

Description

The present invention relates to a speaker system which is utilised in video equipment, such as TVs and audio equipment for automobiles, and a TV utilising the speaker system

The provision of a horn or an acoustic pipe in front of a speaker to introduce sound waves generated by the speaker to an opening of the horn or the acoustic pipe has been widely used since it has advantages such as large sound pressure can be obtained and sound can be transferred in a specific direction as compared with the case in which a horn or an acoustic pipe is not utilised. Prior art speaker systems utilising acoustic pipes will be described with reference to Figs. 13 to 17.

Fig. 13 is a plan view illustrating a TV with a pair of middle and low frequency range speaker systems which comprise the prior art speaker systems in which acoustic pipes are used. The speaker systems are incorporated into the TV to be located alongside a cathode tube 4. Each of the speaker systems includes a middle and low frequency range reproducing speaker 1 and an acoustic pipe 2 disposed in front thereof for conducting sound waves. A cabinet 3 of the TV is formed to fit around the speaker systems for miniaturising the size of the TV.

Fig. 14 is an exploded perspective view showing the construction of the prior art speaker systems of Fig. 13. In Fig. 14, reference numeral 5 designates an acoustic equaliser provided at a front portion of the middle and low frequency range reproducing speaker 1. On opposite sides of the acoustic equaliser 5 there are a pair of apertures 7 for conducting sound waves emitted from the middle and low frequency range reproducing speaker 1 into the acoustic pipe 2. Reflection plates 6 are provided outside the apertures 7. A sound absorbing material 9 is placed on outer sides of the reflection plates 6. Each of the acoustic pipes 2 includes a panel 8 and a cover 10 covering an upper open side thereof.

The acoustic equaliser 5 and the reflection plates 6 which are provided in front of each of the speakers 1 serve to improve the high frequency characteristic of the speaker system. The sound absorbing material 9 placed outside the vertical reflection plates 6 serves to suppress a standing wave which is produced within each of the acoustic pipes 2. Each of the acoustic pipes 2 is formed so that the cross-sectional area thereof is gradually decreased from the front portion of the speaker 1 toward the open end of the acoustic pipe.

Figs. 15 and 16 are perspective views showing conventional TVs each utilising middle and low frequency range reproducing speaker systems with acoustic pipes 2 as described above and high frequency range reproducing speakers. In Fig. 15, reference numeral 11 designates open ends of the acous-

tic pipes of the middle and low frequency range reproducing speaker systems, and 12 indicates high frequency range reproducing speakers arranged above each open end 11. In the TV of Fig. 16, each of the high frequency range reproducing speakers 12 is arranged at the front portion of the open end 11 of the corresponding middle and low frequency range reproducing speaker system.

To make the TV compact, the high frequency range reproducing speakers 12 are placed at the front of the TV for the following reasons: for the purpose of conducting sound to the opening end portions thereof in a manner similar to that of the middle and low frequency range reproducing speaker systems which utilise the acoustic pipes 2; it is necessary to locate a sound absorbing material 9 within the acoustic pipe 2 to remove a standing wave generated within it and the inner construction of the acoustic pipe 2 would become rather complicated in order to conduct a high frequency component to the open end 11 without attenuation.

These constructions, however, make the middle and low frequency range reproducing speakers 1 and the high frequency range reproducing speakers 12 rather different from each other in respect of mounting position, and the difference in phase between sound waves reproduced by the middle and low frequency range reproducing speakers 1 and the high frequency range reproducing speakers 12 is produced in every frequency band. Thus, as shown at 26 in Fig. 17, a sound pressure vs. frequency characteristic having many dips in peak is produced by the speaker systems, and the speaker systems also have an unnatural tone quality.

Furthermore, the TV having the high frequency range reproducing speakers 12 arranged above the middle and low frequency range reproducing speakers 1 as shown in Fig. 15 raises a problem in that sound moves up and down in a middle and high frequency range since the middle and low frequency range reproducing speakers 1 and the high frequency range reproducing speaker 12 are greatly different as regards their mounted positions. This leads to a deterioration in the performance of the speaker systems in sound image localisation and articulation of sound, and the speaker systems are not sufficient for advanced TVs.

Similarly to the abovementioned prior art TV speaker systems, EP-A-0342117 discloses a stereophonic sound system for a TV comprising an acoustic pipe for conducting sound waves arranged in front of a speaker for reproducing a middle and low frequency sound, said acoustic pipe having a substantially rectangular open end; reflection plates arranged within the acoustic pipe on opposite sides of a front portion of the speaker, said plates delimiting a cavity for conducting sound waves from the speaker; and a speaker for reproducing a high frequency sound. This con-

struction suffers the same problems as the above-mentioned prior art speaker systems.

It is an object of the present invention to provide a speaker system which is capable of exhibiting excellent sound characteristics in sound image localisation and in articulation of sound, which cannot be provided by the prior art.

Accordingly, the present invention is characterised over the system of EP-A-0342117 in that the high frequency speaker is disposed within the cavity between the reflection plates, coaxially in front of the middle and low frequency speaker; the high frequency speaker obstructs 20 to 50% of the area between the reflection plates with its structure to form an acoustic equaliser which modifies the response of the middle and low frequency speaker; and a sound absorbing material is disposed in lateral cavities formed between the walls and end of the pipe and the reflection plates.

With this construction, attenuation of middle and high frequency components of sound signals which are produced from the middle and low frequency range reproducing speakers are thus suppressed. Moreover, it is possible to conduct the high and middle frequency components and a high frequency component, which is reproduced by the high frequency range reproducing speaker, as naturally composed sound signals to the open end portion of the acoustic pipe. The speaker system thus exhibits excellent characteristics in sound image localisation and articulation of sound, thereby providing a high tone quality for the TV.

The foregoing and further features of the invention will be more readily understood from the following description of the following embodiments, with reference to the drawings, of which:-

Fig. 1 is a partly cut away perspective view of a first embodiment of a speaker system of the present invention;

Fig. 2 is a cross-sectional view on a modified scale of the speaker system of Fig. 1;

Fig. 3 is a graph showing a sound pressure vs. frequency characteristic of the speaker system of Figs. 1 and 2, the speaker system being incorporated into a TV;

Fig. 4 is a modified form of the first embodiment in which an acoustic pipe is integrally formed;

Fig. 5 is a partly cut away perspective view of a second embodiment of the speaker system of the present invention;

Fig. 6 is a cross-sectional view on a modified scale of the speaker system of Fig. 5;

Fig. 7 is a graph showing a sound pressure vs. frequency characteristic of the speaker system of the Figs. 5 and 6, the speaker system being incorporated into a TV;

Fig. 8 is a modified form of the second embodiment in which an acoustic pipe is integrally

formed;

Fig. 9 is a diagrammatic horizontal sectional view of a TV having speaker systems according to the present invention;

Fig. 10 is a perspective view of the TV of Fig. 9; Figs. 11 and 12 are perspective views of other embodiments of speaker systems of the present invention;

Fig. 13 is a diagrammatic horizontal sectional view of a TV having prior art speaker systems;

Fig. 14 is an enlarged, exploded perspective view of one of the prior art speaker systems of Fig. 13; Figs. 15 and 16 are perspective views of TVs each having two high frequency range reproducing speakers and two middle and low frequency range reproducing speakers of the prior art; and Fig. 17 is a sound pressure vs. frequency characteristic graph of the prior art speakers systems incorporated into a TV.

Referring to Figs. 1 to 13, several embodiments of the present invention will be described. In Figs. 1 to 13 the same reference numerals as those of Figs. 11 to 14 designate corresponding parts, of which description will be omitted or simplified hereinafter.

Figs. 1 and 2 illustrate a first embodiment of a speaker system of the present invention, in which an acoustic pipe 2 is arranged in front of a middle and low frequency range reproducing speaker 1. The acoustic pipe 2 has an elongated rectangular front open end 11 which is formed with a view to incorporating it into a specific appliance. Within the acoustic pipe 2 there is provided a high frequency range reproducing speaker 12 in front of, axially aligned and in the vicinity of the middle and low frequency range reproducing speaker 1. A cavity 14 serves to conduct sound waves of the middle and low frequency range reproducing speaker 1. Reflection plates 6 and sound absorbing material 9 are arranged on both sides of the high frequency range reproducing speaker 12 and the cavity 14.

In Fig. 2, reference numeral 15 indicates a magnetic circuit portion of the high frequency range reproducing speaker 12 which serves as an acoustic equaliser of the middle and low frequency range reproducing speaker 1. For this reason, the magnetic circuit portion 15 is coaxially closely arranged with the front portion of the middle and low frequency range reproducing speaker 1. The cross-sectional or vertical sectional area of the cavity 14 is smaller by about 20 to 50% than an effective radiation area of the middle and low frequency range reproducing speaker 1. The open end 11 of the acoustic pipe 2 is formed sufficiently large in cross-sectional area as compared to the cavity 14 at the front of the middle and low frequency range reproducing speaker 1.

In the speaker system according to the present invention, since the high frequency range reproducing speaker 12 is coaxially and closely arranged in

front of the middle and low frequency range reproducing speaker 1, attenuation of middle and low frequency components of sound signals which are produced from the middle and low frequency range reproducing speaker 1 is thus suppressed. Moreover, it is possible to conduct the middle and low frequency components and a high frequency component, which is reproduced by the high frequency range reproducing speaker 12, as naturally composed sound signals to the open end 11 of the acoustic pipe 2. Thus, the speaker system is capable of exhibiting a characteristic with small dips in peak as shown in the sound pressure-frequency characteristic curve of the speaker system for a TV in Fig. 3 by reference numeral 16. Furthermore, the problem of sound moving up and down in a high and middle frequency range is overcome by close coaxial arrangement of the two speakers. This embodiment exhibits an excellent characteristic in sound image localisation and in articulation of sound.

In this embodiment, a distance L2 from a surface on which the middle and low frequency range reproducing speaker 1 is mounted to a surface on which the high frequency range reproducing speaker 12 is mounted is set to be not substantially larger than $L2 = (1/3)L1$ where L1 is a distance from the mounted surface of the middle and low frequency range reproducing speaker 1 to the open end 11 of the acoustic pipe 2.

The sound pressure-frequency characteristic of the speaker system of this embodiment largely depends upon the mounted position of the high frequency range reproducing speaker 12. As the mounted position of the high frequency range reproducing speaker 12 approaches the open end 11 of the acoustic pipe 2, the speaker system exhibits a sound pressure-frequency characteristics such that sound pressure drops in the middle and high frequency range, and many dips in peak occur as shown by the reference numeral 17 in Fig. 3. This is because the magnetic circuit portion 15 of the high frequency range reproducing speaker 12 does not function as the acoustic equaliser for the middle and low frequency range reproducing speaker 1, and because an increase in distance between the mounted positions of the two speakers causes a difference in phase between sound waves reproduced from the two speakers in the high and middle frequency range.

Fig. 4 illustrates a modified form of the speaker system of Fig. 1. In the modified speaker system, the acoustic pipe 18 has an integrally molded structure which is made by integrally forming the cover 10 with the pipe 2 of the first embodiment. The acoustic pipe 18 is provided as one panel portion 18A with a pair of openings 18B at portions corresponding to locations for accommodating the sound absorbing material 9. Each of the openings 18B is sealingly covered with a cover plate 19 after the sound absorbing material 9 is

placed within the acoustic pipe 18.

With the acoustic pipe being an integrally molded structure, the speaker system is provided with sufficient strength against internal resonance of the acoustic pipe 18. This enables sound distortion produced by the internal resonance of the acoustic pipe 18 to be considerably reduced, and thus the speaker system is enhanced in tone quality. Moreover, the integral molding of the acoustic pipe 18 increases accuracy in size thereof, and it is thereby possible to reduce in size a TV into which the speaker system of this embodiment is incorporated. The integrally molded structure of the speaker system also enhances productivity of the speaker system and considerably reduces manhours for assembling it.

Fig. 5 is a partly cut away perspective view of a second embodiment of the speaker system of the present invention. In this embodiment, a pair of parallel reflection plates 20 are arranged at respective opposite sides of the high frequency range reproducing speaker 12 in addition to the speaker system shown in Figs. 1 and 2. The reflection plates 20 conduct the high frequency component sound wave, reproduced by the high frequency range reproducing speaker 12, to the open end 11 of the acoustic pipe 2.

With this speaker system, a high frequency component which is reproduced by the high frequency range reproducing speaker 12 is conducted to the open end 11 of the acoustic pipe 2 by a sound conductor constituted by the parallel reflection plates 20 disposed in front of the high frequency range reproducing speaker 12. Thus, the waveform of the high frequency component within the acoustic pipe 2 is not disturbed or not cross modulated by sound waves produced by the middle and low frequency range reproducing speaker 1, and thereby sounds reproduced by the speaker system are conducted in a substantially natural state to the open end 11 of the acoustic pipe 2. As shown in the sound pressure-frequency characteristic graph of Fig. 7, the speaker system is, accordingly, capable of exhibiting a characteristic having relatively high sound pressure at the middle and high frequency range with small dips in peak. Also in the second embodiment, the problem that sound moves up and down in a high and middle frequency range is overcome by close coaxial arrangement of the two speakers and sound signals reproduced by the speaker system of this embodiment is superior in quality to those reproduced by the speaker system of the first embodiment. This embodiment exhibits excellent characteristics in both sound image localisation and articulation of sound, which have not been achieved by the prior art.

Fig. 8 illustrates a modified form of the second embodiment. In the modified speaker system, an acoustic pipe 22 has the same structure as the acoustic pipe 2 of Fig. 4 except that an upper panel

22A of the acoustic pipe 22 has a pair of openings 22B at portions corresponding to respective locations to accommodate sound absorbing material 9. Each of the openings 22B is sealingly covered with a cover 23 after the sound absorbing material 9 is placed within the acoustic pipe 22 through the openings 22B. Further detailed description of this modified speaker system is omitted since this modification is identical in structure to the embodiment of Fig. 4 as regards other points.

Figs. 9 and 10 illustrate a TV into which a pair of the first embodiment of the speaker systems of the invention are incorporated. Each of the acoustic pipes 2 is placed along a cathode tube 4. A TV cabinet 3 is formed so that it fits around each acoustic pipe 2. This construction allows miniaturisation of the TV to be achieved with ease.

Fig. 10 is an illustration of a TV having a pair of the speaker systems of the first embodiment incorporated into it so that the open ends 11 of the acoustic pipes 2 of the speaker systems are placed at respective sides of the front of the TV.

As already described in connection with the first and second embodiments, a TV with such a construction also achieves a reduction in size, and the accommodated speaker systems enable high tone quality sound signals to be reproduced.

Also in a case where a speaker system of the invention is provided with a rear cabinet 24 and/or bass reflex ports 25 as shown in Figs. 11 and 12, the same advantages resulting from the speaker systems according to the invention can be obtained.

Claims

1. A speaker system comprising: an acoustic pipe (2;18;22) for conducting sound waves arranged in front of a speaker (1) for reproducing a middle and low frequency sound, said acoustic pipe (2;18; 22) having a substantially rectangular open end (11); reflection plates (6) arranged within the acoustic pipe (2;18;22) on opposite sides of a front portion of the speaker (1), said plates (6) delimiting a cavity (14) for conducting sound waves from the speaker (1); and a speaker (12) for reproducing a high frequency sound, characterised in that the high frequency speaker (12) is disposed within said cavity (14) between the reflection plates (6), coaxially in front of the middle and low frequency speaker (1); the high frequency speaker (12) obstructs 20 to 50% of the area between the reflection plates (6) with its structure to form an acoustic equaliser which modifies the response of the middle and low frequency speaker (1); and a sound absorbing material (9) is disposed in lateral cavities formed between the walls and end of the pipe (2;18;22) and the reflection plates (6).

tion plates (6).

2. A speaker system as claimed in claim 1, characterised in that a distance (L2) from a surface on which said middle and low frequency speaker (1) is mounted to a surface on which said high frequency speaker (12) is mounted is not substantially larger than one third of the distance (L1) from the surface on which said middle and low frequency speaker (1) is mounted to the open end (11) of the acoustic pipe (2;18;22).
3. A speaker system as claimed in claim 1 or 2, characterised in that said reflection plates (20) are disposed on opposite sides of a front portion of said high frequency speaker (12), said second reflection plates (20) constituting a sound conductor for conducting sound waves from said high frequency speaker (12).
4. A speaker system as claimed in any one of claims 1 to 3, characterised in that said acoustic pipe (18;22) is provided with a pair of covers (19;23) for covering openings (18B;22B) formed there-through, said openings (18B;22B) being adapted for inserting sound absorbing material (9) into said acoustic pipe (18;22), and said acoustic pipe (18; 22) excluding said covers (18B;22B) is integrally molded.
5. A TV including a speaker system in accordance with any of the preceding claims.

Patentansprüche

1. Lautsprechersystem, umfassend: ein akustisches Rohr (2; 18; 22) zum Leiten von Schallwellen, das vor einem Lautsprecher (1) zur Wiedergabe von Mittel- und Niederfrequenzschall angeordnet ist, welches akustische Rohr (2; 18; 22) ein im wesentlichen rechteckiges offenes Ende (11) hat; innerhalb des akustischen Rohres (2; 18; 22) an entgegengesetzten Seiten eines vorderen Abschnitts des Lautsprechers (1) angeordnete Reflexionsplatten (6), welche Platten (6) einen Hohlraum (14) zum Leiten von Schallwellen von dem Lautsprecher (1) begrenzen; und einen Lautsprecher (12) zur Wiedergabe eines Hochfrequenzschalles, dadurch gekennzeichnet, daß der Hochfrequenzlautsprecher (12) innerhalb des Hohlraumes (14) zwischen den Reflexionsplatten (6) coaxial vor dem Mittel- und Niederfrequenzlautsprecher (1) angeordnet ist; der Hochfrequenzlautsprecher (12) 20 bis 50 % der Fläche zwischen den Reflexionsplatten (6) mit seinem Aufbau verdeckt, um so eine akustische Entzerrungseinrichtung zu bilden, die das Ansprechver-



22A of the acoustic pipe 22 has a pair of openings 22B at portions corresponding to respective locations to accommodate sound absorbing material 9. Each of the openings 22B is sealingly covered with a cover 23 after the sound absorbing material 9 is placed within the acoustic pipe 22 through the openings 22B. Further detailed description of this modified speaker system is omitted since this modification is identical in structure to the embodiment of Fig. 4 as regards other points.

Figs. 9 and 10 illustrate a TV into which a pair of the first embodiment of the speaker systems of the invention are incorporated. Each of the acoustic pipes 2 is placed along a cathode tube 4. A TV cabinet 3 is formed so that it fits around each acoustic pipe 2. This construction allows miniaturisation of the TV to be achieved with ease.

Fig. 10 is an illustration of a TV having a pair of the speaker systems of the first embodiment incorporated into it so that the open ends 11 of the acoustic pipes 2 of the speaker systems are placed at respective sides of the front of the TV.

As already described in connection with the first and second embodiments, a TV with such a construction also achieves a reduction in size, and the accommodated speaker systems enable high tone quality sound signals to be reproduced.

Also in a case where a speaker system of the invention is provided with a rear cabinet 24 and/or bass reflex ports 25 as shown in Figs. 11 and 12, the same advantages resulting from the speaker systems according to the invention can be obtained.

Claims

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5. A TV including a speaker system in accordance with any of the preceding claims.

Patentansprüche

1. Lautsprechersystem, umfassend: ein akustisches Rohr (2; 18; 22) zum Leiten von Schallwellen, das vor einem Lautsprecher (1) zur Wiedergabe von Mittel- und Niederfrequenzschall angeordnet ist, welches akustische Rohr (2; 18; 22) ein im wesentlichen rechteckiges offenes Ende (11) hat; innerhalb des akustischen Rohres (2; 18; 22) an entgegengesetzten Seiten eines vorderen Abschnitts des Lautsprechers (1) angeordnete Reflexionsplatten (6), welche Platten (6) einen Hohlraum (14) zum Leiten von Schallwellen von dem Lautsprecher (1) begrenzen; und einen Lautsprecher (12) zur Wiedergabe eines Hochfrequenzschalles, dadurch gekennzeichnet, daß der Hochfrequenzlautsprecher (12) innerhalb des Hohlraumes (14) zwischen den Reflexionsplatten (6) coaxial vor dem Mittel- und Niederfrequenzlautsprecher (1) angeordnet ist; der Hochfrequenzlautsprecher (12) 20 bis 50 % der Fläche zwischen den Reflexionsplatten (6) mit seinem Aufbau verdeckt, um so eine akustische Entzerrungseinrichtung zu bilden, die das Ansprechver-



halten des Mittel- und Niederfrequenzlautsprechers (1) modifiziert; und ein schallabsorbierendes Material (9) in seitlichen Hohlräumen angeordnet ist, die zwischen den Wänden und dem Ende des Rohres (2; 18; 22) und den Reflexionsplatten (6) ausgebildet sind.

2. Lautsprechersystem nach Anspruch 1, dadurch gekennzeichnet, daß ein Abstand (L2) von einer Oberfläche, an der der Mittel- und Niederfrequenzlautsprecher (1) befestigt ist, bis zu einer Oberfläche, an der der Hochfrequenzlautsprecher (12) befestigt ist, nicht wesentlich größer ist als ein Drittel des Abstandes (L1) von der Oberfläche, an der der Mittel- und Niederfrequenzlautsprecher (1) befestigt ist, bis zu dem offenen Ende (11) des akustischen Rohres (2; 18; 22).

3. Lautsprechersystem nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die Reflexionsplatten (20) an entgegengesetzten Seiten eines vorderen Abschnitts des Hochfrequenzlautsprechers (12) angeordnet sind, wobei die zweiten Reflexionsplatten (20) einen Schalleiter zum Leiten von Schallwellen von dem Hochfrequenzlautsprecher (12) bilden.

4. Lautsprechersystem nach einem der Ansprüche 1 bis 3, dadurch gekennzeichnet, daß das akustische Rohr (18; 22) mit einem Paar von Abdeckungen (19; 23) zum Abdecken von durch dieses ausgebildeten Öffnungen (18B; 22B) versehen ist, welche Öffnungen (18B; 22B) zum Einführen von schallabsorbierendem Material (9) in das akustische Rohr (18; 22) eingerichtet sind, und das akustische Rohr (8; 22) ausschließlich der Abdeckungen (18B; 22B (richtig: 19; 23)) einstückig geformt ist.

5. Fernsehgerät, welches ein Lautsprechersystem in Übereinstimmung mit einem der vorstehenden Ansprüche enthält.

Revendications

1. Un système de haut-parleurs comprenant: un conduit acoustique (2;18;22) pour la transmission d'ondes sonores disposé devant un haut-parleur destiné à la reproduction d'un son à moyenne et basse fréquence, ledit conduit acoustique (2;18;22) comportant une extrémité ouverte et sensiblement rectangulaire (11); des plaques de réflexion (6) disposées sur des faces opposées de part et d'autre d'une section avant du haut-parleur (1) dans le conduit acoustique (2;18;22), lesdites plaques (6) délimitant une cavité pour la transmission d'ondes sonores issues

du haut-parleur (1); et un haut-parleur (12) destiné à la reproduction d'un son à haute fréquence, caractérisé en ce que le haut-parleur à haute fréquence est disposé coaxialement entre les plaques de réflexion (6) dans ladite cavité (14) et devant le haut-parleur à moyenne et basse fréquence; le corps du haut-parleur de haute fréquence (12) obture de 20 à 50% du volume entre les plaques de réflexion (6) pour former un égaliseur acoustique qui modifie la réponse du haut-parleur à moyenne et basse fréquence (1); et un matériau absorbant de son (9) est interposé dans des cavités latérales formées entre les parois et l'extrémité du conduit (2;18;22) et les plaques de réflexion (6).

2. Un système de haut-parleurs selon la revendication 1, caractérisé en ce qu'une distance (L2) entre une face sur laquelle est monté ledit haut-parleur à moyenne et basse fréquence (1) et une face sur laquelle est monté ledit haut-parleur à haute fréquence (12) n'est pas sensiblement plus grande qu'un tiers de la distance (L1) entre la face sur laquelle est monté ledit haut-parleur à moyenne et basse fréquence (1) et l'extrémité ouverte (11) du conduit acoustique (2;18;22).

3. Un système de haut-parleurs selon le revendication 1 ou 2, caractérisé en ce que des plaques de réflexion (20) sont disposées sur des faces opposées de part et d'autre d'une section avant dudit haut-parleur à haute fréquence (12), lesdites deuxièmes plaques de réflexion (20) constituant un conducteur de son pour la transmission d'ondes sonores issues dudit haut-parleur à haute fréquence (12).

4. Un système de haut-parleurs selon l'une quelconque des revendications 1 à 3, caractérisé en ce que ledit conduit acoustique (18;22) est pourvu d'une paire de couvercles (19;23) pour couvrir les ouvertures (18B;22B) formées par celui-ci, lesdites ouvertures étant adaptées à l'introduction dans ledit conduit acoustique (18;22) d'un matériau absorbant de son (9), et en ce que ledit conduit acoustique (18;22) est produit à l'exception des couvercles (18B;22B) en unité intégrale par moulure.

5. Un poste récepteur de télévision muni d'un système selon l'une quelconque des revendications précédentes.