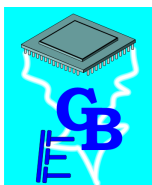
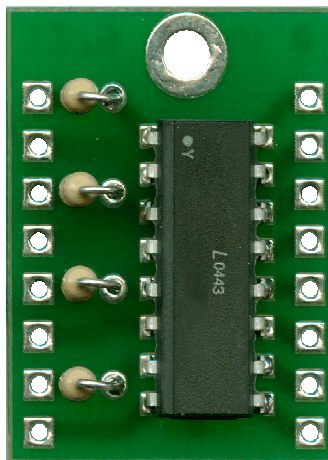
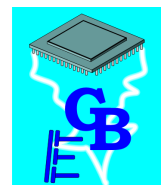


Operation Manual

Optocoupler Adapter OKA-4



BEIER Electronic
Winterbacher Str. 52/4, 73614 Schorndorf - Weiler
Telephone 07181/46232, Fax 07181/45732
e-Mail: modellbau@beier-electronic.de
Web: <http://www.beier-electronic.de/modellbau>



Function

The OKA-4 optocoupler adapter was specially manufactured for our USM series sound modules in order to trigger the additional sounds with a wide variety of voltages and circuit variants.

There are 4 separate inputs and outputs available on the adapter. An output switches as soon as a voltage of approx. 2.0 - 15.0 V is present at the associated input. It is not necessary to pay attention to the polarity of the input voltage. The adapter can therefore be connected directly in parallel to a motor, for example, in order to trigger an additional sound as soon as the motor is running - no matter in which direction (e.g. when turning the turret of a tank).

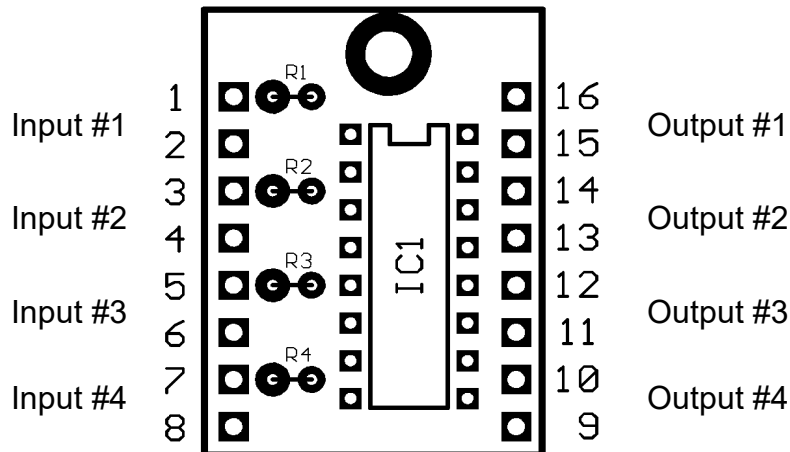
The 4 outputs can be selected as plus or minus switching outputs, so the adapter can be used for all of our sound modules.

The inputs and outputs are connected via solder terminals.

Technical specifications

Channels:	4 inputs and outputs (galvanically isolated)
Input voltage:	2.0 - 15.0 V (higher voltages are possible with series resistors)
Input current:	approx. 1 – 14 mA (depending on the input voltage)
Exit:	plus or minus switching
Output current:	max. 5 mA
Size:	30 x 22 x 10 mm
Weight:	4 g

Pinout



Connections on the circuit board:

Channel	Input	Output negative switching	Output positive switching
#1	1 2	16	15
#2	3 4	14	13
#3	5 6	12	11
#4	7 8	10	9

Inputs:

The 4 inputs are on pins 1+2, 3+4, 5+6 and 7+8. The polarity does not matter for the inputs.

Outputs negative switching (e.g. USM-BN, USM-RC, USM-RC-2):

With the negative-switching version, pins 15, 13, 11 and 9 must be connected to the negative pole of the supply voltage.

The outputs are then on pins 16, 14, 12 and 10.

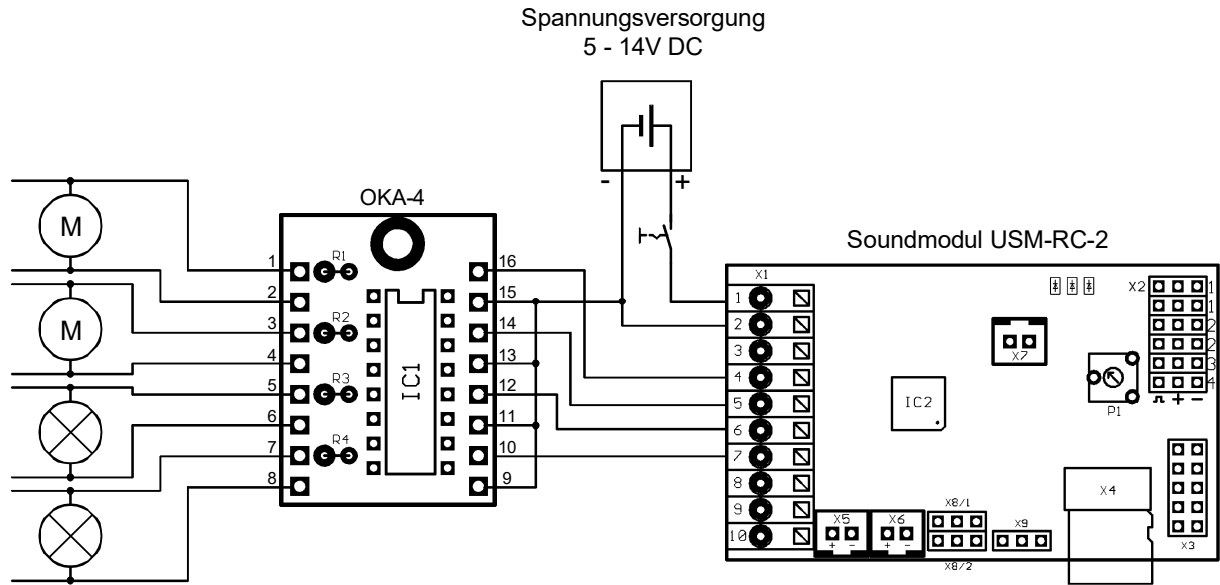
Tip: There are 3 solder bridges on the printed circuit board, with which you can connect pins 15, 13, 11 and 9 with each other. If the solder bridges are closed, then only 1 negative line needs to be connected to one of the 4 pins.

Outputs positive switching (e.g. USM-A, USM-B):

With the positive-switching version, pins 16, 14, 12 and 10 must be connected to the positive pole of the supply voltage.

The outputs are then on pins 15, 13, 11 and 9.

Connection example minus switching



Connection example plus switching

