

HDD Compatibility Chart (only for China)

Version: 12th September 2023

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(*) For models that have been discontinued for more than 7 years, the compatibility chart will be deleted.



Caution: To use Seagate, WD (5TB or 6TB or 8TB) HDD with HDD canister

for WJ-NX400K/WJ-HXE400/WJ-ND400K/WJ-HDE400/WJ-HD716K

Please DO NOT fix two screws into bottom side of HDD (\Rightarrow marks below), because screw length is longer than depth of tapped hole.







Important information: The preparations to use Seagate HDD

(For WJ-NX400K/WJ-HXE400/WJ-ND400K/WJ-HDE400/WJ-HD716K)

To use Seagate HDD, the following 2 items must be performed before the installation of HDDs.

Turn off SSC (SSC: Spread Spectrum Clocking, default setting: "ON")

Caution: If SSC is NOT turned off, the HDD will never be recognized by NVR.

⇒ See Next Page

2. Choose the screw to use

Caution: If do not install the correct screws, the HDD will not be properly secured to the case, and may experience HDD errors or malfunction.

The screws to install the HDD depend on the serial number of the NVR.

⇒ See Page 5

Caution:

We will not take responsibility for any failure that occurs by performing an operation different from the detailed procedure from the next pages.



The preparations to use Seagate HDD

- 1) The items and procedure to turn off SSC
- ◆ The required items
 - Windows PC with "SeaChest utilities" *1
 - USB to SATA conversion adapter for 3.5 inch HDD with AC power input
 Note: Adapter with special functions such as clone function cannot be used.
 - HDDs to be changed
 - *1: the download site of "SeaChest Utilities"

https://www.seagate.com/support/software/seachest/

Procedure to turn off SSC setting

Described on page 15 to 19

⇒ See Page 15



The preparations to use Seagate HDD

- 2) Choose the screws
- ◆ The screws to install the HDD differ depending on the serial No. of the NVR.

Ex.) Serial No.: TLV00001

(1st character = year(T:2020), 2nd character = month(L:Dec)

	Serial No(example)												
1st character year		R	S	Т	C	V	W	Х	Υ	Α	В	C	D
	year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2nd character month		Α	В	С	D	Е	F	G	Н	I	J	K	L
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	

Case 1 : Serial No. is TLxxxxxx or later (1st character T=2020, 2nd character L = Dec)

-> See page 6 to 7

【Case 2 】: Serial No. is TKxxxxxx or earlier

-> See page 8 to 9

(1st character T=2020, 2nd character K =Nov)

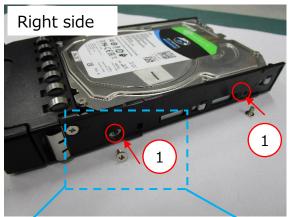
The preparations to use Seagate HDD / Choose the screws [Case 1]

	•				quantity		6	
Screw No	type colo		color	WJ-NX400K WJ-NX300K WJ-NX200K Not applicable for China		Standard Accessories		
1)	Screw	#6-32UNC L=5.3 mm	Silver	6pcs x 9HDDs *1	4pcs x 4HDDs	4pcs x 2HDDs	YES	*1 Use 36 (4pcs X 9HDDs) screws to install Seagate HDDs and WD 5TB/6TB HDDs. Use 54 (6pcs X 9HDDs) screws to install other WD HDDs except for 5TB/6TB.



The preparations to use Seagate HDD / Choose the screws [Case 1]

Install the HDD into the HDD Unit using 4 fixing screws (Screw No.1)







Do not fix the two places on bottom with screws



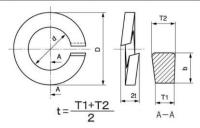


The preparations to use Seagate HDD / Choose the screws [Case 2]

					quai	ntity			
Screw No	Screw or washer	. I type I color	WJ-NX400K WJ-HXE400 WJ-ND400K WJ-HDE400	WJ-NX300K Not applicable for China	WJ-NX200K Not applicable for China	WJ-HD716K (WJ-HDU40K)	Standard Accessories		
2	Screw	#6-32UNC L=6 mm	Gold	6pcs x 9HDDs *1	4pcs x 4HDDs	4pcs x 2HDDs	6pcs x 4HDDs *2	YES	Provided with NVR *1 Use 36 (4pcs X 9HDDs) screws to install Seagate HDDs and WD 5TB/6TB HDDs. Use 54 (6pcs X 9HDDs) screws to install other WD HDDs except for 5TB/6TB. *2 Use 16 (4pcs X 4HDDs) screws to install Seagate HDDs and WD 5TB/6TB HDDs. Use 24 (6pcs X 4HDDs) screws to install other WD HDDs except for 5TB/6TB.
3	washer	M4 spring washer	-	2pcs x 9HDDs	4pcs x 4HDDs	4pcs x 2HDDs	2pcs x 4HDDs	NO	Locally procured

Screw No. 3 (spring washer) spec

Spring Washer	d(m	ım)	b(mm)	t(mm)	D(mm)	Material
Spring Washer	max	min	min	min	Max	Material
4 (For M4)	4.5	4.1	1.4	1	7.6	SUS









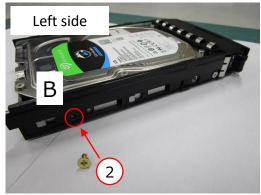
The preparations to use Seagate HDD / Choose the screws [Case 2]

Installation of the HDD for WJ-NX400K/WJ-HXE400/WJ-ND400K/WJ-HDE400/WJ-HD716K

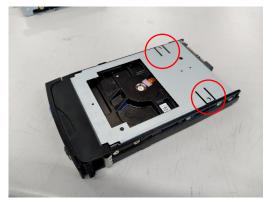
[Case 2 : TK*xxxxx or earlier]

Install the HDD into the HDD Unit using 2 fixing screws (2), A and B places

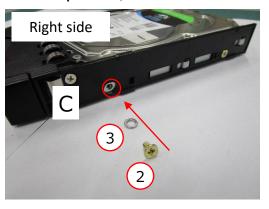


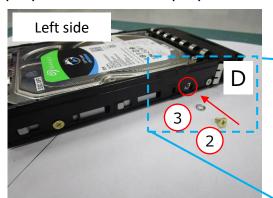


Do not fix the two places on bottom with screws



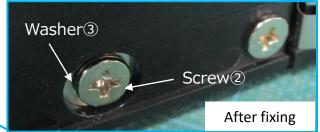
C and D places, fix with 2washers (3) and 2 screws (2)











HDD Compatibility Chart

WJ-NX400K WJ-HXE400





12th September 2023

<u>Latest Firmware Version : V5.30 (NX400)</u>

V1.11 (HXE400)

3.5" SATA – Advanced Format

Current HDDs

Capacity	Vendor	Model	Note
8TB	Western Digital	WD84EJRX-89B2TY0	*1
6ТВ		WD63EJRX-89BFMY0	*1
		WD64PURZ-85BWUY0	*1
4TB		WD42EJRX-89BFNY0	
		WD43PURZ-85BWPY0	
	Seagate	ST4000VX016	
3ТВ	Western Digital	WD33PURZ-85BWPY0	
2TB		WD22EJRX-89BEMY0	
		WD23PURZ-85C5HY0	
1TB		WD11PURZ-85C5HY0	

Discontinued HDDs

Capacity	Vendor	Model	Note
6ТВ	Western Digital	WD60PURX-64T0ZY1	*1
		WD60PURX-64T0ZY0	*1
		WD60EJRX-89MP9Y1	*1
		WD60EFRX-68MYMN1	*1
		WD60EFRX-68L0BN1	*1
		WD62EJRX-89B2VY0	*1
	Seagate	ST6000VX001	*1, *2 Discontinued in CY23Q1
5TB	Western Digital	WD50PURX-64T0ZY0	*1
		WD50EFRX-68MYMN1	*1
		WD50EFRX-68L0BN1	*1

Capacity	Vendor	Model	Note
4TB	Western Digital	WD40PURX-64NZ6Y0	
		WD40PURX-64GVNY0	
		WD40EJRX-89T1XY0	
		WD40EFRX-68WT0N0	
		WD40EJRX-89AKWY0	
3ТВ		WD30PURX-64P6ZY0	
		WD30EJRX-89G3VY0	
		WD30EFRX-68EUZN0	
		WD30EJRX-89AKWY0	
2TB		WD20PURX-64P6ZY0	
		WD20EJRX-89G3VY0	
		WD20EFRX-68EUZN0	
		WD20EJRX-89AKWY0	



^{*1} Please refer to page 2, not to fix two screws into bottom side of HDD.

^{*2} To use Seagate SkyHawk series, it is necessary to set the HDD SSC setting to "OFF" in advance. And need to choose the screws to install the HDDs. Please refer to page 3 for instructions.

HDD Compatibility Chart (Discontinued Model, Support ends in Mar. 2025)





12th September 2023

Latest Firmware Version: V2.62

3.5" SATA

Current HDDs

Capacity	Vendor	Model	Note
6ТВ	Western Digital	WD63EJRX-89BFMY0	
		WD64PURZ-85BWUY0	
4TB		WD42EJRX-89BFNY0	
		WD43PURZ-85BWPY0	
3ТВ		WD33PURZ-85BWPY0	
2TB		WD22EJRX-89BEMY0	
		WD23PURZ-85C5HY0	
1TB		WD11PURZ-85C5HY0	

Discontinued HDDs

Capacity	Vendor	Model	Note
6ТВ	Western Digital	WD60PURX-64T0ZY1	
		WD60PURX-64T0ZY0	
		WD60EJRX-89MP9Y1	
		WD60EFRX-68MYMN1	
		WD60EFRX-68L0BN1	
		WD62EJRX-89B2VY0	
	Seagate	ST6000VX001	*1, *2 Discontinued in CY23Q1
5TB	Western Digital	WD50PURX-64T0ZY0	
		WD50EFRX-68MYMN1	
		WD50EFRX-68L0BN1	
4TB		WD40PURX-64NZ6Y0	
		WD40PURX-64GVNY0	
		WD40EURX-63BMCY0	
		WD40EJRX-89T1XY0	
		WD40EFRX-68WT0N0	
		WD40EJRX-89AKWY0	

Capacity	Vendor	Model	Note
ЗТВ	Western Digital	WD30PURX-64P6ZY0	
		WD30EURX-63T0FY0	
		WD30EJRX-89G3VY0	
		WD30EFRX-68EUZN0	
		WD30EJRX-89AKWY0	
2TB		WD20PURX-64P6ZY0	
		WD20EURX-63T0FY0	
		WD20EJRX-89G3VY0	
		WD20EFRX-68EUZN0	
		WD20EJRX-89AKWY0	
1TB		WD10EURX-63FH1Y0	



^{*1} Please refer to page 2, not to fix two screws into bottom side of HDD.

^{*2} To use Seagate SkyHawk series, it is necessary to set the HDD SSC setting to "OFF" in advance. And need to choose the screws to install the HDDs. Please refer to page 3 for instructions.

HDD Compatibility Chart

WJ-ND400K WJ-HD716K WJ-HDE400

Very Important Notification for Compatibility of i-PRO NVR/DVR's with AF (Advanced Format) HDD's

ND400K	HD716K	HDE400	Note
V3.20	V2.30	V1.20	These versions are compatible with AF HDD's. (AF HDD has 4K-byte data in one sector, while legacy HDD has 512byte in one sector.)
or above	or above	or above	
V3.10	V2.20	V1.07	These versions are not compatible with AF HDD's. If AF HDD will be installed into DVR's/NVR of these older versions, lack of recorded image/video, frequent restart of recorder, or some unexpected troubles may happen.
or below	or below	or below	



HDD Compatibility Chart (Discontinued Model, Support ends in Oct. 2025)

WJ-ND400 WJ-HDE400





12th September 2023

Latest Firmware Version: V6.10 (ND400)

V1.31 (HDE400)

3.5" SATA – Advanced Format

ND400 MUST be V3.20 or above. (Please refer to page 12)

Current HDDs

Capacity	Vendor	Model	Note	
6ТВ	Western Digital	WD63EJRX-89BFMY0	*1	
		WD64PURZ-85BWUY0	*1	
4TB		WD42EJRX-89BFNY0		
		WD43PURZ-85BWPY0		
3ТВ		WD33PURZ-85BWPY0		
2TB		WD22EJRX-89BEMY0		
		WD23PURZ-85C5HY0		
1TB		WD11PUR7-85C5HY0		

Discontinued HDDs

Capacity	Vendor	Model	Note
6TB	Western Digital	WD60PURX-64T0ZY1	*1
		WD60PURX-64T0ZY0	*1
		WD60EJRX-89MP9Y1	*1
		WD60EFRX-68MYMN1	*1
		WD60EFRX-68L0BN1	*1
		WD62EJRX-89B2VY0	*1
	Seagate	ST6000VX001	*1, *2 Discontinued in CY23Q1
5TB	Western Digital	WD50PURX-64T0ZY0	*1
		WD50EFRX-68MYMN1	*1
		WD50EFRX-68L0BN1	*1
4TB		WD40PURX-64NZ6Y0	
		WD40PURX-64GVNY0	
		WD40EJRX-89T1XY0	
		WD40EFRX-68WT0N0	
		WD40EJRX-89AKWY0	

Capacity	Vendor	Model	Note
3ТВ	Western Digital	WD30PURX-64P6ZY0	
		WD30EJRX-89G3VY0	
		WD30EFRX-68EUZN0	
		WD30EJRX-89AKWY0	
2TB		WD20PURX-64P6ZY0	
		WD20EJRX-89G3VY0	
		WD20EFRX-68EUZN0	
		WD20EJRX-89AKWY0	

^{*2} To use Seagate SkyHawk series, it is necessary to set the HDD SSC setting to "OFF" in advance. And need to choose the screws to install the HDDs. Please refer to page 3 for instructions.



^{*1} Please refer to page 2, not to fix two screws into bottom side of HDD.

HDD Compatibility Chart (Discontinued Model, Support ends in Mar. 2024)

WJ-HD716K WJ-HDE400



12th September 2023

Current Firmware Version: V2.64 (HD716K)

V1.20 (HDE400)

3.5" SATA – Advanced Format

HD716K MUST be V2.30 or above. (Please refer to page 12)

Current HDDs

Capacity	Vendor	Model	Note	
6ТВ	Western Digital	WD63EJRX-89BFMY0	*1	
		WD64PURZ-85BWUY0	*1	
4TB		WD42EJRX-89BFNY0		
		WD43PURZ-85BWPY0		
ЗТВ		WD33PURZ-85BWPY0		
2TB		WD22EJRX-89BEMY0		
		WD23PURZ-85C5HY0		
1TR		WD11PHR7-85C5HV0		

Discontinued HDDs

Capacity	Vendor	Model	Note
6ТВ	Western Digital	WD60PURX-64T0ZY1	*1
		WD60PURX-64T0ZY0	*1
		WD60EJRX-89MP9Y1	*1
		WD60EFRX-68MYMN1	*1
		WD60EFRX-68L0BN1	*1
		WD62EJRX-89B2VY0	*1
	Seagate	ST6000VX001	*1, *2 Discontinued in CY23Q1
5TB	Western Digital	WD50PURX-64T0ZY0	*1
		WD50EFRX-68MYMN1	*1
		WD50EFRX-68L0BN1	*1
4TB		WD40PURX-64NZ6Y0	
		WD40PURX-64GVNY0	
		WD40EJRX-89T1XY0	
		WD40EFRX-68WT0N0	
		WD40EJRX-89AKWY0	

Capacity	Vendor	Model	Note
3ТВ	Western Digital	WD30PURX-64P6ZY0	
		WD30EJRX-89G3VY0	
		WD30EFRX-68EUZN0	
		WD30EJRX-89AKWY0	
2TB		WD20PURX-64P6ZY0	
		WD20EJRX-89G3VY0	
		WD20EFRX-68EUZN0	
		WD20EJRX-89AKWY0	

^{*2} To use Seagate SkyHawk series, it is necessary to set the HDD SSC setting to "OFF" in advance. And need to choose the screws to install the HDDs. Please refer to page 3 for instructions.



^{*1} Please refer to page 2, not to fix two screws into bottom side of HDD.

1. Download SeaChest Utilities from the following URL then install it to Windows PC.

https://www.seagate.com/support/software/seachest/

2. Connect target HDD via USB to the PC which SeaChest Utilities is installed.

3. Double click SeaChest Utilities icon on desktop and launch SeaChest Utilities.



4. Enter the following command from Windows Command Prompt.

Seachest_Basics_x64_windows.exe --scan

```
C:\text{Program Files\text{Seagate\text{SeaChest}}SeaChest_Basics_x64_windows.exe --scan}

SeaChest_Basics - Seagate drive utilities - NVMe Enabled
Copyright (c) 2014-2022 Seagate Technology LLC and/or its Affiliates, All Rights Reserved
SeaChest_Basics Version: 3.3.1-3_2_1 X86_64
Build Date: Jul 26 2022
Today: Wed Nov 2 09:43:49 2022

Today: Wed Nov 2 09:43:49 2022

Vendor Handle Model Number Serial Number FwRev

Vendor PD0 KBG4A7NV256G TOSHIBA MFMORY 61UPG2HIOS12

ST4000VX PD1 016-3CV104 152D20337A0C

Target drive
```

Seagate Model# won't be displayed because HDD is connected via USB bridge chip. Check ID# (PD1 for above case) of target drive.

5. Confirm the current SSC condition by entering the following command.

Seachest_Configure_x64_windows.exe -d PD1 --ssc info

```
C:\Program Files\Seagate\SeaChest\SeaChest_Configure_x64_windows.exe -d PD1 --ssc info

SeaChest_Configure - Seagate drive utilities - NVMe Enabled
Copyright (c) 2014-2022 Seagate Technology LLC and/or its Affiliates, All Rights Reserved
SeaChest_Configure Version: 2.1.0-3_2_1 X86_64
Build Date: Jul 26 2022
Today: Wed Nov 2 09:47:41 2022

\text{YEACHEST SEAGURE FOR THE SEAGURE SE
```

default value : SSC Feature is enabled (SSC is "ON")

6. Turn off SSC by entering the following command.

Seachest_Configure_x64_windows.exe -d PD1 --ssc disable

```
C:\text{Program Files\text{Seagate\text{SeaChest}} SeaChest_Configure_x64_windows.exe -d PD1 --ssc disable

SeaChest_Configure - Seagate drive utilities - NVMe Enabled
Copyright (c) 2014-2022 Seagate Technology LLC and/or its Affiliates, All Rights Reserved
SeaChest_Configure Version: 2.1.0-3_2_1 X86_64
Build Date: Jul 26 2022
Today: Wed Nov 2 09:50:50 2022

**Y.\text{YPhysicalDrive1} - 016-3CV104 -_- - ATA
Successfully set SSC feature to disabled |
Please power cycle the drive to make the change take effect.
```

Power cycle the drive to make the change take effect. (No need to close SeaChest Utilities during power cycle)

7. Confirm SSC setting had been changed by entering the following command.

Seachest_Configure_x64_windows.exe -d PD1 --ssc info

8. Power off USB-SATA converter and then remove the HDD from the converter.

Introduction

As network disk recorders used for security system generally operate all-year-round, they need regular maintenance to avoid system failures and to keep their performance.

What is a hard disk drive?

What is a hard disk drive?

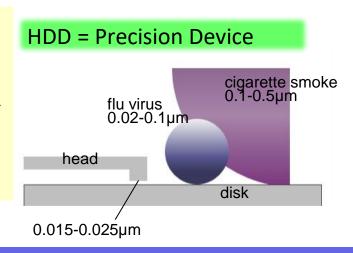
- A hard disk drive (an HDD) is a device which reads and writes digital data magnetically with the disks (platters) that spin and the head floating above the disks.



Points to Note

Point # 1 Avoid Vibration

The magnetic head floating above the disks in an HDD is set extremely close to the disks with the spacing that even cigarette smoke or flu virus cannot go through. Therefore, vibration can cause head crash and generate tiny dust if the head gets out of correct position. This results in creating fatal scratches in an HDD. Please install your recorder in a stable place away from declination, vibration or physical impact. Also, as an impact of sound (sound pressure) such as the radiation sound from gas distinguishing agent system can affect the speed of data transfer on HDDs, please install your recorder in the place without loud noise.

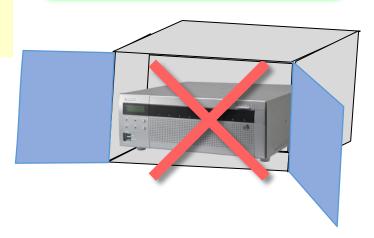




Point # 2 Keep Your Recorder from Getting Hot

Keeping HDDs exposed to high temperature results in the deterioration of its head and disks, and it can shorten the HDD life as well. Please consider ventilation when installing. The ambient operating temperature is 5 degrees Celsius to 45 degrees Celsius (the recommended temperature is 25 degrees Celsius).

Consider Ventilation When Installing



Point # 3 Avoid Static Electricity and Condensation

Static electricity can be the cause of electronic parts failure in an HDD.

Condensation can cause a malfunction of a recorder as the head sticks to the disk due to the water.

Condensation occurs;

- when relocating the recorder to a place with sudden change in temperature and humidity.
- in the room just after heated.
- when the recorder is relocated from the cooled place to the heated place with high humidity.

Prevent Static Electricity and Condensation





Regular Maintenance is Necessary for a Network Disk Recorder

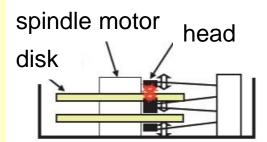
As a network disk recorder has HDDs for data storage, regular maintenance is necessary to use the recorder under its optimal conditions.

The Major Causes of Network Disk Recorder Failure

The Major causes of network disk recorder failure results from HDD malfunctions as below.

- a. The head crashes on the disk due to vibration or impact on the recorder and that creates scratches on the disk.
- b. Operating your recorder in high temperature environment causes the incorrect spacing between the head and the disks and that causes a head crush and creates scratches on the disk.
- c. Non-proper spin of the motor and the deterioration of the head's characteristics occur due to the long term use of HDDs. These can cause the write/ read error. The scratches on the disk gets larger in several months and causes a recorder failure.

Cutaway of an HDD



Tips for the Stable Operation of Your Network Disk Recorder

As the parts in a disk recorder are consumable, it is necessary to maintain your recorder regularly. The consumable parts in a network disk recorder are the followings.

HDD Unit / cooling fan / built-in backup battery / damper rubber for fixing HDDs. (Please note that the applied parts varies depending on the models.)

Maintenance including parts exchange leads to the stable operation of your recorder.



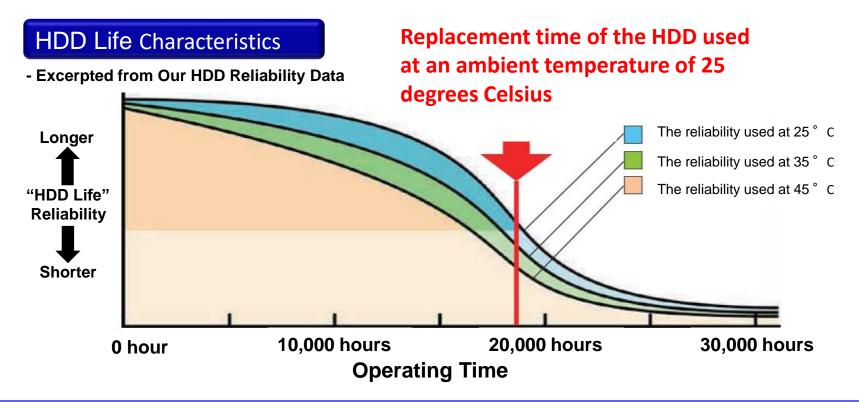
Estimated Replacement Period of an HDD

Although the HDD life differs depending on the usage environment, an HDD is certainly a consumable device. When used at an ambient temperature of 25 degrees Celsius, errors such as write error may start to occur at the operating time of 20,000 hours. When it reaches over 30,000 hours, the HDD can die due to the deterioration of the read/ write head or the motor in it. Keep the ambient temperature under 25 degrees Celsius and replace HDDs at the point of 18,000 hours for your secure data management.

Please note that this is our estimated replacement period for reference and does not guarantee the life of your HDDs.

Hour Meter:

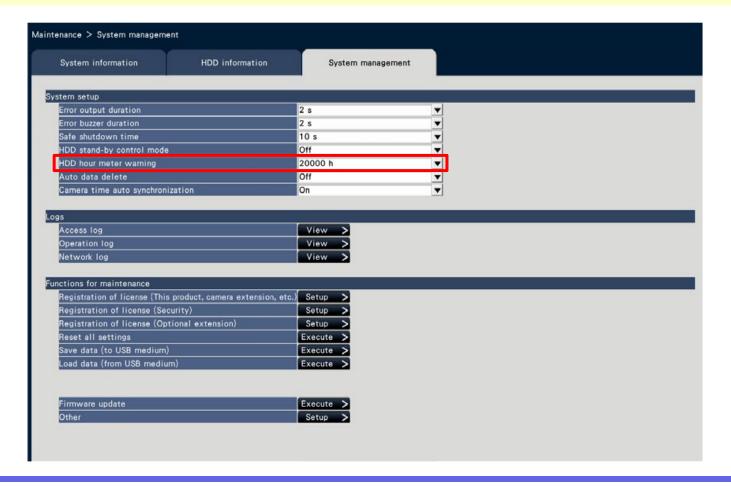
Approx. 9,000h = 1 year, : Approx. 18.000h = 2 years, Approx. 26,000h = 3 years, Approx. 35,000h = 3 years, Approx. 44,000h = 5 years





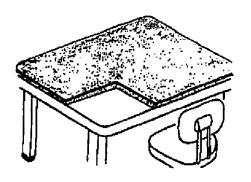
HDD hour meter warning

HDD hour meter warning is a function that performs a warning when the operating time of an HDD reaches a specified level. With default setting, it performs a warning at the operating time of 20,000 hours where errors such as write error can start to occur. As described on the previous slide, the reliability of an HDD starts to decrease rapidly before the operating time reaches 20,000 hours. Therefore we recommend to replace HDDs at the point of 18,000 hours to prevent possible failures and manage data securely.

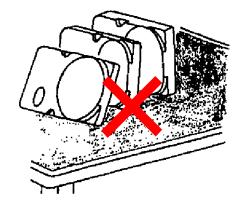




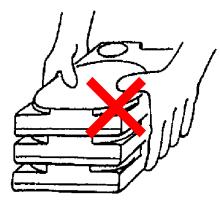
To Prevent HDD troubles



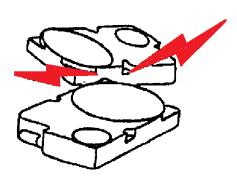
Use Antistatic & shock prevention mat



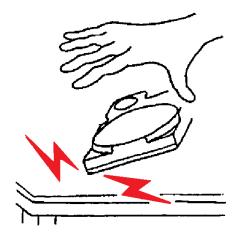
Do not place vertically



Do not stack



Do not hit



Do not drop



Do not use a regular electric screwdriver

