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Kayla Henry-Griffin

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### **The Very Quick Rise and Fall of the HIPAC System**

July 24, 1971- A headline in Tape Cartridges Magazine reads, "Ten Japanese Firms Back New Mini Stereo System".<sup>1</sup> At that time, this was one of the first announcements of Pioneer's newest format, the HIPAC (also written as hipac, Hipac, or HiPac). The HIPAC created some a bit of an uproar in Japanese economic market. However, it was a quick uproar and it showed through its very low sales in the subsequent years. The HIPAC is an analog, stereo tape cartridge format small in size. HIPAC was one fourth of the size of an 8 track, as small as a cassette, and was made with two speeds. It was created in a continuous loop system so that it operated without interruption once inserted in a player. The HIPAC made its grand entrance into the world at the Consumer Electronics Show in 1971.<sup>2</sup> Because the 1971 show had numerous new concepts of audio tape, one can argue that HIPAC just got lost in the weeds. After a couple of years being sold on the Japanese market and minimally in the United States market, the HIPAC was discontinued. Even though the HIPAC was discontinued around 1973, it was then repurposed for other purposes.

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<sup>1</sup> "Tape Cartridge: Ten Japanese Firms Back New Mini Stereo System." 1971. *Billboard (Archive: 1963-2000)*, Jul 24, 19-19, 21. <http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1040675823?accountid=12768>.

<sup>2</sup> "Tape Cartridge: Five New Tape Concepts are Unveiled at the CES." 1971. *Billboard (Archive: 1963-2000)*, Jul 10, 12-12, 54. <http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1017420588?accountid=12768>.



1971 Consumer Electronics Show via The Verge



Image from July 24, 1971 Billboard's article, "Tape Cartridge: Ten Japanese Firms Back New Mini Stereo System."

### Brief History of HIPAC

In an article from Billboard, the HIPAC is compared to a pack of cigarettes and is considered to have attracted a good amount of attention in the tape industry. Before the

HIPAC, audio tape sales were doing so well that in 1970 they reached \$83 million in sales and 30 to 40 percent in growth rate.<sup>3</sup> The article had the assumption that the HIPAC would do well in the industry since tape sales were on the rise.



Image from December 11, 1971 *Billboard's* article, "Tape Industry is Healthy; HIPAC is the Newest System"

In *Pioneer News*, the HIPAC was advertised as recording and playback equipment.<sup>4</sup> Pioneer News also explained that the HIPAC would resolve issues that were coming from the tape industry. They claimed one issue was that there needs to be a tape cartridge that had the capability of an 8-track and the "compact, handy size" of cassette tape.<sup>5</sup> The article then lists the features and capabilities of the HIPAC system and how it would solve the tape industry's problems.

Before the HIPAC was released on market, there was an enormous amount of buy-in from Japanese companies, also known as kabushiki kaisha (KK). Pioneer, Toshiba, Nippon Columbia, Hitachi, and Sharp Corporation created the HIPAC

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<sup>3</sup> "Tape Industry is Healthy: 'Hipac' is the Newest System." 1971d. *Billboard* (Archive: 1963-2000), J32-J32, J34. <http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1017428640?accountid=12768>.

<sup>4</sup> "Pioneer Takes Lead in Developing New "HIPAC" Tape System." *Pioneer News*, 1971. pp. 2. <https://manualzz.com/doc/23790908/page-1-vol4-3-no.-4-in-this-issue-of-pioneer-news--we-pre...>

<sup>5</sup> Ibid.

association and named Yosuke Suga president of the association.<sup>6</sup> Later on, more Japanese companies signed onto the association, such as Apollon, Mitsui, Tokyo Shibaura Electric, Clarion, Funai Electric, Kodansha, Mitsubishi Electric, and Sanyo Electric.<sup>7</sup> Toshiba is the corporation that created the PlayTape. Since Toshiba was part of the HIPAC association, it is possible that HIPAC's design was influenced by PlayTape's design. With this group, the HIPAC was then retailed in different markets; Toshiba, Japan Columbia, and Apollon would market HIPAC as music tape cartridges and the other members of the association would market HIPAC as home and car use.<sup>8</sup>



Screenshot of TechMoan's "hipac" video. Comparison of the PlayTape (left) and the HIPAC (right).

## Physical Components of the HIPAC

Even though small in size, the HIPAC was able to combine qualities of PlayTape, 8-track, and audio cassettes. Unlike the previous PlayTape, the HIPAC magnetic tape was thicker in size, being around 3.81 mm in size. Four tracks could be played on the HIPAC, with two tracks on one channel and two tracks on another channel. What is

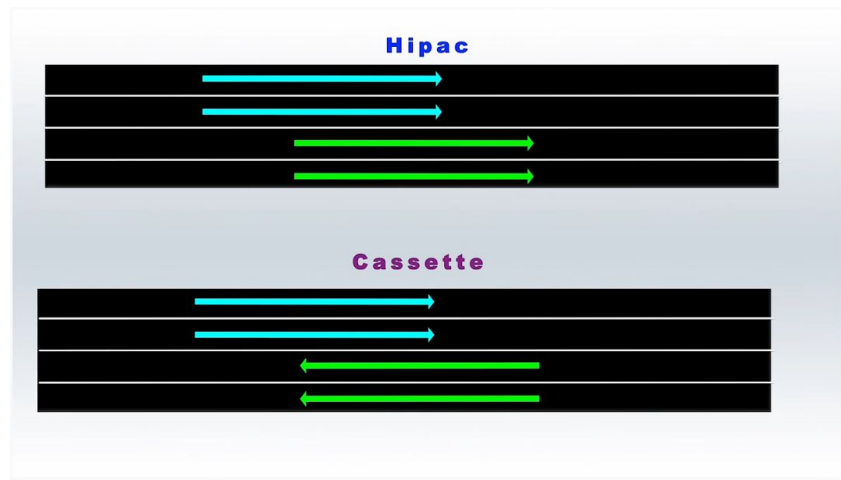
<sup>6</sup> "International News Reports: JOIN TO PUSH HIPAC TAPES." 1971a. *Billboard* (Archive: 1963-2000), 49.

<http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1040648255?accountid=12768>.

<sup>7</sup> "Stereo Cartridges: Outlook Bullish." *Billboard*, 17 Feb. 1973, pp. J-10.

<sup>8</sup> "Pioneer Takes Lead in Developing New "HIPAC" Tape System." *Pioneer News*, 1971. pp. 2. <https://manualzz.com/doc/23790908/page-1-vol4-3-no.-4-in-this-issue-of-pioneer-news--we-pre...>

different about the HIPAC is that all four tracks read in the same direction, while cassettes have two tracks in one direction and two in the other direction. There were two speeds for the HIPAC tape: 4.8 cm/s and 9.5 cm/s, where 9.5 cm/s gave higher quality in sound, but less maximum playing time (about 30 minutes worth).<sup>9</sup>



*Direction of tracks, HIPAC vs. Cassette via TechMoan's YouTube video, Hipac - The lost tape : Pioneer's forgotten 1970s cassette rival*

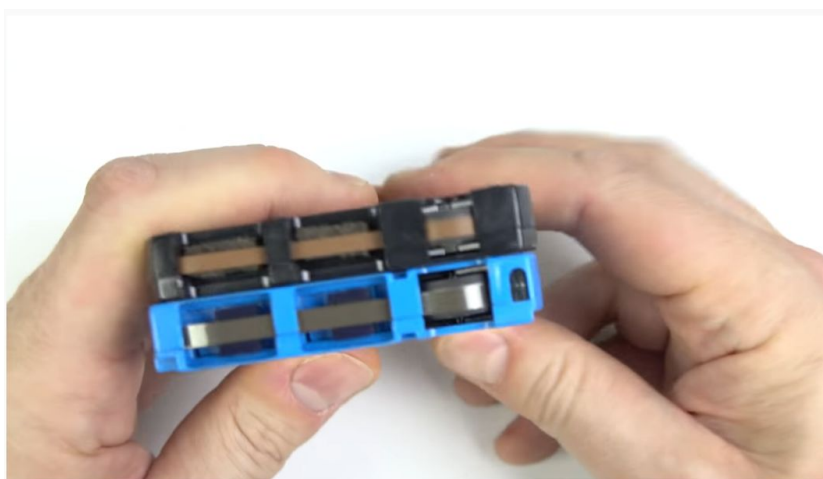
MAJOR SPECIFICATIONS OF THE "HIPAC" CARTRIDGE	
Dimensions (width × depth × thickness):	70mm × 85mm × 12mm
Weight:	Approximately 50 grams
Tape width:	3.81mm
Tape winding:	Endless winding
Tape speed:	4.8cm. per second or 9.5cm. per second
Number of tracks:	4
Number of programs:	2
Maximum playing time:	60 minutes (at 4.8cm. per second) 30 minutes (at 9.5cm. per second)

<sup>9</sup> Techmoan. "Hipac - The Lost Tape : Pioneer's Forgotten 1970s Cassette Rival." *YouTube*, YouTube, 29 Sept. 2017, [www.youtube.com/watch?v=Q\\_9IBlcsYj4](http://www.youtube.com/watch?v=Q_9IBlcsYj4).

Specifications of HIPAC via article, "Pioneer Takes Lead in Developing New 'HIPAC' Tape System"



Comparison of eight track (left) and HIPAC (right) tape via TechMoan's YouTube video, Hipac - The lost tape : Pioneer's forgotten 1970s cassette rival.



Comparison of PlayTape (top) and HIPAC (bottom) tape via TechMoan's YouTube video, Hipac - The lost tape : Pioneer's forgotten 1970s cassette rival.

### Failure of the HIPAC

During the 1970s, many stereo cartridges were being made and the market seemed promising for all of the formats created during that time. In a special Japanese-featured Billboard magazine, they stated the HIPAC was appreciated by

“motorists with golden ears”, even though the HIPAC was not standardized.<sup>10</sup> However, Later on, the HIPAC was said to have a “bleak” future.<sup>11</sup>

The discontinuation of the HIPAC did not mean the end for the format. The format was then repurposed for other uses. During the mid-1970s, the HIPAC was repurposed as a children’s audio tape that held Japanese children's stories. The name HIPAC was given during this time was *Ponkey*. It is not known how long this version of the HIPAC lasted, but it had some success in the children entertainment market. In addition to *Ponkey*, the thousands of HIPAC cartridges that were manufactured and never sold were then used as recording tape for the Apollon corporation.



*Photo of Pioneer HIPAC player designed for children via eBay*

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<sup>10</sup> “Stereo Cartridges: Outlook Bullish.” *Billboard*, 17 Feb. 1973, pp. J-10.

<sup>11</sup> Eguchi, Hideo. 1973. "LOCALLY MANUFACTURED AND IMPORTED BLANKS PRODUCE MILLIONS IN BUSINESS IN JAPAN." *Billboard (Archive: 1963-2000)*, Oct 06, 66-66, 68.  
<http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1505875146?accountid=12768>.



*HIPAC repurposed as Ponkey, a children's entertainment system*



*HIPAC repurposed as Apollon test tape*

Many audio tape formats were created during the early 1970s and many were discontinued. Audio cassette tapes reigned supreme and were the most popular and most used format. It can be said the uncommon audio tape formats had no chance to shift the market with audio cassette tapes around. Cassettes were widely used not only in the United States, but also on a global scale. This may be a reason why the HIPAC



format had no economic success. In 1972, the HIPAC accounted for only three percent of market sales in new car sales.<sup>12</sup> Then, the HIPAC was manufactured solely for stereo systems in small cars. There was not a huge market for this tape cartridge since Japan and some countries in Europe were the only countries manufacturing smaller cars during this time. The HIPAC was deemed, “too little, too late”.<sup>13</sup>

### **Formats Developed After the HIPAC**

Although the recording music industry and audio tapes were doing extremely well, new creations of audio formats were developed after the fall of the HIPAC tape. The Elcaset was developed in 1976 and received similar recognition as the HIPAC. The Elcaset was seen as having the same functionality as the cassette but with better sound quality.<sup>14</sup> It was even known as a format that may become a threat to cassettes and its market.<sup>15</sup> Similarly to the HIPAC, the Elcaset was very short lived, discontinuing sometime in 1978. It could be said that the Elcaset was competing in a market that was heavily run by audio cassettes.

### **Theories on the discontinuation of the HIPAC**

The theories behind the discontinuation of the HIPAC include its non standardization, the amount of audio tape formats created, and the niche market for

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<sup>12</sup> Eguchi, Hideo. 1973. "Locally Manufactured and Imported Blanks Produce Millions in Business in Japan." *Billboard (Archive: 1963-2000)*, 66-66, 68.

<http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1505875146?accountid=12768>.

<sup>13</sup> Eguchi, Hideo. 1973. "Locally Manufactured and Imported Blanks Produce Millions in Business in Japan." *Billboard (Archive: 1963-2000)*, 66-66, 68.

<http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1505875146?accountid=12768>.

<sup>14</sup>Eisenberg, Norman. 1977. "Taking Up Where Cassettes Leave Off?: Sound." *The Washington Post (1974-Current File)*, Aug 28, 175.

<http://proxy.library.nyu.edu/login?url=https://www-proquest-com.proxy.library.nyu.edu/docview/146613361?accountid=12768>.

<sup>15</sup>Eisenberg, Norman. 1977. "Sound." *The Washington Post (1974-Current File)*, Feb 27, 66.

<http://proxy.library.nyu.edu/login?url=https://www-proquest-com.proxy.library.nyu.edu/docview/146741407?accountid=12768>.

HIPAC. There is no written evidence that shows the HIPAC was standardized later. By the way of trends, non-standardized formats do not last long on the market. HIPAC had yet another fail in the terms of standardization. There could have been more buy in from corporations outside of Japan if the HIPAC conformed to a standard. The second theory to why HIPAC became obsolete so quickly was that too many audio formats were clogging the audio tape market. In the 1971 Consumer Electronics Show, there were numerous audio tape formats that were trying to take audio cassette's huge role in the market. Because of the massive influx of audio formats, there was much competition in popularity and in economics. Unfortunately, the HIPAC did not stay in the competition for long. In regards to the market, the HIPAC was not sold in a large scale market. Due to its very niche market, there would be very few people who would find interest in purchasing HIPAC cartridges and players. In regards to the HIPAC not being standardized, its non-standardization could be the result of being created for a very specific, very niche audience. The HIPAC was created smaller than the eight track cartridges and had the same power as a cassette, and it was specifically designed for stereo systems in small cars. These small cars would be geographically found in Japan and possibly Europe. There was not a great reason to market the HIPAC in the United States since cars were manufactured to be bigger and to carry cassette players.

### **Preserving what is left of the HIPAC**

Now that the HIPAC is no longer available on the current market, it will be highly difficult to preserve such an obscure format. Assuming the care and housing of HIPAC tapes and players are non-existent, the HIPAC is in danger of being extremely damaged. If the HIPAC was in a thin, cardboard sleeve, the sleeve could possibly be

moldy or transfer acidic features to the tape, depending on the environment. The plastic components of the cartridge would become moldy if not taken care of properly, and over time the magnetic tape could deteriorate (sticky shed, loss of magnetic particles, etc.). It is also possible that HIPAC players cannot play anymore. There may be very few or no technicians who would understand how to repair a HIPAC player. There may be some musicians who recorded their music on the HIPAC format and no other format.

Preserving that music would mean that digitization or migration of formats must be done to keep that music existing. Because the HIPAC was not highly favorable, it is safe to assume that many of the players and tapes were thrown in the trash. What remains of the HIPAC has been sold via auction sites and acquired by collectors.

The HIPAC had its charm and was relatively changing the scene of analog audio formats by having the power of an 8-track system in the compact size of a PlayTape and audio cassette. However, the oversaturation of audio formats at the beginning of the 1970s may have been the downfall of the HIPAC tape and player. It is also possible that the market for the HIPAC was highly niche and was not capable of being part of a larger market. Another reason for the possible decline of sales is that the HIPAC never found a home in standardization. Whatever the reason for this vintage format to become obsolete, it is imperative to preserve the short legacy the HIPAC had. There are a few artists who have their musical works only on HIPAC tapes, and because of this, the HIPAC tapes should be preserved or at least the music on the HIPAC should be reformatted for accessibility reasons.

## Bibliography

"International News Reports: JOIN TO PUSH HIPAC TAPES." 1971a. *Billboard* (Archive: 1963-2000), 49.

<http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1040648255?accountid=12768>.

A brief report on the numerous Japanese corporations (kabushiki kaisha) that supported the HIPAC development. These corporations created a HIPAC association to discuss further developments.

"Tape Cartridge: Five New Tape Concepts are Unveiled at the CES."

1971b. *Billboard* (Archive: 1963-2000), 12-12, 54.

<http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1017420588?accountid=12768>.

A summary of new tape formats that were developed and showcased at the 1971 Consumer Electronics Show (CES). This particular show was bombarded with many and various audio tape formats, in which HIPAC was one of the audio formats.

"Tape Cartridge: Ten Japanese Firms Back New Mini Stereo System."

1971c. *Billboard* (Archive: 1963-2000), 19-19, 21.

<http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1040675823?accountid=12768>.

A list of Japanese companies that backed and supported the HIPAC development. Also included in this article is a commentary on the problems that may arise with another audio tape format.

"Tape Industry is Healthy: 'Hipac' is the Newest System." 1971d. *Billboard* (Archive: 1963-2000), J32-J32, J34.

<http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1017428640?accountid=12768>.

A report on the tape industry highlighting Japan developments and the HIPAC. There was an expectation that since the tape industry was doing well, the HIPAC would find its place in the market as well.

Eguchi, Hideo. 1973. "Locally Manufactured and Imported Blanks Produce Millions in Business in Japan." *Billboard* (Archive: 1963-2000), 66-66, 68.

<http://proxy.library.nyu.edu/login?url=https://www.proquest.com/docview/1505875146?accountid=12768>.

An article on the tape market in Japan in 1973. There is discussion about each company with a tape format and whether they are doing well or losing sales (like the HIPAC). This article is a Billboard perspective on the Japanese market.

"Stereo Cartridges: Outlook Bullish." *Billboard*, 17 Feb. 1973, pp. J-10.

Commentary on the audio tape format market. Gives an optimistic explanation of the current market for new audio tape formats like the HIPAC.

Techmoan. "Hipac - The Lost Tape : Pioneer's Forgotten 1970s Cassette Rival." YouTube, YouTube, 29 Sept. 2017, [www.youtube.com/watch?v=Q\\_9IBlcsYj4](http://www.youtube.com/watch?v=Q_9IBlcsYj4).

A video on the quick history of the HIPAC. Content includes how the HIPAC works, what it sounds like, the initial and later purposes of the HIPAC, and an explanation of why the HIPAC became obsolete.

"Pioneer Takes Lead in Developing New "HIPAC" Tape System." *Pioneer News*, 1971. pp. 2.  
<https://manualzz.com/doc/23790908/page-1-vol4-3-no.-4-in-this-issue-of-pioneer-news--we-pre...>

Pioneer issued an article in their own news magazine on the then new HIPAC system. The article illustrates the HIPAC cartridge and various HIPAC players. There is also a portion of the article that explains the specifications of the HIPAC cartridge.

Eisenberg, Norman. 1977. "Taking Up Where Cassettes Leave Off?: Sound." *The Washington Post (1974-Current File)*, Aug 28, 175.  
<http://proxy.library.nyu.edu/login?url=https://www-proquest-com.proxy.library.nyu.edu/docview/146613361?accountid=12768>.

A view by a commentator on the up and coming Elcaset format. The commentator questions if this new format would reign supreme and take over the cassette's market.

Eisenberg, Norman. 1977. "Sound." *The Washington Post (1974-Current File)*, Feb 27, 66.  
<http://proxy.library.nyu.edu/login?url=https://www-proquest-com.proxy.library.nyu.edu/docview/146741407?accountid=12768>.

An overview of the Elcaset and its possibly audio tape market effect. It explains the companies who developed the format and what companies are in support of the Elcaset. There is a brief discussion about if the Elcaset would become a successful invention or would become lost in history.