Background

Headphone manufacture has boomed recently (new and existing brands) as a result of the ever increasing popularity of MP3 players, smart-phones and other portable devices capable of audio output.

Furthermore, with the growth of more users enjoying music with headphones, the high class headphones made with innovative materials and improved drivers are now drawing users’ attentions.

However, the sound field (bi-phonic※) formed with the driver closely fitting to the ears makes the listener feel that the sound is coming from the head center (Internal Sound Localization), this is a common problem with conventional headphones.

CROSSZONE have developed the CZ-1 which solves this problem. The CZ-1 produces a natural ‘spatial’ sound by means of an acoustic method solution.

※Conventional music sources are mostly made on the premise of playing back the music through dual channel stereo speakers. The sound field to play out the music source through headphones is called bi-phonic, which is very different from the sound field originally expected by the music producers and the artists.

CZ-1 Main Features (Actualization of 3 ”Natural” Factors)

1. Natural External Sound Localization (Front Side Localization) supported by ART (Acoustic Resonance Technology)
   Each earpiece is equipped with two driver units to play the main sound sources (tweeter/woofer) and another reserved driver unit to play the sound sources of the opposite channel, a natural sound field is carried out without any music source selection by the adoption of ADC (Acoustic Delay Chamber) technology.

2. Actualization of natural sound quality and good balance of sound frequency
   As the diaphragm plate on the two driver units for the main sound sources (Tweeter 23mm/ Woofer 40mm) is coated with beryllium (see Appendix Photo 1) and the brass frame (see Appendix Photo 2) is adopted for the woofer driver, the balance of natural sound is well reproduced from low to high frequency.
3. The comfortably fitting design allows long periods of listening without fatigue or discomfort.
   We all have different head sizes and so the structural design of most headphones results in uncomfortable lateral pressure on the head. The CZ-1 is different, the headband is made from die cast magnesium which retains its shape and is not easily deformed. This result is a much lower lateral pressure, allowing for comfortable long term listening.

**Other Features**

1. **A striking visual design, born from the unique product characteristics.**
   Due to the tridimensional configuration of the three driver units, the housing has a unique triangular shape. The ADC structure that allows for the ART technology is in fact the reason for the unique triangular design.

2. **Dedicated cables to support high sound quality and high-resolution**
   A dedicated high quality cable is supplied with the CZ-1.
   The OFC (oxygen free copper) Ritz cable features an anti-noise, twisted structure. As there are 8 cores (4 X 2) separated from the plug at the amplifier side, this assures left-right channel separation. In addition, as the housing cable connector has a waterproof structure, sound quality variation due to air leakage is well controlled.

   The high quality cable supplied can be connected to either the left or the right earpiece. This adds to comfort and convenience when using the CZ-1. This feature also reduces wear and stress on the cable and the headset. (Left / right channel integrity is maintained, whichever side the cable is connected)
   ※Standard accessorized cables are two cables of 1.5m (for mobile) and 3.5m (for listening room).

3. **“Made in Japan” words that inspire quality and trust**
   All parts are sourced locally from the EMS makers’ precision machining technology. Assembly and optimization is carried out in Okaya City, Nagano Prefecture, JAPAN. Superior quality is assured.

**Main Specifications**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Closed System</th>
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<tbody>
<tr>
<td>Frequency Range:</td>
<td>20 Hz - 40 kHz</td>
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<tr>
<td>Sensitivity:</td>
<td>97dB</td>
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<tr>
<td>Impedance:</td>
<td>75Ω</td>
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<tr>
<td>Weight:</td>
<td>485g（Body only）</td>
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<tr>
<td>Accessories:</td>
<td>Dedicated 3.5m Cable (Standard Plug)</td>
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<tr>
<td></td>
<td>1.5m (Mini Plug)</td>
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<tr>
<td></td>
<td>Adaptor Plug</td>
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Photo 1: Diaphragm plated with beryllium

Photo 2: Hardened brass frame