

JIS

JAPANESE INDUSTRIAL STANDARD

Concentric plugs and jacks

JIS C 6560 - 1994

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

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Concentric plugs and jacks

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1. Scope This Japanese Industrial Standard specifies the very small-sized concentric plugs, small-sized concentric plugs, and large-sized concentric plugs, as well as jacks conforming to these plugs.

Remarks 1. The standards cited in this Standard are as follows:

- JIS B 7503 Dial gauges
 - JIS C 0051 Basic environmental testing procedures Part 2:
Tests Test U: Robustness of terminations and
integral mounting devices
 - JIS C 5001 General rules for electronic components
 - JIS C 5401 General rules of connectors for use in electronic
equipment
 - JIS C 5402 Method for test of connectors for use in electronic
equipment
 - JIS H 3100 Copper and copper alloy sheets, plates and strips
 - JIS H 3130 Copper beryllium alloy, phosphor bronze and
nickel silver sheets, plates and strips for springs
 - JIS H 3250 Copper and copper alloy rods and bars
 - JIS H 8617 Electroplated coatings of nickel and chromium
 - JIS K 6720 Polyvinyl chloride resins
 - JIS K 6748 Polyethylene moulding materials
2. The International standards corresponding to this Standard
are as follows.
- IEC 130-8 (1976) Connectors for frequencies below 3 MHz.
Part 8: Concentric Connectors for audio
circuits in radio receivers
 - IEC 603-11 (1992) Connectors for frequencies below 3 MHz for
use with printed boards. Part 11: Detail
Specification for concentric connectors
(dimensions for free connectors and fixed
connectors)

2. Definitions For the purpose of this Standard, the definitions given in JIS C 5001, JIS C 5401 and JIS C 5402 apply.

3. Type designation

3.1 Composition of type designation The composition of type designation shall be arranged as follows.

Symbol denoting concentric plug and jack	Symbol denoting conforming plug	Symbol denoting class	Symbol denoting composition of circuit
3.2.1	3.2.2	3.2.3	3.2.4
Example: JC	35	J	2A

3.2 Symbols

3.2.1 Concentric plugs and jacks The symbol denoting the concentric plugs and jacks shall be JC.

3.2.2 Conforming plugs The symbol denoting the conforming plugs shall be classified by the outer diameter of sleeve, as shown in Table 1.

Table 1. Symbol denoting the conforming plug

Symbol	Conforming plug
25	Very small-sized (sleeve diameter, 2.5 mm)
35	Small-sized (sleeve diameter, 3.5 mm)
63	Large-sized (sleeve diameter, 6.3 mm)

3.2.3 Class The symbol denoting the class shall be as specified in Table 2.

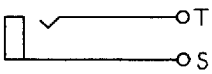
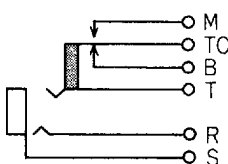
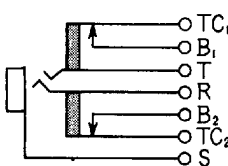
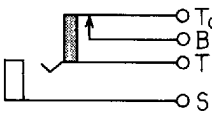
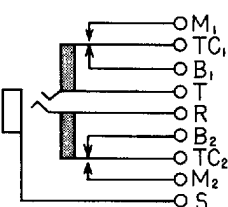
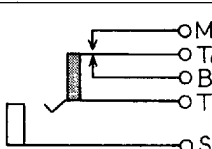
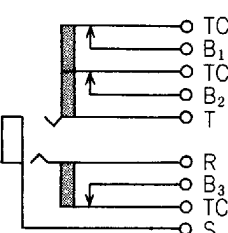
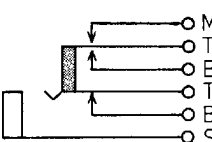
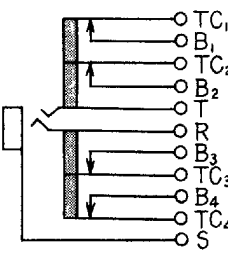
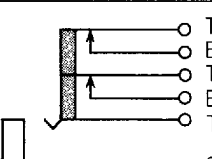
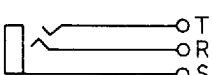
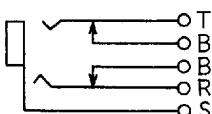
Table 2. Symbol denoting class

Symbol	Class
P	Plug
J	Jack

3.2.4 Composition of circuit The symbol denoting the composition of circuit shall be a numeric character for the number of poles and an English capital letter for type of circuit, as shown in Table 3. However, plugs shall be denoted only by a numeric character for the number of poles, and English capital letters shall not be used.

Example: (Plug) JC-35-P-2

Table 3. Symbols denoting composition of circuit

Number of poles	Symbol	Composition of circuit	Number of poles	Symbol	Composition of circuit
2	2A		3	3C	
	2B			3D	
	2C			3E	
	2D			3F	
	2E			3G	
	2F			3Z	Others
	2Z	Others			
3	3A				
	3B				

Remarks: The detail of each termination symbol is given in Attached Fig. 8.

4. Construction

4.1 Construction, shape and dimension The construction, shape and dimension of concentric plug and jack shall be specified by Attached Figures given in Table 4. However, where any dimension is not indicated in Attached Figs. 1 through 7, and 9, one example of construction and shape is illustrated.

Table 4. Construction, shape and dimension of concentric plug and jack

Number	Item	Dimension
1	2-pole very small-sized concentric plug	Attached Fig. 1
2	3-pole very small-sized concentric plug	Attached Fig. 2
3	2-pole small-sized concentric plug	Attached Fig. 3
4	3-pole small-sized concentric plug	Attached Fig. 4
5	2-pole large-sized concentric plug	Attached Fig. 5
6	3-pole large-sized concentric plug	Attached Fig. 6
7	Very small-sized jack	Attached Fig. 7
8	Small-sized jack	
9	Large-sized jack	
10	Figure of basic composition of jack	Attached Fig. 8
11	Knob	Attached Fig. 9

4.2 Materials and surface treatment The materials for concentric plugs shall be specified in Attached Table 1, and those for the jacks, in Attached Fig. 8.

The surface treatment of chips and rings of the concentric plugs shall be equivalent to or better than Ep-Cu/Ni 3 as specified in JIS H 8617.

5. Performance The performance and its test methods given in Table 5 shall apply.

Table 5. Performance and test methods

No.	Item	Applicable component			Performance	Test method	
		Combination	Plug	Jack			
1	Voltage proof	○	○	○	No burn caused by short circuit and no insulation destruction	Comply with 5.1 of JIS C 5402. Test voltage: AC500 V	Test the chip, ring, sleeve gaps of plug; each termination gap when jack circuit is open, and gap between each termination and the insulated metals.
2	Insulation resistance	○	○	○	100 MΩ or over	Comply with 5.2 of JIS C 5402. Test voltage for very small-sized: DC100 V Test voltage for small- and large-sized: DC500 V	
3	Contact resistance	○	—	—	Between jack and plug: 50 mΩ or under	Comply with 5.3 of JIS C 5402. Test current: 100 mA or under	
		—	—	○	Within jack: Break spring Meter spring 30 mΩ or under		