

THE USE OF A TAPE RECORDER IN DXING

Introduction by Arthur W. Peterson

Do you have a tape recorder? If so, are you getting the most out of it? If not, do you plan to get one? If not, should you be planning or considering such an investment? In my opinion tape recorders and DX make a perfect team. Many DXers use recorders to great advantage. In this article, I will discuss the DX-related uses of recorders, what to look for when buying a DX recorder, how to use a recorder most effectively, and how to properly maintain your recorder.

Uses for a Recorder

1. Taped reception reports. I send out nothing but taped reports, and many CE's thank me for sending tapes.
2. Improved written reports. Ever have the experience of not quite catching the sponsor's name or even the DJ's name or of not being able to write down the details fast enough? If you had taped those details, you could have replayed the tape as many times as necessary to write a complete report.
3. Tentative reports. A few times I have received verification of a tentative just on the basis of the CE recognizing the DJ's voice.
4. IDing stations. Didn't quite catch that ID? A play-back of the tape could remedy that. Can't understand Korean, but the guy down the block does? Play the tape for him! Not only could he confirm your ID of the language but also ID the station.
5. Expanded DX. A couple of years ago when playing a tape of CBL-740, I heard the now-extinct CBXA (Edmonton, 250 w) as well during a CBL fade. I had missed it completely while DXing because it was so weak. Recently, I heard HRN-670 on a tape of YVLL while playing it for Larry Godwin.
6. Frequency monitoring. Eyelids heavy, but some good catch expected in? Hop into bed, and let the recorder listen for you! Listen to the tape later, spot checking every 20 feet or so. A timer to turn the recorder on and off automatically is helpful.
7. A tape library. A tape collection of DX catches is valuable for your own enjoyment, to play for others, and for follow-up reports. Some DXers keep a continuous record of their DX catches; it uses a lot of tape over the years, but all the DX is there. Others, like myself, keep tape of only their best DX.
8. Tapesponding. DXers seem to inherently enjoy tapesponding and exchanging tapes of DX; the need for a recorder is clear.

Choosing a Tape Recorder

When you buy a recorder, you must consider what other uses the machine will serve; if you plan to make and play high fidelity tape like I do, you must be more concerned with frequency response, wow, flutter, signal to noise ratios, etc. The important features for DXing to look for, in my opinion, are the following:

1. Necessary features:
  - a. A recording level indicator. Avoid neon light indicators. VU meters and "magic eye" tubes are best.
  - b. A digital counter so you can quickly find IDs, ISs, etc.
  - c. Reel to reel operation is nice and allows you to run long tapes. Cassette machines, particularly decks, are fine however, if limited to about 45 minutes a side. The C120's--60 minutes a side--are too thin for continued heavy use.
  - d. Record safety lock. Prevents accidental erasure of tapes; practically universal on recorders.
  - e. Capstan drive. Most good recorders and few cheap recorders have this feature.
  - f. (for reel to reel) Designed to take 7" reels. 7½ ips as well as 3-3/4 ips.
2. Very desirable features.
  - a. Fast forward.
  - b. A "pause" or "edit" lever.
  - c. An output jack so you can copy tapes on another recorder.
  - d. Local service and parts, particularly on foreign machines.
  - e. A device which automatically lifts the tape away from the recording head during rewinding to reduce wear.

You should get a demonstration of the machine before you buy. The best tests of performance are your own ears, eyes and hands. Are the controls simple yet versatile, and are they conveniently placed? Does the recorder operate smoothly?

Getting the Most Out of a Recorder for DX

1. Installation. Place the recorder in a convenient position, but at the same time away from your receiver and antenna lead-in to avoid "recorder hets" (oscillation) on your receiver. A vertical position is often handy, but some recorders will not operate properly standing vertically. Proper ventilation is essential, so don't block any openings. To avoid extraneous noises on your tapes, poor acoustics, and limited frequency response, don't record DX with a microphone. A direct wire from your receiver is far superior. A patch cord plugged into the radio's phone jack works well; if you DX with earphones, get a "Y" adapter. If your receiver does not have a phone jack, attach wires (e.g. alligator clips on a patch cord) to the speaker terminals without disconnecting the other wires. To avoid hum and stray pick-up you should use shielded cable for connecting the receiver to the recorder.

2. Recording. Make sure your recorder is threaded properly. Have the machine turned on and ready to record at a moment's notice. Adjust your receiver tuning and the recording level before you begin taping. The loudest peaks of sound should cause the "magic eye" to barely close (no overlap) or the meter to indicate 100% modulation. As you record, take notes. Note frequency, counter number, and the exact time when you hear IDs, IS, etc. A stop watch or sweep second hand used later will give you the exact time of the reception details. Another possibility, if you have a stereo tape recorder, is to tape DX onto one track and simultaneously record your comments on time and frequency onto the other channel. You could even record a time standard station (CHU or WWV) from a second radio onto the second track.

3. Maintenance. The most frequently needed maintenance tasks are cleaning and demagnetization of the heads. To clean the heads, use cotton swabs soaked with a solution of head-cleaner specifically prepared for the job. Don't use carbon tetrachloride; it damages tape and creates hazardous fumes. Sylene is used as the base solvent for most head cleaners. Also keep the capstan quite clean. Other maintenance (e.g. lubrication, bias adjustment, head alignment) is best left to a qualified recorder repairman unless you understand exactly how and when to do it. You can tell when the recorder's heads need aligning by playing one of the first hi-fi tapes you recorded when the machine was new. If the high frequencies are missing or poor, it's probably due to either dirty or poorly aligned heads.

4. Tape. Best tapes for general use is 1.0 mil mylar; thinner mylar will stretch, ruining fidelity. However, if you must record for long uninterrupted periods, try 0.5 mil tape for extra playing and recording time. Always keep tapes in a cool dry place and play them every 6 to 12 months if possible.

5. Accessories. Good accessories to have are shielded patch cords (radio to recorder), a head demagnetizer, a bulk eraser, and a bottle of head-cleaning solvent. Others can be added to fit your needs.

Concluding remarks

For taped reports and other copying needs, a second recorder is a big help. You need not buy another recorder if a friend nearby also has a recorder. A copying recorder need not be very elaborate, but it should have capstan drive, some kind of recording indicator, and a 7½ ips recording speed for reception reports. A cassette tape can also be used for reception reports.

Considering all the advantages of using a tape recorder while DXing and that recorders can be used for many other purposes besides DX, a serious DXer cannot afford not to have access to a tape recorder. By the way, be sure that you get a tape RECORDER as compared to a tape PLAYER which will not record. Space does not permit a complete and detailed discussion of tape recorders, but there are many fine books on the subject. A friend who is experienced in the use of recorders can supply many valuable tips and techniques that might take you a long time to discover on your own. Good taping to you!

Additional comments

Since the preceding article was written, good quality cassette tape recorders have come on the market, and are widely used for recording DX.

The basic cassette machine has poor high frequency response due to the slow speed (1-7/8 ips) of the tape past the heads. However, for DXing purposes this is not very important, as most DX is at lower audio frequencies. You can get inexpensive mono cassette recorders which have a self-contained playback amplifier and speaker; these often have an automatic recording level device. They are very convenient, but some are not of tremendous quality; check for a warranty and ask around to see if other owners have had trouble. Most can use house current with an adapter, but don't expect the tape to run at the same speed if you use batteries as they're wearing out. The cassette "deck" is more expensive, but usually has two channels and is more versatile in its recording inputs and outputs. It doesn't come with self-contained amplifiers and speakers, although some have stereo headphone output. A cassette deck with Dolby noise reduction is not greatly important, although it does cut down on tape hiss (a simple low pass audio filter will do the same for DX purposes). If you want to use a cassette machine for recording music as well, you will have to consider the better quality decks with Dolby. Again, look for a reasonable warranty and service availability.

As far as tape goes, avoid the really cheap stuff for continued use; they tend to bind and break after awhile. At the same time, super frequency response tapes are a waste of money if you're taping murky sounding DX.