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SDHC Logo is a trademark of SD-3C, LLC.

TAFMat is a trademark of TEAC Corporation, registered in the U.S. and other countries.

Other company names, product names and logos are the trademarks or registered trademarks of their respective owners.
Thank you for purchasing the WX-7000 WIDE BAND DATA RECORDER ("WX-7000"). Please read this document in its entirety before using the product to get the best performance and ensure safe and proper operation.

1-1. Disclaimers

Information is given about products in this manual only for the purpose of example and does not indicate any guarantees against infringements of third-party intellectual property rights and other rights related to them. TEAC Corporation will bear no responsibility for infringements on third-party intellectual property rights or their occurrence because of the use of these products.

1-2. included accessories

If anything is missing or damaged, contact us. (For contact information, see the last page.) For a list of included accessories, see “16-4. Included accessories” on page 75.

1-3. Overview

Wideband, multichannel recording for long durations continues to increase in importance for measurements in the fields of space exploration, aircraft development, power generation and railways. Moreover, as the scales of the subjects measured increase, the need has arisen for standalone data recorders that have the ability to back up irreplaceable measurement data and that can be operated easily. The WX-7000 series of wideband data recorders fulfills these needs. These systems use RDX cartridges and SDHC cards as recording media, and they can record 16-bit/16-channel or 24-bit/8-channel data in frequency bands up to DC 80kHz. Systems with up to 128 channels can be provided using 16-channel expansion units. Furthermore, by synchronizing two recording units, up to 256 channels of measurements can be recorded simultaneously. The quantization bit depth can be set to either 16-bit or 24-bit, which allows measurements with high dynamic ranges.

1-4. Features

- Wideband, high-resolution, multichannel stand-alone data recorders that can record 16-bit/16-channel or 24-bit/8-channel data in frequency bands up to DC 80kHz
- Wide dynamic range realized using 24-bit analog to digital conversion
- Two recording media types: RDX cartridges and SDHC cards
  - RDX cartridges with hard disk drives (HDD) have high capacities that provide long continuous recording times.
  - RDX cartridges with solid-state drives (SSD) have greater resistance to vibrations and shocks.
  - SDHC cards provide increased media accessibility.
- One system that combines one WX-7000 with eight AU-WXEPIO expansion units can record up to 128 channels
- Two systems can be synchronized, allowing up to 256 channels of recording
- High-speed data transmission with computers is possible using Gigabit Ethernet
- WX Navi waveform display software included
- TAFMat data format used
- Easy-to-read 320x240 3.5-inch TFT color display
- Graphical interface designs enable intuitive operation
- Voice memo recording and playback
- Stopping and starting recording and playback possible using external contact inputs
- Additional convenient functions include trigger recording and audio playback of recorded voice memos
- Synchronized AQ-VU video recording with 4-channel camera possible
- Files are saved regularly, preventing data loss due to unexpected power interruptions
- Power outage signals from an uninterruptible power supply (UPS) can trigger the system to conduct recording conclusion procedures to prevent data loss
- Panel lock function prevents accidental operation
- Analog input circuit offset and gain correction
- DC input and ICP sensor input can be used for analog input
- Analog input level monitoring LEDs
- Power supplied to ICP sensors can be switched between DC 24V and DC 28V for all 16 channels at once.
- Constant current to each ICP sensor channel can be switched between 0.5 mA and 4 mA.
- Signal line interruption detection for each channel when using ICP input sensors
- Reads ICP sensor TEDS information
- Analog monitoring output possible during recording
- Detection of analog filter input saturation due to excessive input
1-5. TAFFmat format

TAFFmat is an abbreviation for the TEAC data Acquisition File Format. This format is composed of a data file that contains data converted from analog to digital (binary format with a "dat" file extension) and a header file that contains recording conditions and other information (text format with an "hdr" file extension).

This system gives each single accumulation of data collected from when it starts recording until it pauses or stops an "ID" number. One data file and one header file are saved for each ID number. In addition, when voice memos are recorded, their files with "wav" extensions are also saved. These all have the same file name and "ID number." Only their extensions differ. When a new file name prefix is used, the ID number of the first recording is "1." This increases by one automatically each time file recording starts again.

16-bit data converted from analog to digital is recorded as 2-byte integer values from –32768 to +32767, while 24-bit converted data is recorded as 4-byte integer values from –8388608 to +8388607. Negative numbers are shown using two’s-complement notation. The byte order is from the lowest to the highest. The data order is from the first sampling channel to the second sampling channel and so on until the last sampling channel.

With the WX-7000 series, the input range of ±100% is equivalent to ±25000 for 16-bit A/D conversion and ±6400000 for 24-bit A/D conversion.

All data captured by a single sampling is called a ‘scan’. A data file is made of repeated scans.

Example of data for one scan at 6kHz sampling frequency

```
<table>
<thead>
<tr>
<th>ch1</th>
<th>ch2</th>
<th>ch3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

1/6000

The directory structure of each medium is as follows

Root (Root directory)

- WXDAT
  - Aaaaa001.dat
  - Aaaaa001.hdr
  - Aaaaa002.dat
  - Aaaaa002.hdr

- TEST0001
  - Aaaaa001.dat
  - Aaaaa001.hdr
  - Aaaaa001.wav

- TEST0002
  - Bbbbbb001.dat
  - Bbbbbb002.dat

1. WXDAT
   - Folder name automatically created by the WX-7000
2. TEST0001
   - Folder name created according to the recording file setting
3. Aaaaa001.dat
   - Aaaaa001.hdr
   - Aaaaa001.wav
   - Data, header and voice memo files created for a single ID

- Prepare media for use only with the WX-7000
- In order to conduct recording stably, keep the total number of files on the recording media to no more than about 1000. You should also check that the recording media has enough open space before beginning to record.
1-6. Recording media
Open the drive cover of the WX-7000 unit to access the RDX docking station and SDHC card slot.

1-6-1. RDX cartridge
One internal RDX 3.5-inch drive (HDD or SSD)
Recording capacity
HDD: 500 GB – 1 TB
SSD: 64 GB – 512 GB

1-6-2. SDHC card
One SDHC card slot
Compatible media
SDHC cards (SDXC cards not supported)
Recording capacity
4 GB – 32 GB
Recommended speed class
Class 10

1-6-3. Media verified for use
This unit uses RDX cartridges and SDHC cards for recording and playback.
We provide a list of RDX cartridges and SDHC cards that we have verified the operation of with this unit on our Industrial Products Division website.
http://datarecorder.jp/
You can also contact the sales office of our Industrial Products Division.

1-7. System composition
This system is composed of a WX-7000 recording unit and one or more AU-WXPIO expansion units.

Recording unit: WX-7000

Expansion unit: AU-WXPIO
By adding more AU-WXPIO expansion units, you can increase the number of input and output channels.
We offer products with 1, 2, 4 and 8 AU-WXPIO expansion units.

WX-7016 (16 input and output channels)

WX-7032 (32 input and output channels)
1. Introduction

WX-7064 (64 input and output channels)

WX-7128 (128 input and output channels)

- When multiple AU-WXPIO expansion units are connected, channel numbering starts with channel 1 at the top left and ends with the last channel (32, 64 or 128) at the bottom right.
2. IMPORTANT SAFETY PRECAUTIONS

FCC Part 15
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Caution
Changes or modifications to this equipment not expressly approved by TEAC CORPORATION for compliance could void the user’s authority to operate this equipment.

For the customers in Europe

WARNING
This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Pour les utilisateurs en Europe

AVERTISSEMENT
Il s’agit d’un produit de Classe A. Dans un environnement domestique, cet appareil peut provoquer des interférences radio, dans ce cas l’utilisateur peut être amené à prendre des mesures appropriées.

Für Kunden in Europa

Warnung
Dies ist eine Einrichtung, welche die Funk-Entstörung nach Klasse A besitzt. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betrieber verlang werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen.

For Canada

Industry Canada’s Compliance Statement:
This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

DISCLAIMER
TEAC disclaims all warranty, either expressed or implied, with respect to this product and the accompanying written materials. In no event shall TEAC be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information or other loss) arising out of the use of or inability to use this product.
3. Connections

3-1. Powering the unit

One included AC adaptor can supply power to both the WX-7000 recording unit and two AU-WXEPIO expansion units. AU-WXEPIO expansion units that are not connected to an AC adaptor receive power by connection cables. Connect AC adaptors and connection cables as shown in the following illustrations.

**CAUTION**
- Do not supply power to AC adaptors or DC INs until after securely connecting all connection cables between units.
- Before connecting or disconnecting connection cables, turn off the power to the AC adaptors and DC INs.
- Connect the EXPANSION OUT connector of the unit above with the EXPANSION IN connector of the unit below it using a connection cable.

3-1-1. WX-7016

![WX-7016 Diagram]

Connect the included AC adaptor to the DC IN on the WX-7000.

3-1-2. WX-7032

![WX-7032 Diagram]

Connect the included AC adaptor to the DC IN on the WX-7000.
3-1-3. WX-7064

Connect one included AC adaptor to the DC IN on the WX-7000 and the second included AC adaptor to the DC IN on the third AU-WXEPIO unit from the top.

3-1-4. WX-7128

Connect one included AC adaptor to the DC IN on the WX-7000, the second adaptor to the DC IN on the 3rd AU-WXEPIO unit from the top, the third adaptor to the 5th unit and the fourth adaptor to the 7th unit.
3. Connections

3-2. Connecting an uninterruptible power supply (UPS)

Even if a power outage occurs while a WX-7000 is recording, data except for that recorded just before the outage will be retained in most cases. This is because the unit regularly conducts file closing procedures during recording, so even if a power outage occurs while recording data, all data from the start of recording until the last file closing procedure for the outage will have been saved. However, since file management information is also recorded along with the measurement data to the recording media, regular file closing procedures alone cannot protect all data depending on the timing in some cases. For complete protection against power outages, use an uninterruptible power supply (UPS) for the external power source. Have the UPS send a power outage contact signal to the WX-7000 so that it will conduct recording completion procedures.

Power the WX-7000 through its AC adaptor from a power output from the UPS.

Connect the UPS power outage contact signal output to the WX-7000 UPS SIGNAL IN.

After confirming that the connection cables are securely connected between all units, turn on the power for the UPS and then the WX-7000.

For details about this unit’s UPS contact input connector, see page 25.

For details about the UPS contact signal output connector, please check with the manufacturer of the UPS as there are differences among models and manufacturers.

Operation after power outage

When a power outage signal is input during measurement recording, recording will stop and the unit will become idle.
3-3. Connecting with computers and oscilloscopes

- This unit’s LAN connection supports 1000BASE-T Ethernet. Use a compatible hub or router and computer.
- This unit’s LAN connection is compatible with Auto MDI/MDI-X. You can use a straight cable even when connecting with a computer directly. Use a category 7 LAN cable.
3. Connections

3-4. Connecting sensors

- Input setting: PA
  Example: Piezoelectric accelerometer
  Voltage output type with built-in preamp
  724ZT triaxial TEDS-compliant ICP

- Input setting: AC
  Amplifier for piezoelectric accelerometers
  SA-611

- Input setting: DC
  TEDS-compliant strain/DC amplifier
  SA-570ST

Piezoelectric accelerometer
Electric charge output type 60B

General pressure monitoring type
Strain Gauge Pressure Transducer
TP-HVR

Oscilloscope or other device
Microphone
Earphone
3-5. TEDS

A Transducer Electronic Data Sheet (TEDS) is a standard format defined in IEEE 1451.4 for recording information specific to a measurement sensor that is stored within the sensor itself. By connecting a TEDS sensor with a TEDS-compatible WX-7000, sensor calibration is made unnecessary, reducing the time required for measurement preparations.

- If transducer information is not compliant with the TEDS IEEE standard, correct information cannot be loaded and displayed.
- This system is compliant with TEDS Version 1.1.
4. Names and functions of parts

4-1. Front panels

WX-7000 recording unit

- Drive cover open

AU-WXEPIO expansion unit
4. Names and functions of parts

**A RDX indicator**

This shows the RDX status as follows.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Meaning</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlit</td>
<td>Inactive</td>
<td>The cartridge is not loaded properly or the docking station power is not on.</td>
</tr>
<tr>
<td>Lit green</td>
<td>Ready</td>
<td>The cartridge is ready for use.</td>
</tr>
<tr>
<td>Blinking green</td>
<td>In use</td>
<td>The cartridge is being accessed (including reading, writing and searching).</td>
</tr>
<tr>
<td>Lit yellow</td>
<td>Malfunctioning</td>
<td>A cartridge malfunction in the RDX docking station has been detected.</td>
</tr>
</tbody>
</table>

**B Drive cover**

This is the drive unit cover.
The SD card slot and RDX docking station are beneath the cover.
Always keep the drive cover closed when not loading or unloading an SDHC card or RDX cartridge. Moreover, keep it closed when data is being recorded or played back.

**C Display**

This 3.5-inch TFT color display has a 320x240 resolution and shows various information.

**D Operation controls**

- **CANCEL button**
- **MENU button**
- **HOME button**
- **SHIFT button**
- **VALUE knob/button**

When a cursor is visible, turn this to move it. Press to input a parameter and turn it to increase or decrease the parameter value.
Press to use it as an ENTER button.

- **Up (▲) button**
- **Down (▼) button**
- **Left (◄) button**
- **Right (►) button**

Use these to move the cursor.
When inputting parameters, you can also use these to increase or decrease values.

**E STANDBY/ON (◇/l) switch**

Press to turn the power on or put the unit into standby.
Press the switch up to turn the power on. Press it down to put the unit into standby.

**F Transport buttons**

- **Stop (■ STOP) button**
Press to stop recording and playback.

- **Record (● REC) button**
Press when the unit is idle to make it record ready.

- **Play (► FWD) button**
Press when the unit is idle or playback ready to start playback.
Press when the unit is record ready to start recording.

- **Pause (II PAUSE) button**
Press when the unit is idle or playing back to make it playback ready.
Press when recording to make it record ready.

- **Search (◄REW/► F FWD) buttons**
Use to search playback files.

**G Function (F1, F2, F3, F4) buttons**

**H VOLUME (SPEAKER) knob**

Use to adjust the playback volume of voice memos.

**I EARPHONE jack**

Connect the included earphone here.

- When an earphone is connected, sound will not be output from the speaker built into the side of the unit.

**J MEMO IN (mic input) jack**

Connect the included mic here to record voice memos.
When audio input is detected, the LED lights green.

Continued on the next page. ➔
4. Names and functions of parts

K MONITOR OUT connector
This can be used to output a monitor signal, which can be the input signal of any channel or the voice memos.

L SDHC card slot
Insert SDHC cards here. (See page 28.)

M RDX cartridge emergency ejection hole
Use if you cannot eject the RDX cartridge with the EJECT button. (See page 27.)

N RDX cartridge dock
Load RDX cartridges here. (See page 27.)

O RDX cartridge EJECT button and indicator
Use to eject RDX cartridges. (See page 27.)
The indicator shows the status as follows.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Meaning</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlit</td>
<td>No power</td>
<td>No power is being supplied to the RDX docking station.</td>
</tr>
<tr>
<td>Lit green</td>
<td>Ready</td>
<td>Power is being supplied to the RDX docking station and it is functioning properly.</td>
</tr>
<tr>
<td>Blinking green</td>
<td>Ejecting</td>
<td>The cartridge is being ejected from the docking station.</td>
</tr>
<tr>
<td>Lit yellow</td>
<td>Malfunction-ing</td>
<td>A malfunction has been detected in the RDX docking station.</td>
</tr>
<tr>
<td>Blinking yellow</td>
<td>Ready</td>
<td>The RDX media was being accessed when you pressed the EJECT button. After blinking yellow for a few seconds, it will light green.</td>
</tr>
</tbody>
</table>

P LEVEL LEDs
Each LED lights green when its input level exceeds 10% of its input range and lights red when it exceeds 115%. When using an ICP sensor, the LED lights yellow when there is no ICP current.
4-2. Side panels

The WX-7000 and AU-WXEPIO units are physically connected by four joint bars. The lengths of the joint bars differ for the WX-7016, WX-7032, WX-7064 and WX-7128 models.

**R** joint bars

**S** Built-in speaker

This outputs voice memos.

- When an earphone is connected to the earphone jack, no sound is output from this built-in speaker.
4. Names and functions of parts

4-3. Rear panels

**WX-7000 recording unit**

- **A** OPTION-1 slot
  This slot is for an option card with a height of 20.5 mm.

- **B** OPTION-2 slot
  This slot is for an option card with a height of 16.5 mm.

- **C** LAN (1000BASE-T) connector
  This is for an ethernet connection. Use to connect the system with a computer. The LED blinks when transmitting data.
  - Use a category 7 LAN cable.

**AU-WXEPIO expansion unit**

- **D** EXPANSION OUT connector
  Connect this to the EXPANSION IN connector of the AU-WXEPIO below it using a connection cable.

- **E** DIGITAL CONTROL input connector
  Use to control recording and playback with contact signals and to connect a remote control unit (option).

- **F** SYNC IN connector
  Use for synchronized recording input. Do not connect anything when not conducting synchronized recording.
4. Names and functions of parts

**G** AQ-VU synchronized recording connector
Use to control starting and stopping of AQ-VU recording, as well as to synchronize the time.

**H** SYNC OUT connector
Use for synchronized recording output. Do not connect anything when not conducting synchronized recording.

**I** EXT TRIGER IN connector
Use to input external trigger contact signals to start and stop recording.

**J** Cooling fans
These are exhaust fans to cool the unit. Do not block their outputs.

**K** FG (frame grounding) connector
Connect a grounding wire here.

**L** DC IN power connector
Input a voltage between 11 V and 30 V.

**M** UPS SIGNAL IN (contact input) connector
Connect the desired contact output of an uninterruptible power supply here. Confirm the specifications of the connector beforehand. (See page 25.) Do not connect anything if you are not using this feature.

**N** EXPANSION OUT connector
Connect this to the EXPANSION IN connector of the AU-WXEPiO below it using a connection cable.

**O** EXPANSION IN connector
Connect this to the EXPANSION OUT connector of the WX-7000 or AU-WXEPiO unit above it using a connection cable.

**P** FG (frame grounding) connector
Connect a grounding wire here.

**Q** OUT connectors
Use to output measurement and playback signals.

**R** Cooling fan
This is an exhaust fan to cool the unit. Do not block its output.

**S** DC IN power connector
Input a voltage between 11 V and 30 V. Not every expansion unit requires direct power input. (See pages 10-11.)
5. Connector specifications

5-1. DIGITAL CONTROL input connector

Function
Use to control recording and playback with contact signals and to connect an optional remote control unit.

Contact input
REC_FWD, REC, FWD, STOP, PAUSE, event, panel lock, internal clock calibration

Status output
REC_FWD, REC, FWD, STOP, PAUSE, event, panel lock

Input and output circuit formats

Input format
L level: 0.4 V or less  
H level: Open or 2 V or more  
Pulse width: 100 msec or more

Output format
Open drain, 8mA maximum sync current

Connector
Angled, half-pitch, 50-pin (Hirose DX10A-50S)

Panel lock input signals
Panel lock input signals can be used to prevent use of the buttons on the front panel. The first signal locks the buttons, and the next signal unlocks them.

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>2</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>3</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>4</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>5</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>6</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>7</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>8</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>9</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>10</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>11</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>12</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>13</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>14</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>15</td>
<td>RTCADJIN</td>
<td>Internal clock adjustment input</td>
</tr>
<tr>
<td>16</td>
<td>REC_FWDIN</td>
<td>REC FWD input</td>
</tr>
<tr>
<td>17</td>
<td>STOPIN</td>
<td>STOP input</td>
</tr>
<tr>
<td>18</td>
<td>RECIN</td>
<td>REC input</td>
</tr>
<tr>
<td>19</td>
<td>FWDIN</td>
<td>FWD input</td>
</tr>
<tr>
<td>20</td>
<td>PAUSEIN</td>
<td>PAUSE input</td>
</tr>
<tr>
<td>21</td>
<td>EVENTIN</td>
<td>EVENT input</td>
</tr>
<tr>
<td>22</td>
<td>REWINDBIN</td>
<td>REWIND input</td>
</tr>
<tr>
<td>23</td>
<td>FAST_FWDIN</td>
<td>FAST FWD input</td>
</tr>
<tr>
<td>24</td>
<td>PLOCKIN</td>
<td>Panel lock input</td>
</tr>
<tr>
<td>25</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>26</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>27</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>28</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>29</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>30</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>31</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>32</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>33</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>34</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>35</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>36</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>37</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>38</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>39</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>40</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>41</td>
<td>REC_FWDSTS</td>
<td>REC FWD output</td>
</tr>
<tr>
<td>42</td>
<td>STOPSTS</td>
<td>STOP output</td>
</tr>
<tr>
<td>43</td>
<td>RECSTS</td>
<td>REC output</td>
</tr>
<tr>
<td>44</td>
<td>FWDSTS</td>
<td>FWD output</td>
</tr>
<tr>
<td>45</td>
<td>PAUSESTS</td>
<td>PAUSE output</td>
</tr>
<tr>
<td>46</td>
<td>EVENTSTS</td>
<td>Event output</td>
</tr>
<tr>
<td>47</td>
<td>REWINDBSTS</td>
<td>REWIND output</td>
</tr>
<tr>
<td>48</td>
<td>FAST_FWDSTS</td>
<td>FAST FWD output</td>
</tr>
<tr>
<td>49</td>
<td>PLOCKSTS</td>
<td>Panel lock output</td>
</tr>
<tr>
<td>50</td>
<td>GND</td>
<td>Ground</td>
</tr>
</tbody>
</table>
5. Connector pin assignments

5-2. SYNC IN and SYNC OUT connectors

Function
Use these input and output connectors for synchronized recording with two systems. Do not connect anything when not conducting synchronized recording.

Clock input and output
FS, MSYNC

Control input and output
RECTRГ, SYNCTRG, COM

Status input and output
STS, SYNCERR, SYNCBUSY

Input and output circuit format
Serial communication
RS-422 (MAX4385 or equivalent)

POWER DOWN
LVCMOS level

Connector
Angled, half-pitch, 28-pin (Hirose DX10A-28S)

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>2</td>
<td>SYNCFS+</td>
<td>FS clock +</td>
</tr>
<tr>
<td>3</td>
<td>SYNCFS-</td>
<td>FS clock -</td>
</tr>
<tr>
<td>4</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>5</td>
<td>MSYNC+</td>
<td>Master clock +</td>
</tr>
<tr>
<td>6</td>
<td>MSYNC-</td>
<td>Master clock -</td>
</tr>
<tr>
<td>7</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>8</td>
<td>COM+</td>
<td>Command signal +</td>
</tr>
<tr>
<td>9</td>
<td>COM-</td>
<td>Command signal -</td>
</tr>
<tr>
<td>10</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>11</td>
<td>STS+</td>
<td>Status signal +</td>
</tr>
<tr>
<td>12</td>
<td>STS-</td>
<td>Status signal -</td>
</tr>
<tr>
<td>13</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>14</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>15</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>16</td>
<td>SYNCTRG+</td>
<td>SYNC trigger +</td>
</tr>
<tr>
<td>17</td>
<td>SYNCTRG-</td>
<td>SYNC trigger -</td>
</tr>
<tr>
<td>18</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>19</td>
<td>RECTRГ+</td>
<td>Recording trigger +</td>
</tr>
<tr>
<td>20</td>
<td>RECTRГ-</td>
<td>Recording trigger -</td>
</tr>
<tr>
<td>21</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>22</td>
<td>SYNCBUSY+</td>
<td>SYNC busy +</td>
</tr>
<tr>
<td>23</td>
<td>SYNCBUSY-</td>
<td>SYNC busy -</td>
</tr>
<tr>
<td>24</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>25</td>
<td>SYNCERR+</td>
<td>SYNC error +</td>
</tr>
<tr>
<td>26</td>
<td>SYNCERR-</td>
<td>SYNC error -</td>
</tr>
<tr>
<td>27</td>
<td>GND</td>
<td>Power supply 0V</td>
</tr>
<tr>
<td>28</td>
<td>LOW</td>
<td>POWER DOWN</td>
</tr>
</tbody>
</table>
5. Connector pin assignments

5-3. AQ-VU synchronized recording connector

Function
Use to control starting and stopping of AQ-VU recording, as well as to synchronize the time.

Input
ALARM IN

Control output
CLOCK, START STOP, EVENT TRG

Serial output
S-IF OUT 9200 bps

Input and output circuit format

Input format
L level: 0.4 V or less
H level: open or 2 V or more

Output format
Open drain (pull-up to 5V at 1 kΩ)
Maximum sync current: 8 mA

Connector
Angled connector (Hirose D-SUB 9-pin male)

Pin assignments

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EVENT TRG OUT</td>
<td>Event trigger output</td>
</tr>
<tr>
<td>2</td>
<td>ALARM IN</td>
<td>Alarm signal input</td>
</tr>
<tr>
<td>3</td>
<td>START STOP OUT</td>
<td>Start and stop control output</td>
</tr>
<tr>
<td>4</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>5</td>
<td>CLOCK OUT</td>
<td>Sampling clock output</td>
</tr>
<tr>
<td>6</td>
<td>S-IF IN</td>
<td>Reserved</td>
</tr>
<tr>
<td>7</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>8</td>
<td>S-IF OUT</td>
<td>Internal clock serial output</td>
</tr>
<tr>
<td>9</td>
<td>RESERVED</td>
<td></td>
</tr>
</tbody>
</table>

5-4. EXT TRIGGER IN connector

Function
Use to input external trigger contact signals to start and stop recording.
Changing from H to L starts recording.
Changing from L to H stops recording.
External triggers must be turned on with the trigger setting.

Input circuit format
L level: 0.4 V or less
H level: open or 2 V or more

Connector
BNC connector
5-5. DC IN power connector

**Function**
Input a voltage between 11 V and 30 V.

**Connector**
XLR cable connector (male Neutrik NC4MXX or equivalent)

**Pin assignments**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>0V DC power supply</td>
</tr>
<tr>
<td>2</td>
<td>NC</td>
<td>No connection</td>
</tr>
<tr>
<td>3</td>
<td>RESERVED</td>
<td>Reserved</td>
</tr>
<tr>
<td>4</td>
<td>+</td>
<td>11V–30V DC power supply</td>
</tr>
</tbody>
</table>

5-6. UPS SIGNAL IN contact input connector

**Function**
If a power outage occurs when using this system with a UPS power supply and a UPS power outage detection contact signal is input here, recording closing procedures will be conducted to stop recording.

**Input circuit format**
L level: 0.4 V or less
H level: open or 2 V or more

**Connector**
Round connector (Hirose HR10-7R-4S(73) or equivalent)

**Pin assignments**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UPS SIGNAL IN</td>
<td>Power outage signal input</td>
</tr>
<tr>
<td>2</td>
<td>GND</td>
<td>Ground</td>
</tr>
<tr>
<td>3</td>
<td>NC</td>
<td>***</td>
</tr>
<tr>
<td>4</td>
<td>NC</td>
<td>***</td>
</tr>
</tbody>
</table>
5. Connector pin assignments

Internal circuit
If a short-circuit occurs between pins 1 and 2 of the UPS SIGNAL IN connector, recording completion procedures will start. Short-circuits occur due to contact and non-contact (transistor or TTL open collector).
Do not increase voltage from outside.

6. Basic operation

6-1. RDX cartridges

6-1-1. Handling
RDX cartridges are designed to be tough, but you should take care to avoid allowing them to be dropped. In order to assure the accuracy and security of data, please observe the following precautions.
- When purchased new, RDX cartridges are NTFS formatted. Format cartridges with the WX-7000 before using them with this system.
- When not using a cartridge store it in a protective case.
- Do not stack RDX cartridges.
- Avoid dusty or humid environments.
- Avoid direct sunlight, high and extremely cold temperatures, as well as extreme temperature changes.
- Do not force cartridges into the docking station. If you are having trouble inserting the cartridge, confirm that you are inserting it with the correct orientation, including the alignment of its keyed corner.
- Read the RDX cartridge operation manuals.
- Remove the RDX cartridge before transportation.
6-1-2. Protection switch

![Protection switch diagram]

When a protection switch is set to  Writing not possible, writing to the cartridge is prevented.
When a protection switch is set to  Writing possible, writing to the cartridge is possible.

6-1-3. Loading and ejecting

The front of the docking station has an opening for RDX cartridge insertion. This opening has a protective door. To its bottom right is the EJECT button that also functions as a power supply indicator. Never remove an RDX cartridge when the unit is in use (including when recording, playing back or writing data). Removing a cartridge could cause recording to fail, recorded data to be lost and loud noises from the monitoring output, which could damage equipment.

Loading RDX cartridges

Insert an RDX cartridge into the docking station with the correct orientation. Its keyed corner should be on the top left and its write-protection switch should be at the back right. Push the RDX cartridge in gently until it makes a clicking sound and locks into place.

Ejecting RDX cartridges

Press the EJECT button. After the RDX cartridge is ejected from the docking station, pull it out directly.

If an RDX cartridge cannot be ejected

If an RDX cartridge cannot be ejected, stop the power supply to the unit and confirm that the EJECT button indicator is unlit. If the LCD display is unlit but the RDX docking station EJECT button is lit green, stop the power supply to the DC-IN or the AC adaptor. After confirming that the EJECT button indicator is unlit, restart the power supply to the unit. After the Home Screen appears, press the EJECT button to remove the RDX cartridge.

- If an RDX cartridge is reinserted while it is being ejected, for example, the media might not be recognized. If this occurs, restart the unit.

6-1-4. Emergency ejection of RDX cartridges

At the top center on the front panel of the docking station is an emergency ejection hole. If you are still unable to eject an RDX cartridge after following the procedures in “If an RDX cartridge cannot be ejected” above, use the following procedures.

1. Stop the power supply to the unit.

2. Straighten a large paperclip and insert one end into the emergency ejection hole.

   Push the paperclip straight in with a small amount of force to eject the cartridge.

3. After the RDX cartridge is ejected from the docking station, pull it directly out.

   **CAUTION**

   Do not use the emergency ejection hole to eject a cartridge when the cartridge indicator is blinking green.
6-2. SDHC cards

6-2-1. Handling SDHC cards
Avoid using SD cards that have adapters for microSD cards or miniSD cards.

6-2-2. Insertion and removal

SDHC card insertion
Insert SDHC cards when the unit is in standby mode (power off).

1. Open the drive cover.

2. Push the SDHC card all the way in.
   - A clicking sound can be heard when the card is pushed all the way in.

3. Close the drive cover.

Removing SDHC cards
Never remove an SDHC card when the unit is in use (including when recording, playing back or writing data). Removing a card could cause recording to fail, recorded data to be lost and loud noises from the monitoring output, which could damage equipment.

1. Open the drive cover.

2. Push SDHC card in gently.
   - The SDHC card will come out part way.

3. Pull the SDHC card out by hand.

4. Close the drive cover.

SDHC card write-protection switches
SDHC cards have write-protection switches.

Write-protection switch
Writing data can be prohibited by moving the switch to the LOCK position.
- Slide the write-protection switch to one direction completely

Locked
Writing prohibited

- To use an SDHC card for recording or to erase recording data on it or format it, unlock the write-protection.

6-3. Turning the power on

Check the connections between the recording unit (WX-7000) and the expansion units (AU-WXEPIO), as well as the AC adaptor connections and turn the STANDBY/ON switch to ON. When the Home Screen appears on the display the system is ready for use.

6-4. Stopping power to the system

Before turning the power off for the recording unit (WX-7000), eject the RDX cartridge and SDHC card. If the power is turned off while data is being written, data recorded on that medium might become unreadable.
Stop powering the system before moving it.
6-5. Status changes

6-5-1. Explanation of status change diagram entry

Entries appear on the status change diagram in the following manner.

- **Stopped**: Status
- **Waiting for button input or setting**: Possible operations
- **[REC]**: Status change (by button or menu)

6-5-2. Status change diagram

The status of the system can be changed in the following manner.

- **Stopped**: Waiting for button input or setting
  - **[REC]**: Status change
  - **Recording**: Show recording and input signal levels, set screen display
  - Stop playback
- **Record ready**: Show input signal levels, set screen display
  - **[FWD]**
  - **PAUSE**
- **Playback ready**: Searching and skipping operations
  - **[FWD]**
  - **PAUSE**
6-6. Home Screen

a Recording unit status indicator
This icon shows the current status of the recording unit.
The meanings of the icons are as follows.
- ■ Stopped
- ◄► Playback ready
- ►► Playing back
- ◄ ◄ Record ready
- ◄ Recording

b ID number
This shows the ID number of the current directory.
ID numbers with up to 3 digits from 001 to 999 can be shown.
When ready for playback, you can select the ID item on the LCD and press and turn the VALUE knob to search by ID.

c Counter (COUNT)
This shows the day, hour, minute and second (ddd, HH:MM:SS).
The time that appears depends on the status of the recording unit.
When recording, this shows the elapsed time since recording started.
When playing back or ready for playback, this shows the elapsed time from the beginning of the file.
When ready for playback, you can select the COUNT item on the LCD and press and turn the VALUE knob to search by time.

d Data display
These bar meters show the levels of the channels.
Press the F1 (Peak Clear) button to reset the peak hold display.

e Recording file information
FILE (name of file being recorded)
DIR (name of directory where file is being recorded)
The information shown changes according to the status of the recording unit.
During playback and when ready for playback, this shows the name of the file that is being played or is ready for playback.
At all other times, this shows the name of the file that will be recorded. Only the first five characters of file names can be set. The last three numbers are automatically added when recording starts. When the file name has been set, only these first five characters will be shown before recording starts.

f TRG indicators
Start trigger and stop trigger settings are shown by icons. (See page 33.)
EVENT number

This shows the EVENT number. The information shown changes according to the status of the recording unit.

When recording, this shows the total number of marked events from the beginning of the recording to the present.

When playing back or ready for playback, this shows the number of marked events from the beginning of the file to the current position.

When ready for playback, you can select the EVENT item on the LCD and press and turn the VALUE knob to search by event.

Function assignments

This shows the current assignments of the Function (F1, F2, F3, F4) buttons. The functions shown change according to the status of the recording unit.

- The function assignments cannot be selected.

TIME display

By default, this shows the year, month and day in that order (YYYY/MM/DD), but it can be set to show them in MM/DD/YYYY or DD/MM/YYYY format.

The information shown changes according to the status of the recording unit.

When playing back or ready for playback, this shows the time the recording was made.

At all other times, this shows the current setting of the unit.

When ready for playback, you can select the TIME item on the LCD and press and turn the VALUE knob to search by time.

- To set the time, select the TIME item on the LCD when stopped and press and turn the VALUE knob.

Recording media information

When playing back or ready for playback, this shows the elapsed time from the beginning of the file.

At all other times, this shows the amount of space used on the current media.

Status indicators

These indicators show when the SHIFT button is in use, the panel is locked, the system is synchronizing and when it is connected to a computer.

- SHIFT button pushed
- Panel locked
- Synchronizing
- Connected to a computer

The system cannot be operated when connected to a computer.

Recording settings

This shows recording setting values. You can select each of these settings and press and turn the VALUE knob to change their values.

- SERIES
  - Sampling frequency series
- SAMPLE
  - Sampling frequency
- AD
  - Analog to digital conversion bit depth
- REC CH
  - Number of recording channels
- FAN
  - WX-7000 and AU-WXEPIO fans ON or OFF
- MEMO
  - Voice memo function setting
  - When playing back, this shows playback data.

- Setting values shown on the Home Screen can also be changed from the Home Screen. See “7. Changing settings from the Home Screen” on page 36
6. Basic operation

6-7. Data display

When recording or ready to record, bar meters show the input level of each channel.

![Display channels](image)

Level bar for channel 1

The bar meters are colored by level as follows.

<table>
<thead>
<tr>
<th>Level (%)</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 – 127</td>
<td>Red</td>
</tr>
<tr>
<td>10 – 100</td>
<td>Green</td>
</tr>
<tr>
<td>0 – 10</td>
<td>Blue</td>
</tr>
<tr>
<td>0 – -10</td>
<td>Blue</td>
</tr>
<tr>
<td>-10 – -100</td>
<td>Green</td>
</tr>
<tr>
<td>-100 – -127</td>
<td>Red</td>
</tr>
</tbody>
</table>

channels shown

This shows the ID number of the connected expansion unit and the number of channels shown.

6-7-1. Setting the number of channels shown

While pressing and holding the SHIFT button, press the up (▲) button to change to 32-channel display.

32-channel display example

![32-channel display example](image)

While pressing and holding the SHIFT button, press the down (▼) button to change to 16-channel display.

16-channel display example

You can also change the number of channels shown using the DISPLAY CH item on the MISC menu.

6-7-2. Peak indicators

Peak indicators are shown when ready to record, when recording and when playing back.

Example

![Peak indicators example](image)

- Peak indicators are reset whenever recording starts from a record ready state.
- When recording stops, the bar meters disappear, but the peak indicators remain.
- Press the F1 (Peak Clear) button to clear peak indicators.

6-7-3. Monitored channel

The monitored channel’s signal is output from the MONITOR OUT connector.

Unless the MONITOR CHANNEL item is set to OFF on the SYSTEM screen, the number of the channel currently being monitored is highlighted yellow below its bar graph.

- Select the monitored channel area and press and turn the VALUE knob to change the monitored channel.
6-8. Trigger indicators

The start and stop trigger settings are shown by icons.

- No trigger
- External trigger
- Level trigger
- Time trigger
- Timeout trigger

Triggers set modes. If multiple triggers are set, they are shown in the following order of priority.

Start triggers

<table>
<thead>
<tr>
<th>Priority</th>
<th>Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Level</td>
</tr>
<tr>
<td>2</td>
<td>External</td>
</tr>
<tr>
<td>3</td>
<td>Timeout</td>
</tr>
</tbody>
</table>

Stop triggers

<table>
<thead>
<tr>
<th>Priority</th>
<th>Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Level</td>
</tr>
<tr>
<td>2</td>
<td>External</td>
</tr>
<tr>
<td>3</td>
<td>Time</td>
</tr>
</tbody>
</table>

6-9. Function buttons

The assignments of the Function (F1, F2, F3, F4) buttons are shown at the bottom of the screen.

The assignments of the Function buttons change according to the status of the recording unit as follows.

When stopped

F1 button: Peak Clear
- Resets the peak hold indicators on the Home Screen.

F2 button: Input Amp
- Opens the INPUT SETTING screen.

F3 button: Output Amp
- Opens the OUTPUT SETTING screen.

F4 button: Display Unit
- Changes the unit shown when using a system with 32 or more channels.

Pressing SHIFT while stopped

F1 button: (No indication)
- No function

F2 button: (No indication)
- No function

F3 button: Calibration
- Calibrates the system.

F4 button: Display Unit
- Changes the unit shown when using a model with 32 or more channels.

When recording

F1 button: Peak Clear
- Resets the bar meter peak hold indicators.

F2 button: Event mark
- Adds an event mark to the file being recorded.

F3 button: (No indication)
- No function

F4 button: Display Unit
- Changes the unit shown when using a model with 32 or more channels.

- A maximum of 200 event marks can be added to a single data file.

Continued on the next page.
6. Basic operation

Pressing SHIFT while recording
- F1 button: (No indication)
  No function.
- F2 button: Input Amp confirmation
  Check the settings on the INPUT SETTING screen.
- F3 button: Output Amp confirmation
  Check the settings on the OUTPUT SETTING screen.
- F4 button: Display Unit
  Changes the unit shown when using a model with 32 or more channels.

When ready to record
- F1 button: Peak Clear
  Resets the bar meter peak hold indicators.
- F2 button: (No indication)
  No function.
- F3 button: (No indication)
  No function.
- F4 button: Display Unit
  Changes the unit shown when using a model with 32 or more channels.

Pressing SHIFT when ready to record
- F1 button: (No indication)
  No function.
- F2 button: Input Amp confirmation
  Check settings on the INPUT SETTING screen.
- F3 button: Output Amp confirmation
  Check settings on the OUTPUT SETTING screen.
- F4 button: Display Unit
  Changes the unit shown when using a model with 32 or more channels.

When playing back
- F1 button: Peak Clear
  Resets the bar meter peak hold indicators.
- F2 button: (No indication)
  No function.
- F3 button: File Information
  Indicate file information of playing back.
- F4 button: Display Unit
  Changes the unit shown when using a model with 32 or more channels.

- When playing back, the Function buttons have “F4 button: Display Unit” when pressing and holding the SHIFT button.

When ready for playback
- F1 button: Peak Clear
  Resets the bar meter peak hold indicators.
- F2 button: (No indication)
  No function.
- F3 button: File Information
  Indicate file information of playing back.
- F4 button: Display Unit
  Changes the unit shown when using a model with 32 or more channels.

- When ready for playback, the Function buttons have “F4 button: Display Unit” when pressing and holding the SHIFT button.
6-10. Recording media information

Media use/playback position

Media type and remaining capacity (%)

Media capacity use and playback position display
The information shown changes according to the status of the recording unit.

When playing back or ready for playback, the elapsed time from the beginning of the file is shown as a blue bar meter and as a %. At all other times, the amount of the current media space used is shown as a green bar meter and as a %.

Media remaining capacity
This shows the type of recording media and amount of available recording time (hours: minutes).

No media is loaded.

Media is loaded.

Something is wrong with the media or the media is not supported.

The unit is writing to the media now.

The unit is reading from the media now.

This shows the amount of available recording time (hours: minutes).
(In this example, the amount of available recording time is 9 hours 26 minutes.)

- Select the recording media information and press the VALUE knob to open the FILE screen.
- RDX cartridges in NTFS format (immediately after purchase, for example) cannot be used as is with this system. Format them with the WX-7000 before use.
- SDHC cards smaller than 2 GB are not supported.

6-11. Panel locking

While pressing and holding the SHIFT button, press the HOME button to lock and unlock the panel.
When the panel is locked, only the STANDBY/ON switch and the SHIFT + HOME button combination function.
If you try to use any of the other buttons or the VALUE knob when the panel is locked, an alarm will sound and a warning message will appear.
7. Changing settings from the Home Screen

You can change settings on the menu screens, but you can also change settings that are used frequently on the Home Screen.

7-1. Screen operations

1. Turn the VALUE knob to select the desired item.

   You can also use the up, down, left and right (▲, ▼, ◀, ▶) buttons to select items.

2. Press the VALUE knob.

   If you select an item that has its current value shown to its right on its menu screen, a list of values opens and you can change the selected item’s setting.

3. Turn the VALUE knob to change the setting value.

   You can also use the up and down (▲, ▼) buttons to change the setting value.

4. Press the VALUE knob to confirm the setting.

   The settings of the following items can be changed from the Home Screen.
   For details about each parameter, see “10. Settings” on page 40.

   - Sampling series (SERIES)
   - Sampling frequency (SAMPLE)
   - Analog-digital conversion bit depth (AD)
   - Number of recording channels (REC CH)
   - Fan activation (FAN)
   - Voice memo activation (MEMO)
   - Monitor output channel
   - ID number (when playing back)
   - EVENT number (when playing back)
   - COUNTER (when playing back)
   - TIME (when playing back)
   - Trigger settings (TRG)
   - Displayed device
   - Recording directory name (DIR)
   - Recording file name (FILE)
8-1. Order of procedures

Set the recording conditions
Set the recording destination
Set the triggers
Make other settings
Start recording
Start measurement
Stop measurement
Stop recording

8-2. Setting recording conditions

Make settings for the sampling frequency, analog–digital conversion bit depth, number of recording channels, voice memo activation, input and output.

- Calibration is conducted automatically when this system's power is turned on.
- In order to record measurements with greater precision, however, we recommend manually calibrating the system after letting it warm-up for at least 10 minutes before beginning recording.

SYSTEM menu → Calibration

8-3. Setting the recording destination

Set the media, directory and file name for recording.

FILE menu → RECORDING FILE
→ DEVICE
→ DIRECTORY
→ FILE
→ COMMENT

- If the recording destination media does not have open space, format it.

FILE menu → Format

8-4. Setting triggers

In addition to manually starting and stopping recording, you can also set the system to start and stop recording using triggers and intervals. For details about how to make settings, see page 59.

8-4-1. Trigger recording

Example of one trigger recording repetition

<table>
<thead>
<tr>
<th>Pre trigger</th>
<th>Recording time</th>
<th>Post trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ready to record</td>
<td>Recording stops</td>
<td></td>
</tr>
</tbody>
</table>

Recording starting conditions
- level trigger
- external trigger
- timeout trigger

Recording stopping conditions
- level trigger
- external trigger
- Recording time

For trigger recording, you can set a combination of a starting trigger (level, external or timeout) and a stopping trigger (level or external).

Recording starting conditions

Level trigger
Use a level change for the set channel as a trigger.

External trigger
When the external trigger signal input (EXT TRIGGER IN) becomes the L level (0.4V) or less, recording starts. If the L level has already been reached, when the system becomes record ready, recording starts immediately.

Timeout
If the conditions set to start recording are not met within a specified time, recording will be forced to start automatically.

Pre trigger
By default, the system saves data from the time between when a recording starting condition occurs and when a recording stopping condition occurs.

When a pre-trigger interval is set, data is recorded before a recording starting condition occurs, but only after the system is made record ready.

- You cannot record voice memos during this time.

Recording stopping conditions

Level trigger
Use a level change for the set channel as a trigger.

External trigger
When the external trigger signal input (EXT TRIGGER IN) becomes the H level (open or 2V) or higher, recording stops.

Continued on the next page. ➤
8. Recording

Rec Time
Recording continues only for the set amount of time.

Post trigger
Even after one of the above recording stopping conditions is met, recording will continue for the set amount of time.
- When recording is stopped manually, however, the system will not record after the stop trigger.

8-4-2. Interval recording

Example of one interval recording repetition

<table>
<thead>
<tr>
<th>Recording time</th>
</tr>
</thead>
</table>

Starting time
Recording starts
Recording stops

With interval recording, when the number of repetitions is set to 1, recording will start at the set time and stop after the set recording time has elapsed.

Example of three interval recording repetitions

<table>
<thead>
<tr>
<th>Recording time</th>
<th>Interval time</th>
<th>Interval time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recording starts</td>
<td>Recording starts</td>
<td>Recording starts</td>
</tr>
</tbody>
</table>

| Ready to record | Ready to record | Recording stops |

When the number of repetitions is set to 2 or more, recording will start at the set time and stop after the set recording time has elapsed. Then, the system will become record ready and start recording again after the set interval. After this process has repeated to record the set number of repetitions, recording will stop.

If the number of repetitions is set to 0, interval recording will repeat until the recording media is full or recording is stopped manually.

Repetitions
Sets the number of repetitions. When set to 0, interval recording will repeat until the recording media becomes full, the recorded data for the last recording might not be as long as the Rec Time setting.

- When set to 0, if recording is repeated until the recording media becomes full, the recorded data for the last recording might not be as long as the Rec Time setting.

8-5. Starting recording

Press the REC button to make the unit ready to record.
If a starting trigger has been set, recording will start when a trigger condition is met.
If no starting trigger has been set, press the FWD button to start recording.

Start time
Recording starts at the set time.

Recording time
Recording continues for the set amount of time.
9. Playback

9-1. Order of procedures

Set the playback conditions
Select the playback file
Start playback

• If you want to search for a playback position, first press the PAUSE button to make the system playback ready and then search.

9-2. Setting playback conditions

Make output unit settings.
SYSTEM menu ➔ OUTPUT SETTING

9-3. Selecting the playback file

Select the media and file.
FILE menu ➔ FILE OPEN

9-4. Searching with the counter

When ready for playback, select the counter (COUNT), and use the VALUE knob to search for the desired counter position. Then, press the VALUE knob to start playback from that counter position.

9-5. Searching by event

When ready for playback, select the event number (EVENT), and use the VALUE knob to search by event number. Then, press the VALUE knob to start playback from the position of that event number.

9-6. Searching by ID

When ready for playback, select the ID number, and use the VALUE knob to search for the desired ID number. Then, press the VALUE knob to start playback from the position of that ID number.
10. Playback

9-7. Searching by time

When ready for playback, select the date and time (TIME), and search for the desired date and time. Then, press the VALUE knob to start playback from the position of that date and time.

- After selecting the date and time (TIME), press the VALUE knob to make the date and time display larger.

10. Settings

You can change settings on the menu screens, but you can also change settings that are used frequently on the Home Screen.

10-1. Basic operation

Follow these procedures to change settings using the menu screens.

1. Press the MENU button on the front panel to open the menu screens.

   The title of the open menu page is shown in white.

   Press the MENU button again to cycle through the menu pages in the following order.

   Press the MENU button again to cycle through the menu pages in the following order.

   Press the MENU button again to cycle through the menu pages in the following order.

   Press the MENU button again to cycle through the menu pages in the following order.

   Press the MENU button again to cycle through the menu pages in the following order.

2. Turn the VALUE knob to change the selected item.

   You can also use the up, down, left and right (▲, ▼, ◀, ◁) buttons to change the selected item.
3 Press the VALUE knob.

If you select an item that has its current value shown to its right, a list of values opens and you can change the selected item's setting. The following screen shows an example of a selection from the setting value options. For instructions, see "10-2. Selecting values from setting options" on page 42.

4 After you finish making settings, press the HOME button on the front panel to return to the Home Screen.

- For instructions on inputting characters as setting values, see "10-4. Inputting characters as setting values" on page 43.
- When special operations are required for a setting, they are explained in the section for that setting.

An arrow (→) to the right of a menu item shows that there is a submenu screen. See "10-5. Opening submenu screens" on page 43.

- When a submenu screen is open, press the MENU button to return to the menu screen above.
You can also press the CANCEL button to return to the menu screen above.
10. Settings

10-2. Selecting values from setting options

The current setting value of a menu item is shown to its right. To set a different value for a parameter such as the sampling frequency, press the VALUE knob to show a list of options to the right of the current setting value.

1 Turn the VALUE knob to select the value you want to set.
   Turn it clockwise to move down the list.
   Turn it counterclockwise to move up the list.

   You can also use the up and down (▲, ▼) buttons to change the selected value.

2 Press the VALUE knob to confirm the set value and close the list of options.

   Press the CANCEL button on the front panel to cancel changing a setting.

10-3. Inputting numbers as setting values

To input a numerical value within a certain range for a parameter such as the OUTPUT SETTING, press the VALUE knob to enable changing the current value. The current selection is shown between the next lower and higher value options.

1 Turn the VALUE knob to select the desired value.
   Press and then turn the VALUE knob to scroll through the options.
   Turn it clockwise to increase the value.
   Turn it counterclockwise to decrease the value.

   You can also use the up and down (▲, ▼) buttons to increase and decrease the value.

2 Press the VALUE knob to confirm the set value and close the list of options.

   Press the CANCEL button on the front panel to cancel changing a setting.
10-4. Inputting characters as setting values

To input characters as a setting value, such as a CHANNEL NAME, press the VALUE knob to open the character input screen. The currently set characters are shown in the window near the top of this screen.

1. Turn the VALUE knob to select the position where you want to input a character, and press the VALUE knob.

   - You can also use the up, down, left and right (↑, ↓, ←, →) buttons to change the selected item.
   - Press the F2 (CANCEL) button to cancel changing the input characters.
   - Press the F3 (a) button to input a lowercase letter. (only when it is possible to input lowercase letters).
   - Press the F4 (BackSpace) button to delete the rightmost character.

2. Repeat step 1 to input all the characters. When done, press the F1 (OK) button to return to the menu screen.

   - The assignments of the function buttons appear at the bottom of the screen: OK (F1), CANCEL (F2), a (F3) and BackSpace (F4). They cannot be selected.

10-5. Opening submenu screens

The menu screen has a multilevel structure. Select a menu item with an arrow (➡️) to its right and press the VALUE knob to open its submenu screen. The structure of the menus is shown in "10-6. Menu screen item list" on page 44.

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>FILE</th>
<th>TRG</th>
<th>MISC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLING SERIES</td>
<td>192k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAMPLING FREQ.</td>
<td>48k</td>
<td></td>
<td>OUTPUT SETTING</td>
</tr>
<tr>
<td>ACTIVE CHANNEL</td>
<td>16</td>
<td></td>
<td>TEDS</td>
</tr>
<tr>
<td>AD BIT</td>
<td>24bit</td>
<td></td>
<td>CALIBRATION</td>
</tr>
<tr>
<td>VOICE MENO</td>
<td>OFF</td>
<td></td>
<td>SYNCHRO SETTING</td>
</tr>
<tr>
<td>MONITOR CHANNEL</td>
<td>OFF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MONITOR RANGE</td>
<td>1.0V</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. Settings

10-6. Menu screen item list

- Sampling series (SERIES)
- Sampling frequency (SAMPLE)
- Analog-digital conversion bit depth (AD)
- Number of recording channels (REC CH)
- Fan activation (FAN)
- Voice memo activation (MEMO)
- Monitoring output channel
- Searching by ID (ID) (during playback)
- Searching by event (EVENT) (during playback)
- Searching with the counter (COUNT) (during playback)
- Searching by time (TIME) (during playback)
- Trigger settings (TRG)
- Device selection
- Recording directory name (DIR)
- Recording file name (FILE)
## 10. Settings

### SYSTEM
- Sampling series (SAMPLING SERIES)
- Sampling frequency (SAMPLING FREQ.)
- Number of active channels (ACTIVE CHANNEL)
- Analog-digital conversion bit depth (AD BIT)
- Voice memo activation (VOICE MEMO)
- Monitoring output channel (MONITOR CHANNEL)
- Monitoring output range (MONITOR RANGE)

### Input settings (INPUT SETTING)
- 1 Input range (INPUT RANGE)
- 2 Coupling (COUPLING)
- : ICP current (SENSOR CURRENT)
- 16 Weighting network (MIC SET)
- : High-pass filter (HPF)
- : Channel name (CHANNEL NAME)
- : Unit (UNIT)
- : Coefficient (COEFFICIENT)
- : Offset (OFFSET)
- ICP voltage (Sens Volt)

### Output settings (OUTPUT SETTING)
- 1 Output range
- 2
- :
- 16 Output unit setting (OutUnit Set)

### TEDS setting (TEDS)
- TEDS loading screen

### Calibration (CALIBRATION)
- Manual calibration (MANUAL CAL)
10. Settings

FILE
- Recording file (RECORDING FILE)
  - Media selection (DEVICE)
    - Directory name (DIRECTORY)
    - File name (FILE)
    - Comment (COMMENT)

- Playback file (FILE OPEN)
  - Media selection
    - Directory name
    - File name
    - File information
    - Playback mode

- Delete files (FILE DELETE)

- Format the media (FORMAT)

TRG
- Trigger mode (MODE)
  - No triggers (NONE)
  - Trigger recording (TRIGGER)
    - Starting trigger (START CONDITION)
      - Level trigger (LEVEL)
      - External trigger (EXTERNAL)
      - Time-out trigger (TIMEOUT)
    - Pre-trigger setting (PRE TRG)
    - Stopping trigger (STOP CONDITION)
      - Level trigger (LEVEL)
      - External trigger (EXTERNAL)
      - Recording time (REC TIME)
    - Post-trigger setting (POST TRG)
    - Repetitions (REPEAT COUNT)

- Interval recording (INTERVAL)
  - Starting time (START TIME)
  - Recording time (REC TIME)
  - Interval time (INTERVAL)
  - Repetitions (REPEAT COUNT)
10. Settings

MISC
- Set data shown on Home Screen (DISPLAY DATA)
- Set number of channels shown with bar meters (DISPLAY CH)
- Setting saving, loading and initialization (PARAMETER)
- Speaker output setting (SPEAKER)
- Fan activation (FAN)
- Sampling notation setting (NOTATION)
- Language setting (LANGUAGE)
- Network settings (NETWORK)
- Date and time settings (TIMESET)
- Display adjustment (LCD)
- Beep settings (BEEP)
- Button operation sound (BUTTON BEEP)
- Warning sound (WARNING BEEP)
- Show version information (VERSION)
## 10-7. Setting values list

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Default value</th>
<th>Setting range or options</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAMPLING SERIES</strong></td>
<td>192k</td>
<td>192k, 200k, 204.8k, 131.0k</td>
<td>WX-7016</td>
</tr>
<tr>
<td><strong>SAMPLING FREQ.</strong></td>
<td>48k</td>
<td>48k, WX-7032</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24k</td>
<td>WX-7064</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12k</td>
<td>WX-7128</td>
<td></td>
</tr>
<tr>
<td><strong>ACTIVE CHANNEL</strong></td>
<td>16</td>
<td>8, 16</td>
<td>WX-7016</td>
</tr>
<tr>
<td>(number of recording channels)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>8, 16, 32</td>
<td>WX-7032</td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>8, 16, 32, 64</td>
<td>WX-7064</td>
</tr>
<tr>
<td></td>
<td>128</td>
<td>8, 16, 32, 64, 128</td>
<td>WX-7128</td>
</tr>
<tr>
<td><strong>AD BIT (analog-digital conversion bit depth)</strong></td>
<td>24-bit</td>
<td>16-bit, 24-bit</td>
<td></td>
</tr>
<tr>
<td><strong>VOICE MEMO</strong></td>
<td>OFF</td>
<td>OFF, ON</td>
<td></td>
</tr>
<tr>
<td><strong>MONITOR CHANNEL</strong></td>
<td>OFF</td>
<td>OFF, 1–</td>
<td></td>
</tr>
<tr>
<td><strong>MONITOR RANGE</strong></td>
<td>1.0V</td>
<td>1.0–5.0 V in 0.1V increments</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>INPUT RANGE</strong></td>
<td>1V</td>
<td>0.1, 0.2, 0.5, 1, 2, 5, 10, 20 V</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>COUPLING</strong></td>
<td>DC</td>
<td>DC, AC</td>
<td>All channels</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SENSOR CURRENT</strong></td>
<td>OFF</td>
<td>OFF, 4mA, 0.5mA</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>MIC SET (weighting network)</strong></td>
<td>FLAT</td>
<td>FLAT, A, C</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>HFP (high pass filter)</strong></td>
<td>OFF</td>
<td>OFF, 10Hz, 20Hz</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>CHANNEL NAME</strong></td>
<td>WX7K_PAAMP</td>
<td>20 ASCII characters maximum</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>UNIT</strong></td>
<td>V</td>
<td>8 ASCII characters maximum</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>COEFFICIENT</strong></td>
<td>1.00000000</td>
<td>10 ASCII characters maximum</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>OFFSET</strong></td>
<td>0.00000000</td>
<td>10 ASCII characters maximum</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>SENSOR VOLTAGE</strong></td>
<td>28V</td>
<td>24, 28V</td>
<td>All expansion units</td>
</tr>
<tr>
<td><strong>OUTPUT RANGE</strong></td>
<td>1V</td>
<td>1.0–5.0 V in 0.1V increments</td>
<td>All channels</td>
</tr>
<tr>
<td><strong>OUTPUT UNIT</strong></td>
<td>UNIT 1 → UNIT 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNIT 2 → UNIT 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNIT 3 → UNIT 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNIT 4 → UNIT 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNIT 5 → UNIT 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNIT 6 → UNIT 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNIT 7 → UNIT 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNIT 8 → UNIT 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DEVICE</strong></td>
<td>RDX</td>
<td>RDX, SD</td>
<td></td>
</tr>
<tr>
<td><strong>DIRECTORY (name)</strong></td>
<td>WX7K_DIR</td>
<td>8 ASCII characters maximum</td>
<td></td>
</tr>
<tr>
<td><strong>FILE (name)</strong></td>
<td>WX7K_</td>
<td>5 ASCII characters maximum</td>
<td></td>
</tr>
<tr>
<td><strong>COMMENT</strong></td>
<td>WX-7000</td>
<td>64 ASCII characters maximum</td>
<td></td>
</tr>
<tr>
<td><strong>MODE (trigger)</strong></td>
<td>None</td>
<td>None, trigger, interval</td>
<td></td>
</tr>
<tr>
<td><strong>DISPLAY DATA</strong></td>
<td>%</td>
<td>%, dB</td>
<td></td>
</tr>
<tr>
<td><strong>DISPLAY CHANNEL</strong></td>
<td>16CH</td>
<td>16CH, 32CH</td>
<td></td>
</tr>
<tr>
<td><strong>SPEAKER</strong></td>
<td>MEMO</td>
<td>MEMO, DATA</td>
<td></td>
</tr>
<tr>
<td><strong>FAN</strong></td>
<td>ON</td>
<td>ON, OFF</td>
<td></td>
</tr>
<tr>
<td><strong>NOTATION (sampling)</strong></td>
<td>SAMPLE</td>
<td>SAMPLE, BANDMAX</td>
<td></td>
</tr>
<tr>
<td><strong>LANGUAGE (言語)</strong></td>
<td>日本語</td>
<td>日本語, ENGLISH</td>
<td></td>
</tr>
<tr>
<td><strong>IP ADDRESS</strong></td>
<td>192.168.0.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUBNET MASK</strong></td>
<td>255.255.255.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GATEWAY</strong></td>
<td>0.0.0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DHCP</strong></td>
<td>OFF</td>
<td>OFF, ON</td>
<td></td>
</tr>
<tr>
<td><strong>NAME</strong></td>
<td>(Blank)</td>
<td>32 ASCII characters maximum</td>
<td></td>
</tr>
<tr>
<td><strong>TIMESET</strong></td>
<td>YYYY-MM-DD</td>
<td>YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY</td>
<td></td>
</tr>
<tr>
<td><strong>BACKLIGHT (time)</strong></td>
<td>NONE</td>
<td>NONE, 1min, 5min, 30min</td>
<td></td>
</tr>
<tr>
<td><strong>BUTTON BEEP</strong></td>
<td>OFF</td>
<td>OFF, ON</td>
<td></td>
</tr>
<tr>
<td><strong>WARNING BEEP</strong></td>
<td>ON</td>
<td>OFF, ON</td>
<td></td>
</tr>
</tbody>
</table>
For details about the sampling frequency, analog-digital conversion bit depth (AD BIT) and number of recording channels (ACTIVE CHANNEL) Parameters, see “Sampling frequencies and bands” on page 69 and “Number of channels that can be recorded simultaneously” on page 69.

Selection
Use the VALUE knob and the up, down, left and right (▲, ▼, ◀, ▶) buttons to change the selection.
Press the VALUE knob to change the setting of the selected parameter.

SAMPLING SERIES
Sets the sampling frequency series.
The four series options are 192kHz, 200kHz, 204.8kHz and 131.0kHz.

SAMPLING FREQ.
Sets the sampling frequency.
The 8 available sampling frequency options correspond to the current sampling series.

AD BIT
Sets the analog-digital conversion bit depth (quantization bits).
The options are 16-bit and 24-bit.

ACTIVE CHANNEL
Sets the number of recording channels.
The options are the possible number of recording channels for the current system.

VOICE MEMO
Turn voice memo recording ON or OFF.
Voice memos are not recorded during the pre-trigger interval.
Moreover, the beginnings of voice memos and the beginnings of data are aligned when played back, so the timing might be different from when recorded.

MONITOR CHANNEL
Sets the channel monitored.
The options are the channels available in the current system and OFF.
Set this to OFF when you do not want to monitor the output.

MONITOR RANGE
Sets the monitoring output range.
The setting range is from 1.0V to 5.0V in 0.1V increments.
11. SYSTEM menu

11-1. INPUT SETTING

From the SYSTEM menu, select the INPUT SETTING item and press the VALUE knob to open the INPUT SETTING screen.
The first channel numbers are shown with their settings beneath them.
Change the channel numbers shown with the F1 (PREV PAGE) and F4 (NEXT PAGE) buttons.

Channels shown
This shows the range of channels currently shown.

Expansion unit shown
This shows the number of the expansion unit that has the channels currently shown.

Selection
Use the VALUE knob and the left and right (wegian, up, down, left, and right) buttons to change the selection.
If you move further right from the selection at the right edge of the screen, the next page will open. In the same manner, moving left from the left edge will open the previous page.
Press the VALUE knob to change the setting of the selected parameter.

PREV PAGE (F1 button)
Opens the previous page.

Sens Volt (F2 button)
Opens the sensor voltage menu screen.

NEXT PAGE (F4 button)
Opens the next page.

11-1-1. Individual channel settings

On the INPUT SETTING screen, press the VALUE knob to open the setting screen for the selected channel.

<table>
<thead>
<tr>
<th>CHANNEL SET</th>
<th>SYSTEM / INPUT SET.</th>
<th>ch1</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT RANGE</td>
<td>1v</td>
<td></td>
</tr>
<tr>
<td>COEFFICIENT</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>OFFSET</td>
<td>0.000000</td>
<td></td>
</tr>
<tr>
<td>SENSOR CURRENT</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>MISC SET</td>
<td>FLAT</td>
<td></td>
</tr>
<tr>
<td>HPF</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>CHANNEL NAME</td>
<td>WX7K_PAAMP</td>
<td></td>
</tr>
<tr>
<td>UNIT</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

PREV CH | Same Set | NEXT CH

- To return to the SYSTEM menu, press the MENU or CANCEL button on the front panel.
- If you want all channels to have the same settings, after confirming the set values, press the VALUE knob while pressing and holding the SHIFT button.
- The COEFFICIENT and OFFSET values are recorded as information in header files. They do not affect the display, output signals or recording data of the WX-7000.

Selection
Use the VALUE knob and the up, down, left and right (wegian, up, down, left, and right) buttons to change the selection.
Press the VALUE knob to change the setting of the selected parameter.

INPUT RANGE
The options are 20V, 10V, 5V, 2V, 1V, 0.5V, 0.2V and 0.1V.

COUPLING
The options are DC and AC.
DC: Use when recording signals that include direct currents
AC: Use when recording signals of 1Hz or more

SENSOR CURRENT (PA Current)
Sets the ICP sensor current.
The options are OFF, 4mA and 0.5mA.

MIC SET (weighting network)
The options are FLAT, A and C.

HPF
The options are OFF, 10Hz and 20Hz.

CHANNEL NAME
Sets the name of the channel.
- A maximum of 20 characters can be used for a channel name.
- Only the first 10 characters of the channel name are shown on the CHANNEL SET screen.
UNIT
Sets the name of the input signal unit.
- A maximum of 8 characters can be used for a unit name
- For instructions about inputting characters, see "10-4. Inputting characters as setting values" on page 43.

COEFFICIENT
Use to apply a coefficient to the measured voltage to convert the physical quantity. The physical quantity is calculated using the following formula.
\[
\text{Physical quantity} = (\text{measured voltage} - \text{OFFSET}) \times \text{COEFFICIENT}
\]

OFFSET
Use to subtract an offset amount when calculating the measured voltage.
- The offset value can have a maximum of 10 digits, including digits after the decimal place.
- Only the first 8 digits of the offset value are shown on the CHANNEL SET screen.
- For instructions about inputting characters, see "10-3. Inputting numbers as setting values" on page 42.

PREV CH (F1 button)
Opens the setting screen of the previous channel.

Same Set (F2 button)
Applies the currently shown channel settings to all channels.
Press the F2 button to open a confirmation screen.

 NEXT CH (F4 button)
Opens the setting screen of the next channel.

11-1-2. Sensor voltage
On the INPUT SETTING screen, press the F2 (Sens Volt) button to open the sensor voltage screen.
This screen shows the connected expansion unit numbers and their sensor voltage settings (voltages supplied to ICP sensors).

The sensor voltage can be set individually for each AU-WXPIO expansion unit.
The options are 24V and 28V.
- If SENSOR CURRENT is set to OFF for a channel, sensor voltage will not be output to it.

Selection
Use the VALUE knob and the up, down, left and right (▲, ▼, ◀, ▶) buttons to change the selection.
Press the VALUE knob to change the setting of the selected parameter.

OK (F1 button)
Confirm the settings and return to the INPUT SETTING screen.
11. SYSTEM menu

11-2. OUTPUT SETTING

In the SYSTEM menu, select OUTPUT SETTING and press the VALUE knob to open the OUTPUT SETTING screen.

- To return to the SYSTEM menu, press the MENU or CANCEL button on the front panel.
- If you want all channels to have the same settings, after confirming the set values, press the VALUE knob while pressing and holding the SHIFT button.

Selection
Use the VALUE knob and the up, down, left and right (↑, ↓, ←, →) buttons to change the selection. Press the VALUE knob to change the setting of the selected parameter.

Channels shown
This shows the range of channels currently shown.

Expansion unit shown
This shows the number of the expansion unit that has the channels currently shown.

OUTPUT RANGE
Set within the setting range from 1.0 V to 5.0 V in 0.1 V increments.

PREV UNIT (F1 button)
Opens the OUTPUT SETTING screen of the previous expansion unit.

OutUnit Set (F2 button)
Opens the OUTPUT UNIT screen.

NEXT UNIT (F4 button)
Opens the OUTPUT SETTING screen of the next expansion unit.

11-2-1. OUTPUT UNIT

On the OUTPUT SETTING screen, press the F2 (OutUnit Set) button to open the OUTPUT UNIT screen.

Ordinarily, data recorded with an expansion unit will be output by the same expansion unit when playing back. By changing the OUTPUT UNIT setting, you can change the roles of expansion units when recording and when playing back.

Selection
Use the VALUE knob and the up, down, left and right (↑, ↓, ←, →) buttons to change the selection. Press the VALUE knob to change the setting of the selected parameter.

OK (F1 button)
Confirm the settings and return to the OUTPUT SETTING screen.

Differences in channel composition when recording and playing back
When recording multiple channels of data, the composition of channels might differ when recording and when playing back. For example after recording numerous channels at a measurement site, when playing back data on a system with fewer channels, you will need to select from among the numerous channels of recorded data for analog output from the playback system.
**Setting example 1**
When using a WX-7016 system to play back a 128-channel file recorded using a WX-7128 system, in order to play back data recorded on channels 65-80 with the WX-7016 they must be set to channels 1-16 for analog output.

**OUTPUT UNIT setting:**

<table>
<thead>
<tr>
<th>Playback system</th>
<th>Recording system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td>ch1-16</td>
</tr>
<tr>
<td>Unit 2</td>
<td>ch17-32</td>
</tr>
<tr>
<td>Unit 3</td>
<td>ch33-48</td>
</tr>
<tr>
<td>Unit 4</td>
<td>ch49-64</td>
</tr>
<tr>
<td>Unit 5</td>
<td>ch65-80</td>
</tr>
<tr>
<td>Unit 6</td>
<td>ch81-96</td>
</tr>
<tr>
<td>Unit 7</td>
<td>ch97-112</td>
</tr>
<tr>
<td>Unit 8</td>
<td>ch113-128</td>
</tr>
</tbody>
</table>

**Setting example 2**
When using a WX-7032 system to play back a 128-channel file recorded using a WX-7128 system, in order to play back data recorded on channels 65-96 with the WX-7032 they must be set to channels 1-32 for analog output.

**OUTPUT UNIT settings:**

<table>
<thead>
<tr>
<th>Playback system</th>
<th>Recording system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td>ch1-16</td>
</tr>
<tr>
<td>Unit 2</td>
<td>ch17-32</td>
</tr>
<tr>
<td>Unit 3</td>
<td>ch33-48</td>
</tr>
<tr>
<td>Unit 4</td>
<td>ch49-64</td>
</tr>
<tr>
<td>Unit 5</td>
<td>ch65-80</td>
</tr>
<tr>
<td>Unit 6</td>
<td>ch81-96</td>
</tr>
<tr>
<td>Unit 7</td>
<td>ch97-112</td>
</tr>
<tr>
<td>Unit 8</td>
<td>ch113-128</td>
</tr>
</tbody>
</table>

---

**11-3. TEDS**

This screen shows the TEDS data read when the power is turned on. The checkbox appears white in the CH column for channels for which TEDS data has been read.

**Selection**

Use the VALUE knob and up and down (△, ▼) buttons to change the selection. Press the VALUE knob to change the setting of the selected parameter.

**OK (F1 button)**
Confirm the settings and return to the OUTPUT SETTING screen.

**CANCEL (F2 button)**
Cancel setting changes.

**Update (F3 button)**
Load TEDS data.

**All checked (F4 button)**
Select all channels that have TEDS data loaded.
11. SYSTEM menu

11-3-1. Loading TEDS data
If a TEDS sensor is connected after the power has already been turned on, the TEDS data will not appear on the screen automatically. Press the F3 button to reload TEDS data. The following screen appears while the TEDS data is being loaded.

11-3-2. Calibrated value settings
To set calibrated value for TEDS data, select the channel and press the VALUE knob to add a check mark (✓) to the checkbox in the CH column.

- Press the F4 (All Checked) button to select all channels that have TEDS data loaded.

Press the F1 button set the selected channel's TEDS data to the "UNIT" and "SENSITIVITY" settings on the channel setting screen.

11-4. Calibration
Press the VALUE knob to open a confirmation screen.

Press the OK button and press the VALUE knob to start calibration.
12. FILE settings

12-1. Media information

This screen shows information about the selected recording media.

Current selected media

Selected media
Recording files will be written to the media shown. “NO MEDIA” appears if no media has been loaded.

Usage
The amount of the total media capacity used is shown graphically and as a percentage (%).

Total
Total media capacity

Free
Amount of open space on the media
The time shown in hours and minutes in parentheses is the possible recording time calculated according to the set sampling frequency, bit depth and number of recording channels.

DIR
The name of the directory where recorded data is saved.

FILE
The prefix given to the names of recording data files.

12-2. New file settings

In the FILE menu, select RECORDING FILE and press the VALUE knob to open the RECORDING FILE screen.

12-2-1. DEVICE

Select the media where recording files are saved. The options are SD and RDX. The selected media is shown inside a box.

BACK (F1 button)
Return to the RECORDING FILE screen.
12-2-2. Directory
Select the directory where recording files are saved.

**Selection**
Use the VALUE knob and the up, down, left and right (▲, ▼, ◀, ◁) buttons to change the selection.
Press the VALUE knob to show the files in the selected directory.

**BACK (F1 button)**
Return to the RECORDING FILE screen.

**New DIR (F4 button)**
Create a new directory.
- For instructions about inputting characters, see “10-4. Inputting characters as setting values” on page 43.

12-2-3. File name
Sets the recording file name prefix.
- For instructions about inputting characters, see “10-4. Inputting characters as setting values” on page 43.
- Lowercase letters cannot be used in file names.

12-2-4. Comment
Sets the recording file comment.
- For instructions about inputting characters, see “10-4. Inputting characters as setting values” on page 43.

12-3. Opening files
In the FILE menu, select FILE OPEN and press the VALUE knob to open the FILE OPEN screen where you can play back files.

**Selection**
Select the media with the file that you want to open.
- ”NO MEDIA” appears if no media has been loaded.

**BACK (F1 button)**
Return to the FILE OPEN screen.
12-4. Selecting directories

Select the directory with the file that you want to play back.

**Selection**
Use the VALUE knob and up and down (▲, ▼) buttons to change the selection.
Press the VALUE knob to show the files in the selected directory.
If the contents of a directory do not fit on the screen then it will be scrollable.

**Current directory**
The contents of this directory are shown on the screen.
The root directory is shown by default.

**Total number of directories**
This is the total number of directories within the current directory.

**Selection number**
The directory shown at the top of the list is number 1.

**BACK (F1 button)**
Return to the FILE OPEN screen.

12-5. Selecting files

On this screen, you can select a file for playback.
This screen shows a list of files with their ID numbers, names, sizes and recording dates.

**Selection**
Use the VALUE knob and up and down (▲, ▼) buttons to change the selection.
Press the VALUE knob to confirm selection of a file for playback and return to the Home Screen.
If the files do not fit on the screen then it will be scrollable.

**Selection number**
The file shown at the top of the list is number 1.

**Current directory**
The contents of this directory are shown on the screen.
The root directory is shown by default.

**Total number of files**
This is total number of files within the current directory.

**BACK (F1 button)**
Return to the FILE OPEN screen.

**Repeat (F2 button)**
Confirm repeat playback of a file and return to the Home Screen.

**Continue (F3 button)**
Confirm continuous playback of a file and return to the Home Screen.

Continued on the next page. ➔
12. FILE settings

File info. (F4 button)
Show the following information for the selected file:
- Sampling frequency
- Analog–digital conversion bit depth
- Channel number
- Recording time
- Comment
- Recording starting time
- Recording ending time

Press the VALUE knob to return to the File Open screen.

12-6. Deleting files

Files can only be deleted immediately after recording. They cannot be deleted after the media has been changed or the power has been turned off and back on again.

In the FILE menu, select FILE DELETE and press the VALUE knob.

When the confirmation screen appears, turn the VALUE knob to select OK and press the VALUE knob.

12-7. Formatting media

You must use this unit to format SD cards and RDX media to use them with it. You can also format media to erase their contents.

1 In the FILE menu, select FORMAT and press the VALUE knob.

2 Turn the VALUE knob to select the media that you want to format and press the VALUE knob.

You can also use the left and right (◀, ▶) buttons to change the selection.

3 Turn the VALUE knob to select OK and press the VALUE knob.

You can also use the left and right (◀, ▶) buttons to change the selection.

* "NO MEDIA" appears if no media has been loaded.

You can select CANCEL and press the VALUE knob to return to the FORMAT screen without formatting.
13. TRG settings

13-1. MODE

Set the MODE to NONE, TRIGGER or INTERVAL.

13-1-1. NONE

Use the NONE setting to disable trigger recording. When using this setting, you must use the front panel transport controls or send commands to the system via LAN to start and stop the recording of measurements.

13-1-2. TRIGGER

Selection
Use the VALUE knob and up and down (△, ▼) buttons to change the selection. Press the VALUE knob to change the setting of the selected parameter.

PRE TRG
Input the data quantity.
- The amount of time that measurements are recorded is equal to the data quantity × the sampling frequency.

POST TRG
Input the data quantity.

REPEAT COUNT
Input the number of repetitions.

For details about the use of triggers for recording, see “8-4. Setting triggers” on page 37.

Selection
Press the VALUE knob to change the setting of the selected parameter. The parameters for the selected mode appear beneath it.
14. TRG settings

13-1-2-1. START CONDITION

Selection
Use the VALUE knob and up and down (▲, ▼) buttons to change the selection.
Press the VALUE knob to change the setting of the selected parameter.

LEVEL
Sets the level and UP/DOWN conditions for each channel.

EXTERNAL
The options are ON and OFF.

TIMEOUT [sec]
If the conditions set to start recording are not met within a specified time, recording will be forced to start automatically.

13-1-2-2. STOP CONDITION

LEVEL
Sets the level and UP/DOWN conditions for each channel.

EXTERNAL
The options are ON and OFF.

REC TIME [sec]
Sets the recording time.

13-1-2-3. LEVEL

Set the level trigger conditions for each channel.

LOGIC
This shows the current setting.
Set when there are multiple conditions to determine whether one or all must be fulfilled.
Press the F3 button to switch between AND and OR.
If LOGIC has been set to AND, monitor a channel on the same unit.
Input a square wave as the trigger signal.

COUNT
This shows the number of times that the condition set for stopping has occurred.
Press the F4 button to change the setting.

CH
A check mark appears in this column if one or both CONDITION and LEVEL settings have been set.

CONDITION
This shows the current setting.
Press the VALUE knob to open the settings screen.

OK (F1 button)
Press to confirm the settings and return to the previous screen.
COUNT settings
Press the F4 button to open the following screen where you can input numbers.

For instructions about inputting numbers, see “10-4. Inputting characters as setting values” on page 43.

CONDITION and LEVEL settings
Press the VALUE knob to open the settings screen.

CONDITION
The options are UP and DOWN.

LEVEL
Enter an amount of the settings range as a %.

13-1-3. INTERVAL

REPEAT COUNT
Input the number of recording repetitions.

CONDITION
The options are UP and DOWN.

LEVEL
Enter an amount of the settings range as a %.

REC TIME [sec]
Sets the amount of time from when the recording starts until it stops.

INTERVAL [sec]
Sets the amount of time that the system stays in a record ready state from the time one recording ends until the next recording starts.
### 13-1-3-1. START TIME

**Current selection**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MONTH</th>
<th>DAY</th>
<th>HOUR</th>
<th>MIN</th>
<th>SEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>11</td>
<td>26</td>
<td>11</td>
<td>36</td>
<td>16</td>
</tr>
</tbody>
</table>

Press and turn the VALUE knob to change the value of the selected item.

**OK (F1 button)**
Confirm the settings and return to the TRG screen.

**CANCEL (F2 button)**
Cancel changing settings and return to the TRG screen.

**Current (F3 button)**
Set to the current time of the unit’s clock.

**NEXT 00sec (F4 button)**
Change the starting time to the beginning of the next minute.

### Selection
Use the VALUE knob and the left and right (◀, ▶) buttons to change the selection.

### DISPLAY DATA
Sets how the signal level is shown.
The options are % (bar meter) and dB (bar meter).

### DISPLAY CH
Sets the number of channels shown on the Home Screen.
The options are 16ch and 32ch.

### SPEAKER
Sets the speaker sound source.
The options are MEMO and DATA

### FAN
Sets the operation of the fans.
The options are ON and OFF.
When set to OFF, the fans will be kept off from the start of measurement recording for up to 10 minutes. After 10 minutes the fan will turn on as necessary to keep the units from overheating.
- Set this to OFF if the sound of the fans might affect measurements when, for example, measuring noise.

### NOTATION
Sets the sampling notation.
The options are SAMPLE (frequency) and BANDMAX (band).
14-1. Saving and loading setting values

You can save the system's settings and load saved setting values.

14-1-1. LOAD

Use to load setting values.

1. Select the media with the settings you want to load.

2. Select the data you want to load.

3. Select "OK" and press the VALUE knob.

Confirm

All settings will be changed.
Is it OK?

[OK] [CANCEL]
14. MISC settings

14-1-2. SAVE
Use to save the current settings of the system.

1. Select the media where you want to save the settings.

   To overwrite an existing file, select that file and press the VALUE knob to save the settings and reopen the PARAMETER screen.

2. Set the file name for the saved settings.

   Press the F1 button to save the settings and reopen the PARAMETER screen.

14-1-3. INITIALIZE
Use to restore the system’s settings to their original values.
Select initialize to open a confirmation screen.

Select the OK button and press the VALUE knob to initialize.
14-2. LANGUAGE

You can set the unit to use Japanese or English. Select LANGUAGE (言語) and press the VALUE knob to change the setting of the selected parameter.

14-3. NETWORK

Follow the instruction of your LAN administrator when making network settings.

- For instructions about inputting numbers, see "10-3. Inputting numbers as setting values" on page 42

Depending on the DHCP setting, other input items will change.

When DHCP is OFF, the following items can be set.
IP ADDRESS
SUBNET MASK
GATEWAY

When DHCP is ON, the following items show values set by DHCP, but they cannot be set from this system.
IP ADDRESS
SUBNET MASK
GATEWAY

NAME
Sets the name that is used to identify this system when using the included WX Navi software.

MAC
Shows this system's MAC address.

OK (F1 button)
Confirm the settings and return to the MISC screen.

Default (F4 button)
Restore settings to their original values.
14-4. TIMESET

Set the date and time of the internal clock.

Turn the VALUE knob to change the selection, and press and turn the VALUE knob to change a value.

- For instructions about inputting characters, see "10-3. Inputting numbers as setting values" on page 42.

OK (F1 button)
Set the internal clock and return to the MISC screen.

YYYY-MM-DD (F2 button)
MM-DD-YYYY (F3 button)
DD-MM-YYYY (F4 button)
Sets the order of the date display.
The year, month and day are shown by the following characters.

YYYY: Year
MM: Month
DD: Day

14-5. LCD

Set the amount of time until the backlight turns off and how bright it is.
If no front panel controls are used for the BACKLIGHT OFF time, the backlight will turn off automatically.
Set the BACKLIGHT OFF time until the backlight turns off automatically if no controls are used.

OK (F1 button)
Confirm the settings and return to the MISC menu.

DARK (F3 button)
LIGHT (F4 button)
Adjust the brightness of the backlight.

- If you use any controls while the backlight is off, the backlight will turn on again.
14. MISC settings

14-6. BEEP

Turn the beeping (alarm) sounds on and off.

**Selection**
Use the VALUE knob and up and down (▲, ▼) buttons to change the selection.

**BUTTON BEEP**
Set whether or not the system beeps when using buttons (other than the SHIFT button).

**WARNING BEEP**
Set whether or not the system beeps when warnings occur.

**OK (F1 button)**
Confirm the settings and return to the MISC menu.

14-7. VERSION

Show the versions of the programs used within the WX-7000 recording unit and the AU-WXPIO expansion units.

**OK (F1 button)**
Return to the MISC menu.
15. Options

15-1. Remote control

This is a simple remote control dedicated to the operation of the recording unit transport buttons from a distance. Connect the remote control to the DIGITAL CONTROL input connector on the rear panel of the recording unit with the included cable.

EVENT button
Add an event mark.

The following buttons function in the same way as the recording unit transport buttons.

STOP (■STOP) button
Stops recording and playback.

Recording (●REC) button
Press when stopped to make the system record ready.

Playback (►FWD) button
Press when stopped or playback ready to start playback. Press when record ready to start recording.

Pause (II PAUSE) button
Press when stopped or playing back to make the system playback ready. Press when recording to make record ready.

Search (◄REW/►F FWD) buttons
Use to search the playback files.

15-2. Interface cards

The following two options are available.

- IRIG-B timecode signal input and output card
- GPS data input card
16. Specifications

16-1. Recording unit (WX-7000)

Recording media

RDX
Built-in 3.5-inch RDX drive
Compatible RDX cartridge types: HDD and SSD
Recording capacities: HDD: 500 GB - 1 TB
SSD: 64 GB - 512 GB
Operation verified: Imation RDX cartridges

SDHC
SDHC card slot
Compatible media: SDHC cards (SDXC not supported)
Recording capacity: 4 GB - 32 GB
Speed class: Class 10 recommended
Operation verified: SanDisk SDHC cards

Media that has been verified to operate with this system
We provide a list of RDX cartridges and SDHC cards that we have verified
the operation of with this unit on our Industrial Products Division website. (http://datarecorder.jp/)
You can also contact the sales office of our Industrial Products Division.

Sampling frequencies and bands
Sampling frequency (Fs)/2.4 = band
Series 1: Corresponds to DAT/audio sampling frequencies
Series 2: Corresponds to integer frequencies
Series 3: Frequency axis during 2^N FFT analysis: integrated in resolution
Series 4: Frequency axis during 2^N FFT analysis: integrated in resolution

<table>
<thead>
<tr>
<th>Fs (kHz)</th>
<th>Band (kHz)</th>
<th>Fs (kHz)</th>
<th>Band (kHz)</th>
<th>Fs (kHz)</th>
<th>Band (kHz)</th>
<th>Fs (kHz)</th>
<th>Band (kHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.00</td>
<td>20.00</td>
<td>220.00</td>
<td>41.67</td>
<td>204.80</td>
<td>42.67</td>
<td>204.80</td>
<td>42.67</td>
</tr>
<tr>
<td>96.00</td>
<td>40.00</td>
<td>100.00</td>
<td>60.00</td>
<td>102.40</td>
<td>62.00</td>
<td>102.40</td>
<td>62.00</td>
</tr>
<tr>
<td>48.00</td>
<td>20.00</td>
<td>50.00</td>
<td>12.00</td>
<td>51.20</td>
<td>12.00</td>
<td>51.20</td>
<td>12.00</td>
</tr>
<tr>
<td>24.00</td>
<td>10.00</td>
<td>20.00</td>
<td>6.00</td>
<td>25.60</td>
<td>6.00</td>
<td>25.60</td>
<td>6.00</td>
</tr>
<tr>
<td>12.00</td>
<td>5.00</td>
<td>10.00</td>
<td>3.00</td>
<td>12.80</td>
<td>3.00</td>
<td>12.80</td>
<td>3.00</td>
</tr>
<tr>
<td>6.00</td>
<td>2.50</td>
<td>5.00</td>
<td>1.50</td>
<td>5.12</td>
<td>1.50</td>
<td>5.12</td>
<td>1.50</td>
</tr>
<tr>
<td>3.00</td>
<td>1.25</td>
<td>2.00</td>
<td>0.63</td>
<td>2.56</td>
<td>0.63</td>
<td>2.56</td>
<td>0.63</td>
</tr>
<tr>
<td>1.50</td>
<td>0.63</td>
<td>1.00</td>
<td>0.42</td>
<td>1.28</td>
<td>0.42</td>
<td>1.28</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Number of channels that can be recorded simultaneously

<table>
<thead>
<tr>
<th>Fs (kHz)</th>
<th>RDX recording 6 MB/s</th>
<th>SDHC recording 1.5 MB/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 1</td>
<td>Series 2</td>
<td>Series 3</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>192.00</td>
<td>200.00</td>
<td>204.80</td>
</tr>
<tr>
<td>96.00</td>
<td>100.00</td>
<td>102.40</td>
</tr>
<tr>
<td>48.00</td>
<td>50.00</td>
<td>51.20</td>
</tr>
<tr>
<td>24.00</td>
<td>20.00</td>
<td>25.60</td>
</tr>
<tr>
<td>12.00</td>
<td>10.00</td>
<td>12.80</td>
</tr>
<tr>
<td>6.00</td>
<td>5.00</td>
<td>5.12</td>
</tr>
<tr>
<td>3.00</td>
<td>2.00</td>
<td>2.56</td>
</tr>
<tr>
<td>1.50</td>
<td>1.00</td>
<td>1.28</td>
</tr>
</tbody>
</table>
Recording times

The following tables show approximate recording times for different media capacities according to the combination of sampling frequency, recording bit depth and recording media.

**Approximate total 16-bit recording times for a 1TB RDX HDD (in days, hours:minutes:seconds)**

<table>
<thead>
<tr>
<th>Fs (kHz)</th>
<th>Band (kHz)</th>
<th>8 channels</th>
<th>16 channels</th>
<th>32 channels</th>
<th>64 channels</th>
<th>128 channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.00</td>
<td>80.00</td>
<td>3 days, 18:10:58</td>
<td>1 day, 21:09:00</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>96.00</td>
<td>40.00</td>
<td>7 days, 11:53:54</td>
<td>3 days, 18:10:58</td>
<td>1 day, 21:09:00</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>48.00</td>
<td>20.00</td>
<td>14 days, 21:56:32</td>
<td>7 days, 11:53:54</td>
<td>3 days, 18:10:58</td>
<td>1 day, 21:09:00</td>
<td>—</td>
</tr>
<tr>
<td>24.00</td>
<td>10.00</td>
<td>29 days, 12:34:47</td>
<td>14 days, 21:56:32</td>
<td>7 days, 11:53:54</td>
<td>3 days, 18:10:58</td>
<td>1 day, 21:09:00</td>
</tr>
<tr>
<td>12.00</td>
<td>5.00</td>
<td>57 days, 20:48:58</td>
<td>29 days, 12:34:47</td>
<td>14 days, 21:56:32</td>
<td>7 days, 11:53:54</td>
<td>3 days, 18:10:58</td>
</tr>
<tr>
<td>6.00</td>
<td>2.50</td>
<td>111 days, 6:48:00</td>
<td>57 days, 20:48:58</td>
<td>29 days, 12:34:47</td>
<td>14 days, 21:56:32</td>
<td>7 days, 11:53:54</td>
</tr>
<tr>
<td>3.00</td>
<td>1.25</td>
<td>206 days, 16:03:27</td>
<td>111 days, 6:48:00</td>
<td>57 days, 20:48:58</td>
<td>29 days, 12:34:47</td>
<td>14 days, 21:56:32</td>
</tr>
<tr>
<td>1.50</td>
<td>0.63</td>
<td>361 days, 16:06:02</td>
<td>206 days, 16:03:27</td>
<td>111 days, 6:48:00</td>
<td>57 days, 20:48:58</td>
<td>29 days, 12:34:47</td>
</tr>
</tbody>
</table>

**Approximate total 24-bit recording times for a 1TB RDX HDD (in days, hours:minutes:seconds)**

<table>
<thead>
<tr>
<th>Fs (kHz)</th>
<th>Band (kHz)</th>
<th>8 channels</th>
<th>16 channels</th>
<th>32 channels</th>
<th>64 channels</th>
<th>128 channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.00</td>
<td>80.00</td>
<td>1 day, 21:09:00</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>96.00</td>
<td>40.00</td>
<td>3 days, 18:10:58</td>
<td>1 day, 21:09:00</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>48.00</td>
<td>20.00</td>
<td>7 days, 11:53:54</td>
<td>3 days, 18:10:58</td>
<td>1 day, 21:09:00</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>24.00</td>
<td>10.00</td>
<td>14 days, 21:56:32</td>
<td>7 days, 11:53:54</td>
<td>3 days, 18:10:58</td>
<td>1 day, 21:09:00</td>
<td>—</td>
</tr>
<tr>
<td>12.00</td>
<td>5.00</td>
<td>57 days, 20:48:58</td>
<td>14 days, 21:56:32</td>
<td>7 days, 11:53:54</td>
<td>3 days, 18:10:58</td>
<td>1 day, 21:09:00</td>
</tr>
<tr>
<td>6.00</td>
<td>2.50</td>
<td>111 days, 6:48:00</td>
<td>57 days, 20:48:58</td>
<td>14 days, 21:56:32</td>
<td>7 days, 11:53:54</td>
<td>3 days, 18:10:58</td>
</tr>
<tr>
<td>3.00</td>
<td>1.25</td>
<td>206 days, 16:03:27</td>
<td>111 days, 6:48:00</td>
<td>57 days, 20:48:58</td>
<td>14 days, 21:56:32</td>
<td>7 days, 11:53:54</td>
</tr>
<tr>
<td>1.50</td>
<td>0.63</td>
<td>361 days, 16:06:02</td>
<td>206 days, 16:03:27</td>
<td>111 days, 6:48:00</td>
<td>57 days, 20:48:58</td>
<td>14 days, 21:56:32</td>
</tr>
</tbody>
</table>
### 16. Specifications

**Approximate total 16-bit recording times for a 32GB SDHC (in days, hours:minutes:seconds)**

<table>
<thead>
<tr>
<th>Fs (kHz)</th>
<th>Band (kHz)</th>
<th>8 channels</th>
<th>16 channels</th>
<th>32 channels</th>
<th>64 channels</th>
<th>128 channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.00</td>
<td>80.00</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>96.00</td>
<td>00.00</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>48.00</td>
<td>00.00</td>
<td>5:44:51</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>24.00</td>
<td>00.00</td>
<td>22:38:19</td>
<td>11:26:10</td>
<td>5:44:51</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>12.00</td>
<td>00.00</td>
<td>1 day, 20:22:18</td>
<td>22:38:19</td>
<td>11:26:10</td>
<td>5:44:51</td>
<td>—</td>
</tr>
<tr>
<td>3.00</td>
<td>25.00</td>
<td>6 days, 14:28:12</td>
<td>3 days, 13:19:48</td>
<td>1 day, 20:22:18</td>
<td>22:38:19</td>
<td>11:26:10</td>
</tr>
</tbody>
</table>

**Approximate total 24-bit recording times for a 32GB SDHC (in days, hours:minutes:seconds)**

<table>
<thead>
<tr>
<th>Fs (kHz)</th>
<th>Band (kHz)</th>
<th>8 channels</th>
<th>16 channels</th>
<th>32 channels</th>
<th>64 channels</th>
<th>128 channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.00</td>
<td>80.00</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>96.00</td>
<td>00.00</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>48.00</td>
<td>00.00</td>
<td>5:44:51</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>24.00</td>
<td>00.00</td>
<td>22:38:19</td>
<td>11:26:10</td>
<td>5:44:51</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>12.00</td>
<td>00.00</td>
<td>1 day, 20:22:18</td>
<td>22:38:19</td>
<td>11:26:10</td>
<td>5:44:51</td>
<td>—</td>
</tr>
<tr>
<td>3.00</td>
<td>25.00</td>
<td>6 days, 14:28:12</td>
<td>3 days, 13:19:48</td>
<td>1 day, 20:22:18</td>
<td>22:38:19</td>
<td>11:26:10</td>
</tr>
</tbody>
</table>

- The recording times given in the above tables are approximations. Actual recording times might differ depending on the recording media used.
- The above times are total possible recording times for the media. They are not continuous recording times.
- You can use the following formula as a guide to calculate approximate recording times for other recording media.

**Approximate recording time (seconds)**

= effective recording capacity/(sampling frequency in Hz × number of channels × analog-digital conversion bit depth in bytes + 8000)

- Effective recording capacity: recording capacity – reserved space (in bytes)
- Recording capacity: nominal media capacity in bytes (example: 1 TB = 1000x1000x1000x1000)
- Reserved space: headers and other files besides user data that use approximately 50 MB
- Analog-digital conversion bit depth: bytes required for the quantization bit depth (4 for 24-bit or 2 for 16-bit)
- 8000: voice memo transmission speed at 8kHz fixed sampling frequency with 8-bit quantization (8000 bytes/sec)

**Calculation example**

Total recording time for 16 channels at 192kHz sampling frequency with 16-bit quantization on a 1TB RDX HDD:

Recording time (seconds) = (1000 x 1000 x 1000 x 1000) - (50 x 1024 x 1024)/(192 x 1000 x 16 x 2+8000)

= 162540 seconds = 1 day, 21:09:00
16. Specifications

Analog monitoring output
Number of output channels .................................................. 1
Monitor signal source options ..............................................
  Any active data channel or voice memos
Output connector ................................................................. BNC (Z=50Ω type)
Output format ................................................................. Unbalanced
Output impedance ............................................................. 50Ω ±10%
Output range setting ......................................................... ±1 to ±5 V
  selectable in 0.1V increments
Maximum output current ...................................................... ±10 mA (into 20Ω load)
Output signal quantization bit depth ..................................... 24-bit
Digital-analog conversion .................................................. ΔΣ method
  with 24-bit, 128x oversampling

Output connector ................................................................. BNC (Z=50Ω type)
Output format ................................................................. Unbalanced
Output impedance ............................................................. 50Ω ±10%
Output range setting ......................................................... ±1 to ±5 V
  selectable in 0.1V increments
Maximum output current ...................................................... ±10 mA (into 20Ω load)
Output signal quantization bit depth ..................................... 24-bit
Digital-analog conversion .................................................. ΔΣ method
  with 24-bit, 128x oversampling

Voice memo input and output
Sampling frequency .......................................................... 8 kHz
Quantization bit depth ....................................................... 8-bit (WAV file)
Number of input channels ................................................... 1 (mono)
Input connector ................................................................. 3.5mm TS mini jack
Monitoring connector ......................................................... 3.5mm TS mini jack
  • SPEAKER output off when earphone connected
Output level adjustment ..................................................... VOLUME knob
Monitoring ................................................................. Voice memo signal can be set as monitoring output

Internal clock
Clock precision .............................................................. ±2 PPM (at 25 °C)
Battery life ................................................................. 5 or more years

External interfaces
1000BASE-T LAN connector ............................................ 1
  with LINK/ACTIVITY LED
DIGITAL CONTROL signal connector ............................... 1
  Angled half-pitch 36-pin
  Hirose DX10A-50S series
  Signal format: TTL level
  for ER-WXRC REMOTE CONTROLLER
AQ-VU synchronization connector ................................. 1
EXT TRIGGER IN signal input connector .......................... 1
  BNC
  Signal format: TTL level
  Recording starts when TRIGGER stopped
  with LOW (0.4V or less) signal.
EXPANSION OUT expansion unit connector ...................... 1
SYNC IN synchronized recording connector ..................... 1
SYNC OUT synchronized recording connector .................. 1
UPS SIGNAL IN contact signal input connector .................. 1
  Recording completion procedures are conducted when a power outage signal is received.
FG (frame grounding) connector .................................... 1
## 16. Specifications

### 16-2. Input/output unit (AU-WXPIO)

#### Analog signal input channels

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input amplifier switching</strong></td>
<td>Can be switched between DC input and PA input</td>
</tr>
<tr>
<td><strong>Input signal type</strong></td>
<td>DC input</td>
</tr>
<tr>
<td><strong>Number of input channels</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>Input connectors</strong></td>
<td>BNC (Z=50Ω type)</td>
</tr>
<tr>
<td><strong>Input format</strong></td>
<td>Unbalanced</td>
</tr>
<tr>
<td><strong>Input impedance</strong></td>
<td>1 MΩ or more</td>
</tr>
<tr>
<td><strong>Input signal and amplifier coupling</strong></td>
<td>DC coupling</td>
</tr>
<tr>
<td><strong>Input range options</strong></td>
<td>±0.1, 0.2, 0.5, 1, 2, 5, 10, 20 V</td>
</tr>
<tr>
<td><strong>Input filter</strong></td>
<td>—</td>
</tr>
<tr>
<td><strong>High pass filter</strong></td>
<td>—</td>
</tr>
<tr>
<td><strong>Weighting</strong></td>
<td>—</td>
</tr>
<tr>
<td><strong>Absolute maximum input voltage (input range value)</strong></td>
<td>±50 V (0.1, 0.2, 0.5, 1, 2, 5V), ±100V (10, 20 V)</td>
</tr>
<tr>
<td><strong>2-color input level LED (red/green)</strong></td>
<td>Lights green when input level exceeds 10% of its input range and lights red when it exceeds 115%. Lights green when input level exceeds 10% of its input range and lights red when it exceeds 115%. Lights both green and red when there is no ICP current.</td>
</tr>
<tr>
<td><strong>Input signal quantization bit depth</strong></td>
<td>24-bit or 16-bit switchable</td>
</tr>
<tr>
<td><strong>Over range</strong></td>
<td>±127% (+2.08 dB)</td>
</tr>
<tr>
<td><strong>Analog-digital conversion method</strong></td>
<td>ΔΣ method with 24-bit, 128x oversampling</td>
</tr>
<tr>
<td><strong>Input frequency flatness characteristics</strong></td>
<td>10V or less input range: ±0.5 dB or less</td>
</tr>
<tr>
<td><strong>(0 dB at 100 Hz)</strong></td>
<td>Band (40kHz or less): ±0.5 dB or less</td>
</tr>
<tr>
<td><strong>(Sampling frequency/24)</strong></td>
<td>Band (80kHz or less): +0.5 to – 1.0 dB</td>
</tr>
<tr>
<td><strong>20V input range</strong></td>
<td>Band (20kHz or less): ±0.5 dB or less</td>
</tr>
<tr>
<td><strong>(Sampling frequency/24)</strong></td>
<td>Band (80kHz or less): +0.5 to – 2.5 dB</td>
</tr>
<tr>
<td><strong>Input range precision</strong></td>
<td>±2% or less</td>
</tr>
<tr>
<td><strong>Nonlinearity</strong></td>
<td>±0.1% or less</td>
</tr>
<tr>
<td><strong>Input DC drift stability</strong></td>
<td>±0.1% or less (10 or more minutes after power supplied)</td>
</tr>
<tr>
<td><strong>OFFSET, gain correction</strong></td>
<td>Correction function available</td>
</tr>
<tr>
<td><strong>Measured frequency of phase contrast between input channels</strong></td>
<td>10V or less input range: 1º or less (in same expansion unit)</td>
</tr>
<tr>
<td><strong>(Sampling frequency/24)</strong></td>
<td>Band (20kHz or less): 2º or less (in different expansion unit)</td>
</tr>
<tr>
<td><strong>20V input range</strong></td>
<td>Band (80kHz or less): 3º or less</td>
</tr>
<tr>
<td><strong>(Sampling frequency/24)</strong></td>
<td>Band (20kHz or less): 3º or less (in different expansion unit)</td>
</tr>
<tr>
<td><strong>Band (80kHz or less): 3º or less</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Voltage supplied to ICP sensors</strong></td>
<td>—</td>
</tr>
<tr>
<td><strong>ICP sensor constant current source</strong></td>
<td>—</td>
</tr>
<tr>
<td><strong>ICP sensor interruption detection</strong></td>
<td>—</td>
</tr>
<tr>
<td><strong>TEDS</strong></td>
<td>—</td>
</tr>
</tbody>
</table>

*Can be set to 28V or 24V DC for each expansion unit (all 16 channels at once)*

*Can be set to OFF, 0.5 mA or 4 mA per channel*

*Each channel has ICP sensor interruption detection*

*Supports TEDS Ver. 1.1*
16. Specifications

DC/PA input amplifier signal to noise (SN) ratio

<table>
<thead>
<tr>
<th>Input range</th>
<th>Band (20kHz or less)</th>
<th>Band (40kHz or less)</th>
<th>Band (80kHz or less)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16-bit</td>
<td>24-bit</td>
<td>16-bit</td>
</tr>
<tr>
<td>Up to 1 V</td>
<td>85 dB</td>
<td>87 dB</td>
<td>84 dB</td>
</tr>
<tr>
<td>1 – 20 V</td>
<td>87 dB</td>
<td>98 dB</td>
<td>87 dB</td>
</tr>
</tbody>
</table>

DC/PA input amplifier distortion .................. 0.1% or less
DC/PA input amplifier crosstalk \( ^2 \) (1V input range) ........... –80 dB

\(^1\)Noise level compared to 100% of the given input range
\(^2\)Signal leakage level from other channels compared to 100% of the given input range.

The measured signal frequency is the sampling frequency divided by 2.4.

Analog signal output channels

Number of output channels ........................................... 16
Output connectors ........................................................... BNC (Z=50Ω type)
Output format ................................................................. Unbalanced
Output impedance .............................................................. 50Ω±10%
Output range setting ..................................................... ±1 to ±5 V
selectable in 0.1V increments
Maximum output current .............................................. ±10 mA (into 20Ω load)
Quantization bit depth .................................................. 24-bit or 16-bit switchable
Digital-analog conversion ...................................... ΔΣ method
with 24-bit, 128x oversampling

Output frequency flatness characteristics
(10V or less input range)
Band (20kHz or less) ........................................... ±0.5 dB or less
Band (40kHz or less) ........................................... +0.5 to – 1.0 dB or less
Band (80kHz or less) ........................................... +0.5 to – 2.5 dB or less
(20V input range)
Band (20kHz or less) ........................................... +0.5 to – 1.0 dB or less
Band (40kHz or less) ........................................... +0.5 to – 1.5 dB or less
Band (80kHz or less) ........................................... +0.5 to – 3.0 dB or less
Output range precision ............................................. ±2% or less
Output nonlinearity ...................................................... ±0.1% or less
Output distortion (THD) .............................................. ±0.1% or less
Output dynamic range (1V input range in 20kHz band or less)
24-bit: 97 dB
16-bit: 89 dB
Signal to noise (SN) ratio (1V input range)
band (20kHz or less) ............................................... 24-bit: 95dB
16-bit: 87dB
band (40kHz or less) ............................................... 24-bit: 92dB
16-bit: 87dB
band (80kHz or less) ............................................... 24-bit: 82dB
16-bit: 78dB
Crosstalk between output channels (1V input range) 
-74 dB or more

Measured frequency of phase contrast between input channels
(10V or less input range)
Band (20kHz or less):
1.5º or less (in same expansion unit)
2º or less (in different expansion unit)
Band (80kHz or less): 3º or less
(20V input range)
Band (20kHz or less):
2º or less (in same expansion unit)
3º or less (in different expansion unit)
Band (80kHz or less): 3º or less

External interfaces

EXPANSION IN expansion unit connector .................................. 1
EXPANSION OUT expansion unit connector .................................. 1

Power supply

DC IN connector .......................................................... for AC power adaptor
2 of 4 pins used

● See “Powering the unit” on pages 10 - 11 For illustrations
showing how to connect the adaptor(s).

FG (frame grounding) connector ......................................... 1
### 16-3. General

**External dimensions (W x H x D, not including protrusions)/weight**

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>WX-7000</td>
<td>340 x 82 x 220 mm</td>
<td>4.1 kg</td>
</tr>
<tr>
<td>AU-WXEPIO</td>
<td>340 x 40 x 220 mm</td>
<td>3.1 kg</td>
</tr>
<tr>
<td>WX-7016</td>
<td>340 x 123 x 220 mm</td>
<td>7.4 kg</td>
</tr>
<tr>
<td>WX-7032</td>
<td>340 x 164 x 220 mm</td>
<td>10.4 kg</td>
</tr>
<tr>
<td>WX-7064</td>
<td>340 x 246 x 220 mm</td>
<td>30.2 kg</td>
</tr>
<tr>
<td>WX-7128</td>
<td>340 x 410 x 220 mm</td>
<td>30.2 kg</td>
</tr>
</tbody>
</table>

*Not including AC adaptors, media and optional boards.*

Sidebar attachment screws: M4 binding x 6
Rubber feet attachment screws: M3 binding x 8

**DC power supply input**

11 – 30 V DC (powered from included AC adaptor)

**Power consumption**

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>WX-7000</td>
<td>Approximately 15 W</td>
</tr>
<tr>
<td>AU-WXEPIO</td>
<td>Approximately 38 W</td>
</tr>
<tr>
<td>WX-7016</td>
<td>Approximately 53 W</td>
</tr>
<tr>
<td>WX-7032</td>
<td>Approximately 90 W</td>
</tr>
<tr>
<td>WX-7064</td>
<td>Approximately 166 W</td>
</tr>
<tr>
<td>WX-7128</td>
<td>Approximately 317 W</td>
</tr>
</tbody>
</table>

**RC120G-16D AC adaptors (included)**

- Rated input voltage: AC 100–240 V
- Input voltage range: AC 90–264 V
- Input power supply frequency: 50/60±3 Hz
- Rated output voltage: 16 V
- Rated output current: 6.5 A
- Output power: 104 W
- External dimensions (W x H x D): 68 x 35 x 153 mm
- Weight: 650 g or less

**Operating conditions**

- Operating temperature: 0 to 40 °C
- Operating humidity range: 10–80% (no condensation)
- Storage temperature: -20 to +60 °C
- Storage humidity range: 5–90% (no condensation)
- Operating air pressure range: 860–1060 hPa
- Vibration resistance: MIL-STD-810E Figure 514.4-1, 2, 3 (not including RDX HDD)

- Confirm the operating conditions of each type of recording media. In cold temperatures, we recommend using an RDX SSD or an SDHC card. Use RDX cartridges in environments with operating temperatures of at least 10° C. When you expect to use a cartridge in an environment that is colder than 10° C, let the unit run to warm up for at least 45 minutes before use.

**Note**

- Cooling fan life: 30,000 hours (fan alone at 20 °C)

### 16-4. Included accessories

- WX Navi: measured data waveform display software
- Microphone for voice memos: 1
- Earphone for voice memos: 1
- CD-ROM: 1
- Quick Start Guide: 1 printed
- Expansion connection cables: WX-7016: 1, WX-7032: 2, WX-7064: 4, WX-7128: 8
- AC adaptors: WX-7016: 1, WX-7032: 1, WX-7064: 2, WX-7128: 4
- AC adaptor power cords: According to the number of AC adaptors (1 for domestic use and 2 for overseas use per adaptor)
- Ferrite cores: Pre-attached to AC adaptors

### 16-5. Options

- AU-WXEPIO: Expansion unit
- ER-WXRC: Dedicated simple remote control

Planned for future release

- AR-WXIRIG: IRIG-B timecode signal input and output card
- AR-WXGPS: GPS data input card

- In order to improve the products, specifications and appearance could be changed at any time without warning.
- Illustrations in this Owner’s Manual might differ in part from the actual products.
17. Exterior drawings

WX-7016

WX-7032
17. Exterior drawings

WX-7064

WX-7128
## Troubleshooting

If any of these problems should occur, please check the following before requesting service.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible causes and responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power will not turn on</td>
<td>Is the power adaptor connected?</td>
</tr>
<tr>
<td></td>
<td>Is the DC power supply voltage too low?</td>
</tr>
<tr>
<td>Number of recording channels is less than</td>
<td>Are all the power adaptors connected correctly?</td>
</tr>
<tr>
<td>expected</td>
<td>Are all the connection cables connected correctly?</td>
</tr>
<tr>
<td>RDX cartridge not recognized</td>
<td>If the media is not recognized immediately after the removal and</td>
</tr>
<tr>
<td></td>
<td>insertion of an RDX cartridge, turn the WX-7000's power off and</td>
</tr>
<tr>
<td></td>
<td>then on again.</td>
</tr>
<tr>
<td>&quot;Inserted media is not supported.&quot; message</td>
<td>Is compatible media loaded in the WX-7000?</td>
</tr>
<tr>
<td>appears</td>
<td>Has the media been formatted by the WX-7000? If not, use the WX-7000</td>
</tr>
<tr>
<td></td>
<td>Are you using media that has been confirmed to work with the WX-7000?</td>
</tr>
<tr>
<td>Cannot select the sampling frequency</td>
<td>Is it set to more channels than the supported by the recording media?</td>
</tr>
<tr>
<td>Main unit buttons do not function</td>
<td>Is the panel locked? If so, unlock it.</td>
</tr>
<tr>
<td></td>
<td>Buttons are disabled during WX-Navi operation. If transmission</td>
</tr>
<tr>
<td></td>
<td>with WX-Navi should be interrupted, for example, the use of</td>
</tr>
<tr>
<td></td>
<td>buttons will become possible again after at least 3 minutes</td>
</tr>
<tr>
<td></td>
<td>have passed.</td>
</tr>
<tr>
<td>WX Navi does not recognize the WX-7000</td>
<td>Are the LAN cables connected correctly?</td>
</tr>
<tr>
<td></td>
<td>Are the IP address and subnet mask settings, for example, set</td>
</tr>
<tr>
<td></td>
<td>correctly?</td>
</tr>
<tr>
<td></td>
<td>Is it being blocked by the computer’s firewall?</td>
</tr>
<tr>
<td></td>
<td>Turn the WX-7000 power supply on and off again and then restart WX Navi.</td>
</tr>
</tbody>
</table>

If you are still unable to fix the problems after checking the above, please contact our service department.