



Sony Group Corporation et al. v. inMusic Brands, Inc.

Patent Owner's Presentation April 25, 2024

IPR2023-00294
(Patent 7,567,498)

INMUSIC EXHIBIT 2017
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Summary of Argument



1. Sony has failed to establish that claims 1-2 and 4-6 are obvious over Cortellesi;
2. Sony has failed to establish that claim 3 is obvious over Cortellesi in view of Georges;
3. Sony has failed to establish that claims 1-2 and 4-6 are obvious over Spencer in view of Cohen; and
4. Sony has failed to establish that claim 3 is obvious over Spencer in view of Cohen and further in view of Georges.

Claim 1 of the '498 Patent



1. A turntable including:
a rotatable platter;
a tonearm for receiving a phono cartridge for generating an analog audio signal representative of an audio recording;
an analog to digital converter for receiving an analog audio signal from the phono cartridge; and
a controller responsive to said analog to digital converter for generating an output digital audio signal of music or speech representative of an audio recording from an output of said analog to digital converter, representative of said analog audio signal;
wherein said analog to digital converter and said controller are included within said turntable; and
wherein said output digital audio signal is output from said turntable and uses standard computer protocol.

Construction of “controller” (Claims 1-6)



- inMusic:
 - An electronic device which receives a digital data stream, renders it into a specific data format, and manages the output of that formatted stream on a specific interface.
- Sony:
 - A device for controlling another device and/or circuit.

inMusic's Construction of Controller Accords with the Disclosure of the '498 patent



Ex. 1001 at 2:19-25

The output of the analog to digital converter 18 is digital and is received by the USB controller 20. Both the analog to digital converter 18 and the USB controller 20 are within the turntable 10. This results in a USB signal being generated from the turntable 10 from a USB jack 22 which is on the cabinet of the turntable 10.

Id. at 2:40-48

The output of the analog to digital converter 18 is digital and is received by the firewire controller (link layer) 26. The output of the rewire controller (link layer) 18 is received by physical (PHY) layer 28. The analog to digital converter 16, the firewire controller (link layer) 26 and the physical SHY) layer 28 are all contained within the turntable 10. This results in a USB signal being generated from the turntable 10 from a firewire jack (IEEE-1394) 30 which is on the cabinet of the turntable 10.

inMusic's Construction of Controller Accords with Sony's Cited Dictionary Definition



Controller 1. In the truest sense, a device which controls the operation of another piece of equipment. In its more common data communications sense, a device between a host and terminals that relays information between them. It administers their communication. . . .

Sony's Construction of Controller is Based on Cases Directed to Different Technology



- *Karl Storz Endoscopy-America, Inc. v. Stryker Corp.*, No. 14-CV-00876-RS, 2016 WL 3597426, at *6 (N.D. Cal. Jul. 5, 2016)
 - The claims disclosed “a first controller,” and “at least one medical device having safety-related functions controlled by said first controller.” *Id.* at *8.
- *Intellectual Ventures I LLC v. Altera*, No. CV 10-1065-LPS, 2013 WL 3913646, at *1 (D. Del. Jul. 26, 2013)
 - The claim recited “a controller ... wherein the controller is configured to independently vary a clock frequency of each whole processor unit.” *Id.* at *8.
- None of the cases involved a controller generating an output digital audio signal.

Construction of “representative” (Claims 1-6)



- inMusic:
 - Reproducibly indistinguishable to a listener, but in a different format from the original.
- Sony
 - A first object that stands in the place of or corresponds to a second object.

inMusic's Construction of Representative Accords with the Disclosure of the '498 patent



Ex. 1001 at claim 1

“a phono cartridge for generating an analog audio signal representative of an audio recording; an analog to digital converter for receiving an analog audio signal from the phono cartridge; and a controller responsive to said analog to digital converter for generating an output digital audio signal of music or speech representative of an audio recording from an output of said analog to digital converter, representative of said analog audio signal;”

Id. at 2:16-19

“The phono cartridge generates a conventional analog electrical signal, representative of the audio recording on the LP record. The conventional analog electrical signal is received by the analog to digital converter (ADC) 18.”

Id. at 2:20-25

The output of the analog to digital converter 18 is digital and is received by the USB controller 20. Both the analog to digital converter 18 and the USB controller 20 are within the turntable 10. This results in a USB signal being generated from the turntable 10 from a USB jack 22 which is on the cabinet of the turntable 10.

Sony's Construction of Representative Would Allow for Completely Unrelated Objects to be Representative of One Another



- For instance, a digital output of “Beep Bop” would be representative of “Let it Be” by the Beatles under Sony’s construction
 - No POSITA would consider this representative as recited in the claims.

Ground 1: Sony has failed to establish that claims 1-2 and 4-6 are obvious over Cortellesi



Cortellesi Does Not Disclose the Claimed Controller



- Sony relies on Cortellesi's "CPU EC" as the claimed controller
- Claim 1 requires that the controller generate an output digital audio signal of music or speech
- But the only output digital audio signal of music or speech disclosed in Cortellesi is generated by Cortellesi's playing unit RD/A
- Sony failed to explain how the CPU EC generates the required signal

[SLIDE OMITTED]



Cortellesi Does Not Disclose An Analog to Digital Converter and Controller within the Turntable

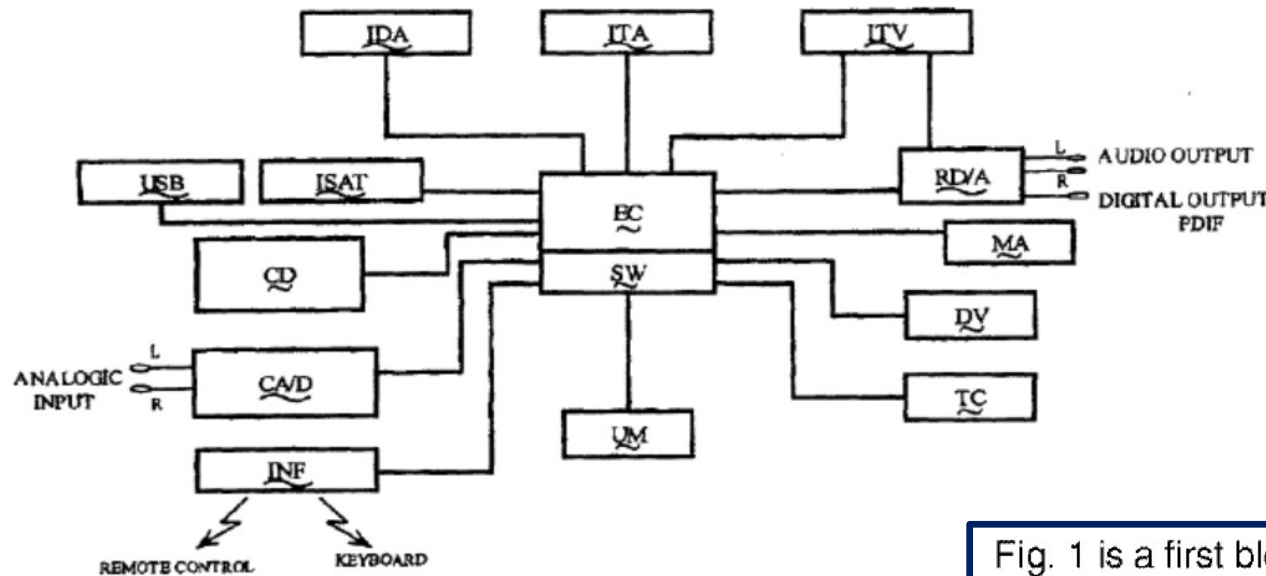


FIG. 1

Fig. 1 is a first block diagram of the storing, playing apparatus;

Cortellesi Does Not Disclose An Analog to Digital Converter and Controller within the Turntable

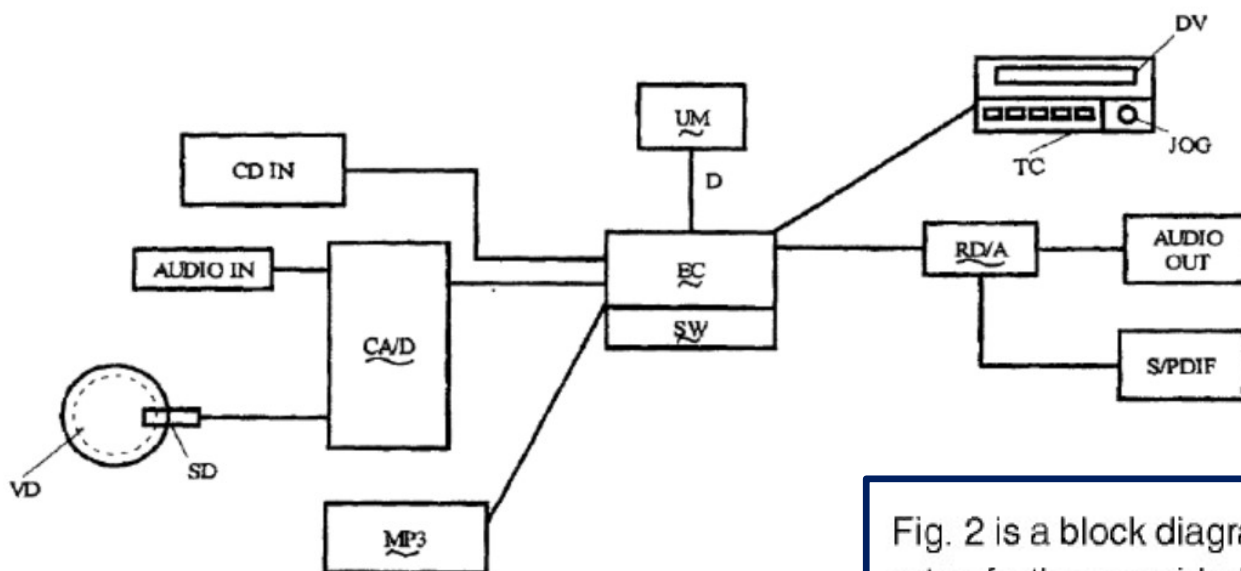


Fig. 2 is a block diagram of a storing, playing apparatus further provided with a virtual disk;

FIG. 2

Figures 1 and 2 Are Two Different Embodiments



Cortellesi:

Further features and advantages of the invention will be readily apparent from the following detailed description with reference to the accompanying drawings which show some preferred embodiments of the invention by way of a not limiting example. In the drawings:

Fig. 1 is a first block diagram of the storing, playing apparatus;

Fig. 2 is a block diagram of a storing, playing apparatus further provided with a virtual disk;

Figures 1 and 2 Are Two Different Embodiments



Cortellesi:

“The block diagram of Fig. 2 is different from the previous diagram by the presence of a virtual disk VD which is connected to an analogue/digital converter CA/D that allows DJ to act manually, even in a digital context, on the rhythmic synchronization of the records played in succession.”

- But FIG. 1 can also use the virtual disk:

a digital/analogue converter CA/D for storing directly from audio analog sources . . . and for receiving signals from a virtual disk, if any;

Figure 4 Does Not Disclose an All-in-One Device



- A sensor SD may be connected to the analog-to-digital converter CA/D of the apparatus of Figure 1 via the analogic inputs
- This is similarly true for Figure 2, which depicts the sensor SD connected to the CA/D.
- Cortellesi makes clear that the SD and VD are optional components that may be connected to the rest of the apparatus.
- The components of Figure 1 are not shown in Figure 4 because this is a separate record player.
 - Knob JOB is not shown
 - Display DV is not shown

Fig. 4 is a top plan view of a first embodiment of the apparatus provided with a record player carrying the virtual disk provided with a reading sensor.

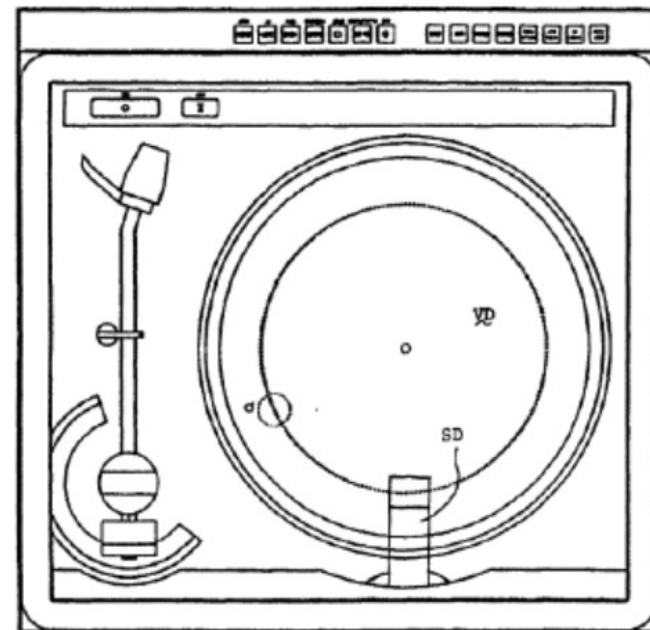


FIG. 4

It Would Not Have Been Obvious to Create an All-in-One Device



- Cortellesi describes modifying a “common record player” by connecting a sensor SD to it and then using that sensor instead of the traditional “pick up arm.” Ex. 1004 at 4:40-46.
- If Figures 1, 2 and 4 were combined and a “common record player” were not used, there would be no reason to include traditional turntable components (such as the stylus, cartridge, etc). They are not needed for controlling digital music through a turntable interface as disclosed by Cortellesi’s virtual disk VD and sensor SD.
- The entire purpose of Cortellesi is so DJs can play music “without the need of having original music supports or records.” *Id.* at 1:17-23.

Ground 2: Sony has failed to establish that claim 3 is obvious over Cortellesi in view of Georges



Ground 2: Georges Does Not Change the Analysis



- Georges is only cited with respect to claim 3 for its alleged disclosure of firewire.
- This disclosure does not address any of the deficiencies identified with respect to Ground 1, and therefore this Ground is equally deficient.

Ground 3: Sony has failed to establish that claims 1-2 and 4-6 are obvious over Spencer in view of Cohen



Spencer does not transmit digital audio signals that are representative of an analog audio signal representative of an audio recording



- Sony relies on a single sentence in one paragraph of Spencer that states a “controller unit 100” (i.e., turntable) communicates “digitized audio signals ... **useful in determining an intratrack needle position**” to a “data processor unit 200.” Ex. 1005 ¶ 30.
- But this paragraph does not provide that the digitized audio signals are representative of analog audio signals representative of an audio recording as required by the claims.
- Further, the remainder of Spencer makes clear that it does not transmit such signals.

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- The Purpose of Spencer is to Synchronize and Control Music via a Turntable

[0002] The present invention relates to a system and method for detecting a location on a surface selected by a user and manipulating a digital source based on information relative to the detected location.

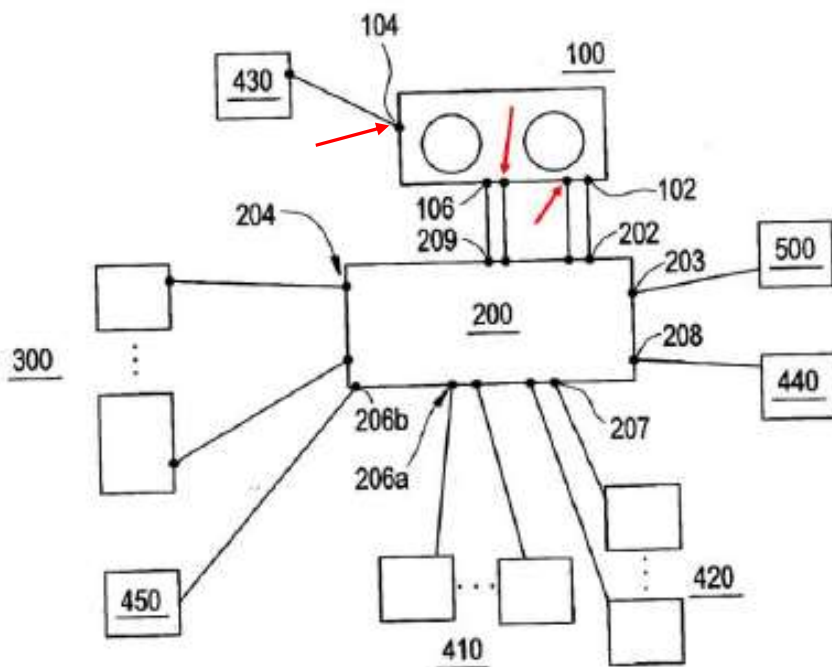
Spencer Communicates Analog – Not Digital – Signals



- Spencer does not transmit digital audio signals that are representative of an analog audio signal representative of an audio recording
- Instead, Spencer's turntable communicates analog audio signals to the data processor unit 200 for sampling.

[0036] In one embodiment of the present invention, tone arm assembly 120 may include a cartridge 122 pivotally coupled to the controller unit 100 via a tone arm 124 and tone arm pin 126. Tone arm pin 126 may, for example, include a stylus 123 arranged at a first predetermined distance, d_1 , from the spindle 114. The stylus 123, capable of running within a groove on an existing analog record supported by the turntable platter 112 and sensing the groove topography may be arranged within the cartridge 122, may be positioned at a second predetermined distance, d_2 , from the tone arm pin 126. The cartridge 122 generally includes at least one transducer for converting mechanical vibrations sensed by the stylus 123 into analog electrical signals. Further, the cartridge 122 communicates those analog electrical signals to the data processor unit 200 for sampling, as will be discussed in greater detail below.

Spencer Communicates Analog Signals to the Data Processor Unit



- Figure 1 discloses two unlabeled ports, either of which could potentially be used to transmit analog audio.
- Analog audio output port 104 could also be used to communicate analog audio signals to the data processor unit 200.

Spencer's Teachings



- **“Pre-production step”**: analog audio is transferred to the data processor unit 200 for sampling and creation of a waveform map.
- **Waveform Map**: correlates the sampled audio with corresponding values of the tone arm assembly signals (*i.e.*, needle position).
- **Synchronization map** is then created:
 - Synchronization points are marked on the waveform map and matched to corresponding portions of an “output from an external digital source.”
- **Synchronization and Control**: In this way, analog music from the turntable and digital music can be played in synchronization. The turntable can also be used to control the output of the digital music.
- The only **digital signals** communicated to the data processor unit 200 are those for determining the **intratrack needle position**.

Sony's Sampling Arguments Should be Rejected



- Sony incorrectly argues the “analog waveform” in paragraph 66 is digital, and that Spencer’s teachings of “sampling” are not really sampling. See Paper 21 at 26-28.
- But this is contrary to the explicit language of paragraph 66:

[0066] In generating the waveform map, the data processor 200 samples the analog audio waveform communicated from the controller unit 100 (e.g., the analog waveform) and correlates portions of the sampled analog waveform with corresponding values of the tone arm assembly signals, indicating the distance the stylus has traveled from its rest position.

- Spencer, therefore, is clear that the analog audio received from the turntable is sampled at data processor unit 200.

Spencer's Disclosures on Synchronizing



[0075] Synchronization points from the analog waveform may then be marked on the waveform map and then matched to corresponding portions of an output from an external digital source (i.e., a digital waveform) such that the digital waveform may be synchronized with the analog waveform.

[0082] Once an analog record is processed, (e.g., labeled, sampled, analyzed, and marked to provide a basis with which to synchronize digital waveforms) it is possible to play that analog record in synchrony with the one or more external digital data sources for which the synchronization map has been generated, regardless of the rotational velocity of the analog record or the needle location.

Sony has failed to explain why a POSA would modify Spencer in view of Cohen



- Sony summarily asserts it would have been obvious to implement a host controller in the microprocessor of Cohen in Spencer.
- But Sony has failed to explain (1) why the turntable would have a host controller and (2) how such a modification would be accomplished.
- Further, a host controller is typically present on a computer and a device controller is present on a device. See Ex. 1029 at 30:7-9. Thus, a POSA would not implement a host controller on the device side.

Ground 4: Sony has failed to establish that claim 3 is obvious over Spencer in view of Cohen and further in view of Georges



Ground 4: Georges Does Not Change the Analysis



- Georges is only cited with respect to claim 3 for its alleged disclosure of firewire.
- This disclosure does not address any of the deficiencies identified with respect to Ground 3, and therefore this Ground is equally deficient.

Conclusion



1. Sony has failed to establish that claims 1-2 and 4-6 are obvious over Cortellesi;
2. Sony has failed to establish that claim 3 is obvious over Cortellesi in view of Georges;
3. Sony has failed to establish that claims 1-2 and 4-6 are obvious over Spencer in view of Cohen; and
4. Sony has failed to establish that claim 3 is obvious over Spencer in view of Cohen and further in view of Georges.

'498 Patent at FIG. 1

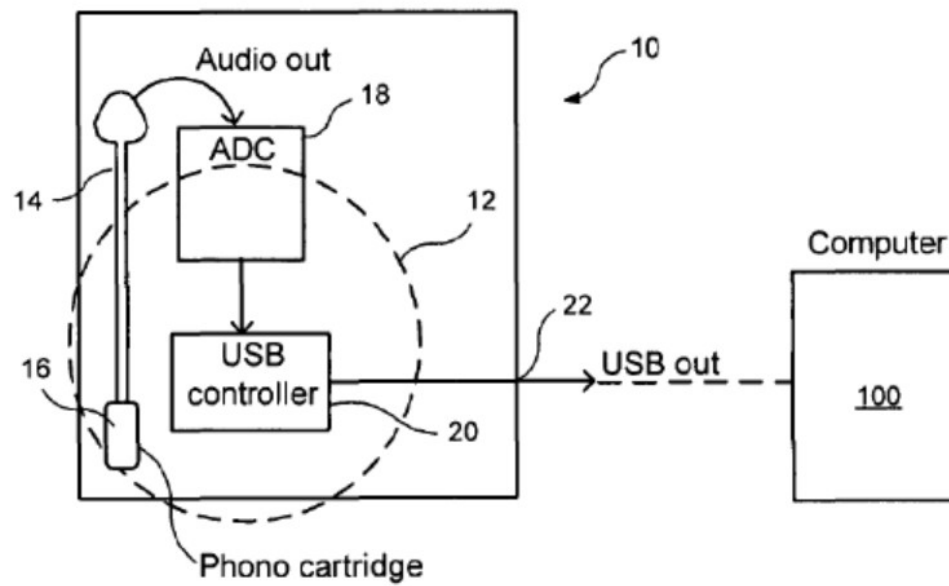


FIG. 1

'498 Patent at FIG. 2

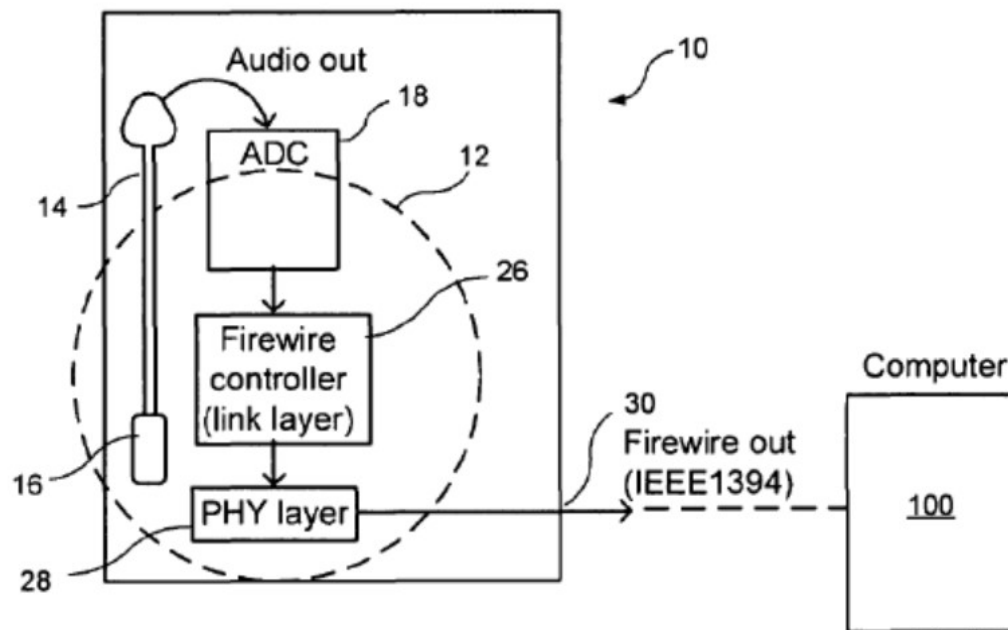


FIG. 2

Cortellesi at FIG. 1

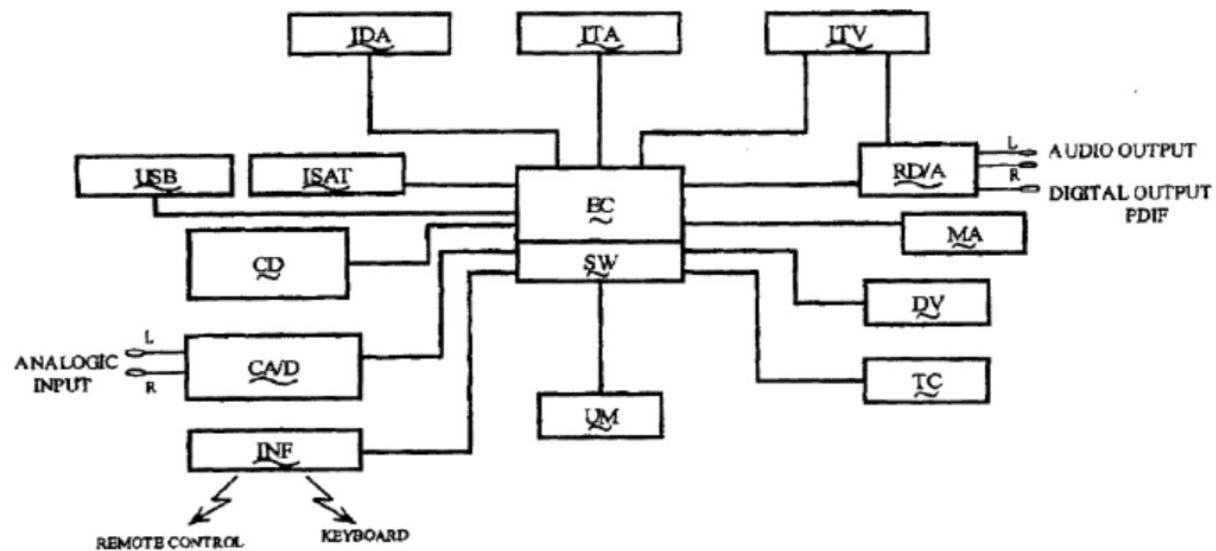


FIG. 1

Cortellesi at FIG. 2

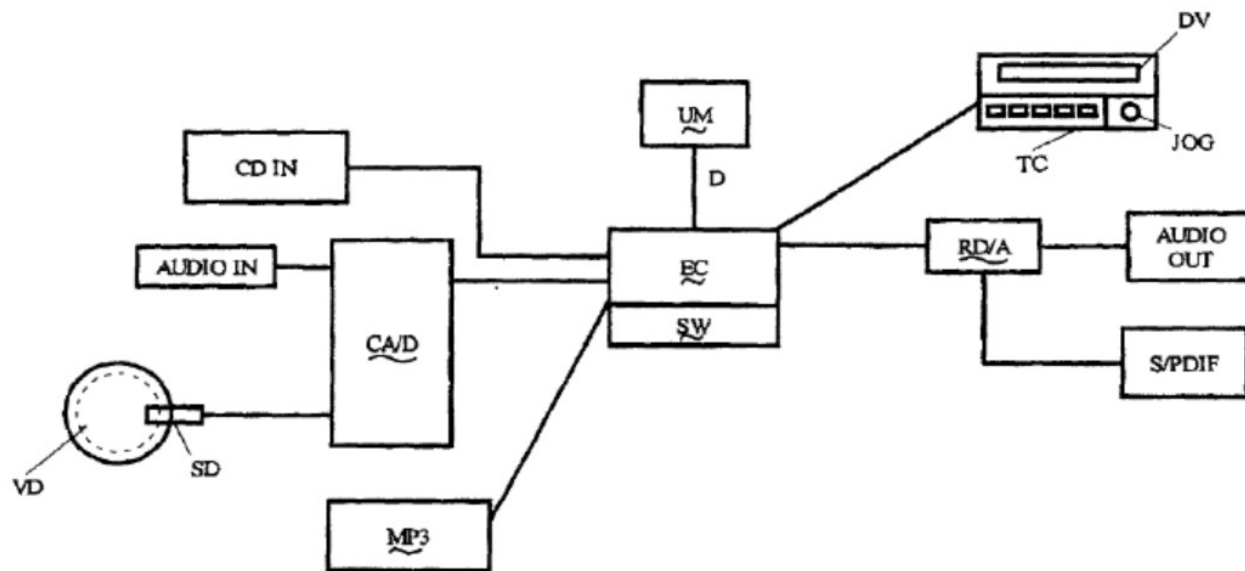


FIG. 2

Cortellesi at FIG. 3

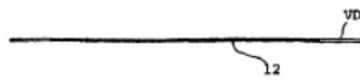


FIG. 3b

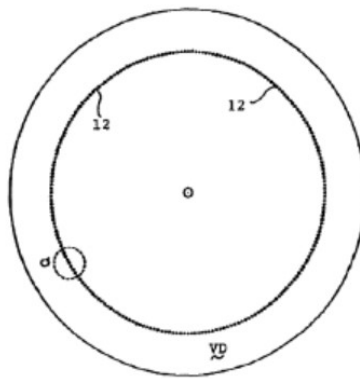
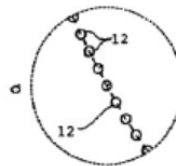


FIG. 3



Cortellesi at FIG. 4

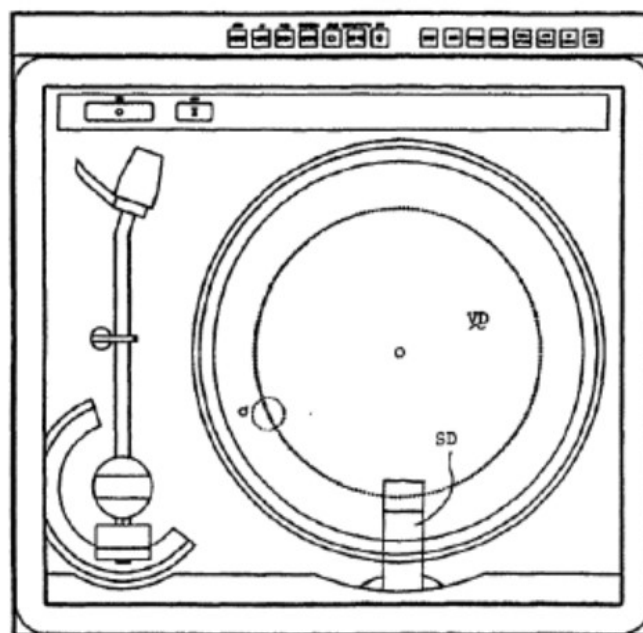
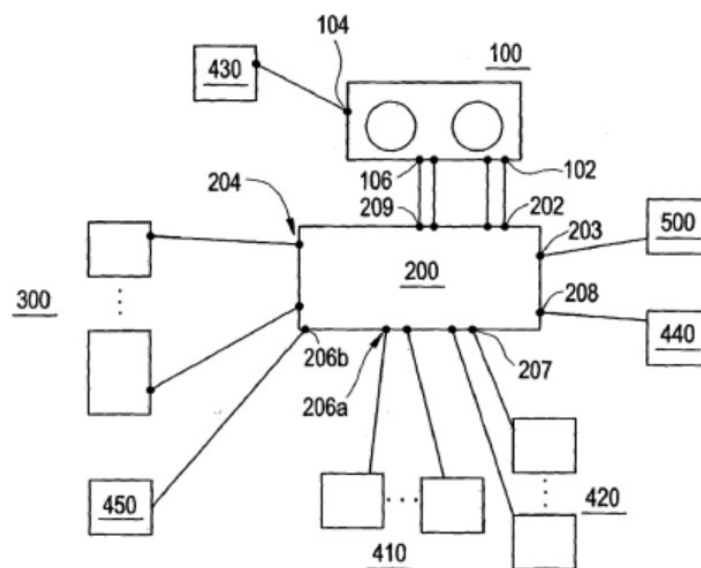


FIG. 4

Spencer at FIG. 1



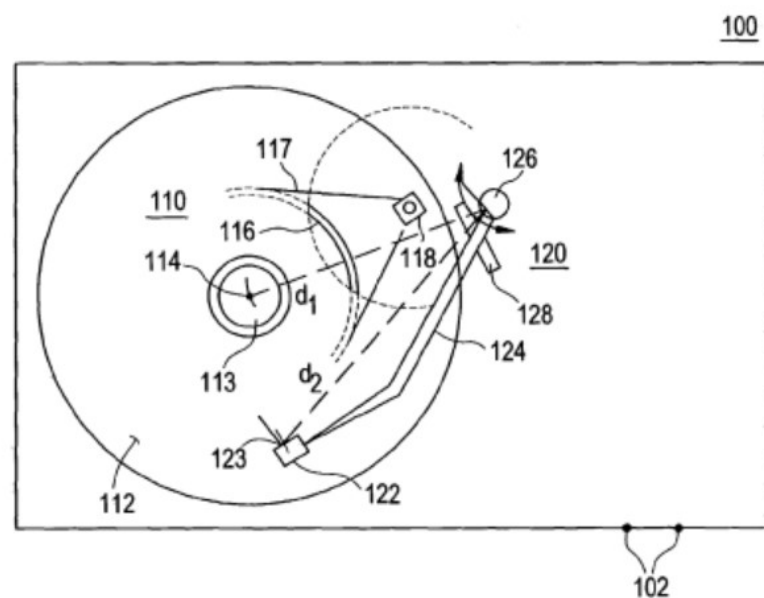
FIG. 1



Spencer at FIG. 2



FIG. 2



Cohen at FIG. 1

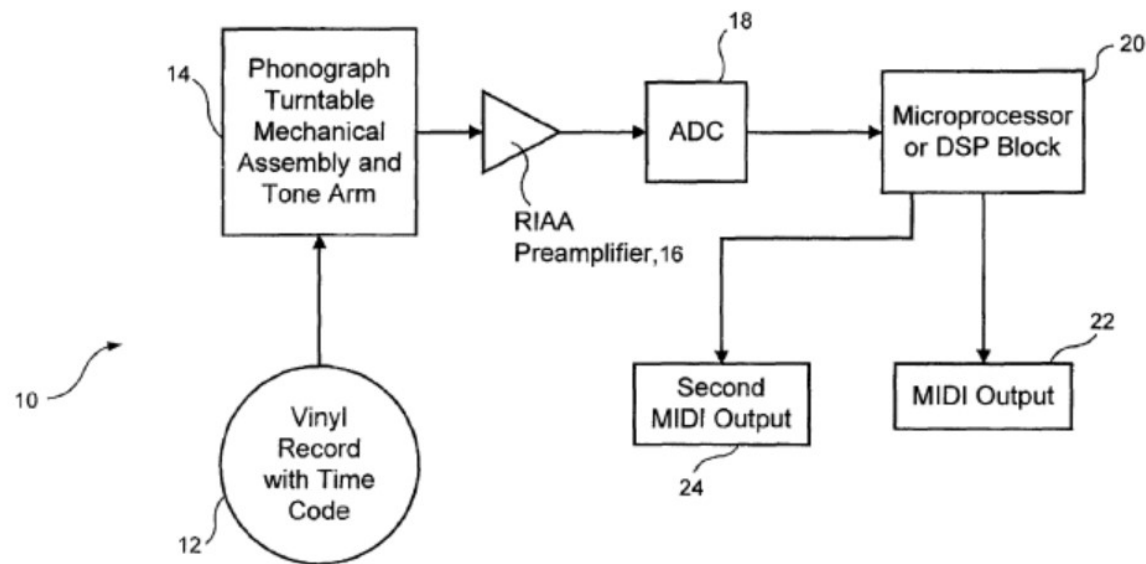


FIG. 1

Cohen at FIG. 2

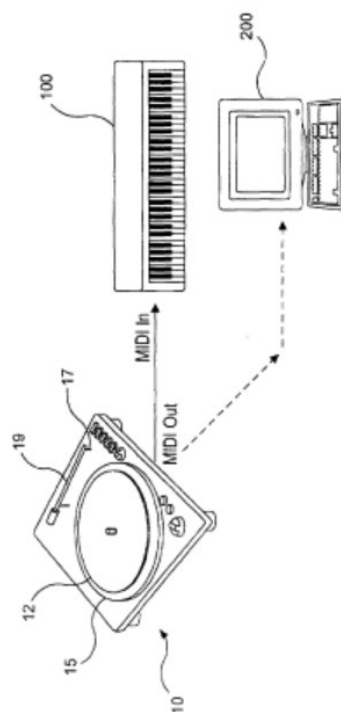


FIG. 2