

Description

This invention relates to cassette tape recorders. Embodiments of the invention may particularly, but not exclusively, be formed as thin cassette tape recorders.

Cassette tape recorders are known in which the parts forming the cassette tape recorder are directly mounted at predetermined positions on a printed circuit board, and where electrical interconnections for the respective parts are formed by a printed wiring pattern. For example, such a cassette tape recorder is disclosed in Japanese Laid Open Utility Model No 52/164519, which was published on 13 December 1977.

In a cassette tape recorder where cassette positioning pins, a capstan and so on, are directly mounted on the printed circuit board which forms the chassis, and a tape cassette is loaded thereon utilizing the above-mentioned prior art technique, if the printed circuit board is warped, due for example to change of temperature or dimensional variations, the angles of the cassette positioning pins and the capstan relative to the cassette tape will change. If the perpendicularity of the capstan relative to the cassette tape is changed, the running or operation of the cassette tape becomes unstable, so that the recording and reproducing characteristics deteriorate.

Patent Specification JP-A-59/2072001 discloses an ornamental plate to extend over an upper face of a main chassis of a compact tape recorder, the ornamental plate comprising a printed circuit board, mounting electronic components and being spaced by a prescribed gap from the main chassis by projecting parts.

Patent Specification DE-A-2931191 discloses engagement means whereby a tape cassette loaded into a tape recorder is located and secured in a desired position.

According to the present invention there is provided a cassette tape recorder comprising: a printed circuit board having mounted thereon electronic parts forming an electronic circuit of a tape recorder;

a guide base having mounted thereon cassette positioning pin means and a capstan for substantially perpendicularly engaging a cassette and a tape contained therein respectively; mounting and holding means keeping said cassette engaged with the positioning pin means; and reel driving means for driving at least one reel of said cassette;

characterised in that

said printed circuit board is used as a main chassis of said cassette tape recorder having mounted thereon said guide base mounting and holding means and said reel driving means;

a plurality of insertion openings are provided in the printed circuit board through which the cassette positioning pin means and the capstan provided on the guide base extend; and

coupling means couple the printed circuit board and guide base, whereby a clearance spacing is maintained therebetween even in the event that the printed circuit board becomes warped in use.

Thus the perpendicularity of a capstan relative to a cassette tape can be maintained even if the printed circuit board used as a chassis becomes warped. A cassette tape recorder according to the invention can be especially suitable for reproducing a compact tape cassette.

The invention will now be described by way of example with reference to the accompanying drawings, throughout which like parts are referred to by like references, and in which:

Figures 1 and 2 are exploded perspective views of the overall arrangement of an embodiment of cassette tape recorder according to the present invention;

Figure 3 is a plan view of the overall arrangement of the embodiment; and

Figures 4 to 6 are cross-sectional views of the embodiment taken along lines 4-4, 5-5 and 6-6 respectively in Figure 3.

An embodiment of cassette tape recorder according to the present invention, which is used only to reproduce a compact tape cassette, will now be described.

As shown in Figures 1 to 6, a tape cassette (compact tape cassette) 1 comprises a cassette tape 3, such as a magnetic tape, wound around a pair of left and right reel hubs 2a and 2b. The tape cassette 1 also includes a head insertion opening 4, a pair of left and right pinch roller insertion openings 5a and 5b, a pair of capstan insertion openings 6a and 6b, a pair of cassette positioning pin insertion openings 7a and 7b, and a pair of reel table insertion openings 8a and 8b.

A printed circuit board 10 provides an electronic circuit for the tape recorder, and a large number of electronic parts 12 (Figure 5) are mounted at predetermined positions on wiring patterns 11 that are formed on the printed circuit board 10. In this case, an upper surface 10a of the printed circuit board 10 is constructed as a wiring pattern surface, and a lower surface 10b thereof is constructed as a surface on which assembly parts are mounted.

The printed circuit board 10 is a chassis for the tape recorder. To the printed circuit board 10, there are attached a pair of left and right reel tables 13a and 13b, a cassette mounting guide 14, a cassette holding spring 15, a pair of left and right cassette positioning pins 16a and 16b, a capstan 17, a motor 18, a magnetic head 19 which is a reproduc-

ing head, a pinch roller 20, a tape guide 21, a head mounting table 22, push buttons, such as a playback button 23, a fast forward button 24, a stop button 25, mechanism parts, such as a push button lock plate 26 and so on, various kinds of other springs, and various kinds of mechanical parts, such as a lever, a switch and so on.

The pair of left and right reel tables 13a and 13b are attached through a pair of left and right reel table bearings 28 to the upper surface 10a of the printed circuit board 10 so as to be freely rotatable. Similarly, the cassette mounting guide 14, and the cassette holding spring 15 are attached at a side of the upper surface 10a of the printed circuit board 10.

The pair of left and right cassette positioning pins 16a and 16b, the capstan 17 and the motor 18 are all mounted on a guide base 29 which is made of synthetic resin. In this case, the pair of cassette positioning pins 16a and 16b are formed integrally with the guide base 29, while the capstan 17 and the motor 18 are mounted on the guide base 29 such that the capstan 17 is rotatably supported by a capstan bearing 30 formed integrally with the guide base 29 and the motor 18 is fixedly mounted on a motor mounting portion 31, which is also integrally formed with the guide base 29. The guide base 29 is detachably mounted on the lower surface 10b of the printed circuit board 10, such that a pair of engagement pins or spring clips 32, formed integrally with the guide base 29 at each of its ends, each engage openings 33 formed through the printed circuit board 10. The motor 18 is connected to the wiring pattern 11 of the printed circuit board 10 at its predetermined place by way of a lead wire 50.

The magnetic head 19, the pinch roller 20 and the tape guide 21 are mounted on the head mounting table 22 made of synthetic resin. In this case, the tape guide 21 is formed integrally with the head mounting table 22. The head mounting base 22 is positioned on the side of the upper surface 10a of the printed circuit board 10, and is supported on upper surfaces of a pair of projections 37, which are formed integrally with the guide base 29 on its upper portion, and which extend through openings 36 in the printed circuit board 10 to the side of its upper surface 10a. Moreover, the head mounting table 22 is slidably and detachably mounted on the upper surface 10a of the printed circuit board 10, such that a T-shaped guide member 38 and a pair of engagement pins or spring clips 39 (Figure 5) integrally formed with the lower side of the head mounting table 22 engage guide openings 40 and 41, respectively, formed through the printed circuit board 10 and the guide base 29.

The push button lock plate 26 is slidably screwed to the lower side of the guide base 29 by

a pair of screws 43 which are inserted through a pair of elongated openings 42 formed through both ends thereof in its longitudinal direction. The push buttons, such as the fast forward button 24, the stop button 25 and so on, are located between the guide base 29 and the push button lock plate 26. The push buttons are slidably attached to the printed circuit board 10, such that T-shaped guide members 44 and 45 integrally formed on the upper side of each of these push buttons respectively engage guide openings 46 and 47 formed through the printed circuit board 10 and the guide base 29. In this case, the playback button 23 is moulded integrally on the head mounting table 22. The slide members, such as the head mounting table 22, the fast forward button 24, the stop button 25, the push button lock plate 26 and the like are biased in the return direction by return springs 48. The motor 18, the reel table 13b and the capstan 17 are coupled or connected by a belt 49 (Figure 4).

As shown by a one-dot chain line in Figures 1, 3 and 5, the tape cassette 1 is horizontally loaded onto the upper surface 10a of the printed circuit board 10, the reel hubs 2a and 2b are respectively engaged with the reel tables 13a and 13b, and the cassette tape 3 is extended to the capstan 17. In this case, the tape cassette 1 engages the cassette positioning pins 16a and 16b, is carried on the cassette mounting guide 14, and is held thereon by the cassette holding spring 15 so that the tape cassette 1 is horizontally placed at a predetermined position at a predetermined height from the guide base 29 as a reference.

After the tape cassette 1 has been loaded as described above, when the playback button 23 is moved from the returned position shown by a one-dot chain line in Figure 5 to the position shown by a solid line in Figure 5, the head mounting table 22 is slid to the solid-line position against the spring force of the return spring 48, whereby a lock pin 51 integrally formed on the lower side of the head mounting table 22 is locked to a lock opening 52 of the push button lock plate 26. Then, the magnetic head 19, the pinch roller 20 and the tape guide 21 are inserted into the tape cassette 1, whereby the magnetic head 19 and the tape guide 21 come in contact with the cassette tape 3, and the cassette tape 3 is closely engaged with the capstan 17 by the pinch roller 20. Then, a switch (not shown) mounted on the printed circuit board 10 is operated by the head mounting table 22, thereby to drive the motor 18 with the result that the reel table 13b and the capstan 17 are rotated. Thus, the cassette tape 3 is transported at a constant speed by the capstan 17 and thereby a predetermined playback is carried out.

When the fast forward button 24 is depressed, the switch is operated similarly, and the motor 18

is actuated so that the cassette tape 3 is transferred in the fast forward mode by the reel table 13b.

When the stop button 25 is depressed in the playback mode or the fast forward mode, the locking of the head mounting table 22, of the fast forward button 24, etc., by the push button lock plate 26 is released, and these slide members are returned by the return spring 48. As a result, the switch is turned off, and thus the motor 18 is stopped.

A portion of the embodiment will now be described with reference to Figures 4 to 6.

The printed circuit board 10 and the guide base 29 are coupled to each other as earlier noted. In this case, when the lower surface 10b of the printed circuit board 10 is placed on upper surfaces of each of a pair of protrusions 54 integrally formed with the guide base 29 on its upper surface in its longitudinal direction, the printed circuit board 10 and the guide base 29 are vertically coupled with a spacing or clearance 55 therebetween in the vertical direction.

Accordingly, even if the printed circuit board 10 becomes warped due, for example, to temperature variations or dimensional variations, then as shown by a one-dot chain line in Figure 4, such warping of the printed circuit board 10 is absorbed into the clearance 55 so that such warping can be prevented from adversely influencing the cassette positioning pins 16a and 16b, and the capstan 17 mounted on the guide base 29. Therefore, even when the printed circuit board 10 is warped, the perpendicularity of the capstan 17 relative to the cassette tape 3 within the tape cassette 1, which is positioned horizontally by the cassette positioning pins 16a and 16b, can be prevented from being changed.

Referring to Figures 2 and 4, of the cassette positioning pin insertion openings 34a and 34b formed through the printed circuit board 10, and into which cassette mount base tables 56a and 56b, which are the base portions of the cassette positioning pins 16a and 16b respectively, are inserted, the insertion openings 34b is constructed as a reference opening (that is, an opening whose diameter is substantially equal to the diameter of the cassette mount base table 56b). The other insertion opening 34a is constructed as an elongated opening. The pitch displacement of the insertion openings 34a and 34b caused when the printed circuit board 10 is warped can thus be absorbed, so as thereby to protect the cassette positioning pins 16a and 16b from the influence of warping of the printed circuit board 10.

The head mounting table 22 is carried on the upper surfaces of the pair of projections 37, which are integrally formed with the guide base 29 on its

upper surface, and is slidably mounted on the upper surface 10a of the printed circuit board 10 as earlier described. In this case, since the pair of projections 37 extend upwards above the upper surface 10a of the printed circuit board 10, the head mounting table 22 can slide on the guide base 29 so that it is floated from the upper surface 10a, which is the wiring pattern surface of the printed circuit board 10, by a predetermined height H (see Figure 5).

Consequently, without affecting the flux or concavity and convexity (that is, the concavity or convexity of the pattern, etc.) on the upper surface 10a, which is the wiring pattern surface of the printed circuit board 10, at all, the head mount base table 22 can slide very smoothly.

Since the cassette positioning pins 16a and 16b for restricting the height of the tape cassette 1 are provided on the guide base 29 which supports the head mount base table 22 above it by the projections 37, the heights of the tape cassette 1 and the magnetic head 19 can be accurately maintained on the basis of the guide base 29. As a result, independent of influences such as warp of the printed circuit board 10 and so on, the height of the magnetic head 19 relative to the cassette tape 3 can be accurately maintained.

Thus, while the printed circuit board 10 and the guide base 29 are coupled with each other by using the pair of screws 43, if the engaging method using the engagement pin or spring clip 32 and the opening 33 is adopted as shown in the embodiment of the invention, the printed circuit board 10 and the guide base 29 can easily be coupled and/or detached with a one-touch action.

If the protrusions 54 shown in this embodiment are made of an elastic material, such as rubber, it is possible to provide a buffer property between the printed circuit board 10 and the guide base 29.

The present invention is not limited to a cassette tape recorder which uses a compact tape cassette, but can be applied to various kinds of cassette tape recorders using a micro-tape cassette and various other kinds of tape cassettes.

Although the embodiment described utilizes as a chassis the printed circuit board which may become warped due to temperature or dimensional variations, the perpendicularity of the capstan relative to the cassette tape can be prevented from being changed by such warping. Accordingly, it is possible to prevent the running of the cassette tape from becoming unstable, so good recording and reproducing characteristics and high reliability can be achieved.

Claims

1. A cassette tape recorder comprising:

is actuated so that the cassette tape 3 is trans-
ferred in the fast forward mode by the reel table
13b.

When the stop button 25 is depressed in the
playback mode or the fast forward mode, the lock-
ing of the head mounting table 22, of the fast
forward button 24, etc., by the push button lock
plate 26 is released, and these slide members are
returned by the return spring 48. As a result, the
switch is turned off, and thus the motor 18 is
stopped.

A portion of the embodiment will now be de-
scribed with reference to Figures 4 to 6.

The printed circuit board 10 and the guide
base 29 are coupled to each other as earlier noted.
In this case, when the lower surface 10b of the
printed circuit board 10 is placed on upper sur-
faces of each of a pair of protrusions 54 integrally
formed with the guide base 29 on its upper surface
in its longitudinal direction, the printed circuit board
10 and the guide base 29 are vertically coupled
with a spacing or clearance 55 therebetween in the
vertical direction.

Accordingly, even if the printed circuit board 10
becomes warped due, for example, to temperature
variations or dimensional variations, then as shown
by a one-dot chain line in Figure 4, such warping of
the printed circuit board 10 is absorbed into the
clearance 55 so that such warping can be pre-
vented from adversely influencing the cassette po-
sitioning pins 16a and 16b, and the capstan 17
mounted on the guide base 29. Therefore, even
when the printed circuit board 10 is warped, the
perpendicularity of the capstan 17 relative to the
cassette tape 3 within the tape cassette 1, which is
positioned horizontally by the cassette positioning
pins 16a and 16b, can be prevented from being
changed.

Referring to Figures 2 and 4, of the cassette
positioning pin insertion openings 34a and 34b
formed through the printed circuit board 10, and
into which cassette mount base tables 56a and
56b, which are the base portions of the cassette
positioning pins 16a and 16b respectively, are in-
serted, the insertion openings 34b is constructed
as a reference opening (that is, an opening whose
diameter is substantially equal to the diameter of
the cassette mount base table 56b). The other
insertion opening 34a is constructed as an elon-
gated opening. The pitch displacement of the in-
sertion openings 34a and 34b caused when the
printed circuit board 10 is warped can thus be
absorbed, so as thereby to protect the cassette
positioning pins 16a and 16b from the influence of
warping of the printed circuit board 10.

The head mounting table 22 is carried on the
upper surfaces of the pair of projections 37, which
are integrally formed with the guide base 29 on its

upper surface, and is slidably mounted on the
upper surface 10a of the printed circuit board 10 as
earlier described. In this case, since the pair of
projections 37 extend upwards above the upper
surface 10a of the printed circuit board 10, the
head mounting table 22 can slide on the guide
base 29 so that it is floated from the upper surface
10a, which is the wiring pattern surface of the
printed circuit board 10, by a predetermined height
H (see Figure 5).

Consequently, without affecting the flux or con-
cavity and convexity (that is, the concavity or con-
vexity of the pattern, etc.) on the upper surface
10a, which is the wiring pattern surface of the
printed circuit board 10, at all, the head mount
base table 22 can slide very smoothly.

Since the cassette positioning pins 16a and
16b for restricting the height of the tape cassette 1
are provided on the guide base 29 which supports
the head mount base table 22 above it by the
projections 37, the heights of the tape cassette 1
and the magnetic head 19 can be accurately main-
tained on the basis of the guide base 29. As a
result, independent of influences such as warp of
the printed circuit board 10 and so on, the height of
the magnetic head 19 relative to the cassette tape
3 can be accurately maintained.

Thus, while the printed circuit board 10 and the
guide base 29 are coupled with each other by
using the pair of screws 43, if the engaging method
using the engagement pin or spring clip 32 and the
opening 33 is adopted as shown in the embodi-
ment of the invention, the printed circuit board 10
and the guide base 29 can easily be coupled
and/or detached with a one-touch action.

If the protrusions 54 shown in this embodiment
are made of an elastic material, such as rubber, it
is possible to provide a buffer property between
the printed circuit board 10 and the guide base 29.

The present invention is not limited to a cas-
sette tape recorder which uses a compact tape
cassette, but can be applied to various kinds of
cassette tape recorders using a micro-tape cas-
sette and various other kinds of tape cassettes.

Although the embodiment described utilizes as
a chassis the printed circuit board which may be-
come warped due to temperature or dimensional
variations, the perpendicularity of the capstan rela-
tive to the cassette tape can be prevented from
being changed by such warping. Accordingly, it is
possible to prevent the running of the cassette tape
from becoming unstable, so good recording and
reproducing characteristics and high reliability can
be achieved.

Claims

1. A cassette tape recorder comprising:



a printed circuit board (10) having mounted thereon electronic parts (12) forming an electronic circuit of a tape recorder;

a guide base (29) having mounted thereon cassette positioning pin means (16a, 16b) and a capstan (17) for substantially perpendicularly engaging a cassette (1) and a tape (3) contained therein respectively;

mounting and holding means (14, 15) keeping said cassette (1) engaged with the positioning pin means (16a, 16b); and
 reel driving means (13a, 13b) for driving at least one reel (8a, 8b) of said cassette (1);
 characterised in that

said printed circuit board (10) is used as a main chassis of said cassette tape recorder having mounted thereon said guide base (29) mounting and holding means (14, 15) and said reel driving means (13a, 13b);
 a plurality of insertion openings (34a, 34b, 35) are provided in the printed circuit board (10) through which the cassette (1) positioning pin means (16a, 16b) and the capstan (17) provided on the guide base (29) extend; and
 coupling means (32, 33, 54) couple the printed circuit board (10) and guide base (29), whereby a clearance spacing (55) is maintained therebetween even in the event that the printed circuit board (10) becomes warped in use.

2. A cassette tape recorder according to claim 1, wherein the guide base (29) is provided on its surface opposed to the printed circuit board (10) with a first engagement pin (32) and a first protrusion (54), the printed circuit board (10) includes an engagement pin receiving opening (33) therein, the first engagement pin (32) is coupled to the opening (33), and the protrusion (54) contacts the printed circuit board (10) to maintain said clearance (55) between the printed circuit board (10) and the guide base (29).
3. A cassette tape recorder according to claim 2, wherein the guide base (29) is made of a synthetic resin, and the cassette positioning pin means (16a, 16b) and support means (30) for the capstan (17) are moulded integrally therewith.
4. A cassette tape recorder according to claim 2, further comprising a head mounting plate (22) located above the printed circuit board (10) at its surface opposite to the guide base (29) and carrying a magnetic head (19), the guide base (29) having a second protrusion (37), the head mounting plate (22) having a second engagement pin (39) formed integrally therewith, the guide base (29) having a guide opening (41)

therethrough, and the second engagement pin (39) being coupled to the guide opening (41), whereby the head mounting plate (22) slidably contacts the second protrusion (37).

5. A cassette tape recorder according to claim 2, wherein the guide base (29) is provided with a capstan drive motor (18).
6. A cassette tape recorder according to claim 2, wherein the printed circuit board (10) is provided with a cassette mounting guide (14) and a cassette holding spring (15).

Revendications

1. Appareil d'enregistrement à bande à cassette comportant :
 un circuit imprimé (10) sur lequel sont montés des composants électroniques (12) constituant un circuit électronique d'un appareil d'enregistrement à bande;
 une base de guidage (29) sur laquelle sont montés des moyens d'axe de positionnement de cassette (16a, 16b) et un cabestan (17) afin d'engager sensiblement perpendiculairement et respectivement une cassette (1) et une bande (3) contenue dans celle-ci;
 des moyens de support et de maintien (14, 15) maintenant ladite cassette (1) engagée avec les moyens d'axe de positionnement (16a, 16b); et
 des moyens d'entraînement de bobine (13a, 13b) destinés à entraîner au moins une bobine (8a, 8b) de ladite cassette (1);
 caractérisé en ce que
 ledit circuit imprimé (10) est utilisé en tant que châssis principal dudit appareil d'enregistrement à bande à cassette sur lequel sont montés lesdits moyens de support et de maintien (14, 15) de base de guidage (29) et lesdits moyens d'entraînement de bobine (13a, 13b);
 à travers lesquelles s'étendent les moyens d'axe de positionnement de cassette (16a, 16b) et le cabestan (17) prévus sur la base de guidage (29) sont prévues dans le circuit imprimé (10); et
 des moyens de liaison (32, 33, 54) relient le circuit imprimé (10) et la base de guidage (29), un jeu (55) étant maintenu entre eux même dans le cas où le circuit imprimé (10) devient voilé en cours d'utilisation.
2. Appareil d'enregistrement à bande à cassette selon la revendication 1, dans lequel la base de guidage (29) est pourvue sur sa surface opposée au circuit imprimé (10) d'un premier



axe d'engagement (32) et d'une première saillie (54), le circuit imprimé (10) comprend une ouverture de réception d'axe d'engagement (33), le premier axe d'engagement (32) est relié à l'ouverture (33), et la saillie (54) est en contact avec le circuit imprimé (10) afin de maintenir ledit jeu (55) entre le circuit imprimé (10) et la base de guidage (29).

3. Appareil d'enregistrement à bande à cassette selon la revendication 2, dans lequel la base de guidage (29) est réalisée en résine synthétique, et les moyens d'axe de positionnement de cassette (16a, 16b) et des moyens de support (30) pour le cabestan (17) sont moulés d'un seul tenant avec celle-ci.

4. Appareil d'enregistrement à bande à cassette selon la revendication 2, comportant en outre une platine de support de tête (22) située au-dessus du circuit imprimé (10) sur sa surface opposée à la base de guidage (29) et portant une tête magnétique (19), la base de guidage (29) ayant une deuxième saillie (37), la platine de support de tête (22) ayant un deuxième axe d'engagement (39) formé d'un seul tenant avec lui, la base de guidage (29) ayant une ouverture de guidage (41) à travers, et le deuxième axe d'engagement (39) étant relié à l'ouverture de guidage (41), la platine de support de tête (22) étant en contact coulissant avec la deuxième saillie (37).

5. Appareil d'enregistrement à bande à cassette selon la revendication 2, dans lequel la base de guidage (29) est pourvue d'un moteur d'entraînement de cabestan (18).

6. Appareil d'enregistrement à bande à cassette selon la revendication 2, dans lequel le circuit imprimé (10) est pourvu d'un guide de support de cassette (14) et d'un ressort de maintien de cassette (15).

Patentansprüche

1. Kassettengerät mit einer gedruckten Schaltungsplatte (10), auf der eine elektronische Schaltung eines Bandgerätes bildende elektronische Einzelteile (12) montiert sind, mit einem Führungsgrundteil (29), auf dem eine Kassettenpositionierungs-Stifteinrichtung (16a, 16b) und eine Bandantriebswelle (17) derart angeordnet sind, daß diese im wesentlichen rechtwinklig mit einer Kassette (1) bzw. mit einem in dieser enthaltenen Band (3) in Anlage gelangen, mit einer Trag- und Halteeinrichtung (14, 15), welche die Kassette (1) in

Anlage an der Positionierungs-Stifteinrichtung (16a, 16b) hält,

und mit einer Spulen-Antriebseinrichtung (13a, 13b) für den Antrieb zumindest einer Spule (8a, 8b) der betreffenden Kassette (1),

dadurch gekennzeichnet,

daß die gedruckte Schaltungsplatte (10) als Hauptchassis des Kassettengeräts verwendet ist,

daß an der betreffenden gedruckten Schaltungsplatte das Führungsgrundteil (29), die Trag- und Halteeinrichtung (14, 15) und die Spulen-Antriebseinrichtung (13a, 13b) angebracht sind,

daß in der gedruckten Schaltungsplatte (10) eine Vielzahl von Einführungsöffnungen (34a, 34b, 35) vorgesehen ist, durch die sich die Positionierungs-Stifteinrichtung (16a, 16b) für die Kassette (1) und die auf dem Führungsgrundteil (29) vorgesehene Bandantriebswelle (17) erstrecken, und daß eine Verbindungseinrichtung (32, 33, 54) vorgesehen ist, welche die gedruckte Schaltungsplatte (10) und das Führungsgrundteil (29) miteinander verbindet, wobei ein Zwischenraum (55) zwischen der gedruckten Schaltungsplatte und dem Führungsgrundteil sogar in dem Fall beibehalten bleibt, daß die gedruckte Schaltungsplatte (10) sich im Gebrauch verzieht.

2. Kassettengerät nach Anspruch 1, wobei das Führungsgrundteil (29) auf seiner der gedruckten Schaltungsplatte (10) gegenüberliegenden Oberfläche mit einem ersten Einraststift (32) und einem ersten Vorsprung (54) versehen ist,

wobei die gedruckte Schaltungsplatte (10) eine Einraststift-Aufnahmeöffnung (33) aufweist, mit der der erste Einraststift (32) verbunden ist, und wobei der Vorsprung (54) die gedruckte Schaltungsplatte (10) derart berührt, daß der Zwischenraum (55) zwischen der gedruckten Schaltungsplatte (10) und dem Führungsgrundteil (29) aufrechterhalten wird.

3. Kassettengerät nach Anspruch 2, wobei das Führungsgrundteil (29) aus einem Kunstharz besteht und wobei die Kassettenpositionierungs-Stifteinrichtung (16a, 16b) und eine Trageinrichtung (30) für die Bandantriebswelle (17) mit dem betreffenden Führungsgrundteil zusammenhängend geformt sind.

4. Kassettengerät nach Anspruch 2, umfassend ferner eine Kopftragplatte (22), die oberhalb der gedruckten Schaltungsplatte (10) auf deren dem Führungsgrundteil (29) abgewand-



ten Seite angeordnet ist und die einen Magnetkopf (19) trägt,

wobei das Führungsgrundteil (29) einen zweiten Vorsprung (37) aufweist,

wobei die Kopftragplatte (22) einen zweiten, mit ihr zusammenhängend gebildeten Einraststift (39) aufweist,

wobei das Führungsgrundteil (29) eine durchgehende Führungsöffnung (41) aufweist

und wobei der zweite Einraststift (39) mit der Führungsöffnung (41) derart verbunden ist, daß die Kopftragplatte (22) den zweiten Vorsprung (37) gleitbar berührt.

5. Kassettenbandgerät nach Anspruch 2, wobei das Führungsgrundteil (29) mit einem Bandantriebswellen-Antriebsmotor (18) versehen ist.

6. Kassettenbandgerät nach Anspruch 2, wobei die gedruckte Schaltungsplatte (10) mit einer Kassettenträgführung (14) und einer Kassettenthaltefeder (15) versehen ist.

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