

AN ELECTRICAL CONNECTOR

The present invention relates to an electrical connector, and more particularly to an electrical connector intended
5 to be connected to audio equipment such as amplifiers, tuners, receivers or CD players, or other equipment such as video tape recorders or televisions.

Conventional electrical connectors, for example as shown
10 in Japanese utility model examined publication No 55-11085 comprise conductors 4 and 14 of a male connector 3 which are so constructed that when soldering terminals of the male connector 3 to a printed board flux and/or solder can inadvertently come into contact with and adhere to the
15 conductors.

The prior art mentioned above does not consider the point that during soldering of terminals flux and solder can be thrown off and adhere to the conductors of a male
20 connector whilst the terminals of the male connector are being soldered to a printed circuit board, with the problem that subsequent electrical connection of the male connector to a female connector is detrimentally affected as a result.

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The present invention seeks therefore to provide improved electrical connections by preliminarily mounting a shroud

or cover of synthetic resin over the conductors of a male connector so as to prevent contamination of these conductors by flux and solder even if these should be thrown off closely adjacent terminals of the connector during soldering operations.

According to the present invention there is provided an electrical connector comprising a body of electrically insulating material in which are embedded electrical contacts each having first and second contact portions projecting from the body, there being provided contact shrouding means removably connected to said body and acting to protect one of the said contact portions from solder or flux sprayed or splashed towards it upon soldering of the other of the said contact portions to effect electrical connection thereof to another component, the shrouding means being connected to said body by connecting bars.

One embodiment of the invention will now be more particularly described, by way of example, with reference to the accompanying drawings, in which:-

Figure 1(a) is a plan view from above showing an electrical connector formed as an embodiment of the present invention;

Figure 1(b) is a side view of the connector of Figure 1(a);

Figure 1(c) is an end view of the connector of Figure 1(a);

Figure 2 is a side view of the connector of Figure 1 showing its orientation in forming a connection with a female connector; and

Figure 3 is a partly sectioned side view showing the connector of Figure 1 soldered to a printed circuit board.

Referring now to the drawings, the reference numeral 1 generally indicates an electrical connector comprising a body 2 made of an insulating synthetic resin in which conductors 3 are embedded and insulated from one another.

The conductors 3 include terminal pins 4 intended to be soldered to a printed circuit board 8 (Figure 3) and projecting from one face of the body 2, and contact blades 5 intended to be inserted into and connected with conductors 11 of a female connector 10 (see Figure 2). In this embodiment the contact blades 5 are generally L-shape and the ends of the blades are shrouded by a cover 6 made of the same synthetic resin as is used for the body 2, and which is connected to the body 2 by connecting bars 7 which are fine and breakable. The shrouding cover 6 is generally cup-shape and has upstanding fingers 6a lying between the planes defined by the contact blade 5.

Figure 3 shows the connector 1 soldered to a printed

circuit board 8 by inserting the terminal pins 4 through appropriate holes (not shown) in the board 8 and applying a solder bead 9. During this operation any flux or solder thrown off cannot contaminate the contact blades 5 upon passing through the hole 13, necessary to allow access by the female connector as will be explained below, since these are shrouded by the cover 6. After the soldered connection has been made, the cover 6 is pressed in the direction of the arrow P, to break the fine connecting bars 7 to separate the cover 6 from the body 2. The cover 6 can then be removed through the hole 13 to leave the contact blades 5 exposed.

Figure 2 shows the connector 1 connected perpendicularly to a female connector 10. Contact pins 14 of the female connector 10 are soldered to a printed circuit board 12 by solder beads 15. The board 12 extends perpendicularly of the board 8 on which the male connector 1 is soldered.

Female contacts 11 within the connector 10 are electrically connected by contact with the contact blades 5 of the male connector 1.

C L A I M S

1. An electrical connector comprising a body of electrically insulating material in which are embedded electrical contacts each having first and second contact portions projecting from the body, there being provided
5 contact shrouding means removably connected to said body and acting to protect one of the said contact portions from solder or flux sprayed or splashed towards it upon soldering of the other of the said contact portions to effect electrical connection thereof to another
10 component, the shrouding means being connected to said body by connecting bars.
2. An electrical connector as claimed in claim 1, in which the said first and second contact portions project from different faces of the said body.
- 15 3. An electrical connector as claimed in claim 1 or claim 2, in which the shrouding means are joined to the said body by frangible connectors allowing the shrouding means to be removed after soldering of the said other contact portion has been effected.
- 20 4. An electrical connector as claimed in any of claims 1 to 3, in which the said one contact portion is shaped as a blade-type contact pin and the other contact portion is



shaped as a terminal.

5. An electrical connector as claimed in any preceding Claim, in which there are a plurality of electrical
5 contacts embedded in the said body side-by-side, and the said shrouding means is formed as a single cover enclosing all the said one contact portions thereof.

6. An electrical connector substantially as hereinbefore
10 described with reference to, and as shown in, the accompanying drawings.

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