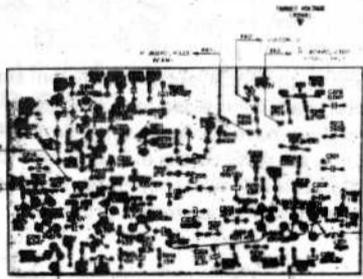
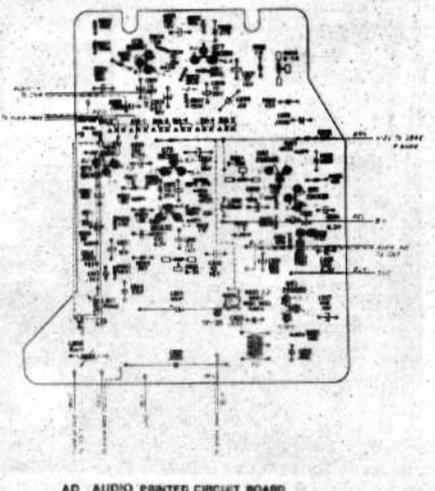
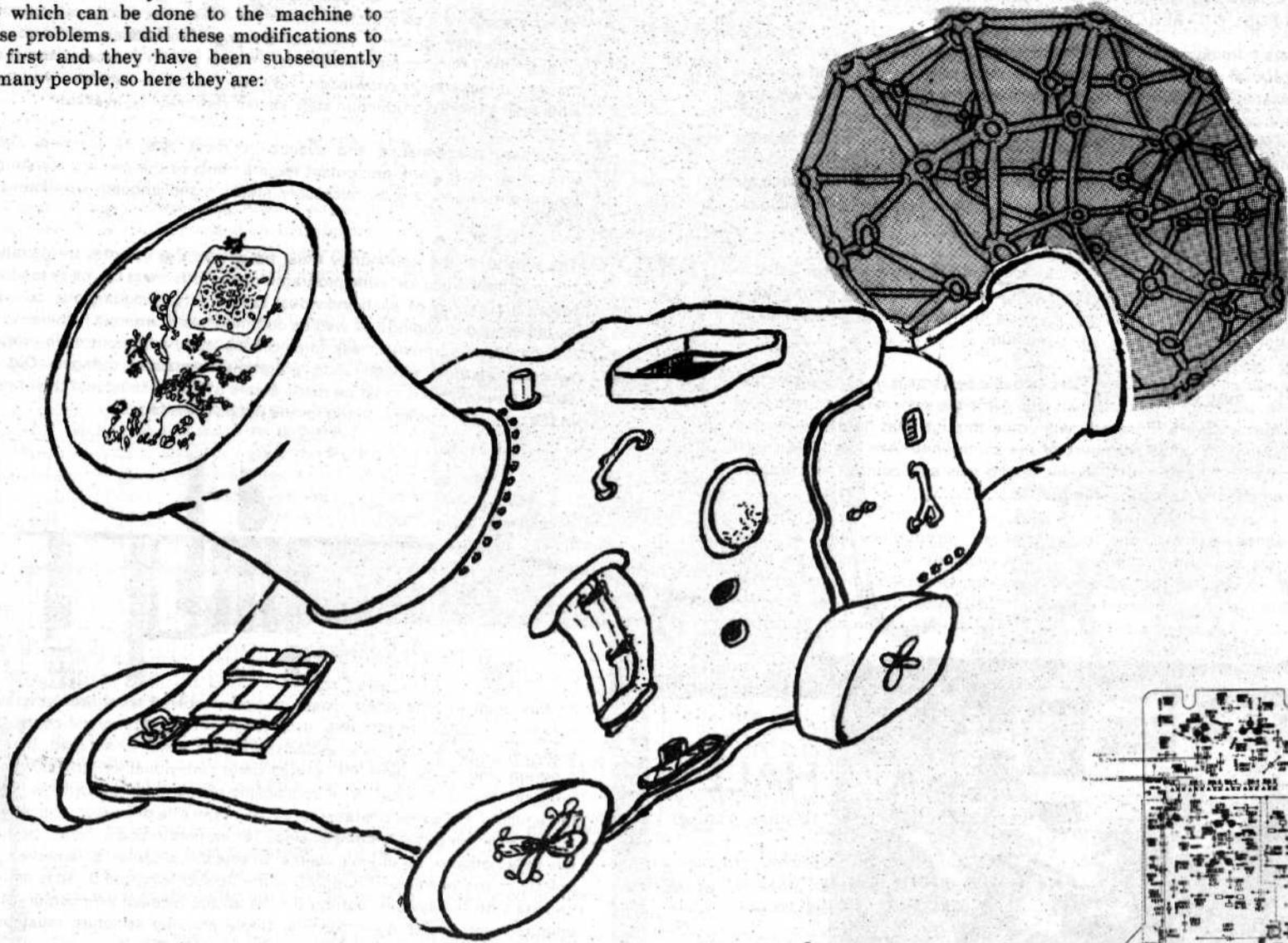


# CUSTOM MODIFICATIONS TO THE SONY PORTA-PAK

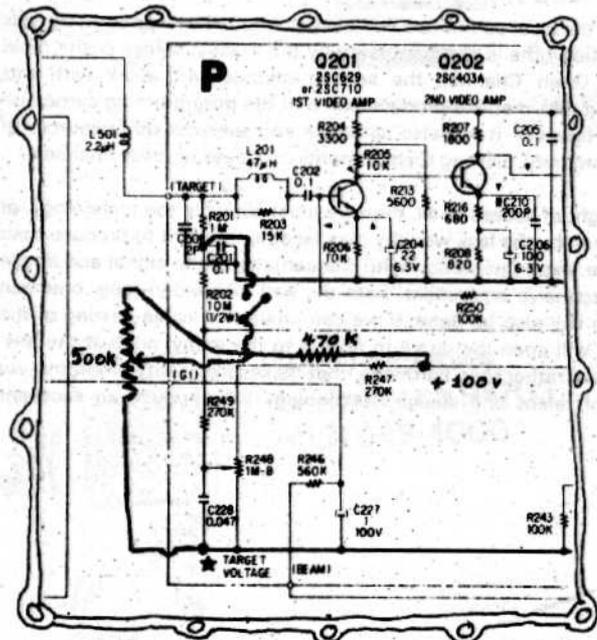
By Eric Siegel

As we all know by now, the Sony back pack is a very troublesome machine—and there seems to be no end to problems with it. Below you will see a list of modifications which can be done to the machine to eliminate these problems. I did these modifications to my machine first and they have been subsequently requested by many people, so here they are:

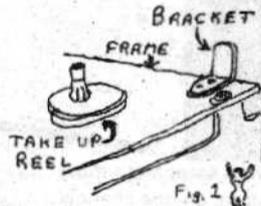


P PRINTED CIRCUIT BOARD

**Target level control.** The importance of this modification cannot be overemphasized. When you have done this, you will have DC restoration in your camera, your tv screen will stop fluctuating every time the light level on the camera changes, and your tapes will begin to look like they were made with an expensive monochrome camera.



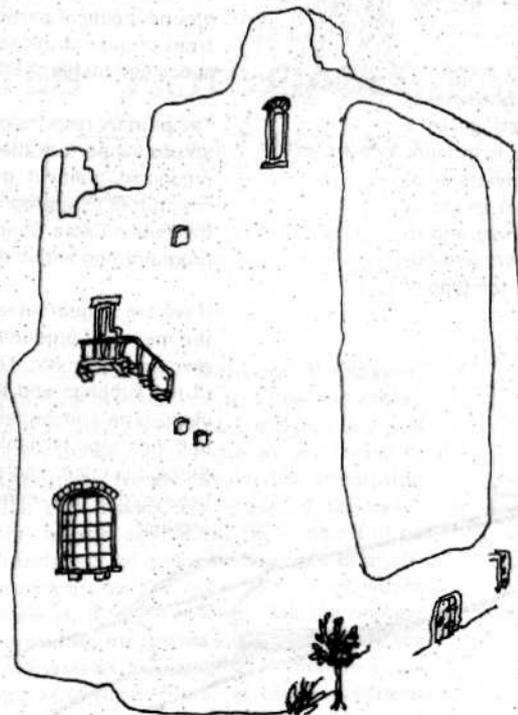
TARGET LEVEL Control  
Refer to Camera Schematic



Troubled by Tangled Tape

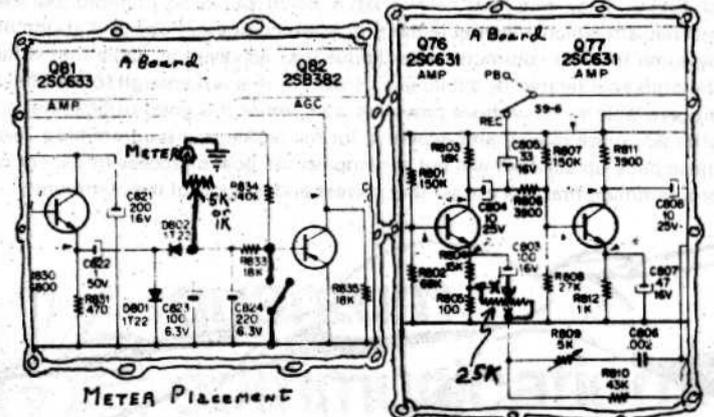
**"L" Bracket Modification.** Due to the cover rubbing up against the take up reel, many rolls of tape have been ruined by being wrapped around the capstan, sometimes our best action shots. Some people bend out their cases at the top so the reels don't rub; however, a more sophisticated solution is to place an "L" bracket as shown in figure 1 and epoxy it to the solid aluminum chassis underneath the thin top plate.

More Modifications will be in the Manual



**Audio level control.** If you make tapes with live music, you know how shitty is sounds on the playback. This is because the first amplifier is overloaded causing severe distortion and to complicate matters further, the automatic level control is busy compressing the entire dynamic range. Many people blame the mike built into the camera, but this is not the culprit. Correction of these faults consists of placing a 25k pot in the audio circuit which varies the amount of negative feedback in the audio preamplifier and at the same time, shorts out the automatic gain control circuit.

**Audio Meter Attachment.** An audio meter (any transistor meter) is attached just before the shorting point for the AGC.



METER Placement  
POT Placement  
Refer to Full Schematic of A Board

This concludes the Sony back pack modifications for now. It must be stated that if you do not have technical experience, don't try these yourself. One mistake can put your whole machine out of order. There is great risk in doing these modifications so leave them to someone who is competent.