



USE OF DAT RECORDER WITH CASTLE METERS

These notes are for use of a Sony DAT machine and a Castle Group "Professional Range" sound level meter such as the GA120, GA122, or GA123. **Please ensure that you are familiar with the operation of both your sound meter and the DAT recorder before proceeding.**

Note: it is necessary to fit the batteries to the DAT machine in order to load the tape. A separate instruction manual will have been provided with the DAT recorder.

- 1 It is essential to set the clock before any recordings are made. Otherwise, the date function will not work properly and the correct date and time of recording will not be registered on the tape.
- 2 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.
- 3 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.
- 4 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.
- 6 Once recording is completed you will have a calibrated digital tape recording of the noise event. To review the DAT recording simply play the tape through

the headset provided, noting the time track on the DAT display to match against the logged data on the unit.

- 7 To avoid accidental overwriting of previously recorded data when preparing for playback, remove the DAT control interface from the lower left corner of the DAT recorder. Then rewind the tape and proceed as illustrated above.