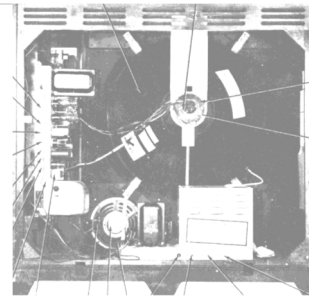
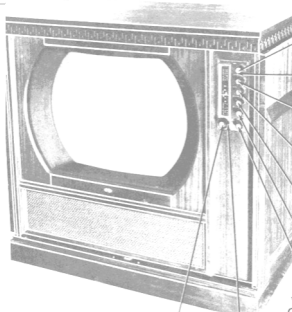


October 2025

Volume 2 Number 10



WHAT'S NEW IN OLD TVS

The Newsletter of the Early Television Foundation

Greetings Early Television Fans,

This is Volume 2, Number 10 of the Early Television Foundation Newsletter. **The October Zoom meeting will be on Saturday, October 25th at 8 PM. Now**

A Bit about the Fall Television Season

Some **of us** will remember when the beginning of fall meant the beginning of the new Fall TV lineup. To your local appliance dealer this meant TV shoppers would start to come in. Summer had people buying a stove or a fridge when they had to, but a TV could wait. Summer reruns, outdoor events, sitting outside until the sun set, all meant the TV was turned off. But now the new models were out and maybe Dad will want to see the World Series in color. Good times and good for the TV dealer.

During the September zoom meeting, Steve McVoy reported that the local farmers market shoppers are not passing through and joining the museum. Perhaps some creative use of crowd control ropes could do the trick, it works for airport security. Also in this months newsletter part three of VinylVideo by James T. Hawes.

We want to hear from you !

newsletter@earlytelevision.org

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In This Issue:

Take a look at some pictures from the swap-meet, the sweepstakes as well as the auction

**Part 3 of a new article
VinylVideo and Phonovision
TV pictures from audio
records**

by James T. Hawes

**Join or Renew
your Membership
NOW.**

It's on the website

We are always looking for:

- **Letters** from members
- **Tech Tips** from service experiences
- **My first TV** (family stories?)
- **My favorite TV** (and why)
- **Stories** of working in the business.
- **Articles** that can be added in whole or in parts.

ETF Auction and Sweepstakes Drawing Oct 18, 2025



Above: Blake Hinkle ran an auction of items in order to raise money for the Museum

Left: Matt D'Asaro announced the winning sweepstakes numbers.

First Prize: 7087

Second Prize: 8766

Third Prize: 4953

Early Television Fall Swap meet Oct 18, 2025

**Good
Weather
Clear
Skies
And a
good se-
lection of
TVs to
shop from
adds up to
a great
swap meet**





If you see a motel with a vintage sign like this, take a picture and send it to us. We're always looking something that brings back some fond memories of days gone by.

ETF member John Pope, vacationing with his wife in Lava Hot Springs, Idaho, saw this motel sign. Back in the day, a color TV in your room was a good reason to choose a hotel. Maybe for many visitors, it would be their first time seeing color TV.

Introduction

Part 3 of Our Series on Video Recording

Last month, we discussed playing back images and sound through the *VinylVideo* converter. Next, we contrasted *VinylVideo* with *Phonovision* (1927). Some related ideas. . .

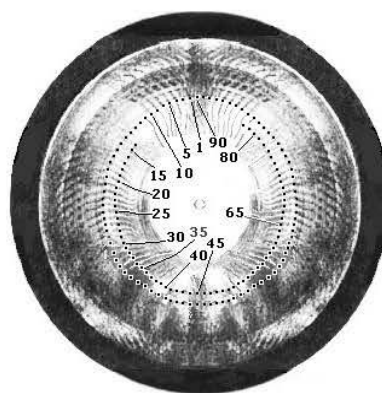
Phonovision Sync. Don McLean mentions spokes (lines, “radials”) between the edges and centers of *Phonovision* discs. (McLean 2000, 133, 158, 161) For McLean, these radials indicate “synchronous recording” and “embedded timing.” On the contrary, he also asserts that the records contained *no sync*. Instead, the mechanical linkage between a record and the scanning disc *should have* assured sync. *It didn't*. (McLean 2000, 102)

How many radials? Apparently, the radial count has never appeared in print. After enhancing a *Phonovision* record photo, (McLean 2000, 64) I could count the radials. I found 90, exactly the number of video lines per record revolution. (McLean 2000, 133)

Phonovision Mysteries. [1] The radials *did* indicate line sync: To what end? None. (An R&D leftover?) [2] Why were the radials crooked sometimes? Because the recording speed varied. (*Photos below.*) (McLean 2000, 64, 94, 132, 158) [3] What produced the radials? Maybe a cutter input signal. (*Black?*) Then the radials would consist of bumps: *Detectable* by the playback stylus. But if turntable drive gears caused the radials, the radials would have recorded laterally: *Undetectable* by a stylus. [4] In photos of Baird's studio, the usual, transverse record-cutting drive is absent. (McLean 2000, 136, 145-146) Then how did Baird record? Maybe he used his conventional pick-up arm and grooved, blank records. [5] *Unsolved:* Why did Baird power his turntable with a long, wobbly shaft to his scanning disc motor? (McLean 2000, 134-141) Two sync motors would have been stabler! Or did Baird use a non-synchronous disc motor, and that's why he needed the wobbly shaft?

Next: Restoring *Phonovision*. A *VinylVideo* designer speaks. —James T. Hawes, AA9DT

Part Three Follows.



**January 1928
Phonovision
record. Left:
Unenhanced
photo. Right: My
enhanced photo,
showing 90
crooked radials.**

VinylVideo & Phonovision

TV Pictures from Audio Records

Success & Failure

by James T. Hawes, AA9DT

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Restoring Images on *Phonovision* Records

Viewable at last! In the 1980s, Don McLean digitally restored some old *Phonovision* video from Baird records. By the time McLean had finished, he'd contributed nearly as much engineering as J. L. Baird had. *Baird would have appreciated McLean's results.* At last, the pictures were viewable, if only barely. The screen aspect ratio remained Baird's awkward three by seven. (McLean's measurements differ by under 10 percent, 3 : 6.36, width by length.) The *Phonovision* picture was narrower than an *iPhone* screen. Result: In close-up, *Phonovision* couldn't display an entire face. Typical faces were a bit too round. A bust shot worked well, though. But the detail was poorer than what a close-up would reveal. McLean's *TV Dawn* Web site provides example videos: (<https://www.tvdawn.com>) At the "Other Projects" tab, pick "30-line TV in the 1980s." Scroll down to "Examples of Frame Sequential Colour." (The Web site may also be at the *Wayback Machine* archive.) (*Aspect ratio*: McLean 2000, 153)

Fortunately, the *VinylVideo* converter didn't need to correct all the mechanical problems that *Phonovision* had. The table below summarizes the differences between *VinylVideo* and *Phonovision*. (Abramson 1955, 41; Burns 2000, 125-126; Diamant 2025b; Diamant 2025c; McLean 1998, 824, 826, 828; McLean 2000, 72-73, 106-107, 152-153, 162-165; RIAA 1963; Taylor 2018a, 7:53-8:10)

<i>Phonovision vs. VinylVideo</i>								
Technology	Record Format	Uses Conv ?*	fps *	Lines/ Scrn	Aspect Ratio (wide x high)	rpm*	Sync	Marketed ?
<i>Phonovision (1927)</i>	Vertically scanned picture as audio; flat EQ	No	~4	30, Seq, B*	3x7	78 Mono, Hill & Dale*	Mech *	No; failed to display usable pictures
<i>VinylVideo (1998)</i>	Horizontally scanned picture & sound as audio; RIAA EQ	Yes	8	84, Seq, B*	4x3 or 16x9	45 or 33 Stereo, RIAA	Elec*	Yes
*KEY: B= Baseband; Conv= Converter box; Elec= Electronic; EQ= Equalization; fps= Frames-per-second; Mech= Mechanical; Mono= Monophonic recording; rpm= Revolutions per minute; Seq= Sequential scanning								

Gramovision, Major Radiovision, & Amateur Recordings

Gramovision. By 1931 or so, Baird had abandoned his *Phonovision* effort. Yet in 1934, fellow Scotsman Ferdinand Plew began promoting a similar product, *Gramovision*. Plew's company also sold television receivers. Gramovision went on display at Selfridge's Department Store in 1935. The new record player technology could allegedly reproduce 30-line MTV pictures. That is, following Baird's standard. (*End of Phonovision*: McLean 2000, 77-78, 90; *Gramophone television*: "Scotsman's Invention," 1934; *Plew Television*: "Television for the Million," 329; Plew Television, Ltd 1934; *Selfridge's*: Shiers 1997, 406, n. 5079; Abramson 1987, 220; McLean 2000, 221-223)

Plew's publicity announced another unique feature: *Gramovision* would play two tracks on its records simultaneously: One track for video. The other for audio. *Gramovision's* double-arm technology made these dual-plays possible. Each side of a *Gramovision* record lasted up to six minutes. Instead of exploiting the Gramovision name, Plew advertised his products as "Plew Television Records." The company name in his ad was just "F. Plew," not "Plew Television." McLean observes that no Gramovision records or turntables survive today. He wonders if Plew ever sold these products. Maybe all the buzz about *Plew Television Records* was a broad, poofy trial balloon. Such a campaign might test

the market, predicting whether manufacturing at scale could be profitable. ("Scotsman's Invention," 1934; McLean 2000, 221-223)

Major Radiovision. In 1935, the Major Radiovision Co. marketed 78 rpm, 10-inch records containing just still pictures. Plew was general manager of the company. An ad claimed that Major Radiovision records were useful for calibrating 30-line MTV sets. Each two-sided record contained a series of graphics. Each side lasted for six minutes. The user could play the records on a standard turntable. But the records didn't include sync signals. Customers could purchase the records at Selfridge's. Many collections include one of these records. (McLean 2000, 57, 63, 222-223)

Fate of Plew Television. Plew Television must not have done well with Gramovision, Major Radiovision records, and MTV receivers. According to a press brief, the company went into liquidation in 1935. H.L. Smith & Co. bought the entire Plew stock, for resale "under manufacturer's cost." ("History of the manufacturer Plew" 2025; "Plew Television, Ltd. (in Liquidation)." 1935, iii.)

Amateur recordings. Besides restoring records from *Phonovision* and Major Radiovision, McLean also recovered records from amateur recordists. Home-recording devices became available to the public in about 1930. These recorders could cut seven-inch, aluminum, hill-and-dale records. Hobbyists could use the machines to record snippets of BBC telecasts. (In those days, mechanical television shows came over the regular radio broadcast band.) The home-cut records were one-sided.

Video pickup from the radio receiver was primitive: Over the speaker and through a microphone. The record speed was 78 rpm. The subject of McLean's first rehab project on an amateur recording was a BBC broadcast. McLean called this 1933 recording the "Silvatone recording." (At the BBC studio, the pickup was a drum scanner, using a flying spot.) McLean restored another collection of seven-inch, aluminum records. He called this collection the "Games Discs." These records rotated at non-standard speeds, 100 to 120 rpm. Undoubtedly, these recordings were brief! (McLean 2024a; McLean 2024b)

After digital enhancement, how good did the images look? McLean remarked:

...we can now properly appreciate the high production quality of BBC 30-line Television [sic.] in the early 1930s... (McLean 2000, 278)

...fast-paced entertainment, full of movement. (McLean 2000, 208)

The author couldn't match McLean's exuberance for the refurbished shows. The closeup screen shots in McLean's book and Web site were barely discernable. The long shots were even less distinct. Take, for example, the ballyhooed kick-line video, featuring the renowned Paramount Astoria Girls. It was as entertaining as watching sidewalk pedestrians from five blocks away. (*An observation which the author tested.*) These "girls" have no eyes, ears, noses, or mouths. And no hands. The viewer can barely see their arms. They could be marionettes. Or at best, ostriches, which they resemble. Is this "true television," as Baird so bombastically proclaimed his work to be?

Motion would have aided intelligibility, as McLean observed. Still, a 1933 viewer would have expected a fuzzy picture. After all, early mechanical television wasn't capable of detailed long shots.

The big story was McLean's record restoration process. At last, he completed Baird's abandoned project. What if Baird could return? Wouldn't *Vinyl/Video* give him a thrill? He'd love that fantastic converter box. But the microprocessor might leave him scratching his head. (*Restored home recordings*: McLean 2000, 201- 211, 213-217, 278; McLean 2024a, McLean 2024b; *true television*: Baird 1973, 56; Abramson 1987, 84; McLean 2000, 33, 38, 39; Dinsdale 1932, 56, 59; *no long shots*: Dunlap 1932, 90; Felix 1931, 210-215; *Gramovision & Major Radiovision (table, below)*: McLean 2000, 221-223)

Non-Phonovision Television Records								
Subject	Sync	fps	Lines/frame	Record Size	Tracks	Record rpm	Subject	Pickup Scanner
Major Radiovision record	None	12.5	30	10", 2 sides	10	78	10 bust shots. Magic lantern slides	Nipkow disc
Plew Television Records, Gramovision	Ad claims it has sync	12.5	30	10"? 2 sides	1 or more	78 (2 tracks at once)	Any	Disc, drum, etc.
Amateur recordings	None	12.5	30	7", 1 side	1	78 & faster	Dancing girls, variety	Drum scanner

Other Early Methods of Video Recording

Videotape & Intermediate Film. Besides record-based television storage, there were other video-recording inventions. Among these were the 1922 and 1927 video tape recorder patents of Boris Rtcheoulouff. In 1928, John Hays Hammond patented a video tape recorder in the U.S. Charles F. Jenkins and Bell Laboratories' Frank Gray were recording television pictures on film. In television's pre-videotape days, the film experiments became the basis for intermediate film recording. (*Rtcheoulouff*: Abramson 1955, 43-44, 133; Abramson 1967, 250-251; Abramson 1987, 53, 55, 95; Shiers 1997, 69 n. 500 and 501; *Hammond*: Abramson 1987, 129-130; *film recording*: Abramson 1987, 77-78; McLean 2000, 189, 194; Burns 1998, 234)

Discussion with Inventor Martin Diamant

By email, inventor Martin Diamant answered several questions about *VinylVideo* theory and availability. Here are the author's questions and Mr. Diamant's responses. (*The author has edited his questions slightly. Added comments appear between angle brackets, "<>."*)

Hawes: Is the *VinylVideo* converter kit still available?

Diamant: Unfortunately, it is out of stock.

Hawes: Are several discs still available for *VinylVideo*?

Diamant: At the moment, there are no commercial activities.

Hawes: Is your widescreen video also a form of NTSC or PAL?

Diamant: No, *VinylVideo* (both normal and widescreen) is a special analog video signal format developed specifically for storage on phonograph records. It has nothing to do with NTSC or PAL.

Hawes: Do I assume correctly that there is no added horizontal detail in widescreen mode?

Diamant: Yes, it is just anamorphotically stretched.

Hawes: Are the widescreen pixels just wider than the normal NTSC or PAL pixels?

Diamant: Even the “normal” *VinylVideo* pixels have nothing to do with NTSC or PAL pixels. *VinylVideo*, NTSC and PAL are all analog video formats. “Pixels” depend on how you digitize the analog waveforms. *VinylVideo* has much less resolution (or bandwidth) than NTSC or PAL, but when our device converts the format to NTSC or PAL (so that your TV can understand it), you don’t see any “*VinylVideo* pixels” as a result. We do this very carefully. The picture just isn’t as sharp as a “normal” TV picture.

Hawes: After the converter, are there just 8 shades of gray (as on your opening screen)?

Diamant: No. The converter uses 256 shades of gray internally.

Hawes: Is the output of the converter digital?

Diamant: Internal processing is digital, but carefully done (so it's essentially like analog). The output is analog NTSC or PAL. Except when you use the HDMI connection, then it's of course digital.

Hawes: On YouTube, “Techmoan” <Taylor 2018a> shows an output scope display from *VinylVideo*. Please provide a summary explanation of this display. (See “*VinylVideo* - Playing video from a 45 rpm record,” tiny.cc/w1m2001 at 11:38-11:44.) <Reader: See Bibliography, Taylor 2018a, 11:38-11:44.>

Diamant: Techmoan <Taylor 2018a> shows the waveform from the record. You can see the *VinylVideo* frames, a “frame” being an entity of image information together with necessary synchronization components. PAL and NTSC also consist of “frames,” but there's only a superficial similarity. (Diamant 2025a)



***VinylVideo* waveform simulation, 1-frame, 1 of 2-channels**
(Taylor 2018a, 10:59-11:44)

Hawes: Does the *VinylVideo* converter box use a DC restorer for the video?

Diamant: No, the signal is designed to be DC-free. There is a rumble filter against low-frequency mechanical playback noise.

Hawes: Does the *VinylVideo* disc record white = maximum, or black = maximum?

Diamant: White = maximum

Hawes: In your manual, I notice that *VinylVideo* recordings use the RIAA curve. For playback, does the converter reverse this curve (boosting bass, in the standard way)? Or does the converter boost treble, too?

Diamant: The RIAA curve is reversed in the standard way.

Hawes: Does the converter box gamma correct the video?

Diamant: The *VinylVideo* decoder does not gamma correct anything. Gamma correction might happen in the graphics processor that drives the HDMI

and analog video outputs, but we don't control this. I guess there are standards for different kinds of monitors.

Hawes: On a *VinylVideo* record: Is the left channel video, and the right channel audio?

Diamant: No, it's not that simple. Video uses much more than 50% of the available capacity. Sound and video are interleaved in time-division multiplex, just like in analog satellite TV transmission systems (before it became digital). Sound is time-compressed on the record and time-stretched upon playback. (Diamant 2025b)

Hawes: “Khkirill” at Hackaday.com (last comment) says he believes that *VinylVideo* has 41-line frames. (Khkirill 2023) How many lines does a *VinylVideo* frame actually have? See. . .

<https://hackaday.com/2018/10/01/vinylvideo-is-literally-video-on-vinyl/>

Diamant: 84 lines. <Author’s note: “Khkirill” might have decided the number of lines by counting horizontal lines. Perhaps “Khkirill” only counted lines for one stereo channel. *VinylVideo* uses both channels for data. (According to Diamant 2025b)>

Hawes: Does *VinylVideo* interlace?

Diamant: No.

Hawes: Does the disc contain baseband video, modulating the groove? Or does the groove contain video on an amplitude-modulated carrier? (The press kit mentions AM.)

Diamant: AM was tried in an early stage of development. The current system is baseband video.

Hawes: Baird *Phonovision* recorded 3 frames per 78 rpm disc revolution. How many frames are there per *VinylVideo* disc revolution? (Maybe 11? Derivation: $[8 \times 60/45] = 10.7$)

Diamant: It is not an integral number of frames per revolution (there is no need to mechanically synchronize a Nipkow disk). Unfortunately, this makes it

impossible to create “locked grooves” with seamless endless loops. We hadn't thought about that. :-)

Hawes: How many frames are there in an average *VinylVideo* disc?
(According to Don McLean, a Baird *Phonovision* disc contained about 750 frames. The formula is something like: [3.9 x 60 x 3.2 minutes' duration]= 749).

Diamant: It's 8 images per second. *VinylVideo* records can be very short or a quarter of an hour long (on one side of a 12", 45 rpm). But shorter is better, since quality gets worse as the radius gets smaller (linear velocity of the groove under the needle becoming less and less).

Hawes: May I say that *VinylVideo* supports a bandwidth of 20-20,000 Hz (if the phonograph is up to that standard)? [See manual, p. 16, category #10, RIAA.]

Diamant: Yes. (Diamant 2025c)

More Information on *VinylVideo*

- Adapter for ceramic cartridge, 2 resistors: www.pspatialaudio.com/45rpm.htm
- Art Gallery Videos (early 2000s): <https://vimeo.com/143231191>
- Art Gallery Videos (similar to above) <https://www.youtube.com/watch?v=0RnEflkJufs>
- Article, General: <https://thevinylfactory.com/features/vinylvideo-play-records-on-tv/>
- Hackaday: <https://hackaday.com/2018/10/01/vinylvideo-is-literally-video-on-vinyl/>
- Infomercial, *Farcical* (Early hdw): <https://www.youtube.com/watch?v=Q6TBXr8qN6U>
- MANUAL: <https://supersense.com/vinylvideo>
- Phonovision*, Restoration: <http://www.tvdawn.com/earliest-tv/>
- Randy Riddle, Introduction: https://www.youtube.com/watch?v=iw_0kIDcYT0&t=0s
- Supersense (New hdw): <https://newatlas.com/vinylvideo-video-sound-vinyl/56802/>
- Supersense phone: +43-1-969-0832
- Supersense Address: Supersense GmbH, Praterstrasse 70, 1020 Vienna, AUSTRIA
- Supersense Email: service@supersense.com
- Techmoan Analysis (*Excellent*): <https://youtu.be/UtNGVb94TFE?si=qBBBrIsmYuILuNu4R>
- Techmoan: Is it a Fake? <https://www.youtube.com/watch?v=Okdh7I06iFM&t=0s>
- Techmoan on Custom Records: <https://www.youtube.com/watch?v=XJIMY07iplM>

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