



Fig.5 Electrical diagram of protection circuit for speakers with antibump

Components list

R1 = 100 k
 R2 = 100 k
 R3 = 100 k
 R4 = 100 k
 R5 = 2,7 k
 R6 = 10k
 R7 = 10k
 R8 = 22k
 R9 = 4,7k
 R10 = 22k
 R11 = 68k
 R12 = 220k
 R13 = 100k
 R14 = 100k
 R15 = 100k
 R16 = 100k
 R17 = 1k

C1 = 1 uF polyester
 C2 = 100nF polyester
 C3 = 100nF polyester
 C4 = 220 uF electrolytic
 C5 = 1nF polyester

C6 = 1 uF polyester
 C7 = 100 uF electrolytic
 C8 = 100 uF electrolytic
 C9 = 220 uF electrolytic
 C10 = 220 uF electrolytic
 C11 = 100nF polyester
 C12 = 100nF polyester
 DS1-DS4 = diodes 1N4150
 DS5 = diode 1N 4007
 DS6 = diode 1N 4150
 RS1 = bridge rectifier 100 V 1 A
 DL1 = LED red colour or another
 MFT1 = mosfet type IRFD.1Z3 or compatible N-channel
 IC1 = LM.324
 Rel1= relay 12V 2contacts

Note: all resistors are 1/4 watt