



(11)

EP 1 701 582 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
13.09.2006 Bulletin 2006/37

(51) Int Cl.:
H04R 5/033 (2006.01) H04R 1/10 (2006.01)

(21) Application number: **05300169.9**

(22) Date of filing: **08.03.2005**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL BA HR LV MK YU

- **Borgonovo, Alberto**
Floor 9 Block E,
Hong Kong (CN)
- **Fung, Kam, Keung**
Hong Kong (CN)

(71) Applicant: **Thomson Licensing**
92100 Boulogne-Billancourt (FR)

(74) Representative: **Rossmannith, Manfred**
Deutsche Thomson-Brandt GmbH
European Patent Operations
Karl-Wiechert-Allee 74
30625 Hannover (DE)

(72) Inventors:
• **Chan, Michael**
Flat D, 15/F, Block 5,
New Territories, Hong Kong (CN)

(54) Assembly of MP3 player and headset

(57) An assembly of MP3 player unit and headset comprises a headset unit and a MP3 player unit. The MP3 player unit is composed of a left half part and a right half part, which are respectively and detachably connected to a left speaker and a right speaker of the headset unit 10 in electrical connection. The left and right half parts can be quickly and conveniently connected to and disconnected from the speakers of the headset unit and then combined together to form a whole single MP3 player unit being independent of the headset unit 10 to be used with a separate earphone.

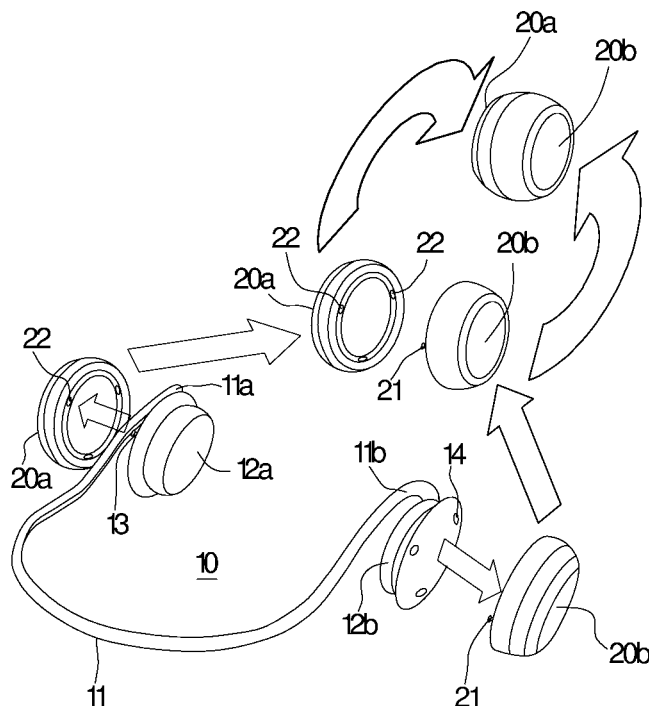


Fig.2

Description

FIELD OF THE INVENTION

[0001] The present invention relates to an assembly of MP3 player and headset.

BACKGROUND OF THE INVENTION

[0002] Some devices such as MP3 player or portable radio are very small and require a headset. Therefore the device is usually used with a separate headset, so the complete product generally consists of two separate units. Consumers of these kinds of products have to carry the separate headset along with their device all the time, which is inconvenient for users.

[0003] In order to avoid the inconvenient carrying problem, different new designs are continuously developed, for example, a type of MP3 player unit being detachably combined with a headset has appeared on the market. However, these types of MP3 player units are normally connected at only one side of the headset, therefore the weight of the whole assembly of the MP3 player and the headset becomes unbalanced, so that a user having this type of MP3 player held on his/her ears always feels uncomfortable.

[0004] Therefore, an improved device overcoming above mentioned defects is desirable.

SUMMARY OF THE INVENTION

[0005] An assembly of MP3 player and headset is provided according to the present invention, it generally comprises a headset unit and a MP3 player unit. Wherein the headset unit includes a connecting part having left and right speakers respectively connected at opposite ends thereof. The MP3 player unit is composed of a left half part and a right half part, which are respectively and detachably combined with the left and right speakers of the headset unit in electrical connection. The left and right half parts of the MP3 player unit are able to be quickly disconnected from the headset unit and easily combined together to form a whole single MP3 player device which can be used with a separate earphone independent of the headset unit.

[0006] Advantageously, the assembly of MP3 player and headset of the invention can be carried by a user as a whole device conveniently. Alternatively, a simple earphone is selectively connected with the complete assembly of MP3 player and headset for a second listener. Furthermore alternatively, a separate earphone is selectively connected with the combined MP3 player unit independent of the headset unit.

[0007] Because the left and right half parts of the MP3 player unit are designed to be balanced in weight, the whole assembly of MP3 player and headset of the invention is balanced in weight, advantageously, a user can enjoy the playing of the MP3 player unit through the speakers of the headset unit with comfortable feeling.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008]

Fig. 1 is a perspective view of an assembly of MP3 player and headset according to the present invention;

Fig. 2 is an exploded perspective view of the assembly of MP3 player and headset according to the present invention; and

Fig. 3 a perspective view of the present invention showing two half parts of the MP3 player unit combined together in connection with a separate earphone.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0009] As shown in Fig. 1, the present invention generally provides an assembly of MP3 player and headset, which comprises a headset unit 10 and a MP3 player unit 20 in a combination way that can be seen more clearly in Fig.2.

[0010] Fig. 2 is an exploded perspective view of the assembly of the invention. As seen in Fig.2, the headset unit 10 has a U-shaped connecting part 11 symmetrically integrated with two ear-holders 11a, 11b at opposite ends thereof. A left speaker 12a and a right speaker 12b are respectively connected to the two ear-holders 11a, 11b.

[0011] The MP3 player unit 20 is composed of a left half part 20a and a right half part 20b, which are respectively and detachably combined with the left speaker 12a and the right speaker 12b of the headset unit 10 in electrical connection. The left and right half parts 20a, 20b of the MP3 player unit 20 can be quickly disconnected from the headset unit 10 and easily combined together to form a whole single MP3 player unit 20 which is independent of the headset unit 10.

[0012] Each one of the left and right speakers 12a, 12b forms a joint face on an external side thereof. The left and

right half parts 20a, 20b of the MP3 player unit 20 are respectively formed with two joint faces corresponding to the joint faces of the left and right speakers 12a, 12b. When the MP3 player unit 20 are combined with the headset unit 10, the joint faces of the half parts 20a, 20b are respectively abutted against the joint faces of the left and right speakers 12a, 12b of the headset unit 10, and the MP3 player unit 20 and headset unit 10 are combined together as a complete assembly of MP3 player and headset as shown in Fig.1.

[0013] With reference back to Fig.2, mechanical connecting means is provided between the MP3 player unit 20 and the headset unit 10. One practicable embodiment of the mechanical connecting means according to the invention includes female connectors and male connectors which are respectively provided on opposite sides of each two counter joint faces. One of the half parts 20a, 20b of the MP3 player unit 20 is provided with a female connector while another one of the half parts 20a, 20b is provided with a male connector. Accordingly, the left and right speakers 12a, 12b are respectively provided with female and/or male connectors in order to engage with the corresponding male and/or female connectors of the left and right half parts 20a, 20b of the MP3 player unit 20.

[0014] The male connector of the MP3 player unit 20 includes multiple plugs 21 distributed around the joint face in equal-spaced, each plug 21 having a retaining end integrated thereon. The female connector of the MP3 player unit 20 includes multiple sockets 22 corresponding to the multiple plugs 21. Consequently, the male connector of the headset unit 10 is provided with multiple plugs 13 corresponding to the sockets 22 of the MP3 player unit 20, and the female connector of the headset unit 10 is provided with multiple sockets 14 corresponding to the plugs 21 of the MP3 player unit 20. When the plugs 13, 21 of the male connectors are respectively inserted into the corresponding sockets 14, 22 of the female connectors, the retaining ends of the plugs 13, 21 are respectively clamped in the sockets 14, 22 by means of clips (not shown in the drawing) provided in the sockets. These clips are designed to allow the plugs 13, 21 to be easily released therefrom by external force.

[0015] Any conventional mechanical connecting means is applicable, if the connecting means either allows the combination between the MP3 player unit 20 and the headset unit 10 or the combination between the two half parts 20a, 20b of the MP3 player unit 20. Nevertheless, the mechanical connecting means provided between the MP3 player unit 20 and the speakers 12a, 12b of the headset unit 10 are designed in a way so as to enable the left and right half parts 20a, 20b of the MP3 player unit 20 to be quick and conveniently connected to and disconnected from the left and right speakers 12a, 12b of the headset unit 10.

[0016] Besides, electrical connecting means are provided between the two half parts 20a, 20b of the MP3 player unit 20 and speakers 12a, 12b of the headset unit 10, so that when the MP3 player unit 20 is combined with the headset unit 10, the MP3 player unit 20 is electrically connected with the headset unit 10, and when the two half parts 20a, 20b of the MP3 player unit 20 is combined together, these two half parts 20a, 20b are also electrically connected. Therefore, a user can conveniently listen to the playing of the MP3 player unit 20 through the speakers 12a, 12b of the headset unit 10, when the MP3 player unit 20 is combined with the headset unit 10 as a complete assembly. Preferably, an audio jack is provided on one of the half parts 20a, 20b of the MP3 player unit 20, so that a separate earphone can be selectively connected to the MP3 player unit 20 of the assembly for a second listener.

[0017] When it is desired, the two half parts 20a, 20b of the MP3 player unit 20 can be quickly detached from the left and right speakers 12a, 12b of the headset unit 10 and combined together to be a whole single MP3 player unit 20, as shown in Fig.3, to be used with a simple earphone 30.

[0018] As shown in the drawings, the half parts 20a, 20b of the MP3 player unit 20 is designed to be identical in shape and profile, and particularly to be balanced in weight. Therefore, a user can listen to the MP3 player of the assembly with a very comfortable feeling.

[0019] The assembly of MP3 play unit and headset according to the present invention advantageously provides following choices for user: a) to use the complete assembly of the MP3 player and headset without worrying about missing any single parts, only a whole assembly is to be taken with; b) to selectively connect a simple earphone to the complete assembly for a second listener; c) to take the MP3 player unit away from the headset unit and use it with a separate simple earphone.

Claims

1. An assembly of MP3 player and headset comprising a headset unit (10) and a MP3 player unit (20), wherein

- the headset unit (10) includes a connecting part (11) having a left speaker (12a) and a right speaker (12b) respectively connected at opposite ends thereof;
- the MP3 player unit (20) is composed of a left half part (20a) and a right half part (20b), which are respectively and detachably combined with the left speaker (12a) and the right speaker (12b) of the headset unit (10) in electrical connection;

characterized in that

- the left and right half parts (20a, 20b) of the MP3 player unit (20) are able to be quickly disconnected from the headset unit (10) and easily combined together to form a whole single MP3 player unit (20) which is independent of the headset unit (10).

2. The assembly of MP3 player and headset as claimed in claim 1, **characterized in that** the left and right half parts (20a, 20b) of the MP3 player unit (20) are formed with joint faces on inner sides thereof and respectively provided with male and female connectors on the joint faces, the left and right speakers (12a, 12b) of the headset unit (10) are formed with joint faces on external sides thereof corresponding to the joint faces of the left and right half parts (20a, 20b) of the MP3 player unit (20) and respectively provided with female and male connectors corresponding to the male and female connectors of the MP3 player unit (20).
3. The assembly of MP3 player and headset as claimed in claim 1, **characterized in that** an audio jack (21) is provided on one of the half parts (20a, 20b) to be used to connect with a separate earphone (30) .
4. The assembly of MP3 player and headset as claimed in any one of preceding claims, **characterized in that** the left and right half parts (20a, 20b) of the MP3 player unit (20) are designed to be balanced in weight.

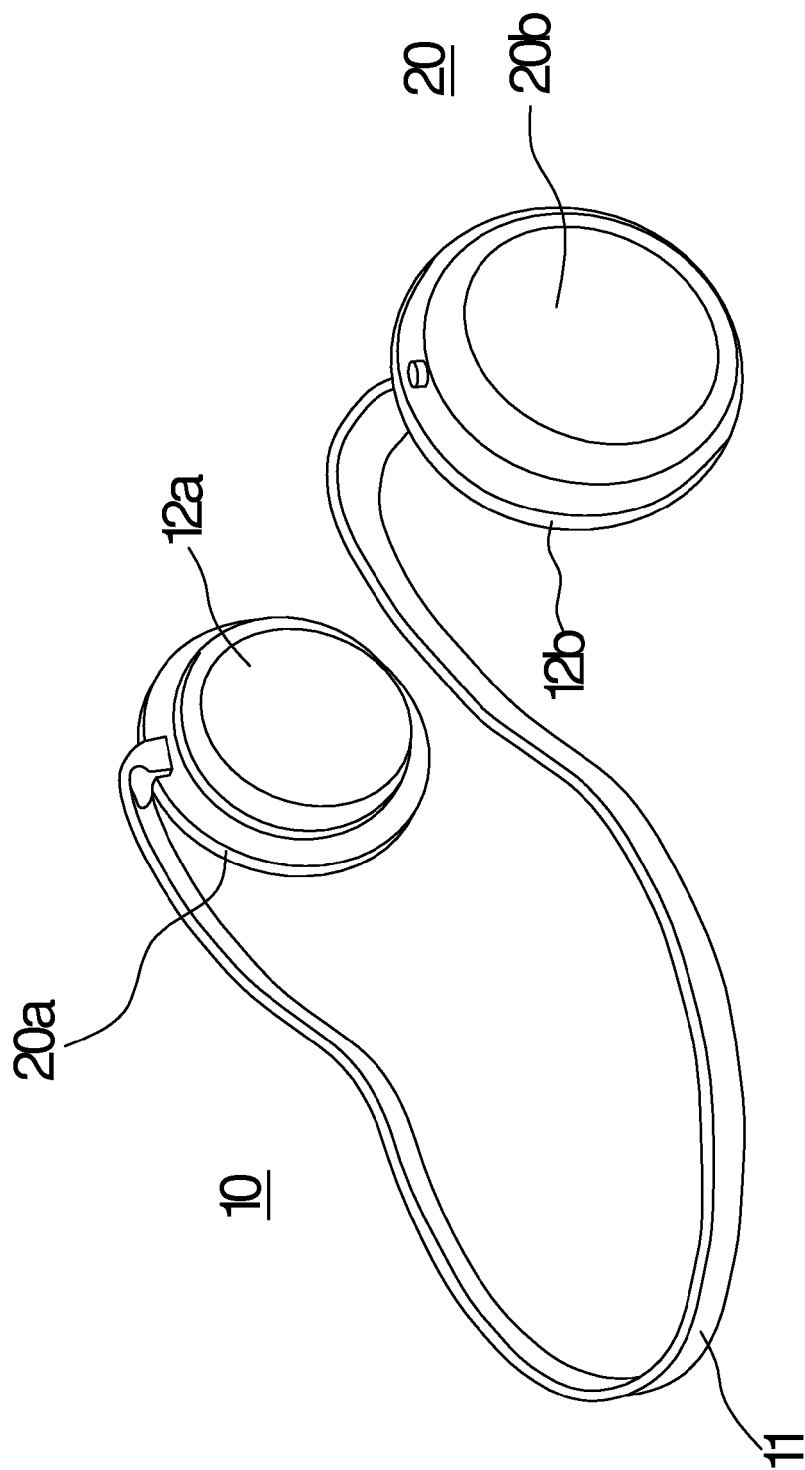


Fig.1

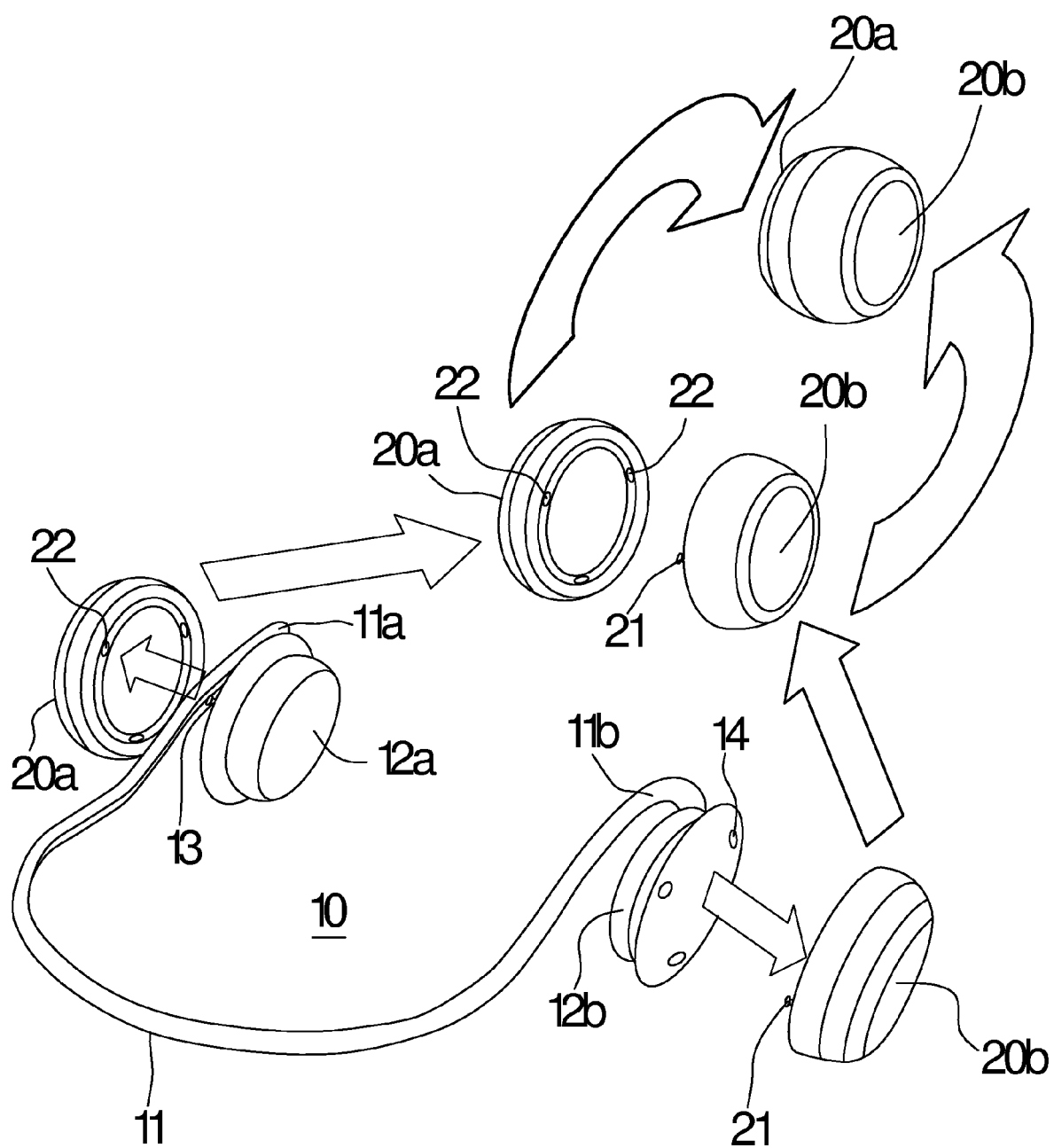


Fig.2

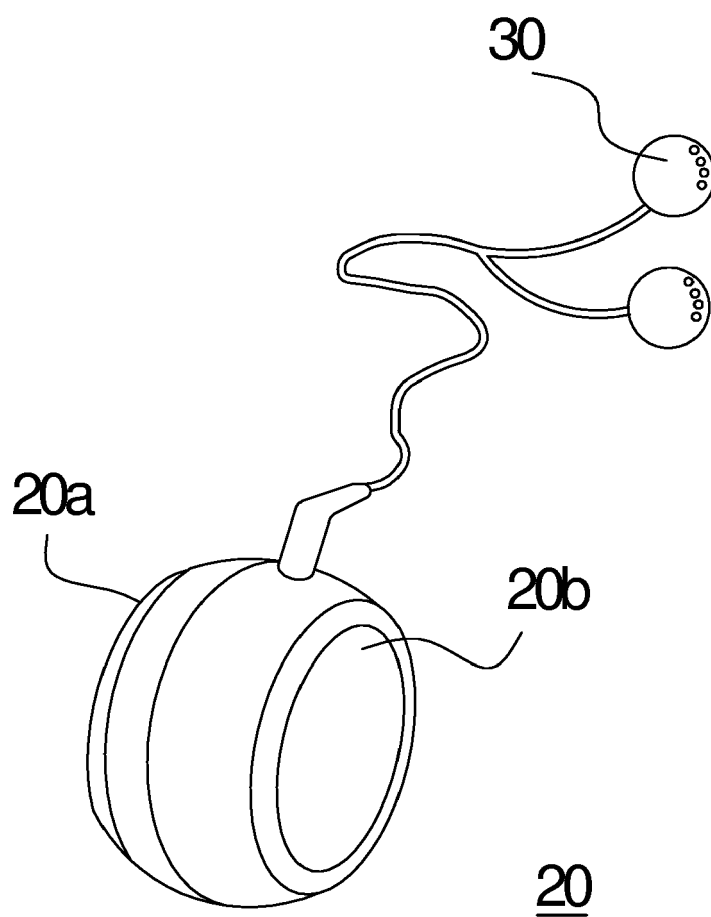


Fig.3



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 05 30 0169

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	PATENT ABSTRACTS OF JAPAN vol. 2003, no. 11, 5 November 2003 (2003-11-05) & JP 2003 219492 A (SANYO ELECTRIC CO LTD), 31 July 2003 (2003-07-31) * abstract * * figures 1-7 *	1-4	H04R5/033 H04R1/10
E	EP 1 519 620 A (NEXTWAY CO., LTD) 30 March 2005 (2005-03-30) * the whole document *	1-4	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			H04R
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		11 August 2005	Moscu, V
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

2

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 05 30 0169

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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11-08-2005

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