

Castle Group Ltd

KA011

Weatherproof Case

Thank you for buying a Castle product, I am sure you will find both the goods and the service to be of the highest quality but if not, then please feel free to write to me personally and I will ensure that your needs are dealt with immediately.

This manual is designed to show you the operation of the goods you have purchased and a very brief insight into acoustics itself. If you would like to become a competent person in the eyes of the law, then you may like to know more about our Competent persons training course for the Noise at Work Regulations.

It is my intention for Castle Group Ltd to provide a complete range of Noise and Vibration products and Services of the highest standard. If you would like to know more about any of our other products and services then please complete the reply paid card and return it to us for prompt action or telephone on +44(0)1723 584250.

Simon Bull

A handwritten signature in black ink, appearing to be 'Simon Bull', written over a circular scribble.

Sales and Marketing Director

PRECAUTIONS

- Only operate the case as described in this manual.
- This manual assumes that the manuals for each individual instrument and accessory have been read.
- Ambient conditions for the operation of the unit are as follows:-

Temperature	-10°C to +50°C
Relative Humidity	30 to 90%
- Disconnect the batteries from the instrument if it is not to be used for an extended period (several days).
- Do not use any solvents or cleaning agents on the case. Use only a soft dry cloth or a soft cloth lightly moistened with water when necessary.
- Do not let any conductive objects, such as wire or metal scraps get into the unit.
- Do not try to disassemble the control box or wiring or attempt any repairs as this may invalidate your warranty. Take a note of the condition of the case and contact your authorised Castle service station.
- To ensure continued precision performance of your instrument have it checked and serviced at regular intervals. It is recommended that the case be sent when instruments are returned for calibration.
- Care should be taken when closing the case lid to ensure that no cables are trapped as this will damage the cables.

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INTRODUCTION

The KAO11 Weatherproof Case is part of Castle's Professional Range meter accessories and has been designed to allow outdoor and long term logging capabilities with optional sound recording to a DAT.

This manual contains complete operating instructions for the above named instruments, read it carefully and you will quickly become familiar with your instrument. If you have problems with the operation of the instrument please call Castle Group Ltd on +44 (0)1723 584250 or fax +44 (0)1723 583728.

USING THE MANUAL

In the course of this manual a named button written in **BOLD** means press that button. E.g. **OK** means press the OK button.

As the DAT is an additional option, this manual refers to setting up the case with the DAT recorder. Since this manual covers the operating instructions for the full capabilities of the case the shaded areas of the title serves to inform the user which functions are being described on your case.

EG: The following title informs you that this function is only applicable to the DAT



CASE LAYOUT	ALL
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Lower Section

The batteries and control box sit in the lower section of the case, with the connections and wiring set to avoid being trapped in the case.

Cables are run through the board and foam to suitable points in the upper section. Care should be taken not to pull any the cables unduly as this could damage them and prevent full operation of the kit.

Upper Section

The foam has been designed to hold a Castle Professional Range meter, Castle calibrator, printer or DAT recorder, with some space left for suitable accessories.

The cables from the lower section are:

- Microphone cable, large 4-pin Lemo plug
- Professional Range connector, small 7-pin Lemo plug
- Printer power, 2.1mm DC plug
- Printer connector, 9-pin D-connector
- DAT Interface connector (With a DAT option only)
- DAT Line-In, Jack plug (With a DAT option only)

CASE CONNECTORS	ALL
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Case Sockets

There are 2 large weatherproof connectors on the side of the case. A 4-pin and a 7-Pin. Plugs will only fit into the correct sockets. Plugs should not be forced or damage to the connector pins may occur.

The 4-pin connector is for the weatherproof microphone cable only.

The 7-pin connector is used for a variety of connectors, including

- ◆ Case charger
- ◆ Remote Switch for DAT machine
- ◆ PC interface connector cable

PRECAUTIONS	ALL
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The instrument must not be connected to the case's battery pack with its own batteries (3xPP3) still fitted inside the instrument. The instrument must be switched off and all 3 batteries removed before making the connection to the weatherproof case by its 7-pin output socket. Data will not be lost as it is backed up by a small lithium cell inside the instrument.

Do not leave the battery in a discharged state. Although the case's internal circuitry will allow effectively indefinite charging, do not leave the charger connected for more than 20 hours unless the instrument is in permanent use and charge the printer batteries for no more than 1 day.

The 240-volt mains plug and charger are suitable for indoor use only. Do not charge the weatherproof case battery with the lid closed and vent sealed.

BATTERIES	ALL
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The KA011 uses 2 batteries for optimum operation.

For safe charging of the batteries the following points should be adhered to:

- Only charge indoors
- Never shut the lid while charging
- Use only the supplied charging unit

To charge the case batteries, firstly ensure the above criteria are met, and insert the supplied charger cable into the 7-pin socket on the side of the case.

The charging cable will consist of 2 separate cables. The charger itself, which terminates with a DC power plug. This connects to a 2nd cable which consists of a DC power socket and 7pin Lemo plug.

Operational life of the batteries, on continuous use, should be for approximately 7 days. This time may vary depending on whether the case printer and DAT option are used during operation.

EXTERNAL BATTERY PACK & POWER SUPPLY UNIT	ALL
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The KA011 kit may be powered from either the supplied Castle AC Power Supply power pack or from an external Castle Battery Pack.

Only a Castle approved charger should be plugged into the charger socket. Use of any unsuitable charger may result in damage to the case circuitry.

The GA505 printer battery will also charge with both the case power supply and printer power connected

PRINTING	ALL
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The supplied GA505 printer operates using it's own internal battery.

To ensure printing runs smoothly check that the 9 pin D connector is plugged into the printer and that the batteries have sufficient charge or the printer power plug and .external power supply are connected.

DAT RECORDING	DAT
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The GA504 DAT Recorder can be used in conjunction with the KAO11 to record noise either continuously, manually starting and stopping the DAT recorder, or automatically, setting the Professional Range meter to start and stop recording at set levels.

The DAT recorder is supplied with its own manual and it is recommended that you are familiar with its operation prior to setting up with a KAO11.

It is strongly recommended that you set the correct time and date in the DAT machine before proceeding with any recordings.

DAT SET UP	DAT
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Place the DAT recorder and sound level meter in the weatherproof case. Connect the meter microphone socket to the 4-pin flying lead, which in-turn connects with the weatherproof microphone cable via the external 4-pin socket. Connect the sound level meter to the 7-pin I/O plug in the case. Connect the DAT recorder to its multi-pin special I/O cable for remote control. Then connect the sound input cable in the case into the **LINE** input on the DAT (this is located on the right-hand side of the DAT next to the MIC and it may be necessary to open the leather case in order to gain access). It is essential to make sure that the 'Rec Mode' switch on the DAT is set to Manual, otherwise the DAT's automatic gain control circuitry will interfere with calibration. Ensure both the batteries for the weatherproof case and the batteries in the DAT are fully charged before use.

Activate and calibrate the sound level meter as per the sequence suggested in the unit's instruction book. With all power on and the DAT set to record, calibrate the recording by placing the acoustic calibrator on the end of the microphone and adjust the DAT for reference tone of 94dB. This should give a reading of -6dB (minus 6dB) on the DAT. This will give a full-scale reading of 100dB or alternatively 94dB input set to -24db on the DAT will give a full-scale reading of 118dB. It is necessary to use the LINE input when using the meter pre-amp output. Typically a gain setting of about 5 is correct for this calibration procedure at 100dB full-scale.

Calibration recording can be initiated by either the sound level meter, pressing the record button on the DAT, or using the push-button provided.

A minute or two of calibration reference should be recorded on the tape along with ensuring the correct time and date are set on the DAT. This is necessary to assure the validity of the recorded data. Actual recording may now begin. Please note that using the pre-amp output of the meter means that any range or switch setting on the instrument will not effect the results, only power needs to be on. However, the gain adjustment must **never** be adjusted on the DAT recorder after calibration, otherwise this will be made invalid.

DAT REMOTE SWITCH	DAT
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The supplied Remote Switch allows manual control over the DAT recording.

With the cable connected to the 7-pin socket on the KA011:

Press the switch once to start the DAT machine recording.
The LED will illuminate when recording.

Press the switch once to stop the DAT machine recording.
The LED will cease to illuminate when not recording.

Unscrew the windshield by twisting the bird spike cage anti-clock-wise at the base.

CONNECTING THE WEATHERPROOF WINDSHIELD	ALL
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Push-fit the microphone and pre-amp assembly into the standard socket on the weatherproof cable, and then push the cable through the slot in the mounting bracket. Then allow the cable to drop through the hole until the socket is held in place. Finally, tighten the knurled screw to prevent the cable from becoming loose.

Replace the windshield, ensuring a secure fit.

The mounting bracket will accept a standard 1/4" Whitworth thread tripod..

Warranty and After Sales Service

Castle Group Ltd design and manufacture precision instruments, which if treated with reasonable care and attention should provide many years of trouble free service.

In the event of a fault occurring, during the warranty period, the instrument should be returned to Castle Group Ltd, in its original packaging, or to an authorised agent. Please enclose a clear description of the fault or symptom.

Details of the warranty cover are available from Castle Group Ltd or an authorised agent.

All instruments are designed to meet rigid British and International Standards. An annual calibration is recommended to ensure that these high standards are maintained. This is particularly important for cases in which instrument readings are to be used in litigation or compliance work.

For warranty and service return to:

The Service Department
Castle Group Ltd
Salter Road
Cayton Low Road Industrial Estate
Scarborough
North Yorkshire
YO11 3UZ

Telephone +44 (0)1723 584250
Fax +44 (0)1723 583728
Web: www.castlegroup.co.uk

Any misuse or unauthorised repairs will invalidate the warranty.

Damage caused by faulty or leaking batteries is not covered by the warranty.

Spare Parts & Accessories Codes

GA505.....	Thermal Printer
GA504.....	DAT Recorder
ZL1093-10.....	Weatherproof Cable 10m
ZL1093-20.....	Weatherproof Cable 20m
ZL1093-30.....	Weatherproof Cable 30m
MC1TP1.....	Microphone Clip with Tripod Adapter
MW400.....	Weatherproof Windshield
CPGA503.....	Thermal Paper for GA505
REMBUT.....	Remote Button for GA504
ZL1094-01.....	Power Supply connector cable
PSU2.....	Charging Unit

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