

# Meta-Manual

New technologies begin life by being mistaken for the ones they replaced. The car was first called "horseless carriage." Another name for radio was "wireless." And some people still see broadcast TV as "a radio with a screen."

There is a similar bias against portable video generated by people who are mired in old media. Film freaks question the potential of videotape as if it were merely "Polaroid movies" and are more concerned about what it can't do in imitation of film, rather than what it can do uniquely. Media instructors tend to be unimpressed by the Porta-Pak because for their money it's just expensive "Super-Eight." Even those who understand that the grammar of television is different from film, nonetheless mistake portables for a less sophisticated version of the old TV studio.

Portable video is a new, major medium. It is a high access form of our culture's dominant communications mode and precisely the opposite of product television which can accept only artificial behavior because it is based on a scarcity of time and equipment access.

The economics of portable video are subversive to anyone whose authority and security are based on controlling information flow. Thus the usual argument against portable video is that it has inferior "technical standards" which is a hype promoted by unions whose jobs are based on scarcity, owners who can't afford both their overhead and "equal time," and educators who build a mystique of expertise and certification.

Unlike product television, the Porta-Pak embodies technological evolution towards decentralization: reduced size and cost, increased ease-of-operation. As a totally self-contained system it gives control of information to whoever is being processed. Film, on the other hand, goes off to central processing and is usually programmed by people who weren't there when the information was compiled.

The bias of self-contained record, storage and instant playback punctures the estranging mythology of technology as something to be operated and therefore controlled by an elite.

Not only are portables simple enough for even kids to use, but they can take a system home and live with it. It's a high access technology. Most of America's media structures are the opposite: centralized and one-way.

Biological systems with those characteristics

are usually unstable and non-adaptive. Because the way information flows through a system determines its structure, we can't expect our culture to embody ecological sanity unless our media are restructured to reflect that bias.

A media ecology demands decentralized, two-way information structures; just as survival pressure is now on to decentralize schools and governments to give control back to the people.

**Our experience at Raindance is that the Porta-Pak works best in its own context:**

**Don't demand that portable video imitate another, product-oriented medium. Treat it instead as a general purpose technology which has many uses indigenous to many different and unique behaviors. It's like the difference between an electric can opener, which is hardwired into one use, and a computer or the human brain, which have many uses independent of predetermined criteria of what is or isn't information.**

Use portable video to process your own life, not to produce products which imitate life, or Johnny Carson and Walter Cronkite. Also avoid making superstars out of "alternate culture" heroes because that's the same old "leader" and "lead" bullshit. It's best to be intimate with video, not estranged by plastic modes of behavior put over on product TV.

So don't worry about initial inadequacies of technique. Everyone we know who's picked up a Porta-Pak for the first time used it to feedback on their own lives and environment because that seemed natural. Some of the strongest tapes we've seen are technically the crudest. It's a medium without experts. Not everyone writes novels, but everyone has writing as a tool.

And most important: structure your system to maximize access. Like guerrilla warfare, your heavy, centralized units should help support your most flexible one (the Porta-Pak), not vice-versa. If you want heavy hardware, (e.g. mixers, slick editing), design it as a technological support system in service to the portable. High flexibility is an optimum survival mode.

We are Raindance, 24 East 22nd St., New York, N.Y. 10010. Other groups with whom we work are: Fobite Muck Truck, c.o. us, Videofreex, 98 Prince Street, New York, N.Y. 10012. People's Video Theater, 544 Avenue of the Americas, N.Y., N.Y. and Media Access Center, 1115 Merrill St., Menlo Park, Calif. 94035.  
But there are also many, many other good people who've gotten it together, especially in New York, along with groups who are getting it together. So this is a pretty incomplete list.



# Manual

There are three standards of videotape and a fourth one coming: two-inch, one-inch, half-inch, and quarter-inch.

Two-inch or "high band" tape systems are indigenous to broadcasting and are exclusively low access systems. They are temperamental, complex to operate, and stationary.

Generally, the wider the tape the more information it can hold. Two-inch systems, also called "quadraplex," lay the scanning signal perpendicular to the edge of the tape. All one and half-inch systems incorporate helical scan which lays the signal at an angle to the tape edge.

Typically, clean editing was once an exclusive function of two-inch machines. One-inch was first used as a cheaper version as their size and price range (\$3,000 to \$10,000) make them ideal for institutions with closed-circuit TV systems which imitate broadcast. Like two-inch, its editing capability is perfect.

There are no one-inch portables. However, all of the half-inch portables listed below can be interfaced with one-inch to provide perfectly edited one-inch masters.

The major technical problem with half-inch systems had been an unstable signal which precluded clean edits and even intra-system compatibility, in some cases. But most of the "technical" objections came from people who had a vested interest in limiting access to TV. Some of the best video we've ever seen was made on early, relatively crude Porta-Paks which were nonetheless flexible enough to go where people had something to record. Process versus product.

Moreover, many of the technical problems have been eliminated since the Porta-Paks were first introduced in 1968. There is now a Japanese standard of intersystem compatibility between manufacturers (although not all the portables share it) which has a stable enough signal to be perfectly edited on relatively inexpensive (approx. \$950) half-inch editing decks (e.g. the Sony AV3650).

Most of the information in this report is grounded in our experience with Sony. The system has many faults, but nonetheless has been the easiest to get and get serviced because of Sony's marketing acumen. Thus, the charts below give more space to Sony than the three other available half-inch systems, two of which are manufactured for two brand names.

The far right column of "coming" machines has more space than Sony because the systems listed there incorporate distinct advantages over the current Sony.

The charts are divided into four different scans: Specs (for specifications). They're generally the same for signal-to-noise ratio (the strength of the signal in relation to inherent noise); audio range (VTR's have a separate, synched, magnetic soundtrack); tape speak (the faster it is the more information stored, but the less recording time); and resolution (most cameras transmit more lines than the tape actually stores, so deck resolution is more important than camera capacity).

The second generation systems all incorporate 2:1 interlace which essentially means that the synch-pulse is continuous and therefore the signal is stable.

System variables to look for are battery life and recharging time; standard microphones and lenses; and playback capability. Some Porta-Paks are record only and the signal won't playback through any TV set. Of course, a playback motor means a heavier unit which you may not need.

**Design Intelligence.** Even the best of the systems is an imitation of film technology. Rather than exploit the potentials inherent in electronics, Porta-Paks still have a small TV screen eyepiece between your eye and the lens. They could be separate. A lens in your hand, for example, and a monitor on your wrist. They're also still configured as guns, with triggers. And are thought of as packs, i.e. something you carry but which isn't part of you.

Other **Design Intelligence** criteria are how accessible is the tape path for monitoring and threading, can you get to the guts for repairs, and configuration of cable jacks and inputs and outputs.

**Experience.** This tells you what has screwed-up both electronically and mechanically from our own experience. Where we have none it's been left blank for others to feedback and fill in our ignorance.

**Support.** Some Porta-Paks are less flexible than others first, because they have few inherent options; second, because other units in the manufacturer's line aren't too good; and third, because they're less than a total system in their inability to interface with support technologies like one-inch and cable television.

This section also evaluates the quality and accessibility of dealer service.

# PORTABLE VIDEO

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