

9751

Directions for use

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Manuale di istruzioni

Gebruiksaanwijzing

Instrucciones de uso

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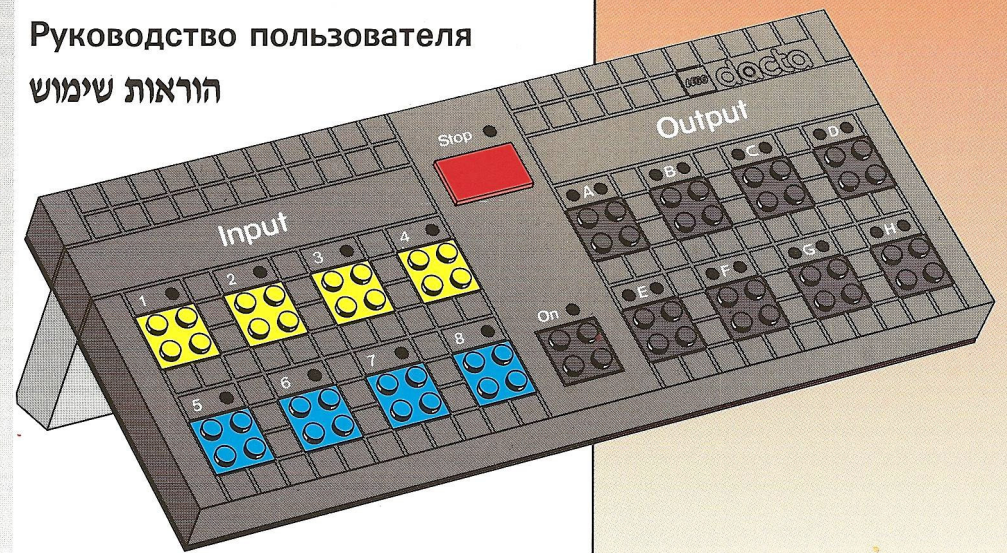
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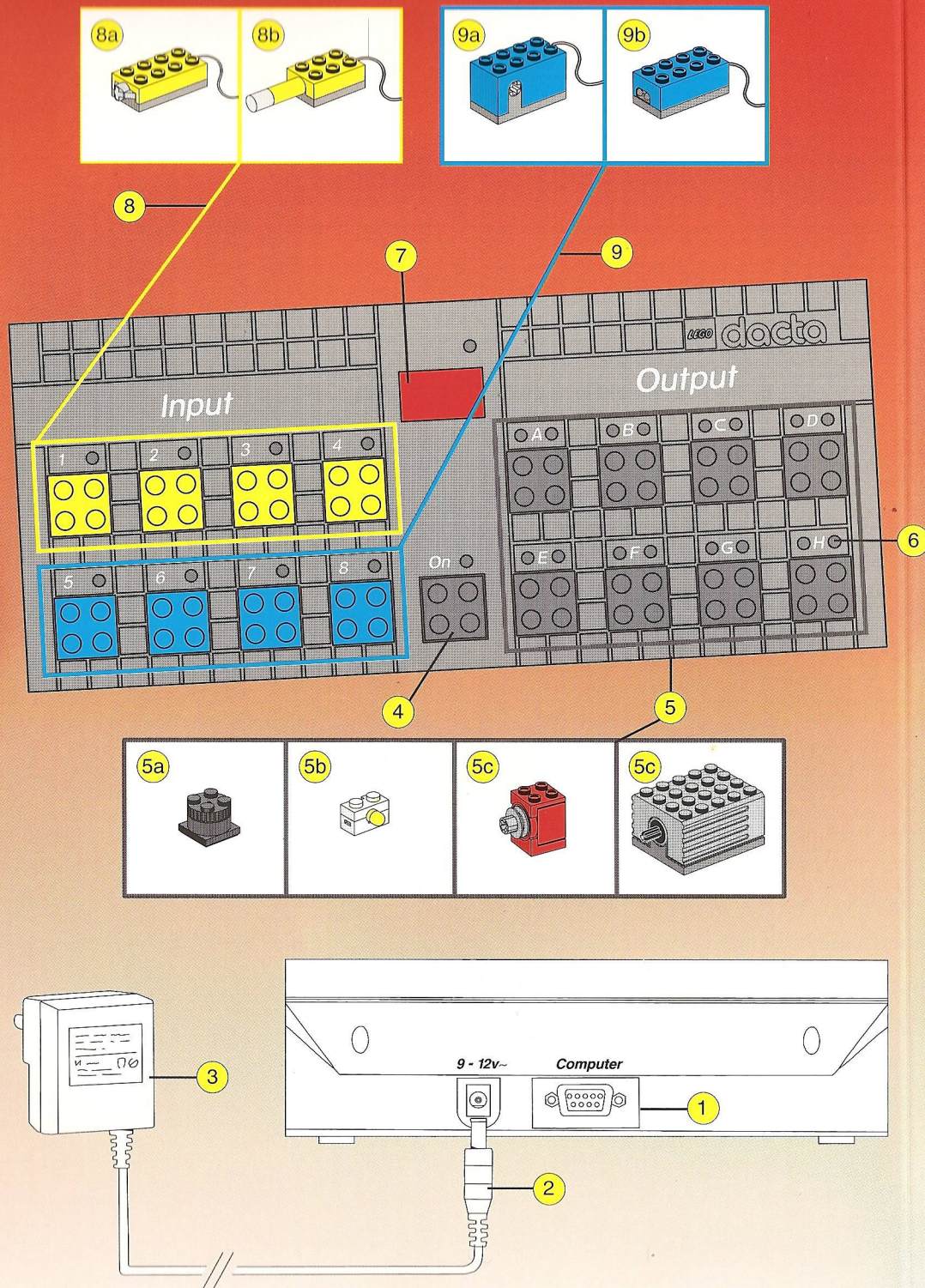
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Introduction

Congratulations on purchasing a new LEGO DACTA® Interface B.

The set includes:

- LEGO DACTA Interface B
- Transformer
- Instruction manual

The interface is an “intelligent” serial link between the computer software and LEGO models.

The interface can control 9 volt motors, lamps and sound elements. LEGO sensors allow data to be collected, recorded and graphed.

Connecting the Computer

The interface is connected to the computer ① via a specific cable. The cable for each supported computer can be ordered from your usual LEGO DACTA educational supplier. Follow the instructions which are enclosed with the cable for your type of computer.

The interface can be used with the following computers;

- Apple Macintosh
- PC Compatible machines (including Nimbus 286/386 machines)
- Acorn (including A3000)

Do not turn on the equipment until the computer is connected to the interface and the interface transformer is connected to the mains power source.

Connecting the Transformer

- Make sure all equipment is turned off.
- Connect the transformer power plug ② to the interface.
- Connect the transformer ③ to the mains power source.

Controlling the Interface

Curriculum material and control software have been specially developed for the LEGO DACTA Interface B. It is unlikely that other manufacturers’ software will be capable of operating the interface. The software and curriculum materials can be ordered from your usual LEGO DACTA educational supplier.

Test Port

The test port ④ is turned on as soon as the transformer is plugged into the mains power source.

The test port is suitable for testing output devices, motors ⑤c, lamps i ⑤b and sound elements ⑤a.

This can also be used to power equipment that needs to be on all the time.

Output Ports

The interface has eight controllable output ports ⑤. These are labelled A–H. These can be used for motors, lamps and sound elements. The output ports have two green lamps ⑥ which indicate the direction of the current.

LEGO DACTA Interface B software allows you to:

- Turn on/off all output channels.
- Change the direction of the current.
- Allows eight possible power levels.
- Set a “flash” rate.

Emergency Stop

The stop button ⑦ is a toggle switch which turns the power off to all output channels. Pressing the button again will allow all output channels to return to their previous state.

Input Ports

The interface has eight input ports. There are two types of input port:

- Yellow input ports ⑧ numbered 1–4 should be used with yellow LEGO DACTA sensors. These sensors do not require power to work e.g. LEGO DACTA temperature ⑧b and touch sensors ⑧a.
- Blue input ports ⑨ 5–8 should be used with blue LEGO DACTA sensors.

These sensors require power to operate correctly e.g. LEGO DACTA light ⑨b and angle sensors ⑨a.

Error Check List

If you have followed all the instructions and your system still doesn't work – try the following:

- Check that there is power to the interface and computer. (A green light should be on at all times when power is connected to the interface.)
- Check that output sensors work when connected to the Test Port.
- Check that the emergency stop indicator light is not flashing red.
- Check that the Interface B software SETUP page has been configured for the sensors you are using.

If all else fails phone LEGO DACTA in the UK: 0978 290900.

Safety Notes

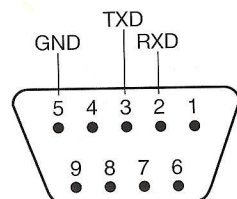
The interface is designed for use in the classroom environment. However, care should be taken so as not to allow the interface to come in contact with water or other liquids.

Technical References

Product Name:	LEGO DACTA Interface B
Art. No.:	9751
Power Supply:	LEGO DACTA 9V Transformer Output Ports: Eight 9V bipolar outputs with indicator lights and built in power level control in 8 steps
Test Port:	One 9V test port
Current Output:	320 mA per output
Stop button:	Switches off all output ports (except test port)
Input Ports:	Eight analogue/digital inputs all with indicator lights, (4 powered and 4 unpowered)
Total Current:	640 mA.
Communication:	Serial RS-232/RS-422
Safety:	Short circuit protected Galvanic separator.

Interface Communication Plug

The pin identification is as follows:



Introduction

Congratulations on purchasing a new LEGO DACTA®, Serial Interface (item #9751).

The set includes a(n):

- Interface
- Transformer
- Instruction manual

The interface is an “intelligent” link between your computer and LEGO® models. The interface can control LEGO 9 volt motors, lights and sound elements. LEGO 9 volt sensors allow data to be collected, recorded and graphed.

Connecting to the Computer

The interface is connected to the computer by a machine-specific cable. The cables can be ordered from your usual LEGO DACTA educational distributor.

To attach the cable to your computer, follow the instructions which are enclosed with the cable. The cable is attached to the port on the interface labelled “Computer” ①.

Connecting the Transformer

- Turn off the computer.
- Connect the transformer power plug ② to the interface.
- Connect the transformer ③ to the main power source.

Controlling the Interface

Curriculum material, control software and LEGO models have been developed for use with the interface. Using the LEGO DACTA software, the interface input and output ports can be controlled. The curriculum material, software and model building sets can be ordered through your usual LEGO DACTA educational distributor.

Test Port

The port labelled “On” ④ is the test port. It is turned on as soon as the transformer is plugged into the main power source. The test port is suitable for testing output devices: motors, lamps and sound elements.

Output Ports

The interface has eight programmable output ports (5) marked A–H which control sound elements (5a), lamps (5b) and motors (5c). The output ports have two green lamps (6) which indicate the direction of the current.

With the LEGO DACTA software, output ports A–H can perform the following functions:

- Turn on/turn off
- Change the direction of current
- Control the power level
- Flash at intervals

Stop Button

The stop button (7) is a switch which turns off all output ports except the test port when pressed. Pressing the stop button again returns the interface to normal use.

Input Ports

The interface has eight digital/analog input ports. The eight inputs are divided into two types:

- Yellow input ports 1–4 (8) are for yellow LEGO DACTA sensors. These inputs are passive. They do not require power to work. The touch (8) and the temperature sensors (8) are yellow.
- Blue input ports 5–8 (9) are for blue LEGO DACTA sensors. These inputs are active. They supply the sensors with power. The blue sensors are the angle (9a) and light (9b) sensors.

Error Check List

If you have followed all the instructions your system still does not work, try the following:

- Check that everything is connected.
- Check that you have turned on your interface and computer.
- Check that your output sensors work when connected to the test port.
- Check that the stop button indicator light is not flashing red. If it is, press the stop button once. The indicator light should turn off.

Make sure your outlet has power.

If all else fails, contact LEGO DACTA Technical Support in the United States: (800) 527 - 8339.

Safety Notes

The interface is designed for safe use in the classroom environment. However, some caution must be observed to protect the interface.

- Never allow water or other liquids to come in contact with the interface or the computer.
- Be careful with other chemicals in the school lab.
- Do not substitute another power supply (transformer).

Technical References

Product Name:	LEGO DACTA Serial Interface
Art. No.:	9751
Power Supply:	LEGO DACTA 9 volt Transformer
Output Ports:	Eight 9 volt bipolar outputs with indicator light and built in power level control in 8 steps
Test Port:	One 9 volt test port
Current Output:	320 mA per output
Stop button:	One emergency stop switches off all the programmable outputs
Input Ports:	Eight analog/digital inputs all with indicator lights, (4 powered and 4 unpowered)
Total Current Output:	640 mA
Communication:	Serial RS-232/RS-422
Safety:	Short circuit protected Galvanic separation

Interface Communication Plug

The plug connection is as follows:

