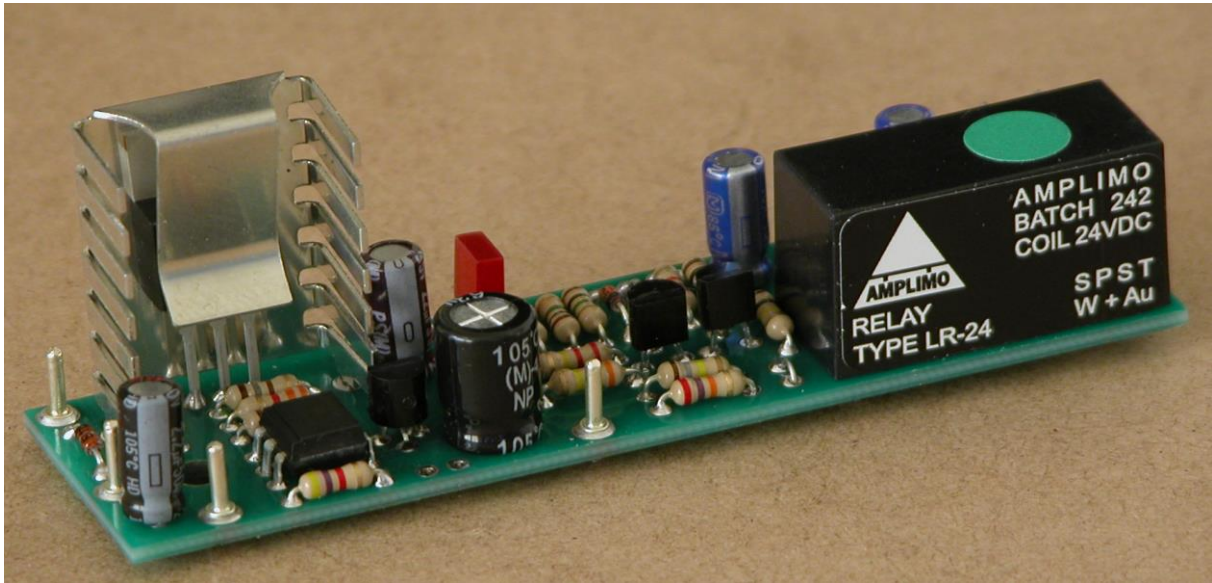


Installation instructions DaDa Electronics DC Protection and Delay unit, Version 1.3



How does the unit work?

Delay:

Basically a capacitor is charged via a resistor, when the voltage of the capacitor reach a certain level, the relay is switched on and the loudspeaker is connected to the amplifier. The relay is a special Audio Grade relay with very low contact resistance.

Fast switch off:

The AC voltage (secondary) of the mains transformer is monitored, when the voltage is to low or not present, the capacitor is quickly discharged, and the relay switches off. This is done to prohibit the switch off noise which normally takes place when the power supply capacitors of the amplifier discharge after switching off the amplifier.

DC protection:

The DC output voltage from the amplifier is measured, when the DC voltage value is above or below approximately plus and minus 2 Volts the capacitor is quickly discharged and the relay switches off.

Indicator:

During the startup delay and when the DC protection is activated or the AC voltage is not present, the indicator led will be bright. During normal operation the led will be dimmed.

Voltage ratings:

DC PSU voltage range: 35-70V

AC voltage range 30-90V

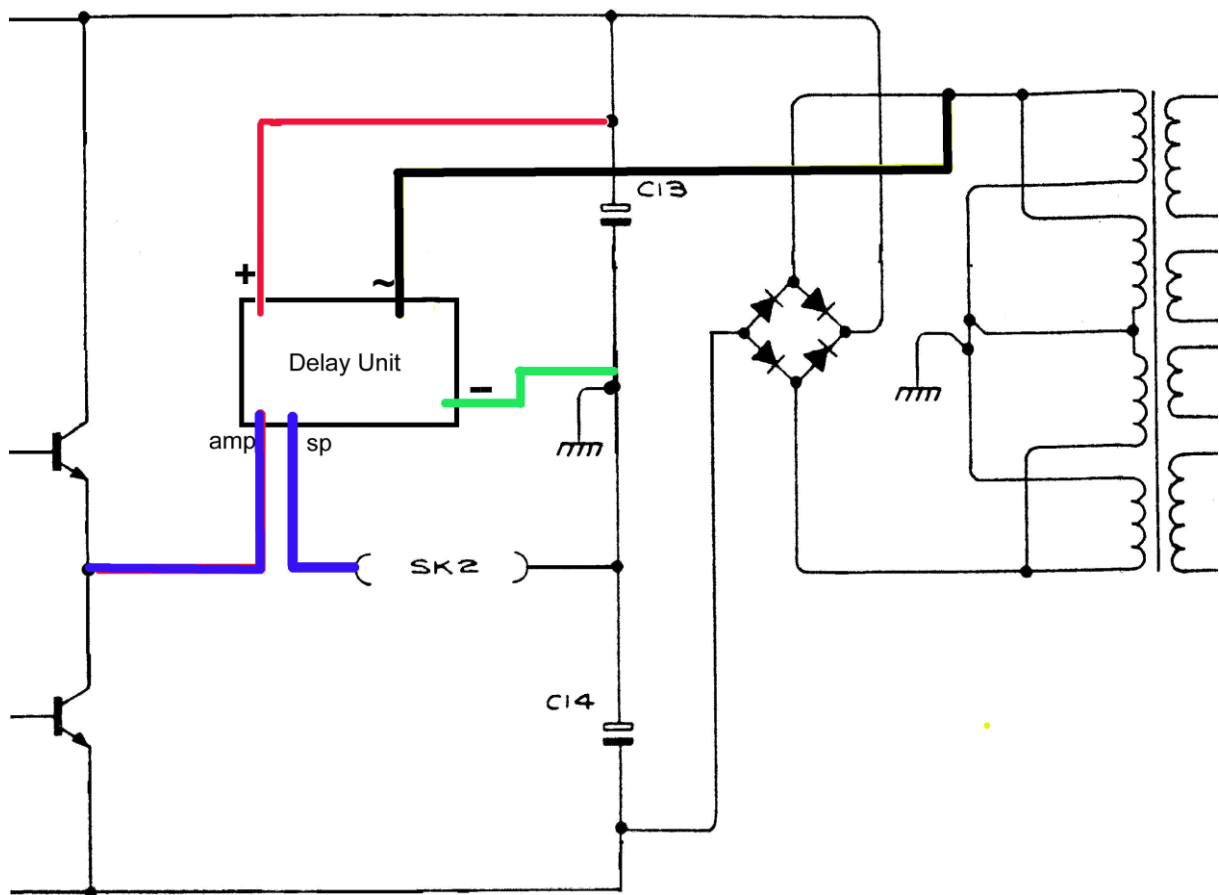
This should cover the complete range of Quad amplifiers.

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The package contains:

- The module with two wire links installed, so only one wire is needed for the AC connection and the DC protection circuit is connected.
- A black wire of 0.2mm for the AC connection
- A red wire of 0.2mm for the Plus and a Green wire of 0.2mm for the minus (ground)
- A Blue wire of 0.75mm from the output of the amplifier module to the delay module and a blue wire from the delay module to the red speaker socket.
- Four 1.3mm connectors (Female), one 2.8mm Fast On connector (female), two Fast on 6.3mm sockets (female), and two self-adhesive feet.

Installation of the units in a Quad 405, all models with clamp circuit incorporated in the amplifier modules, serial 59001 and onwards, or without clamp circuit serial 1 to 9000.



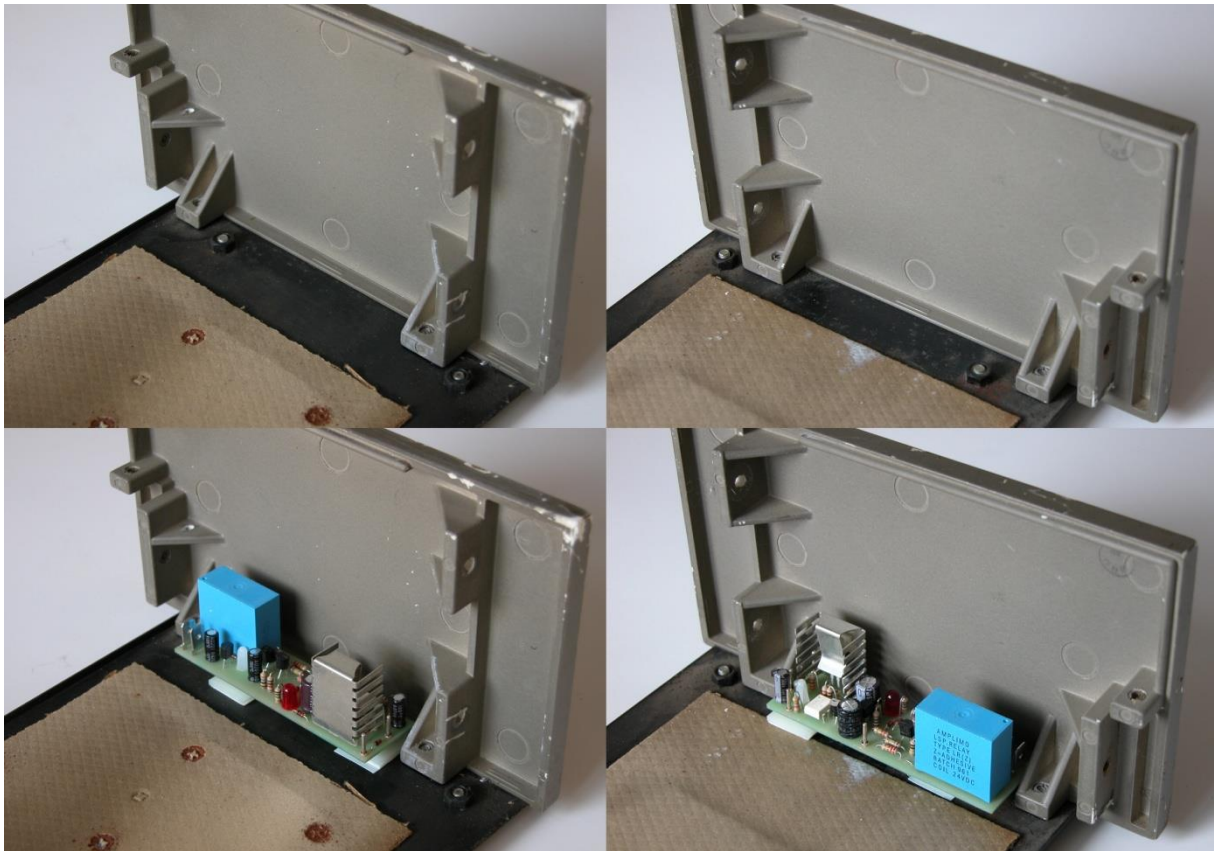
The delay unit in the 405 diagram

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The minus symbol can be confusing, LS ground or mass would be a better one, but the space for text on the Pcb is limited. Improved on M12575.14.

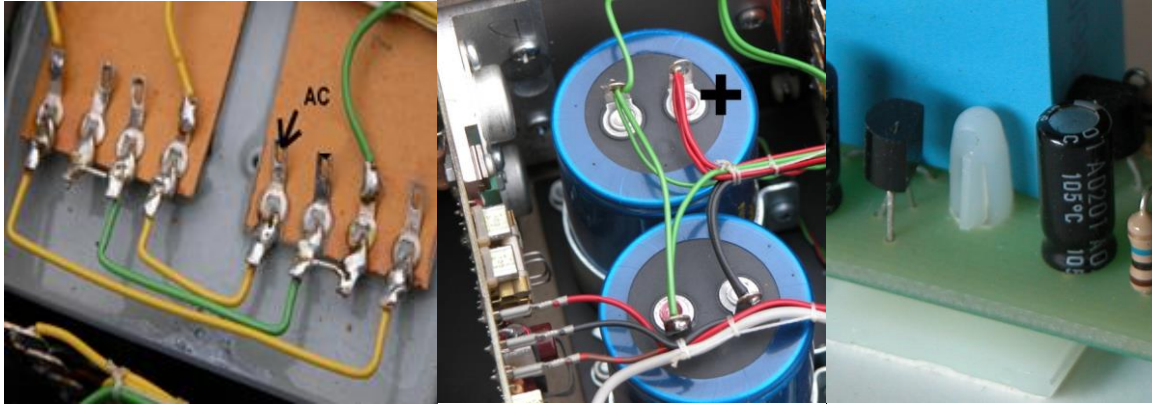
Preparing the 405 for the placement of the units.

Remove the bottom and the side plates. Put the side plates and the bottom plate together again. Mark the inner position of the 'legs' of the side plates on the bottom plate. Within this space and the edge of the bottom plate the delay unit should be placed. Sometimes you have to remove a little bit of the sound absorbing material, which is glued to the bottom panel. Watch the position of the self-adhesive feet; it should be possible to remove the unit from the feet by pressing the 'pin' on the shaft of the feet with a small screwdriver or pliers. Before you place the unit in position, test this feature. Remove the two side panels. Place the units in their definitive positions, see the pictures, after cleaning the baseplate with a solvent, the relays should be facing to the rear of the amplifier, and don't make them stand out of the base plate. They must be parallel with the edge of the baseplate. Check if the delay unit doesn't make contact with the screws from the baseplate feet. If necessary, trim the soldered pin extends. Replace the bottom plate to the amplifier and fix the position of the bottom plate with some (duct) tape patched over the seam formed by the plate and the heat sink. Also use some tape for securing the bottom plate to the back of the amplifier. If everything went ok, the delay units should not be in contact with the amplifier modules or the bottom plate, check this! Replace the side panels in position after all the wires are in place.



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Precut the wires with some slack to the right length. The wires should be long enough to be routed beneath the amplifier modules. Also a hinged position of the bottom plate should be possible.

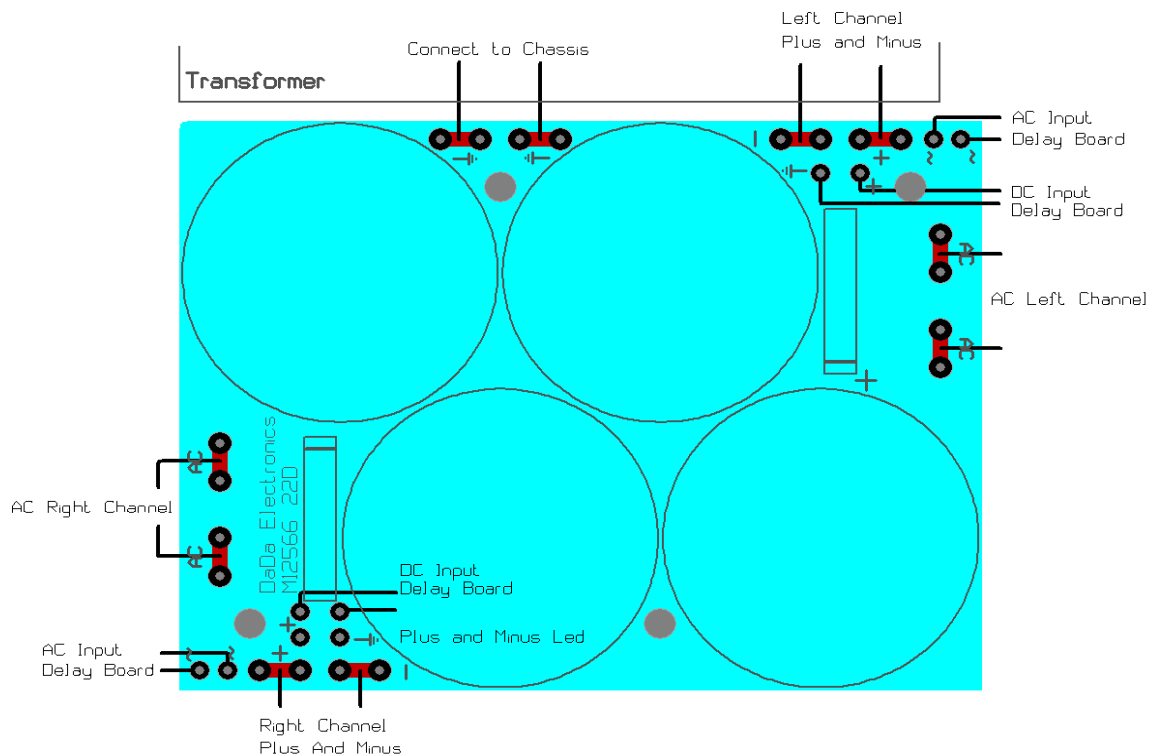


- Connect the pin marked ~ closest to the heatsink, practically beside, of both units to the secondary output of the mains transformer, in the picture this is marked AC. Use the black wire for this.
- Connect the pin marked + of both units to the plus 50V of the power supply, the red wire on the capacitor. Use the red wire for this connection.
- Connect the pin marked 'earth' (ground) of each unit to the other connection of the capacitor in the picture (The one with the green wires connected to it). Use the green wire for this connection.
- Remove the wire from the output of the 405 amplifier boards and the red speaker chassis part.
- Connect the pin marked AMP to the output of the appropriate 405 amplifier module. Use the heavy gauge blue wire for this. For this connection you need the 2.8 and 6.3 Fast On connectors.
- Connect the pin marked SP to the appropriate red speaker chassis part. Use the heavy gauge blue wire and the 6.3mm Fast On connector for this.

Installation of the units in a Quad 405 with the DaDa M12566.22D double supply:

The Delay units are connected to the supply, see the instruction for the double supply for the layout. Make sure each delay unit is only connected to the Psu which is connected to the appropriate amplifier module. For the AC connection, use only the pins closest to the corner of the module, the other pin is also marked AC, but is connected to ground.

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Quad 405 with a separate clamp circuit, serial from 9000 to 59000.



When the unit has a clamp circuit connected to the speaker chassis parts, disconnecting and connecting wires to the red speaker chassis part can be difficult. In some cases you have to loosen the Psu capacitor to make room for your soldering iron.

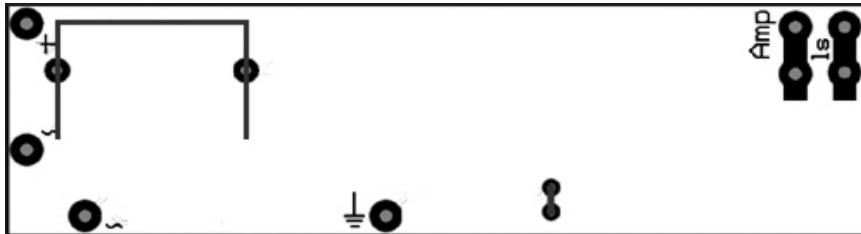
But it is better to remove the separate clamp circuit and preferably install modern Loudspeaker binding post's.

<https://shop.dadaelectronics.eu/connectors/loudspeaker-connectors/>

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Appendix 1

Pin layout M12575.14



The jumper for connection of the DC sensing circuit is replaced by a wire link. If the unit is used in a Quad 303 or another amplifier with an AC coupled output, remove this wire link. There is also a wire link installed for the connection of one AC input to ground, this saves one connection to the transfo. For other applications than the one described in this manual, you maybe have to remove this link.