

SVHS to MII: Reality Meets the Road

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**Adventures on the Pampas: Or How I Won the Small Format War**  
By Mark Freeman

Background

I've written, produced and directed documentaries since 1976. My first professional assignment was a commission from the Center for Independent Living (Berkeley, CA). With little budget and less experience, I used a wind-up Bolex to shoot a 16mm, black and white educational film: "Crip-Trips." This simple program was a success. It met the client's needs-- providing positive images of people with disabilities. The film aired on public television and was widely used in educational settings.

Since that modest beginning I've worked on a wide variety of programs --some on film, but since 1982 exclusively on tape. Almost all of these programs were independently produced for nonprofits. Documentaries about art and culture, or political and social issues never seem to be funded at "state-of-the-art" levels. The challenge is always to match the funds available to the most appropriate technology.

One solution is to push the limits of consumer equipment, while trying to maintain sufficient quality for broadcast on public television. In 1976 I experimented with double system Super-8 sound. The final product was blown-up to 16mm and then transferred to tape. In the mid-1980's programs were produced in VHS and mastered in 3/4" or 1". The on-going video "format wars" have created new opportunities and no little confusion. Attempts to utilize divergent formats --combining the apparent advantages of each-- often creates a "mixed-marriage" with unpredictable results.

## Pre-production

In January 1988 I was planning to leave San Francisco for a year's research and shooting in Argentina. 1989 would mark the 100th anniversary of Jewish agricultural colonization in Argentina. And I believed that there would be an interested audience (both in Argentina and the United States) if I could capture the story on videotape. I had a good idea; a chance to work overseas for an extended period; and little available funding. (Most of my budget was in the "to be raised" column.) The apparent solution was a lightweight camcorder. The most likely choices were VHS, SVHS or 8mm video. (Hi-8 wasn't yet available.) Consumer equipment offers few advantages --except price. I bought one of the first available SVHS consumer camcorders --JVC's GR-S55U. (It was so newly released that SVHS-C (20 minute) cassettes were seemingly unavailable in quantity. In the week prior to departure, I phoned suppliers all across the US to locate the 15 hours of SVHS-C cassettes I needed.) The promise of greatly increased resolution (exceeding 3/4" --they said) determined my choice of SVHS.

I had to be self-sufficient for shooting in Argentina. The television standard there is a unique format -- PAL-N. The electricity is 220v 50 cycles. Video supplies and accessories are only available in the capital (Buenos Aires) at a cost of about three times US prices. And SVHS in any standard was totally unknown and unavailable. In addition to my SVHS camcorder I traveled with a portable battery-operated color monitor/receiver, a high quality lavalier microphone (Sony ECM 55-B) and a simple light weight tripod. Two battery chargers for the camcorder gave me extra flexibility. (Because they ran on all types of current, I could use one as a ac power supply and use the other to charge camcorder batteries.) The addition of a voltage transformer and rechargeable nicad batteries and battery charger gave me increased range. The color monitor, an audio cassette recorder, short-wave radio etc. all ran on standard nicads (D and AA). (An IBM Portable PC needed only a locally purchased surge protector to run on Argentine house current.) Shooting in a consumer format in a foreign country had an additional welcome advantage. At customs I avoided any duties or restrictions because our small "nonprofessional" equipment attracted little attention.

Consumer camcorders are auto-everything: auto-focus, auto-iris, auto-white balance, auto-audio level. Where and when possible I used the manual over-ride settings. The footage suffered the most in back-lit situations. I quickly learned to move the subject, or move the camera, or to shoot close-up to fool the auto-iris. Remarkably the auto white balance and the automatic gain control audio functioned quite well. Shooting in relatively controlled situations was a big factor.

My goal was to produce a 1/2 documentary -- The Yidishe Gauchos. This is the story of Russian Jews escaping pogroms at the turn of the century. They built a network of agricultural communities and became ranchers and farmers on the pampas of Argentina. The script called for a combination of oral histories, academic commentary and archival footage. Interviews were conducted in Spanish and English. (The final program would be in two versions. The English version would have subtitles. The Spanish version would lay Spanish audio over the English interviews.) Archival materials came in many formats: 16mm film, 3/4 PAL-N, VHS PAL-N and still photos. Everything was transferred in Argentina to 3/4" NTSC and reserved for the on-line.

Production was an adventure. My Co-producer (Alison Brysk) and I piled our personal luggage and video equipment aboard Argentine buses. This almost always involved overnight travel and transferring from relatively modern carriers to rattling, dust belching diesels headed across the unsigned dirt roads of the Argentine interior. We were visiting the small towns that were the sites of Jewish colonies. We explored old homesteads, abandoned synagogues, libraries and theaters that were once the sites of a thriving Yiddish culture.

Today a few Jewish-Gauchos still ride the range. But electricity only exists in town. More than once taping was cut short because there was no way to recharge our camera batteries. (Batteries theoretically

can be charged with adapters to car mounted cigarette lighters. And although Argentines smoke constantly lighters aren't a common accessory in the jeeps and trucks we traveled in.) Interviews in unlit country house interiors were traded for outside locations on patios or under a (rare) tree. High contrast lighting on the pampas was an on-going challenge. (The more contrast in the original tape, the more difficult to produce satisfactory release tapes.)

The greatest advantage of our extremely portable equipment was reduced set-up time. People living in the Argentine countryside are far less familiar with video equipment than most people in the United States. Our hosts had scheduled us to meet and interview more people, in a shorter time, than we had thought possible. They had barely allowed for travel time; not to mention set-up time. We soon had our guerrilla technique honed.

We'd be introduced to an old timer --average age 75+. Alison would explain our project and where we were from. She'd attempt to get the lavalier wire under the interviewee's shirt. I'd throw-up a single bounce light if possible; mount the camera; plug in the mic and off we'd go trying to jog memories. We collected wonderful stories, and made many friends. I shot from slow moving tractors and towering grain elevators. I was invited to cover the restoration of an ancient steam locomotive. I learned to drink mate' --a potent herbal stimulant; I discovered Yiddish parodies about life in the colonies; but I never did master the tango.

### Post-production

After a year of hunting and gathering I returned to San Francisco with over 15 hours of material. At this point there were several alternative routes to completion. The most critical choice was whether to master directly from the SVHS original tapes, or to transfer the original material to an intermediate. (In the year I was overseas the number of likely intermediate choices had grown to

include 3/4, 3/4 SP, Betacam and Betacam SP. 1" was too expensive to consider.) I was convinced that avoiding an intermediate format and mastering directly from SVHS would be cost effective and offer the possibility of saving a generation. The choice of mastering format would come later.

The first step was to stripe (non drop frame) timecode on the audio track of each original SVHS-C cassette. The JVC camcorder recorded audio on two linear tracks simultaneously. (There were no hi-fi tracks.) A rented Panasonic industrial SVHS deck with separate audio inputs and a time code generator were required. I found it convenient to set the timecode "hour" location to correspond to assigned reel numbers. (E.g. Reel 1 equals timecode 01:00:00:00 etc.) Because SVHS audio tracks are in close physical proximity it is not possible to stripe timecode and simultaneously generate window dubs. (The intense audio timecode tones (track 2) tend to bleed on to the adjacent dialog track (1) making editing difficult if not impossible.) From each 20 minute timecoded SVHS-C cassette a separate VHS window dub was made. (Window dubs are copies of the original tape which display the assigned timecode numbers in a small video window.) Timecoding and window dubbing were time consuming processes involving two complete passes of 15 hours of original material. This was an opportunity for the editor to become more familiar with the material, update logs and trouble shoot for technical problems in the original tapes.

Editing and fundraising proceeded in tandem. A five minute sample of the work-in-progress was instrumental in obtaining financial support from private foundations and individual donors. (This sample was edited from the window dubs to a 3/4" "master" to VHS "sample tapes.") Editing a bi-lingual program is somewhat complicated. Logs and transcripts were prepared for all interviews. The Spanish interviews were translated into English and vice versa. Narration was written and graphics designed. New

music was recorded and rights to pre-recorded material were cleared. Eli Wallach recorded the narration in New York. To keep costs down, I directed the recording via a telephone hook-up to my studio in Berkeley (CA). Finally the off-line edit was completed. An edit log noting ins and outs for all video and audio edits was prepared. And we were ready to go on-line.

### On-line

In California post houses it was possible to edit from two SVHS source decks (for dissolves etc.) to SVHS, 3/4" or MII. Interformat editing from SVHS directly to 1", D1, D2 or Betacam was unavailable. MII, a high resolution broadcast format, promised the best image quality. (The biggest negative was that MII is somewhat of an orphan format, and that few dubbing houses will accept an MII master.) At Transvideo in Mountain View, California (about 40 minutes south of San Francisco) it was possible to on-line from SVHS, 3/4 or VHS directly to MII. Bells and whistles included a Paintbox, DVE, stillstore and more. Because subtitles were crucial to this production the addition of a Scribe, Jr. proved a big plus. (Basic Chyron systems are impossibly slow and unwieldy for extensive subtitling.) The edit session, while not glitch free, did deliver a high quality master with all the effects and graphics required. (One of the most puzzling glitches was ultimately one of the easiest to fix. Small format SVHS-C cassettes need an adapter to fit into full size players. We learned to our chagrin that SVHS adapters though seemingly identical to VHS adapters are notched differently. A full size SVHS player won't recognize an SVHS-C cassette housed in a VHS adapter. It just plays it as very funky video. Now you know.)

### Audio for Video

Audio sweetening sessions were at least as complicated as the video editing. Poolside Studios in San Francisco was flexible and experienced in working with unusual independent productions. Our final program was mono, but complete versions in English and Spanish had to be prepared.

Center track timecoded 1/4" audio tape was used to assemble all the audio sources. These sources included lp's, cd's audio cassettes, originally recorded music, sound effects (canned, constructed and sampled), Spanish voice over for the English interviews, and versions of the narration in two languages. In addition the "original dialog tracks" were stripped from the MII master for audio processing and mixing. All of these elements were transferred in sequence to a 1/2" timecoded 16 track audio recorder. (The most time consuming part of this process was "laying-in" Spanish over the English interviews. Talent was required to match the timings and inflection of the original English. Because Spanish tends to be much wordier than English this was no mean feat.)

The final 16 track audio was mixed down to 1/4" mono audio. Ideally at this point we would have laid back directly to our MII master. But because of system incompatibilities this was impossible. The solution was to transfer the audio mix to one VHS hi-fi track and timecode to a second VHS hi-fi track. (VHS Hi-fi tracks are much superior to linear audio tracks on any video format.) This VHS hi-fi track was laid back to the MII at the on-line video studio.

Diner + Allied in San Francisco worked with us to make dubs from our MII master. With a rented MII portable deck patched into their facility, Diner + Allied made 1", 3/4" and VHS dubs in NTSC and PAL (hi-band and low band) in both English and Spanish language versions. These dubs were only 2 generations removed from our SVHS original shot in Argentina. Copies were shipped off to Argentina on October 17, 1989 at 4:30 p.m. The earthquake hit San Francisco at 5:04 p.m., but The Yidishe Gauchos made it to Argentina in time for the celebrations there of the 100th anniversary of Jewish colonization.

### Hindsight

This program couldn't have been made unless low cost portable equipment was available. Is SVHS the best solution? I'm not sure. Hi-8 may be my next choice. My wish list includes industrial (not consumer) gear with hi-fi sound, manual overrides (instead of

"auto-everything") and most importantly, post-production compatibility. A post house offering true interformat on-line to 1" or Betacam would be a very attractive facility. Maybe the "video revolution" is truly about to arrive. (Or is it "desktop video publishing" that I'm really waiting for?) A final thought: Ideas count. Having something to say is still more important than the tools you use to say it.

The Yidishe Gauchos is featured in a traveling exhibition created by the Judah L. Magnes Museum (Berkeley, CA). It premieres in Israel at the Museum of the Diaspora. And it has screened theatrically at the Roxie Cinema in San Francisco, CA.