scale range gets 200HZ smaller from the bird with widest scale range.

LISTING BIRDS IN DESCENDING ORDER OF VOCAL RANGE

Arranged the birds from with widest range to narrowest range, and listed the colors used in each leaves. **As the range is wide, the more colors are used to have more abundant leaves. As the range is narrow, the less colors are used to have more sparse leaves.** Also, the circle was designed to become narrower proportionally as the range gets narrower.

Listing by the range, colors extracted from the colors of the birds and usedon the leaves.

The narrower the range is, the smaller the circle got.

HOW TO READ THE MAP OF WOODNOTE

SEASON

Choose the season of the desired bird. (Migratory birds, Winter birds, Summer birds, Resident birds)

HABITAT

I have placed the birds according to the method of reading contour map. The further the birds are from the center, the lower the place they live.

Choose the season and place the bird lives. For example, if you want to listen to the sound of summer forest near the river, choose the summerpart and listen to the most far away sound.

LONG-TAILED ROSEFINCH URAGUS SIBIRICUS

The bird with dense branches cry more, the birds with small and sparse leaves have narrow scale range.

Check the details written in grey.