# NW-ZX2

#### Hi-Res Audio Digital Music Player

Powerful and ultra-efficient technology meets high-capacity battery life and touchscreen ease of use for a powerful, personal Hi-Res audio experience that will take you back



#### **Bullets**

- 128GB1 Walkman® Hi-Res Audio Digital Music Player
- Compatible with: DSD, WAV, FLAC, AIFF, ALAC, MP3, WMA and more
- Enjoy up to 60-hours MP3, and 33-hours Hi-Res playback on a single charge<sup>2</sup>
- Bluetooth® with LDAC™ Hi-Fidelity wireless music streaming
- Built-in, dual-band Wi-Fi, allows users to enjoy music stored on other DLNA enabled devices
- microSD slot allows expanding music capacity up to an additional 128GB<sup>1</sup>
- Google™ Android™ v4.2: Indulge in music, games, videos and more through the Google Play Store
- 4.0" FWVGA TRILUMINOS™ LCD touchscreen display with OptiContrast Panel
- Engineered for Sound: S-Master® HX full digital amp for unparalleled, delicate, and dynamic sound
- DSEE HX upscales audio (MP3, AAC, ATRAC, and WMA) to near Hi-Res quality
- Drag & drop from iTunes® for Mac® or Windows®
- USB digital audio output for lossless connectivity with compatible devices
- Also includes leather carrying case and USB cable

#### **Features**

## Portable Hi-Fi redefined...

Beginning with high-efficiency, high-power circuit board, a sophisticated DAC, and a robust S-Master® HX digital amplifier we then layer the Google $^{\text{IM}}$  Android $^{\text{IM}}$  OS, a vivid TRILUMINOS $^{\text{IM}}$  touchscreen LCD and cap it off with a sleek and solid aluminum chassis. The end result is sweet, soothing, and natural sound that takes you back...

#### That's quite a music collection...

128 GB¹ built-in flash memory allows for up to 2700 Hi-Res tracks (LPCM 1411kbps @ 4 minutes/song). When your collection starts to burst at the seams, you can easily expand memory capacity further using the included microSD slot (up to 256 GB¹).

#### Your Hi-Res favorite tracks, even in DSD!

The NWZ-ZX2 broadly supports the playback of a plethora of Hi-Res digital music file formats including: MP3, WMA, WMA lossless, WAV, FLAC, L-PCM, AAC, ALAC, AIFF, DSF, and DSDIFF.

For optimized playback, a user-selectable DSD filter allows for refined playback, either a slow roll-off ideal for expressive music and a warmer sound experience or sharp roll-off tailored for energetic music and a fuller sound benefitting from a sharp attack.

#### Long battery life

A built-in, high-capacity, lithium ion battery coupled with power supply-line enhancements delivers enhanced battery life: up to 60 hours of audio playback (MP3)/ up to 33 hours (FLAC 192/24-bit) per charge.<sup>2</sup>



## **Enjoy high-quality wireless music streaming**

Enjoy simplified, high-resolution Bluetooth® audio streaming with Sony LDAC codec and Near Field Communications (NFC) technology.³ Simply align your compatible devices via the NFC logos to activate or deactivate pairing and let the magic happen.

## Google™ Android™

Not just a familiar face, Google™ Android™ and dual-band Wi-Fi® affords the ZX2 access to: Gmail, Google Search, Google+, Google Play Books, Music, Movies & TV, Games and the Google Play Store.

#### **Dual band Wi-Fi®**

Built-in dual-band Wi-Fi® support also allows users to access and share music stored on other DLNA enabled devices.

#### Vivid, touchscreen display

The 4.0" FWVGA TRILUMINOS™ LCD touchscreen display with OptiContrast panel delivers outstandingly vivid album artwork, photos, and even videos.

## Optimized chassis with side-mounted controls

A gold-plated, copper chassis delivers high-rigidity with low impedance, the ideal base from which to deliver superb audio reproduction.

Side-mounted controls allow for natural play/pause and track navigation when stowed in a jacket pocket or even when using the supplied leather carrying case.

## High-efficiency...

A low-impedance, thick film, copper foil Printed Circuit Board Assembly optimized for superior power delivery, renders an ultra-low noise-floor for enhanced spatial response and tonality-a listening experience that sounds and feels real.

#### Sophisticated sound

S-Master® HX digital amplification circuitry with enhanced power supply and high-power output stage delivers sophisticated and transparent audio reproduction.

## **Dual clock oscillators**

As is the case with our line of Hi-Res headphone DAC/Amplifiers, dual dedicated clock circuits allow for switching between 44.1kHz (44.1/88.2/176.4kHz, CD/DSD) and 48kHz (48/96/192kHz), depending on music file sampling frequency. The benefit of reducing DA conversion timing inaccuracies is enhanced sound stage integrity and audio response, for superior noise and distortion-free audio reproduction.

#### **DSEE HX**

DSEE HX offers natural sound with a spacious feel by revitalizing the audio signal and also restoring the high frequency sounds stripped by the audio compression process to near hi-resolution sound quality.

#### Drag, drop and go

With a Walkman® player, you are never tied to just one music service. Easily drag and drop files from either iTunes® or Windows® Media and enjoy.

## **USB Digital output**

When used with a compatible device, such as a PHA-3 Headphone DAC/Amplifier, pairing the two using the USB Digital output can result in lossless interconnectivity and a purer listening experience.



## **General Specifications**

| General Specifications |  |
|------------------------|--|
| GENERAL SPECIFICATIONS |  |
| Audio                  | Audio Format(s) Supported: MP3: 32-320 kbps (incl. VBR) at 32, 44.1, and 48 kHz WMA: 5-384 kbps (incl. VBR) at 8-48 kHz FLAC: 16/24-bit at 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48, 88.2, 96, 176.4, and 192 kHz L-PCM: 16/24-bit at 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48, 88.2, 96, 176.4, and 192 kHz AAC: 16-320 kbps (incl. VBR) at 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 kHz HE-AAC: 32-144 kbps at 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 kHz ALAC: 16/24-bit at 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48, 88.2, 96, 176.4, and 192 kHz AIFF: 16/24 bit at 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48, 88.2, 96, 176.4, and 192 kHz DSD: 1-bit at 2.8224 or 5.6448 Mhz Frequency Response: 20 to 40,000 Hz (when playing data file, single signal measurement) Audio Power Output: 15 + 15 mW  |
| Audio Features         | Play Mode: Normal / Repeat / Shuffle / Shuffle & Repeat / Repeat 1 Song / SensMe™ channels Sound Mode: ClearAudio+ (On/Off) Sound Mode: Equalizer Sound Mode: Clear Bass Sound Mode: Surround Sound Sound Mode: DSEE HX (On/Off) Sound Mode: Dynamixc Normalizer (On/Off)  |
| Display                | Display Technology: TFT display with white-LED backlight Screen Size: 4.0 inch (10.2 cm) FWVGA (854x480 pixels)  |
| General                | Music Storage Capacity (Approx): 128 GB (expandable via optional microSD)  |
| Hardware               | Display: 4.6 in. FWVGA TFT display (854 x 480 pixels) Interface: Hi-Speed USB (USB 2.0 compliant) System Requirements: IBM PC/AT compatible computer preinstalled with the following Windows operating systems 4: Windows® XP5 (Service Pack 3 or later) Windows Vista® (Service Pack 2 or later) Windows® 7 (Service Pack 1 or later) Windows® 8 Mac OS X v10.6 or later Not supported by OSs other than above. CPU: 1 GHz processor (2.6 GHz recommended for video playback) RAM: 1 GB or more (2 GB RAM required for Windows 8 64-bit) Hard Disk Drive / Solid State Drive: 600 MB or more of available space Internet Explorer 7 or later Internet connection (for Gracenote® MusicID® service, podcast features, Store access, or online help). We do not guarantee operation for all computers even if they meet the above System Requirements. Not supported by the following environments Personally constructed computers or operating systems An environment that is an upgrade of the original manufacturer-installed operating system Multi-boot environment |
| Inputs and Outputs     | Digital Audio Input(s): WM-Port (22 pin) Headphone Output: Stereo mini-jack USB Port(s): High-speed USB 2.0 compliant  |
| Memory                 | Memory Size: 128 GB, Actual available memory for media contents 113 GB (121,269,354,496 bytes) User Memory Capacity (Approx.): microSD (up to 2 GB) microSDHC (up to 32 GB) microSDXC (64 GB and more)   |
|                        |  |



| Power                      | Battery Charging (Approx): USB-based: 4.5 Hrs (full charge) Battery Indicator: LED Battery Life Indicator (Green/Orange/Red) Battery Life (Approx): MP3 @ 128 kbps = 60 Hrs. Battery Life (Approx): Linear PCM @ 1411 kbps = 61 Hrs. Battery Life (Approx): FLAC @ 96 kHz/24 bit = 43 Hrs. Battery Life (Approx): FLAC @ 192 kHz/24 bit = 33 Hrs. Battery Life (Approx): DSD @ 2.8224 Mhz/1 bit - 22 Hrs. Battery Life (Approx): DSD @ 5.6448 Mhz/1 bit - 16 Hrs. Battery Life (Approx): MPEG-4 @ 384 kbps = 9 Hrs. Power Type: Built-in Rechargeable Li-ion Battery |
|----------------------------|--|
| Video                      | Video Format(s) Supported: AVCHD: 10 Mbps bitrate, 30 fps frame rate, 720 x 480 max MPEG4: 6 Mbps bitrate, 30 fps frame rate, 720 x 480 max WMV9: 6 Mbps bitrate, 30 fps frame rate, 720 x 480 max   |
| Video Features             | JPEG Playback: JPG: Max. image size 6,048 x 4,032 pixels PNG: Max. Image size 2,048 x 2,048 pixels   |
| Weights and Measurements   | Dimensions (Approx.): $64.7 \times 130.4 \times 16.2 \text{ mm}$ (2 5/8 x 5 1/4 x 21/32 in) Projecting parts not included. $65.1 \times 131.2 \times 18.5 \text{ mm}$ (2 5/8 x 5 1/4 x 3/4 in) Weight (Approx.): $235 \text{ g}$ (8.3 oz)  |
| Wireless Connectivity      | Frequency Band: Bluetooth spec 3.0 IEEE 802.11a/b/g/n<br>Maximum Range: Line of sight approx.30 ft (10 m)  |
| BLUETOOTH FEATURE & DEVICE |  |
| Bluetooth Audio Feature    | Audio Codec: LDAC and SBC codecs   |
| IN THE BOX                 |  |
| Quick Start Guide          |  |
| User Guide                 |  |
| USB Cable (1)              |  |
| Leather Case (1)           |  |
| Spacer (1)                 |  |
|                            |  |

- $1.1\,\mbox{GB}$  equals 1 billion bytes, a portion of which is used for data management functions.
- $2. \, Actual \, battery \, life \, will \, vary \, based \, on \, product \, settings, \, usage \, patterns \, and \, environmental \, conditions.$
- 3. Interoperability and compatibility among Bluetooth® devices vary.
- ${\bf 4}$  Excluding OS Versions not supported by Microsoft.
- 5 Excluding 64-bit OS versions.

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