REPLACING HANDLES

The weakest mechanical part on the portable Sony could be the handles that put the VTR in play and record. The biggest hassle in replacing them is waiting in line at Sony for the parts which must come by canoe from Japan. The plastic handles are simply extensions of metal shafts which engage the proper switches. By grabbing the broken end of the plastic handle with a pair of pliers and pulling firmly, the handle can be removed. To replace it, put a few drops of epoxy cement on the inside of the replacement handle and, if necessary, a few long shavings from a wooden matchstick to insure a snug fit, and firmly push the new handle back onto the shaft. Be careful not to use too much epoxy in order to avoid its spilling out and fouling some other part of the machine.

CHANGING A FUSE

Fuses seldom, if ever, blow out just for the hell of it, so if your fuse goes, look for the cause (bad battery wire, battery charger, or battery charter cable bad, etc.) before you replace the fuse. If you find the cause or if none is apparent, then it's time to replace the fuse, which Sony has conveniently placed under 8 screws and the top deck assembly.

Remove the reels from the deck.

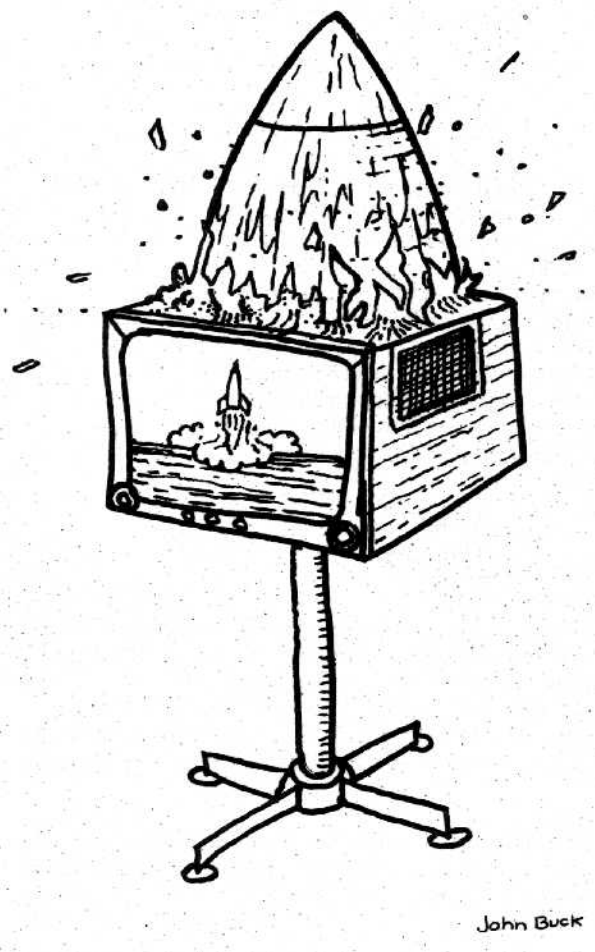
Remove the plastic head cover (the head cover is the silver colored piece with the "Sony" name plate and the hole, for the 'minutes' counter. It just snaps on and off of two posts underneath so there should be no problem if you just pull it straight up when you take it off).

Remove the 6 brown colored screws that hold the grey deck to the rest of the portable unit.

Remove the screw from the side of the "T" shaped plastic roller assembly cover. (In other words, the 1st white arrow in the threading path points toward a white roller, above that roller is a kind of roof that can be removed by taking out the screw which is directly above the head of the second arrow on the threading path.)

Remove white plastic roller assembly by unscrewing the phillips head on top of assembly.

Remove the grey deck called the escutcheon from the rest of the recorder by pulling it gently straight up (there are two places that you have some trouble with the deck catching, as you lift it off, but what ever you do, don't yank the deck off. It could slip and do more damage than a blown fuse. Both places that catch are on the guard rail that runs around the video heads (drum) assembly. There is a gurad plate in front of the audio head. Between that plate and the rail there is a piece of heavy black foam rubber attached to the guard rail which, since the guard rail comes off as part of the escutcheon, catches on the metal guard plate. The other trouble spot is on the video head area—called the drum assembly. There are hooks towards the bottom of the drum. They keep the tape from falling off the drum when the tension is released but they also catch when you take the grey deck off. Both of these problems can be overcome by manuevering the escutcheon around until it is free.


John Buck

Replace the fuse which is located just below the feed (upper) reel assembly. #3 amp., 250 volt fuses for AV3400—NOT SLOW BURN FUSES.

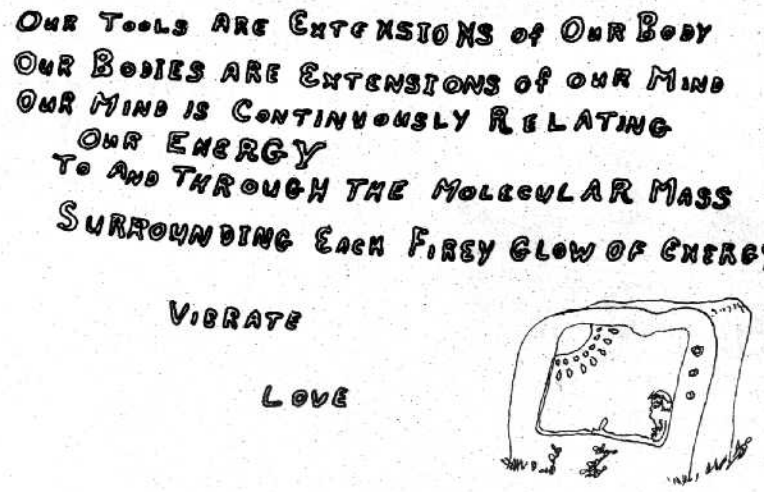
Replace escutcheon and roller assembly. The only thing to watch for is to see the silver colored spacers that sit between the screw holes nearest the feed reel, and the grey deck are in place. As you're taking the deck off, they may topple into the machine but they should be easily visible and they are very important. They keep the escutcheon from rubbing against the reel assembly as it turns.

PREVENTIVE MAINTENANCE

Cleaning and degaussing (de-magnitizing) the heads and the rest of the tape path are the two most important and essential parts of PM. Keeping an eye out for loose screws is a good idea also. Notorious for falling out are the screws on the latches on the AV3400 and the 3 small set screws on the 10 pin connectors (the camera cable connector). You will need a jeweler's screwdriver to tighten the screws on the 10 pin, but both those screws and the ones on the latches can be held in place by a little dab of fingernail polish which acts as a seal.

Also, check the wires that lead from the batteries to the deck. If they are frayed, burned, or otherwise mutillated, tape them up or replace them. The same goes for the battery wire connector. A replacement for it can be gotten at most electrical equipment and hi-fi stores.

The plug that goes from the battery charger (AC adaptor) into the deck is not indestructible nor is the plastic recepticle on the deck, so look before you insert the battery charger cable, the channel or groove on the connector is always on the side farthest from the camera cable connector. If you plug it in the wrong way, you can blow a fuse or worse.



SETTING UP THE CAMERA

After long use, especially in low light, you may end up with what's called a "sticky" vidicon—one that retains after images. Or, you may find that there is a "bleached" effect on the camera in bright sunlight even when the F stop is as high as it will go. If either of these cases occurs, the beam and target voltages in the camera should be adjusted. There are precise, electronically measured settings for both beam and target but both can also be adjusted by the eye with relative effectiveness.

The Beam adjustment controls the intensity of the beam of electrons in the tube and functions as a brightness control. The Target controls the sensitivity of the face of the vidicon and is analogous to a contrast control. Both Beam and Target effect the overall sensitivity of the camera.

The optimum adjustment for the beam is accomplished by turning the adjustment knob (located next to the focus adjustment and just as fragile) clockwise until the picture on the viewfinder and/or monitor goes completely white (which is called blooming) and then backing off until the picture first reappears. Then the target voltage must be set to produce the desired picture. The target control is located in the rectangular silver box above the vidicon housing on the high voltage section side of the camera. It is another screw hole adjustment like the beam and focus and is also that same fragile type of adjustment.

The last adjustments you may want to make are the ones which effect the size and shape of the picture. These adjustments are best made with a test chart that gives accurate indications of linearity, height and center. Some expert help would be advisable here since charts differ and fouling up these adjustments can throw the camera out electronically as well as optically. For the brave or experimentally minded, these adjustments are located in the 4 holes parallel to the beam and focus holes. Starting from the eyepiece end of the camera and working forward the adjustments are—Vertical Linearity, Vertical Height, Vertical Center and horizontal center.

It's good to keep in mind that all of these adjustments (focus, beam, target, Vertical center, etc.) are not meant to be fooled around with because this camera wasn't designed that way. There are cameras where those adjustments are external and are supposed to be played with, but they're not portable . . . yet.