
LOCATION RECORDING USING CASSETTES AND OTHER MEANS

Increasing use is being made of good quality portable cassette recorders in gathering location recordings.

As small cassette recorders and other forms of recording have developed, the use of reel to reel type tape recorders has ceased to be the only option when recording for radio programmes outside the studio environment. Cassette recorders were the first alternative used. Now other formats are replacing them. Some thought needs to be given as to how such machines may be profitably selected and used.



STRENGTHS & WEAKNESSES OF CASSETTES

A number of factors are involved in contrasting cassette based recording with the "traditional" reel to reel approach.

STRENGTHS

- **Relatively inexpensive**
- **More portable**
- **Less obtrusive**
- **Modern machines give good quality recording**

WEAKNESSES

- **Recording quality is not generally as good**
- **No cut editing of cassette is possible (dub to reel to edit)**
- **Not easy to locate short pieces in the middle of a cassette**

So it can be seen that though cassette is by no means the ideal form of "field recording" it can be very useful, and if the right equipment is used, with care, good results can be obtained..

SELECTING CASSETTE MACHINES AND TAPES

A number of issues need to be considered when selecting cassette tape recorders and their tape. Only if suitable machines and tapes are used will the cassette be of value in radio programme production.

Here are a number of issues that need to be considered.

- **Recording Quality**

- does the machine perform to the standards we require, having little noise (hiss & buzz) and clear sound reproduction.

- **Noise reduction**

- all cassettes generally suffer from increased noise (hiss) so some form of noise reduction is important. Generally "Dolby" noise reduction is favoured. Three types exist: "B", "C", & "S" (in order of increasing effectiveness).

- **Tape head arrangement**

- inexpensive machines generally have 2 "heads". Some professional machines have 3. This can result in improved performance, and the ability to check the recorded signal whilst recording.

- **Microphone input**

- to make good recordings an external microphone must be used. Internal microphones are of low quality and suffer from pickup of motor noise. The external microphone connector will ideally be a professional type (XLR), but other types may be used with appropriate adapter cables.

- **Recording level and meters**

- cassette recorders commonly have automatic recording level devices. These are not acceptable for radio use. Either fully manual recording level must be available or a switch to turn off the automatic level control. To set a correct level, some form of record level meter is also needed.

- **Power supply**

- for portable use a battery supply is needed. The machine should not have a heavy power consumption. Rechargeable batteries can be useful, charged by mains power or solar cells. They do need to be carefully monitored to prolong their life. Constant charging and recharging of part discharged cells can drastically shorten the service life of re-chargeable batteries.

- **Weight & size**

- cassette machines can be very small and light. Generally weight and size is not a problem. Note however that very small machines may be difficult to operate easily, and expensive or impossible to repair.

- **Speed accuracy & stability**

- cassette recorders can suffer from fluctuating speeds and this can make recordings unacceptable. Music and background sound are both particularly susceptible to this.

- **Reliability & ease of repair**

- all machine fail from time to time, but no-one wants to have a machine fail in use. Reliability is important and can be increased with proper care and servicing. Some machines are easier to get repaired either because they are straightforward to work on, or because they have a good local service agent.

- **Tape type**

- cassette tape varies widely. Generally try to use new original branded tapes (not copies). Also use the better grades, rather than the basic ones.

COMMONLY USED MODELS

Many different machines are in use around the world, but two makes of cassette machine are particularly common.

SONY (Professional Walkman **WMD6C**) This particular model is commonly used as it has a very high quality of sound recording and playback, yet is extremely small. It is however quite expensive (UK£250.00 approx). The microphone socket is small and weak, and a special adapter cable would be needed (not supplied). The SONY also has no loudspeaker, so headphones are essential for monitoring and checking recordings. The machine has good noise reduction, excellent speed stability, and low battery consumption. It only has 2 heads.

MARANTZ (or **SUPERSCOPE**) Several models by this manufacturer are suitable, they are generally a little larger than the SONY. Specifications vary from machine to machine (Mono/Stereo & 2/3 Head etc). In the UK currently available suitable machines include the **CP130**, **PMD222**, **CP230**, **CP430**.

Great care should be exercised in selecting suitable machines, particularly if you know of no-one else using the same type.

OTHER RECORDING FORMATS

Due to changes and developments in technology, several alternative recording formats have emerged. These all involve use of new, and therefore incompatible recording media. Also these new recording technologies bring with them a level of technical sophistication that make them very difficult to repair or maintain except by specialised agents. To set against this, it is also true that many new technologies are much more reliable than cassettes.

DAT (Digital Audio Tape)

This form of recording is capable of producing good quality recordings. It is not capable of being edited by cutting however. DAT machines can be made

small and portable and have been used in radio and for other professional recording in the UK. Like Mini Disc machines manufacturers now offer adaptations which provide larger units with cases, supplies and professional connectors.

Mini Disc

The Mini Disc (originally made by Sony) has become a very popular format for recording digital audio.

Most Mini Disc recorders have more than adequate recording quality, but often are so small with delicate connections that they are not ideal for regular use. Many specialist manufacturers now offer adaptations which provide larger units with cases, supplies and professional connectors.

Some mini-disc machines have no microphone connection and are therefore of very limited value for this purpose.

Tapeless Digital Recorders

There are now a number of recording devices which use solid state storage, either removable using cards or accessible by cable from a PC. Being digital they are easy to use together with digital systems in studios, and sometimes even offer editing on the recording machine.

With the growth of tapeless playback of MP3 music for consumers, some MP3 players also offer recording facilities.

USING PORTABLE MACHINES

Here are some guidelines to help you when you make recordings with portable recorders.

BEFORE

It is vital to be prepared. Most radio people make mistakes with portable equipment at some time. They soon learn to be prepared...

SET

The machine should be adjusted so that the following controls are correct, before setting out. (These may not all be present on any one particular machine) Some points marked {C} relate to cassettes only.

- **Tape speed (normal) {C}**
- **Noise reduction on and set to correct type (to suit dubbing machine) {C}**
- **Tape type set according to tape being used (Type I/II/III) {C}**
- **Record level set to manual**
- **Meters switched on if necessary**
- **Microphone input switched on and any attenuators off (0db)**

TEST

Be sure to test the machine **before setting out**, there is no more certain way of knowing that you have all that you need.

CHECK

- **Make sure that you have all of the following that apply:**
- **Machine**
- **Case**
- **Batteries & a spare (are they charged?)**
- **Tapes or other media**
- **Microphone**
- **Microphone cable (the right one)**
- **Headphones if appropriate**

IN USE

As you make your recording you must remain aware of the technical aspects of your recording as well as the subject matter. This means that you will be concentrating on several things all at once. This comes with practice!

Here are four points to watch

- **always remember to check your recording levels**
- **before you start, check your settings**
- **conserve battery power, don't leave the machine running**
- **do hold the microphone with care**

If you are recording "vox-pops" make sure that you don't keep altering the record level - the resulting variations in background sound will make the editing hard (if not impossible) to do well.

To aid location of pieces later, you might want to leave a gap between items, and provide a spoken identification so that you can find the piece that you want afterwards.

AFTER

After recording material onto cassette or other portable media, any material to be edited will in most situations need to be dubbed (copied) onto studio equipment. When doing this there are three things to check.

- **Recording level - ensure this is correct**
- **Noise reduction - must be set to the same type as used in recording {C}**
- **Tape type settings must match the cassette tape being played {C}**

Once all of the material has been dubbed off the recording medium (cassette/mini-disc etc.) onto studio equipment, the media might then be re-used.

It is good to bulk erase used cassettes before re-use. (make sure you have all you want dubbed off first!).