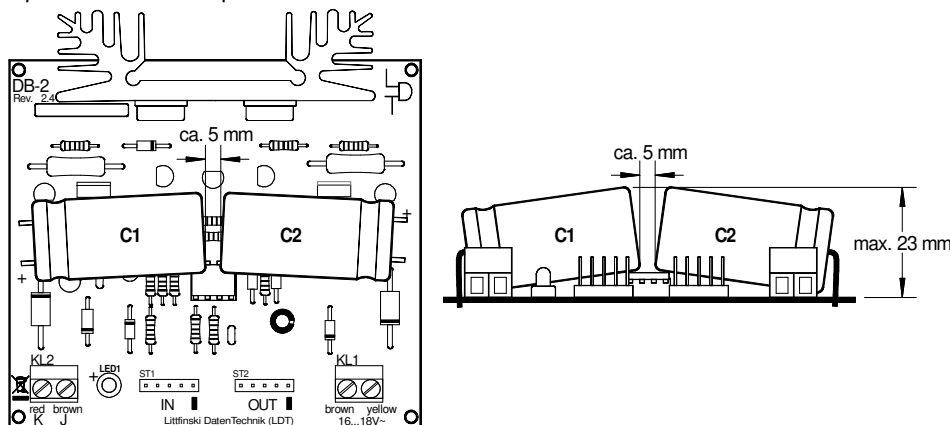


Assembly of the electrolytic capacitors C1 and C2:

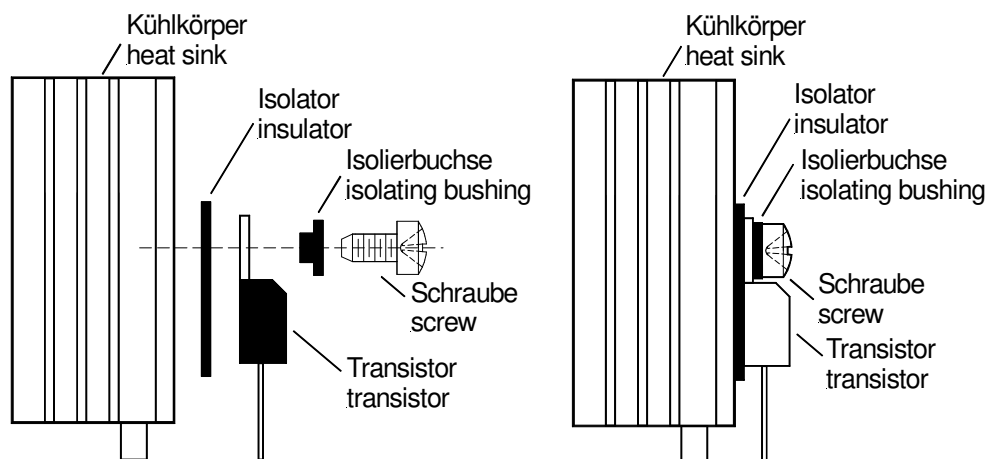
The **connection wires** of capacitor **C1** and **C2** have to be **bent by 90°** before assembly. The capacitors have to be soldered so that they are laying flat above the components of the pc-board. The capacitors have to have a distance of 5mm. A contact between the capacitors has to be prevented.



Draft 1

Assembly of the power transistors T1 and T2:

The **power transistors T1** and **T2** shall be assembled to the **heat sink** in accordance to the drawing by using the **insulator, isolating bushing and screw**. Then insert the complete pre-assembly into the bores of the pc-board and solder them.



Draft 2

Draft 3

Littfinski DatenTechnik (LDT)

Assembly Instruction



DigitalBooster DB-2

from the *Digital-Professional-Series* !

DB-2-B Part-No.: 080061

>> kit <<

The DigitalBooster DB-2 is a short-circuit-proofed power amplifier (booster) for digital model railway layouts. Maximal power output: 2.5A.

The DB-2 amplifies the data formats Märklin-Motorola, mfx®, M4 and DCC

The DB-2 can be directly operated on several digital command stations by use of the attached 5-poles booster-bus cable:

- ⇒ Control Unit (6021)
- ⇒ Central Station 1 and 2 (CS1 and CS2)
- ⇒ Intellibox, EasyControl, ECoS, DiCoStation, KeyCommander
- ⇒ TWIN-CENTER

This product is not a toy! Not suitable for children under 14 years of age! The kit contains small parts, which should be kept away from children under 3! Improper use will imply danger of injuring due to sharp edges and tips! Please store this instruction carefully.



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Introduction:

You have purchased a kit for your model railway supplied within the assortment of Littfinski DatenTechnik (LDT). These kits are of high quality and easy to assemble.

We are wishing you having a good time for assembling and application of this product!

General:

Tools required for the assembly

Please assure that the following tools are available:

- a small side cutter
- a mini soldering iron with a small tip
- solder tin (if possible 0.5mm diameter)

Safety Instructions

- We designed our devices for indoor use only.
- All electrical and electronic components included in this kit shall be used on low voltage only by using a tested and approved voltage transducer (transformer). All components are sensitive to heat. During soldering the heat shall be applied for a very short period only.
- The soldering iron develops a heat up to 400°C. Please keep continual attention to this tool. Keep sufficient distance to combustible material. Use a heat resistant pad for this work.
- This kit consist of small parts which can possibly be swallowed from children. Children (especially under 3 years) shall not participate on the assembly without supervision.

Set-Up:

For the board assembly please follow exact the sequence of the below **assembly list**. Cross each line off as **done** after completing the insertion and the soldering of the respective part.

For the **diodes** please keep special attention the correct polarity (marked line for the cathode).

With reason to different makes of **electrolytic capacitors** you will find different markings of the polarity. Some are marked with "+" and some are marked with "-". Each capacitor has to be assembled to the board that the marking on the capacitor is in correspondence with the marking on the pc-board. The connection wires of capacitor **C1** and **C2** have to be bent by 90° before assembly. The capacitors have to be soldered so that they are laying flat above the components of the pc-board (shown at draft 1). The capacitors have to have a distance of 5mm. A contact between the capacitors has to be prevented.

For **tantalum capacitors** please attend to the connection wire marked "+". This wire has to correspond to the printed mark on the pc-board.

Light emitting diodes have to be assembled that the long wire of the diode corresponds to the mark "+" on the pc-board. Before assembly please slip the **distance spacer** onto the connection wires.

At the **transistor BC 5XX** and the **voltage regulator IC1** the flattened side has to be observed.

The **transistors T3 and T4** have to be assembled that way that the printed lettering shows to the middle of the pc-board.

The **power transistors T1 and T2** shall be assembled to the **heat sink** in accordance to the drawing by using the **insulator, isolating bushing and screw**. Then insert the complete pre-assembly into the bores of the pc-board and solder them (as shown in draft 2 and 3).

Integrated circuits LM393 are either marked with a half round notch on one end or a printed point for the correct mounting position. Push the IC's into the correct socket assuring that the notch or the printed point is corresponding to the half-rounded marking on the pc-board.

Assembly List:

Pos.	Qty.	Component	Remarks	Ref.	Done
1	1	Printed circuit board			
2	2	Resistors 0,18 Ohm	marking:"R18"	R1, R2	
3	2	Resistors 2,2 Ohm	red-red-black-silver	R3, R4	
4	2	Resistors 47 Ohm	yellow-violet-black-gold	R5, R6	
5	2	Resistors 1KOhm	brown-black-black-brown	R7, R8	
6	1	Resistor 2,7KOhm	red-violet-black-brown	R9	
7	1	Resistor 3,3KOhm	orange-orange-black-brown	R10	
8	2	Resistors 47KOhm	yellow-violet-black-red	R11, R12	
9	1	Resistor 5,6KOhm	green-blue-black-brown	R13	
10	4	Resistors 10KOhm	brown-black-black-red	R14...R17	
11	1	Resistor 22KOhm	red-red-black-red	R18	
12	1	Resistor 68KOhm	blue-gray-black-red	R19	
13	2	Diodes BY251	attend to the polarity!	D1, D2	
14	1	Diodes 1N4003	attend to the polarity!	D3	
15	10	Diodes 1N4148	attend to the polarity!	D4...D13	
16	1	IC-Socket 8poles		IC2	
17	2	Capacitors 100nF	100nF = 104	C5, C6	
18	1	Tantalum cap. 1uF/35V	attend to the polarity!	C4	
19	1	Electrolytic cap. 47uF/50V	attend to the polarity!	C3	
20	1	LED plus distance spacer	attend to the polarity!	LED1	
21	1	78L06	attend to the polarity!	IC1	
22	2	Transistors BC 547	attend to the polarity!	T5, T6	
23	3	Transistors BC 557	attend to the polarity!	T7...T9	
24	1	Transistor BD139	attend to the polarity!	T3	
25	1	Transistor BD140	attend to the polarity!	T4	
26	2	Cross recess screws M3x6	for assembly of T1 and T2		
27	2	Silicone insulators	for assembly of T1 and T2		
28	2	Isolating bushings	for assembly of T1 and T2		
29	1	Heat sink	for assembly of T1 and T2		
30	1	Transistor BD243	assembly on heat sink	T1	
31	1	Transistor BD244	assembly on heat sink	T2	
32	2	Pin plugs 5poles		ST1, ST2	
33	2	Clamps 2poles		KL1, KL2	
34	1	IC: LM393	attend to the polarity!	IC2	
35	2	Electrolytic cap.4700uF/35V	attend to the polarity!	C1, C2	
36	1	Multi-Fuse		MF1	
37			Final control		