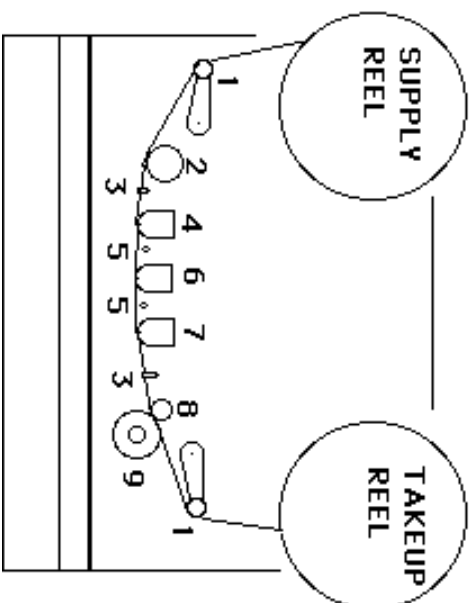




# BASIC TAPE MACHINE MAINTENANCE

1. TENSION ARM
2. IDLE ROLLER
3. GUIDE
4. ERASE HEAD
5. TAPE LIFTERS
6. RECORD HEAD
7. PLAY HEAD
8. CAPSTAN
9. PINCH ROLLER



Congrats, sucker, you got a tape machine! Hope you survive the experience!

If you want your deck to work and keep working there's some things you absolutely must do.

## KEEP IT CLEAN

Every second that tape (even great tape) is running on your deck, it is leaving residue. The more residue on the heads, the farther the tape is from them. The farther the tape is, the less high frequencies and the lower overall volume.

Also bonus! Grime left on the tape path will increase friction, making the heads wear down quicker and carving grooves in the tape guides, which can affect head contact and cause burrs or edges which damage your tape. So bogus.

Which is why you must clean your tape path frequently. How frequently? At least once before every session. And it wouldn't hurt to do it at lunch, too. The amount of residue left depends on the quality of the tape, which can vary widely. Some tape will barely leave any residue, some you might find yourself cleaning after every take.

## BIAS IT

Tape machines need to be set to a certain "bias" based on the type of tape you are using them with. For more about tape types, check out my *Analog Tape Guide*. Once the bias is set, it shouldn't have to be reset unless you change the type of tape you're using. It's okay to have a pro do this.

## RTFM

### (READ THE "FRIENDLY" MANUAL)

**Read the manual for your deck.** The whole manual. You will learn how to use it. You will learn how it works. You will learn its outlook on life.

A tape machine is like a child. Strive everyday to know them better and anticipate their needs. Care for them when they are sick, cherish them when they are healthy. And in return, they will callously waste your money.

If you have a question or need some help, hit me up:

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# CALIBRATE IT

Tape machines have calibrations that make sure everything goes where it's going at the right level and right EQ. These need to be set correctly for things to work as they should. If your deck is from the late 70s or later, it probably can be calibrated every once in awhile. If it's from before then, it probably needs to be calibrated before each use. That's a rule-of-thumb; really it depends on the tape machine.



Appearance May Vary

The sequence of calibrations varies from deck to deck, but will always be detailed in the manual (you do have a manual for yours, right?). You can have a tech (like me) do this, but it's always good to know how to do it yourself. However, to do so you will need appropriate calibration tapes, which are quite pricey. You can order them from the Magnetic Reference Library, through their janky 90's website (<http://www.mrltapes.com/>).

The tools of choice for cleaning the tape path are cotton q-tips and 99% isopropyl alcohol. Not 70%, not 90%, 99%. You want a solvent that is going to evaporate almost immediately.



To clean, you dip your q-tip in the alcohol then vigorously scrub each metal element in the tape path. This includes: the tape guides, the tape arms, the tachometer, capstan, and of course the tape heads. Clean each element until nothing more will come up. For the tape heads, you want to scrub horizontally NOT vertically. You will use up many q-tips doing this.

**DO NOT** get any alcohol on the rubber pinch roller. This can damage the rubber and then you would have to replace it.

To clean the capstan, get it spinning, then hold the q-tip against it until it is completely clean. Some decks, the capstan is always spinning. On others, the end-of-tape arm needs to be held up in the play position.

# DEMAG IT

Tape machines record audio with the spooky spooky power of electro-magnetism. Over time, a magnetic charge can build up on the heads. This charge can erase your tapes when you play them. If it gets really bad it can permanently magnetize the heads, rendering them useless.

To prevent this we use a tool called a Demager. Its pretty much just a big electromagnet. The most commonly used ones are called Hand-D-Mags and they look like so:



## Some general rules:

1. Plug in/turn on your d-mag far away from your tape heads. The initial surge of powering up can magnetize your heads.
2. Keep the d-mag far away from your tape. It can erase it or record pulses on to it.
3. Keep the d-mag far away from hard drives.
4. Move the d-mag slowly and steadily, like you're doing tai chi.

## Do it!

Plug the demager in (most don't have on switches). Slowly move it to the tape machine. Then run it across the entire tape path, getting it as close to the pieces as you can without touching them. The demager is a big magnet, so it will try to touch them. Run it over the full vertical length of all the pieces and a full 360 around rotating pieces like the guides or capstan. When you've done the whole tape path, slowly move the demager as far away from the tape machine as you can, then unplug it.

The manuals generally say to do this once a month, but why not just do it every time you use the machine? A mentor once told me if you do it every time, then when something goes wrong you're sure that demagging isn't the problem.