

SAFETY PRECAUTIONS

MEMORY RECORDER/ANALYZER

EDX-3000A/B

Thank you for purchasing KYOWA's product EDX-3000A/B Memory Recorder/Analyzer.

Read the Instruction Manual carefully in order to make full use of the high performance capabilities of the product.

Do not use the product in methods other than described in the Instruction Manual.

For the Instruction Manual, refer to the attached DVD with the EDX-3000A/B

Standard Accessories

When unpacking, check the contents to ensure that all accessories are enclosed referring to “LIST OF STANDARD ACCESSORIES FOR EDX-3000A/B”.

SAFETY PRECAUTIONS(Do not forget to read the safety precautions prior to use.)

The Memory Recorder/Analyzer EDX-3000A/B (herein after referred to as the EDX-3000A/B) is designed in accordance with "10. HARDWARE SPECIFICATIONS" and "11. SOFTWARE SPECIFICATIONS." Do not use the EDX-3000A/B in an environment exceeding the specifications. Or, system may be damaged.

PRIOR TO USE

For safe use of the EDX-3000A/B, do not forget to read the "Safety Precautions" prior to use.
KYOWA ELECTRONIC INSTRUMENTS CO., LTD. assumes no liability for any damage resulting from the user's failure to comply with the safety precautions.

SAFETY SYMBOLS

For safety operation of the EDX-3000A/B, the following “WARNING” and “CAUTION” symbols are used in SAFETY PRECAUTIONS of this manual and indicated on the EDX-3000A/B.

 WARNING	Improper operation of the system may result in death or severe injury of the operator.
 CAUTION	Improper operation of the system may result in injury of the operator and physical damage of the system.

 **WARNING**

- **Power Supply**
To prevent a fire hazard, ensure that the power supply voltage specified for the EDX-3000A/B matches the local line voltage before connecting the system to the AC power outlet.
- **Inflammable Environment**
To prevent the risk of fire and explosion, do not operate the EDX-3000A/B in area exposed to flammable gases, vapors, or dust.
- **Abnormal Condition**
To prevent fire hazards, if smoke is emerging from the EDX-3000A/B, immediately turn OFF the power switch and disconnect the power cable from the AC power outlet to terminate the system operation.
- **Protective Ground**
Be sure to ground the “GND” terminal. Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Maximum Input Voltage Range for Measurement by CVM-40A, CVM-41A**
Do not apply an input voltage exceeding the range (-50 V to +50 V) specified for the voltage measurement mode of the CVM-40A Strain/Voltage/Acceleration Measurement Card (hereinafter referred to as the CVM-40A).
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Maximum Input Voltage Range for Measurement by CDV-40B/A (-F)**
Do not apply an input voltage exceeding the range (-10 V to +10 V) specified for the voltage measurement mode of the CDV-40B/A (-F) Strain/Voltage Measurement Card (hereinafter referred to as the CDV-40B/A (-F)).
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Maximum Input Voltage Range for Measurement by CCA-40A (-F)**
Do not apply an input voltage exceeding the range (-5 V to +5 V) specified for the CCA-40A (-F) Charge Amplifier Card (hereinafter referred to as the CCA-40A (-F)).
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Maximum Input Voltage Range for Measurement by CFV-40A**
Do not apply an input voltage exceeding the range (-50 V to +50 V) specified for the CFV-40A F/V Converter Card (hereinafter referred to as the CFV-40A).
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Maximum Input Voltage Range for Measurement by CDV-44AS**
Do not apply an input voltage exceeding the range (-50 V to +50 V) specified for the voltage measurement mode of the CDV-44AS Strain/Voltage Measurement Insulation Card (hereinafter referred to as the CDV-44AS).
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Maximum Input Voltage Range for Measurement by CDA-44AS**
Do not apply an input voltage exceeding the range (-50 V to +50 V) specified for the voltage measurement mode of the CDA-44AS Signal Conditioner Card (hereinafter referred to as the CDA-44AS).
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Maximum Input Voltage Range for Measurement by CDA-45AS**
Do not apply an input voltage exceeding the range (-50 V to +50 V) specified for the voltage measurement mode of the CDA-45AS Signal Conditioner Card (hereinafter referred to as the CDA-45AS).
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Maximum Input Voltage Range for Measurement by AD-40AS(-F)**
Do not apply an input voltage exceeding the range (-10 V to +10 V) specified for the AD-40AS(-F) A/D Converter Card (hereinafter referred to as the AD-40AS(-F)).
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Applicable input: DPM-42B/A (-F), DPM-42B-I (-F)**
The dynamic strain amplifier card DPM-42B/A (-F), DPM-42B-I (-F) is a dedicated conditioner card for inputting strain. Do not connect an apparatus other than a strain sensor.
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Applicable input: CTA-40A**
The thermocouple card CTA-40A is a dedicated conditioner card for inputting a thermocouple.
Do not connect an apparatus other than a thermocouple.
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.
- **Applicable input: CAN-40A, CAN-41A**
The CAN card CAN-40A and CAN-41A are dedicated conditioner cards for inputting CAN data.
Do not connect a data other than a CAN data.
Failure to do so will pose the risk of electric shock, deteriorated performance and system failure.

- When using the CVM-40A, CVM-41A or CDV-40B/A (-F), keep the following points.
 1. Use a tester or the like to measure the voltage between negative sides of the DC voltage and confirm that the voltage is approximately 0 V.
 2. Confirm that the voltage between the negative side of the DC voltage and the GND terminal of the EDX-3000A/B is approximately 0 V.
 3. When connecting an input, correctly connect the positive and negative sides.

Failure to comply with the above precautions will result in a short circuit of the signal source (DC power supply, etc.) to be measured in the CVM-40A, CVM-41A or CDV-40B/A (-F), thus causing a fire hazard.

- If you mount the optional 15-inch LCD (EMON-30A) on the EDX-3000A/B, do not set the display upright in a vibrating environment. Or, the display may move to contact a person or surroundings causing injury to the person or damage to the EDX-3000A/B. Always use in the fixed position in such environment.
The DC OUT (12 V, 2 A) connector on the rear panel is a dedicated power supply connector for the optional 15-inch LCD (EMON-30A). Do not connect other device. Or, the mistakenly connected device or the EDX-3000A/B causes system failure.

 CAUTION

- Use the EDX-3000A/B in the specified operating temperature range of 0 to 40 °C.
Use at temperatures exceeding the specified range may lower the performance and cause troubles.
If use under direct sunlight or in a cold place is inevitable, prepare a sunscreen or take proper measures to keep it warm.
 - Use the EDX-3000A/B in the specified operating humidity of 20 to 80%RH.
Use in a humidity place exceeding the specified range or whether it is exposed to splashing water may lower the performance and cause troubles.
 - Do not use the EDX-3000A/B immediately after the change in the environment.
Leave the EDX-3000A/B as it is to acclimate to the environment.
Abrupt change in ambient temperature due to transportation, etc. may cause dew condensation, which may result in lower performance and troubles.
 - Do not use the EDX-3000A/B where it is subject to significant vibration or impact.
 - The vibration resistance of the EDX-3000A/B-H and EDX-3000A/B-S is
 - When in operation: 29.42m/s²(3 G), 5 to 55 Hz,
 - When not in operation: 49.03m/s²(5 G), 5 to 55 Hz,
 - For the EDX-3000A/B-H (with HDD)
 - When in operation: 9.8m/s²(1 G), 10 to 200 Hz
 - For the EDX-3000A/B-S (with SSD)
 - When in operation: 19.6m/s²(2 G), 10 to 200 Hz
 - The impact resistance of the EDX-3000A/B-H and EDX-3000A/B-S is
 - 196.1m/s²(20 G)／11 ms
- Use the EDX-3000A/B in an area where vibration and impact can be kept within the scope of specifications. Continuous vibration or severe impact may cause deteriorated performance and system failure. Set the EDX-3000A/B on a vibration isolation table to reduce the applied vibration and impact. Be sure to use the EDX-3000A/B-S(E) in an area where continuous vibration and impact occurs, in a vehicle, etc., even if the vibration and impact is within the specified range.

- Do not use the EDX-3000A/B in strong electromagnetic fields.
Use the EDX-3000A/B in an environment where magnetic field is acceptable to the PC.
Performance may be lowered and erroneous operation and troubles may result if it is used near a telemetry system, microwave oven, electronic furnace or any other equipment generating a strong magnetic field.
- Do not use the EDX-3000A/B under poor conditions.
Operate the EDX-3000A/B within the range of 100 to 240 VAC (50/60 Hz). The power supply used for the EDX-3000A/B should not experience an instantaneous power failure and be free from noise.
- Do not turn ON the power switch immediately after turning it OFF.
After turning OFF the power switch, wait until the power supply is shut OFF automatically before turning ON the power switch again. Do not disconnect the power plug from the AC outlet or DC power supply. Or, internal hard disk in the memory recorder/analyzer may be destroyed and the system may not startup again.
- Do not pull cables.
Lay cables with a certain allowance so that any unreasonable force may not be applied to the connections.
Pulling or unreasonable force may cause troubles or interrupt the measurement.
- Take proper precautions when using a USB memory or USB device (mouse and keyboard) in an environment with vibration.
Do not take measurement while the USB memory or USB device remains inserted in a vibrating environment, which may cause a system failure or PC card failure.
- Do not seal ventilation holes provided for a fan located at the back and two fans located at the front.
If there is not enough space to radiate heat, temperature in the EDX-3000A/B may increase to lower the performance and cause troubles.
- Use a shielded cable as an I/O cable.
- The built-in battery against instantaneous power failure is Ni-MH battery. Recycle or discard your battery in a responsible manner or contact KYOWA or our representatives.
- Charge the built-in battery against instantaneous power failure within the temperature range 0 to 30°C. Or, the battery may not fully charge. In addition, the battery will deteriorate quickly.
- If the EDX-3000A/B is to be stored for an extended period, the built-in battery against instantaneous power failure should first be fully charged. The battery discharges little by little naturally over time even if you didn’t use it. If you store the battery with small remaining capacity, the storage can accelerate battery self-discharge and lead to the over discharging. The battery can no longer be used and have to be replaced if it have been over discharged. In addition, if the EDX-3000A/B is to be stored for an extended period, The self-discharge rate and deterioration rate of the battery are closely related to the storage temperature. It is recommended to store the battery at 25°C or lower temperature.
- Avoid installing sensors and EDX-3000A/B near a welding machine.
Failure to do so will pose the risk of erroneous data, malfunction and failure.
- Do not disassemble or remodel the EDX-3000A/B.
Failure to do so will pose the risk of electric shock and system failure.
This warranty does not cover any damaged or defective parts that results from disassembling or remodeling.
- The EDX-3000A/B limits the number of CFV-40A.
The number of CFV-40A is up to 2.
When mounting two CFV-40A cards: Capable of mounting 4 other conditioner cards (2 slots: empty)
When mounting one CFV-40A card: Capable of mounting 6 other conditioner cards (1 slots: empty)
Or, deterioration or malfunction of the instrument may result.
- The EDX-3000A/B limits the positions and the number of CAN-40A and CAN-41A.
Mount one CAN-40A or CAN-41A to the final slot.