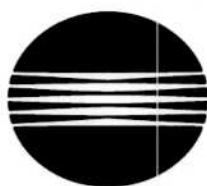


SPECTROPHOTOMETER

CM-3500d






HARDWARE MANUAL



KONICA MINOLTA










Safety Symbols





The following symbols are used in this manual to prevent accidents which may occur as a result of incorrect use of the instrument.

-  Denotes a sentence regarding a safety warning or caution.
Read the sentence carefully to ensure safe and correct use.
-  Denotes a prohibited operation.
The operation must never be performed.
-  Denotes an instruction.
The instruction must be strictly adhered to.
-  Denotes an instruction.
Disconnect the AC power cord from the AC outlet.
-  Denotes a prohibited operation.
Never disassemble the instrument.

SAFETY PRECAUTIONS

- To ensure correct use of this Spectrophotometer CM-3500d, read the following points carefully and adhere to them. After you have read this manual, keep it in a safe place where it can be referred to any time a question arises.

 WARNING (Failure to adhere to the following points may result in death or serious injury.)	
 Do not use the CM-3500d in places where flammable or combustible gases (gasoline fumes, etc.) are present. Doing so may cause a fire.	 Do not disassemble or modify the AC adapter. Doing so may cause a fire or electric shock.
 Always use the AC adapter supplied as a standard accessory or specified replacement AC adapter with the CM-3500d, and connect it to an AC outlet (100 Vac, 50-60 Hz). Failure to do so may damage the CM-3500d or the AC adapter, causing a fire or electric shock.	 The CM-3500d should not be operated if the CM-3500d or AC adapter is damaged, or if smoke or strange odors occur. Doing so may result in a fire. In such situations, turn the power OFF immediately, disconnect the AC adapter from the AC outlet, and contact the nearest <u>Konica Minolta-authorized service facility</u> .
 If the CM-3500d will not be used for a long time, disconnect the AC adapter from the AC outlet. Accumulated dirt or water on the prongs of the AC adapter's plug may cause a fire and should be removed.	 Do not disassemble or modify the CM-3500d. Doing so may cause a fire or electric shock.
 Do not insert or disconnect the AC adapter with wet hands. Doing so may cause electric shock.	 Take special care not to allow liquid or metal objects to enter the CM-3500d. Doing so may cause a fire or electric shock. Should liquid or metal objects enter the CM-3500d, turn the power OFF immediately, disconnect the AC adapter from the AC outlet, and contact the nearest <u>Konica Minolta-authorized service facility</u> .

 CAUTION (Failing to adhere to the following points may result in injury or damage to the CM-3500d or other property.)	
 Do not perform measurement with the specimen measuring port directed towards your face. Doing so may cause damage to your eyes.	 Be careful around openings in the CM-3500d. Failure to do so may result in fingers being trapped causing injury.
 Do not place the CM-3500d on an unstable or sloping surface. Doing so may result in its dropping or overturning, causing injury. Take care not to drop the CM-3500d when carrying it.	

The Konica Minolta Spectrophotometer CM-3500d is a high-accuracy benchtop spectrophotometer for measurements of spectral reflectance and transmittance. Reflectance measurements are taken using d/8 (diffuse illumination/8° viewing angle) geometry and changeable measurement areas: Ø8mm, and Ø30mm (standard accessories) and Ø3mm (optional accessory); either SCI (specular component included) or SCE (specular component excluded) measurements can be taken. Transmittance measurements are taken using d/0 (diffuse illumination/0° viewing angle) geometry. In addition, the top port design allows a petri dish (optional accessory) to be used for reflectance measurements of powders, pastes, or liquids.

All functions are controlled by a computer connected to the Spectrophotometer's RS-232C terminal. Switching between measurement areas and switching between SCI and SCE measurements are all motorized for easy, accurate operation. The Spectrophotometer is compact enough to be placed next to the computer, and the RS-232C interface allows easy integration into virtually any system.

NOTES ON USING THESE MANUALS

The instructions for the Spectrophotometer CM-3500d are divided into two manuals:

- 1 **HARDWARE MANUAL** (this manual): A manual explaining the hardware of the Spectrophotometer CM-3500d itself, including:
 - Names of parts
 - Accessory information
 - Connection with a computer
 - Switching power on and off
- 2 **COMMUNICATION MANUAL**: A manual describing operation of the CM-3500d including:
 - Notes on calibration and measurements
 - Explanation of command functions
 - Command and data formats

WARNING

- DO NOT USE THIS INSTRUMENT IN AN EXPLOSIVE ATMOSPHERE, SUCH AS ONE CONTAINING GASOLINE FUMES. USE IN SUCH AN AREA MAY RESULT IN AN EXPLOSION.
- DO NOT DISASSEMBLE THIS INSTRUMENT OR ATTEMPT TO REPAIR IT YOURSELF. THIS INSTRUMENT CONTAINS HIGH-VOLTAGE ELECTRICAL CIRCUITS AND THERE IS A RISK OF ELECTRICAL SHOCK IF THIS INSTRUMENT IS DISASSEMBLED BY UNQUALIFIED PERSONNEL. Any necessary repairs should be performed only by a Konica Minolta-authorized service facility.

