

NEW AGE COMMUNICATIONS MANUAL

EXCERPTS FROM A MANUAL
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Sony is the General Motors of 1/2" video. The Sony Corp. is already responsible for six different video recording formats (two 2", one 1", the 3/4" cassette, and the old and new 1/2" formats) and they are not above making inscrutable references to new standards of portable recorders, none of which, it can be safely assumed, will be compatible with any existing equipment. Not only that, but the deficiencies that should have been corrected over the past few years have been either overlooked or over-ruled in favor of gimmickry and/or styling to the degree that it would not be unreasonable to expect a Sony portable with fins and a racing stripe rather than one with a more reliable playback system.

It seems impossible to convince Sony that anything less than a completely willing and ignorant consumer market exists where their video equipment is concerned. And, to a certain degree this has been true—up til now. But dissatisfaction with Sony is increasing due, in large part, to the advance publicity job that Ampex has done for its new cassette-recorder. The Ampex, although there appears to be only one prototype model in existence (and even it is not fully operational), has given the people who have seen it demonstrated or have read about it, enough of a taste of what they're missing (increased stability, self-threading etc.) to want to scrap Sony for good, at least in the portable field.

Another problem, although it is by no means true only of Sony, is that there is no real consumer feedback into the 1/2" video industry. It's a fact that the expanded uses and the tremendous wear that alternate culture freaks put on video equipment is a much better proving ground for the equipment than all of Sony's engineers with all of their test equipment and yet there is no way for Sony, or any other manufacturer, to receive that information on a regular basis, considering of course, that they wanted to hear it.

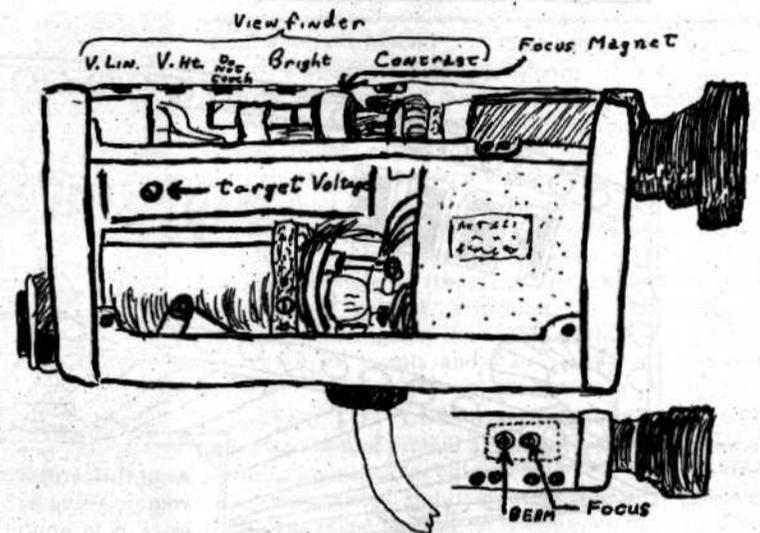
And the problems remain, like a sumo wrestler sitting squarely on our heads. The largest of them is that at this time, the video movement seems to be a one way street in terms of hardware, for if imports from Japan were suddenly to cease, the video movement, such as it is, would probably be forced out of existence from lack of the hardware around which it was created, and upon which it now depends. And, more realistically, since virtually all of the manufacturers are located in Japan (even Ampex is made by Toshiba) there is no way for a basically American movement, with as yet, little economic pull, to force positive responses out of huge foreign industries, like Sony. Even more disillusioning is the fact that, by comparison to other manufacturers, Sony looks quite good. Because Ampex is not yet on the market and probably won't be until at least this winter, Panasonic is the closest competitor. But Panasonic does not yet market a portable with playback. Their service is not near what Sony's is in video equipment and although their equipment is generally better engineered than Sony's, it is always much later on the market and can not always meet the demand of the individual consumer. The same criticisms are true, though to a much greater degree, of Shibaden and the other manufacturers. So as far as the "Fat Japs" are concerned, we ain't got it so good.

The work has already begun. Many new devices and improvements have been developed within the movement, but the burden of electronic awareness lies with the individual users of video equipment. If video people don't take it upon themselves to learn about, and fight, the rip-off, then they are part of it.

Since a good deal of the hardware in the movement, at this time, is based around Sony, most of the following information is related to Sony equipment. Because each manufacturer uses its own techniques and system it is suggested that Sony procedures not be tried on other equipment. There are places, however, where the information is of a general nature, and in each case that will be clearly specified.

AS FAR AS SERVICE GOES—IT'S GENERALLY A FUCKING RIP-OFF . . . and at the same time, service is the only faint phosphorescent glow on the video horizon. There's no reason why anyone should pay something like \$15 to have a fuse changed on a portable recorder. There is absolutely nothing mystical about repairing a VTR and there is often no more charisma to the average video technician than a high school diploma and six weeks at a manufacturer's training school. It is true that there are many operations that untrained persons cannot and should not attempt without at least some expert guidance, but not being an auto mechanic doesn't stop most people from changing a flat tire on a car. Also, there are many systems (e.g. editing and duplicating) that can be set up just by thinking about what's needed and then rigging up the proper cables to do the job. In other words, you *can* do-it-yourself with video equipment and you can do it for the price of a few simple tools and connectors and perhaps the friendship of your smiling local Sony service center. The scariest thing about servicing any piece of video equipment is usually the price of having it done "professionally."

Venting the pent up venom of the video movement on the deaf ears of the industry does no good if there is no way to exert some pressure on that industry. For now, the movement can go through the back door by making local dealers and service centers aware of its presence. At the same time it must be creating and sustaining an alternative structure of production and services where the idea is not to compete, but rather to strengthen the movement through increasing its knowledge of how well the equipment functions, how much to expect from it, how it can best be utilized, modified and improved and, perhaps most important, how the movement—as a movement—can most effectively influence industry changes for higher quality and greater accessibility.



ADJUSTING THE VIEWFINDER

It's possible that after you use the portable camera for a while, the viewfinder monitor in the camera will slip out of adjustment. The symptoms are simply that what you see in the camera is not what you see on the monitor. Adjusting the viewfinder monitor has no effect on how the camera functions but proper viewfinder adjustment is essential if you are interested in what you are shooting while you are shooting it. If you believe that your viewfinder is out of adjustment and you have an RF adaptor or some way of plugging the camera into a monitor (e.g. a CMA 1 or 2) the procedure for setting up the viewfinder is as follows:

Connect the RF Out plug into a TV set, plug in the camera to the deck, focus it on a well lit, high contrast object (a TV test chart is the best), and adjust the camera and the TV to optimum picture. If the picture on the TV is a good representation of the scene the camera is seeing and the viewfinder monitor in the camera is markedly different from the picture on the TV screen, then there are four adjustments for the viewfinder monitor located on the circuit board that is to the right of the viewfinder monitor (with the lens of the camera pointed away from your body).

Unplug the camera and remove the camera cover. Replug the camera into the deck, making sure that none of the exposed parts of the camera are touching anything metallic. Put the deck back into "standby" mode.

The viewfinder controls are small black button shaped objects that extend out perpendicularly from the circuit board towards the viewfinder on thin, cardboard-like semicircular platforms. Each one has a small amount of white paint on it (the paint is put there at the factory in order to hold the adjustments made at the time of the original factory alignment).

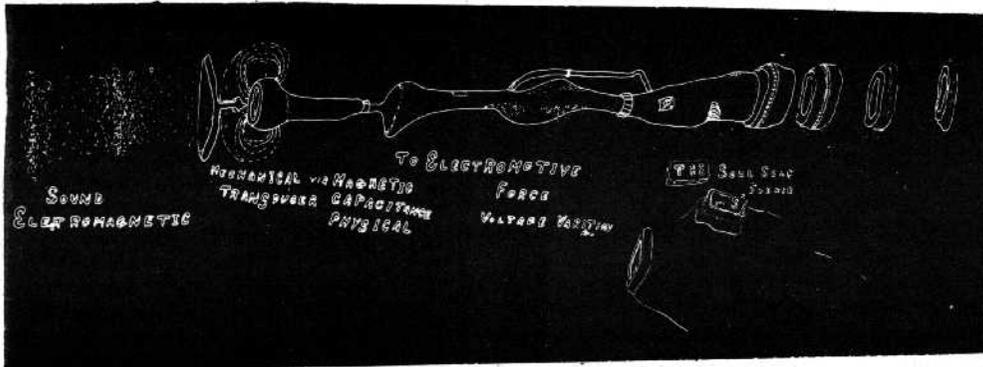
There is only one other viewfinder adjustment that you might want to try and that's the focus magnet. Unfortunately, it can be one of the most tedious operations in 1/2" video repair. It's only necessary when the picture on the TV monitor is in focus and the picture on the viewfinder is not.

The focus magnet, a dark grey donut shaped ring, is located just in front of the copper wrapping (yoke) around the viewfinder. The top of the magnet is covered with wax. The wax is what holds it in place. If the magnet is jarred or if the wax either melts or comes loose then the magnet not only makes the out of focus, but also screws up keystone the picture on the viewfinder screen. The best tools for adjusting the magnet are a small hand held, hot air hair dryer and your fingers. The camera must be on during the adjustment and it's just a matter of your eye vs your patience. The wax should be heated with the hair dryer until it is pliable. Then the magnet should be moved back and forth until maximum focus is obtained and held in the proper position until the wax has had a chance to dry. Please, do not forget to keep the camera in optimum focus while you're trying to adjust the viewfinder focus magnet.

The most important thing to remember is that the viewfinder is not exactly analogous to a regular tv set. It is not adapted for regular adjustment. It's a pretty decent monitor for its size and limited usage and if it's not some sort of lemon and if your camera is in good shape electronically, it should need only infrequent adjustment.

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 charger 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 guard 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 maneuvering the escutcheon around until it is free.

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-magnetizing) 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 mutilated, 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 receptacle 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.

OUR TOOLS ARE EXTENSIONS OF OUR BODY
OUR BODIES ARE EXTENSIONS OF OUR MIND
OUR MIND IS CONTINUOUSLY RELATING
OUR ENERGY
TO AND THROUGH THE MOLECULAR MASS
SURROUNDING EACH FIERY GLOW OF ENERGY

VIBRATE

LOVE



SETTING UP THE CAMERA

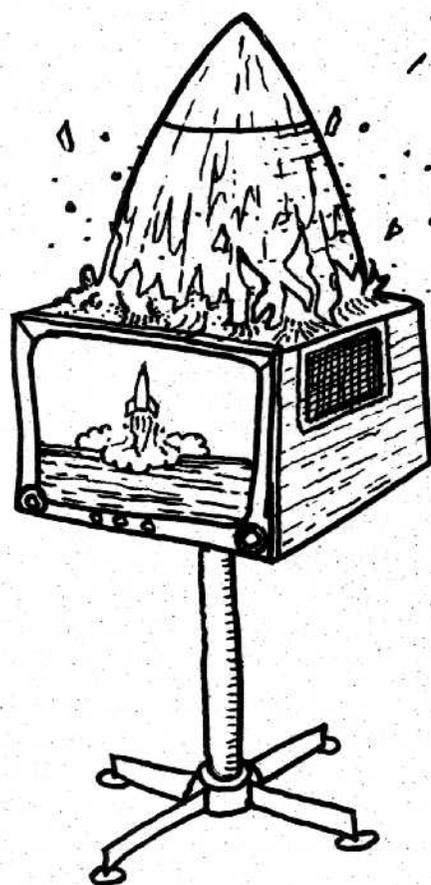
After long use, especially in low light, you may end up with what's called a "sticky" vidicon—one that retains after images. Or, you may find that there is a "bleached" effect on the camera in bright sunlight even when the F stop is as high as it will go. If either of these cases occurs, the beam and 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.



John Buck

