# **DIY Kits**

| Audio Kits                | P 2            |
|---------------------------|----------------|
| Light Effect Kits         | P 5            |
| Sound Effect Kits         | <b>⊘ €</b> P 6 |
| Car Kits                  |                |
| Measurement and Test Kits | <b>V</b> P 8   |
| Kits for Home Application | P 10           |
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# Audio Kits - Overview

Audio Amplifiers

| Part No. | Max. Power | Impedance<br>[Ω] | Power<br>Supply       | Suitable<br>Transformer | Rransformer<br>Ord.No | Load                | IC        | Transistor        | Note                    | Page |
|----------|------------|------------------|-----------------------|-------------------------|-----------------------|---------------------|-----------|-------------------|-------------------------|------|
| NE529    | 1x 0,66W   | 8                | 4 ÷ 12V               | 1x 9V 3,2VA             | 12879                 | 8 $\Omega$ and more | LM386     |                   |                         | P3   |
| NE021    | 1x 4W      | 4                | 3 ÷ 16V               | 1x 12V 5VA              | 12891                 | 8 $\Omega$ and more | TBA820    |                   |                         | P2   |
| NE530    | 2x 4W      | 4                | 4 ÷ 11V               | 1x 9V 10VA              | 12902                 | 4 $\Omega$ and more | KA2206    |                   |                         | P4   |
| NE011    | 1x 7W      | 4                | 4 ÷ 20V               | 1x 15V 16VA             | 12915                 | 4 $\Omega$ and more | TBA810    |                   |                         | P2   |
| NS561    | 4x 12W     | 2                | 8 ÷ 18V               | 2x 12V 50VA             | 8264                  | 4 $\Omega$ and more | TDA8561   |                   |                         | P5   |
| NE018    | 1x 15W     | 4                | 12 ÷ 24V              | 1x 15V 22VA             | 12934                 | 4 $\Omega$ and more | TDA2030   |                   |                         | P2   |
| NE019    | 2x 15W     | 4                | 12 ÷ 24V              | 1x 15V 30VA             | 12925                 | 4 $\Omega$ and more | TDA2030   |                   | bridge                  | P2   |
| NE060    | 2x 15W     | 4                | 12 ÷ 24V              | 2x 12V 50VA             | 8264                  | 4 $\Omega$ and more | TDA2030   |                   | bridge                  | P3   |
| NE020    | 1x 20W     | 4                | 8 ÷ 18V               | 2x 12V 50VA             | 8264                  | 4 $\Omega$ and more | TDA2003   |                   | only bridge             | P2   |
| NS066    | 2x 20/30W  | 4                | ±10 ÷ ±20V            | 2x 12V 50VA             | 8264                  | 4 $\Omega$ and more | TDA2040   |                   |                         | P4   |
| NS067b   | 2x 30/40W  | 4                | ±10 ÷ ±20V            | 2x 12V 100VA            | 59955                 | 4 $\Omega$ and more | TDA2050   |                   |                         | P4   |
| NS074    | 1x 40W     | 4                | ±10 ÷ ±30V            | 2x 24V 50VA             | 8265                  | 4 $\Omega$ and more | LM3876    |                   |                         | P4   |
| NS563    | 2x 40W     | 2                | 6 ÷ 18V               | 2x 12V 100VA            | 59955                 | 2 $\Omega$ and more | TDA8563Q  |                   | for car appl.           | P5   |
| NE078    | 2x 30W     |                  | $\pm 12 \div \pm 17V$ | 2x 12V 100VA            | 59955                 | 2 $\Omega$ and more | TDA2030   | 2+2pcs BDX53,54   | bridge                  | P3   |
| NS071    | 2x 50W     | 4                | ±10 ÷ ±25V            | 2x 12V 100VA            | 59955                 | 4 $\Omega$ and more | TDA7250   | 2+2pcs BDX33,34   |                         | P4   |
| NS562    | 1x 70W     | 4                | 8V ÷ 18V              | 2x 12V 80VA             | 8266                  | 4 $\Omega$ and more | TDA1562Q  |                   | for car appl.           | P5   |
| NS072    | 2x 80W     | 4                | ±10 ÷ ±35V            | 2x 24V 160VA            | 64732                 | 4 $\Omega$ and more | TDA7250   | 2+2pcs TIP142,147 |                         | P4   |
| NE013    | 1x 70/100W | 4                | ±10 ÷ ±40V            | 2x 24V 160VA            | 64732                 | 4 $\Omega$ and more | TDA7294   |                   |                         | P2   |
| NE013NZR | 1x 70/100W | 4                | ±10 ÷ ±40V            | 2x 24V 160VA            | 64732                 | 4 $\Omega$ and more | TDA7294   |                   | rectifier +<br>heatsink | P2   |
| NE022    | 2x 70/100W | 4                | ±10 ÷ ±40V            | 2x 24V 200VA            | 64734                 | 4 $\Omega$ and more | 2xTDA7294 |                   | bridge                  | P2   |
| NE116a   | 2x 50/100W |                  | ±10 ÷ ±35V            | 2x 24V 300VA            | 60313                 | 4 $\Omega$ and more | TDA7250   | 2+2pcs TIP142,147 | bridge                  | P3   |
| NS073    | 2x 130W    | 4                | ±10 ÷ ±45V            | 2x 24V 250VA            | 64739                 | 4 $\Omega$ and more | TDA7250   | 2+2pcs MJ11015,16 |                         | P4   |
| NS075    | 2x 60/150W | 4                | ±10 ÷ ±30V            | 2x 24V 300VA            | 60313                 | 4 $\Omega$ and more | LM3886    |                   |                         | P4   |
| NS077    | 1x 200W    | 8                | ±10 ÷ ±45V            | 2x 24V 250VA            | 64739                 | 8 $\Omega$ and more | TDA7294   |                   | bridge                  | P4   |
|          |            |                  |                       |                         |                       |                     |           |                   |                         |      |
|          |            |                  |                       |                         |                       |                     |           |                   |                         |      |

| Pre-Am | nplifiers F  | age | An |
|--------|--|-----|----|
| NS201  | stereo HIFI with corrections (LM1036)                    | P4  |    |
| NE025  | stereo with corrections                                  | P2  | NS |
| NS200  | stereo with RIAA characteristic for gramophones (NE5532) | P4  | NS |
| NE098  | stereo with RIAA characteristic for gramophones (TL062)  | P3  | NE |
| NE099  | mono for mikrophone/guitar                               | P3  | NE |
| NE092  | active stereo sound controller (TL084)                   | P3  | NE |
| NE073  | mono graphic equalizer with 5+1 potentiometer            | P3  | NE |
| NE097  | mono 8-channel audio mixer (TL0x1, NA741)                | P3  | NE |
| NE125  | active subwoofer filter (TL072)                          | P3  |    |
|        |  |     |    |

Amplifier Accessories

Page

| NS005  | 10 LED VU meter (LM3915)              | P4 |
|--------|---------------------------------------|----|
| NS053  | stereo 2x5 LED VU meter with AN6884   | P4 |
| NE012  | stereo 2x10 LED VU meter              | P2 |
| NE016  | mono 10 LED VU meter                  | P2 |
| NE085  | deleyed switch-on-speaker system      | P3 |
| NE069  | power supply ±35V without transformer | P3 |
| NE069/ | Apower supply ±45V with transformer   | P3 |

Suitable heatsinks - chapter I



DIY Kits

# AUDIO Kits



Ord.No

45263

Ord.No

Ord.No

Ord.No

62261

9613

NE 012

NE 013

circuits.

TDA 7294

Stereo VU Meter

Dimensions: 80x38x15mm

mixing consoles, stereoamplifiers.

7W 4Ω

Part No

Part No.

S NE 012

S NE 011

#### NE 011 7W Mono Audio Amplifier with

UL1481 (TBA810) This small amplifier is constructed around the UL148 IC. (TBA810) The IC is fully protected against overheating and short circuits. Music power output: 7W / 40hm Frequency response: 40Hz to 20kHz Supply voltage: 4-20V

It is suitable for all stereo devices as recorders.

21 LED – one for ON/OFF indication, 2x10 LED for signal – level indication Supply voltage: 10-14V

100W Mono Audio Amplifier with

It is suitable for driving subwofers. The IC is

fully protected against overheating and short

Music power output: 70-100W / 40hm Supply voltage: from + and -10V to + an - 40V Recommended pre-amplifier: NE025

# 15W 4Ω

Part No.

S NE 018

#### NE 018

Ord.No

9617

15W Mono Audio Amplifier with TDA2030

This small AF amplifier is constructed with the TDA2030 IC, with a maximum supply capability of 15Wrms/4 ohm. The IC is protected against overheating and short circuits. Suitable for tuners, CDs, MP3, radios... Music power output: 15W / 40hm Supply voltage: max.30V Dimensions: 55x45mm



#### NE 019 15W Stereo Audio Amplifier with TDA2030

This small AF amplifier is constructed with the TDA2030 IC, with a maximum supply capability of 2x15Wrms/4 ohm. The IC is protected against overheating and short circuits. Suitable for tuners, CDs, MP3, radios... Music power output: 2x15W / 40hm Supply voltage: max.30V

 Part No.
 Ord.No

 \$ NE 019
 9618



#### NE 020

20W Mono Audio Amplifier with TDA2003

Simple amplifier constructed with two TDA2003 in bridge connection. The IC is fully protected against overheating and short circuits. Music power output: 20W / 40hm Supply Voltage: 8-18V Easy to install

Part No.





#### NE 021

Ord.No

Ord.No

45264

Ord.No

48824

Ord.No

48825

9619

4W Amplifier with UL1482/ TBA820M Suitable for portable equipment

Suitable for portable equipment Music power output: 4W / 4Ohm Supply Voltage: 3-16V

4W 4Ω

Part No.

2x70/100W 4Ω

S NE 021



# NE 022

#### 100W Stereo Audio Amplifier with TDA7294 Suitable for driving subwofers. Max. music power output: 2x100W / 40hm Sumply Velogae for a 100 / 40hm

Supply Voltage: from + and -10V to + and -40V Impedance: 4 Ohm

Recommended pre-amplifier: NE025

Part No. S NE 022



NE 025 Universal Low-Noise Stereo Pre-Amplifier Suitable for NE012 (mono), NE022 (stereo) or 2xNE022 Frequency range: 20Hz - 100kHz Max. input voltage: 775mV Adjustable gain: ±12dB. Input impedance: 220Kohm

Part No. S NE 025



85558

70/100W 4Ω

Part No.

S NE 013



## 48823 NE 013 NZR 100W Mono Audio Amplifier with

TDA 7294, rectifier and heatsink This kit is suitable for driving subwofers. The IC is fully protected against overheating and short circuits. Music power output: 70-100W / 40hm

Supply voltage: from + and -10V to + and - 40V Recommended pre-amplifier: NE025

70/100W 4Ω

Part No. S NE 013 NZR



NE 016 Mono VU Meter

VU meter with a scale consisting of 10 LEDs.

| Part No. | Ord.No |
|----------|--------|
| S NE 016 | 9615   |

#### **AUDIO Kits** (continued)

|   |          |        | 15W St<br>TDA203<br>This small<br>TDA2030<br>2x15Wrms<br>overheatin<br>Suitable fo<br>Music pow |
|---|----------|--------|---|
|   | Part No. | Ord.No | o   |
| s | NE 060   | 45270  |   |
|   |          |        | NE 069<br>Power S<br>NE 069,<br>Power S<br>Univesal p<br>NE069 fo                               |

#### NF 060 5W Stereo Audio Amplifier with DA2030 s small AF amplifier is constructed with the

A2030 IC, with a maximum output power of 15Wrms/4 ohm. The IC is protected against erheating and short circuits. itable for tape recordes, tuners, radios... sic power output: 2x15W / 40hm

wer Supply for ± 35V Amplifiers E 069A

wer Supply for ±45V Amplifiers ivesal power supply for AF amplifiers 069 for output current 5A/10A and output

voltage +/- 35V NE069A for output current 10A/50A and output voltage +/- 45V

Suitable for NE078, NE013, NE022, NE116A

| P   | Part No. | Ord.No |
|-----|----------|--------|
| S N | IE 069   | 45275  |
| S N | IE 069A  | 45276  |

Ord.No

9640

#### NE 073

Graphic Equalizer with Volume Control Mono 5 potentiometers

1 volume regulator Dimensions: 122x58x25mm

|   | Part No. |
|---|----------|
| s | NE 073   |

**NE 078** 2x50W/1x100W Audio Amplifier

This amplifier is constructed with the TDA2030 Max. music power output: 2x30/50W 40hm or 1x60/100W 40hm

Supply Voltage: ±12V and ±17V Easy to install

#### $2x30/50W 4\Omega$ 1x60/100W 4 $\Omega$

Part No. Ord.No S NE 078 9641



#### **NE 085**

Deleyed Switch-On-Speaker System Supply Voltage: 12-24V

Current Consumption: 70mA Dimensions: 55x45x22mm

Part No. NE 085 S

45281 NE 092

Ord.No

Active Stereo Sound Controller with TI 084

This stereo sound controller must be superposed to the stereo final amplifier. Trebles, basses and volume are adjustable separately Dimensions: 75x70x30mm

| Part No. | Ord.No |  |
|----------|--------|--|
| S NE 092 | 9644   |  |

# Part No. NE 097



# NF 097

8-channel Audio Mixer with TL061 The Kit has 8 independet inputs and 1 output. It works with any kind of source of audio signal. The circuits are supplied from integrated regulated power supply 12V or 15V. Because of very low power consuption (30mA) it is possible to use a non-regulated plug-in power supply (adapter).

Ord.No 45297 NE 098

#### **RIAA Stereo Pre-Amplifier with**

**TL062** RIAA stereo pre-amplifier for MD pick-ups. Low noise. Supply voltage: 12V / regulated Active filter: 100Hz

Part No NE 098

s



#### NE 099

Ord.No

45298

Ord.No

Ord.No

9648

9645

Guitar and Microphone Pre-Amplifier

An electric guitar or microphone cannot be connected to just any amplifier or audio instal-This pre-amplifier has been designed lation. exactly for this purpose Input sensitivity: 4mV Output: 775mV Impedance: 5kOhm standard/max.50 kOhm Power supply: 12V Dimensions: 80x50mm

Part No. NE 099



#### **NE 116A** 2x100W Audio Amplifier with TDA 7250

This small AF amplifier is constructed with the TDA 7250 IC, with a maximum output power of 2x100Wrms/4 Ohm. The IC is protected against overheating and short circuits.

Part No.

S NE 116A



#### NE 125

Active Subwoofer Filter Universal active subwoofer filter Adjustable frequency: 80-250Hz Dimensions: 80x50mm

S NE 125 45314

#### NE 529



Mini Audio Amplifier with LM386 Mini audio amplifier suitable for portable equipments, toys, loudspeakers or headsets Output power: 0,66W/8 Ohm Power supply: 4-12V

Low current consumption Dimensions: 38x38mm

Part No. S NE 529

Ord.No 45339





# Audio Kits



## NF 530

2x4W Mini Audio Amplifier (KA2206, TEA2025B) Mini audio amplifier suitable for portable equipments as well as at reparation of old car radios and tape players Power supply: 4-12V

#### 2x4W 4Ω

Part No. Ord.No S NE 530 45340



# NS 005

LED VU Meter with LM3915-mono This LED VU Meter is capable of monitoring and displaying power levels present at the speaker outputs of an audio power amplifier. The level is displayed in ten discrete steps using 10 LEDs for each channel. This projection is designed to give an approximate visual indication of the audio power output of each channel. Supply voltage: +12V

Part No Ord.No S NS 005 11626

NS 053

LED VU Meter-stereo with AN6884 This LED VU Meter is capable of monitoring and displaying power levels present at the speaker outputs of a stereo audio power amplifier. The level is displayed in ten discrete steps using 2x5 LEDs for each channel. (-10dB...+6dB) 2x1 LED On/Off indication Supply voltage: 3,5-18V

Ord No Part No.

S NS 053

2x20/30W 4Ω

11645



#### NS 066 2x30W Audio Amplifier (TDA 2040) NS 067b

2x40W Audio Amplifier (TDA2050) Simple amplifier using TDA2040 or TDA2030 IC Power output: 2x30W/40hm or 2x40W/40hm Supply Voltage: ±20V Gain: 30dB Quiescent Current: 30-100mA

2x30/40W 4Ω

Part No. Ord.No S NS 066 (TDA2040) 11649 S NS 067b (TDA2050) 11650



NS 071 2x50W Audio Amplifier with TDA

7250 Mute and Stand-By mode Power output: 2x50W/4Ohm Supply Voltage: ±10V... ±25V Quiescent Current: 20mA Constant or adjustable gain Max. distortion: 0.06%



#### 2x80W 4Ω

| Part No.       | Ord.No |
|----------------|--------|
| S NS 071 2x50W | 11653  |
| S NS 072 2x80W | 11654  |

7250



#### 2x130W 4Ω

Part No. Ord.No. S NS 073 11655



1x40W/40



2x60/150W 4Ω



# NS 075

2x60/2x150W High-End Amplifier with LM3886 Distortion at 60W: 0,006% Signal-to-noise ratio: 110dB SPiKE-Protection - overload and short-circuit protection, protection against incorrect power supply polarity and thermal protection Quiescent Current: 60-100mA

Power supply: ±30V

Part No. Ord.No S NS 075 11657



# NS 077

2000W DMOS Audio Amplifier with TDA7294 Amplifier constructed with two TDA7294 in bridge connection Short-circuit and thermal protection Mute and Stand-By mode Impedance: 8-16 Ohm Power supply: ±10VDC ... ± 45VDC max.

1x200W 8Ω

Part No.



#### NS 200

Ord.No

#### RIAA Pre-Amplifier for Gramophone with NE5532

Phono preamplifier with the RIAA characteristic. Output is suitable for any kind of audio power amplifiers. As a power supply is used simple 12 or 36V.

Part No. Ord.No S NS 200 11666

#### NS 201

Ord.No

11667



Part No.

S NS 201

Hi-Fi Pre-Amlifier with LM1036 Adjustable gain: +/-15dB Input gain: 20dB Power supply: +9....+12V Consumption: 40-50mA





DIY Kits

P

#### NS 073 2x130W Audio Amplifier with TDA

Mute and Stand-By mode Power output: 2x130W/40hm Supply Voltage: ±10V... ±45V Quiescent Current: 20mA Constant or adjustable gain Max. distortion: 0,06%

#### NS 074 40W High-End Amplifier with LM3876 Max. distortion: 0,006% Signal-to-noise ratio: 110dB SPiKE-Protection - overload and short-circuit protection, protection against incorrect power supply polarity and thermal protection Quiescent Current: 60-100mA Power Supply: ±30V

Ord.No 11656

# **AUDIO Kits**

(continued)



#### NS 561 4x12W Quadro Amplifier (TDA 8561)

Overload and short-circuit protection, protec-tion against incorrect power supply polarity and thermal protection Stand-By mode 4 AF inputs and outputs Power supply: +8....+18V

Max. distortion: 0,3% Gain: 20dB

#### NS 562

70W Audio Amplifier (TDA 1562Q) Overload and short-circuit protection, thermal protection Stand-By mode Stand-By Current: 20uA



2x40W Amplifier (TDA 8563Q) Clean tonality and powerful sound Output Impedance 2-4 Ohm Max. Output power 2x40W/2R and 2x25W/4R Stand-By Current < 100uA Operating voltage: 6-18V Gain> 26dB Overload, overheating and short-circuit protection

| Part No. | Ord.No |  |
|----------|--------|--|
| S NS 561 | 11678  |  |
| S NS 562 | 11677  |  |
| S NS 563 | 11679  |  |

# **Light Effect Kits**



NE 002 Flashing Heart With NE555 10 LEDs

Adjustable flashing speed with potentiometer. Power supply: 9V battery (not incl.) Dimensions: 30x25mm

|   | Part No. | Ord.No      |
|---|----------|-------------|
| s | NE 002   | 9606        |
|   |          | L<br>V<br>S |

#### **NE 007** Light Effect Module

With 7400 IC Suited for different applications, f.e. as eye catcher in stores, at exhibitions, in toys, etc... Power supply: +5V or 4,5V battery

|   | Part No. |  |
|---|----------|--|
| s | NE 007   |  |



**NE 010 Flashing Star** Fading animation Adjustable fading speed with potentiometer Power supply: 15V Dimensions: 125x75x30mm

|   | Part No. | Ord.No |
|---|----------|--------|
| s | NE 010   | 9612   |

Ord.No 9609

Ord.No

9616

# NE 017

6-Channel Running Light This impressive bulb running light can be used for many applications, such as: modelling, advertising and decoration. Power supply: 24 VAC Consumption: 3A per channel Dimensions: 90x47x25mm

```
1x70W 4Ω
```

NS 563

Par S NE

Par

Par S NE

Pa S NE

Par S NE

S NE





Flashing LED Star Based on NE555 IC 31 LEDs Adjustable flashing speed with potentiometer Dimensions: 100x85x20mm

| 6   |       |  |
|---|-------|--|
| rt No.  | Ord.N | 0  |
| 053   | 9635  |  |
|   |       | NE 108<br>Pulsating Heart<br>Show your sweetheart in an original way that<br>your heart still beats for him or her. 40 LEDs<br>form 3 blinking hearts.<br>Adjustable light-up speed<br>Power supply: 12V<br>Consumption: 50mA<br>Dimensions: 80x80mm |
| rt No.  | Ord.N | lo   |
| 108   | 45304 | 4  |
|   |       | NE 111<br>Color Organ<br>3-channel color organ, each channel can drive<br>up to 360W bulb. It's input is equipped with an<br>automatic gain amlifier.  |
| rt No.  | Ord.N | lo   |
| 111   | 9646  |  |
| R1 R3<br>R2<br>C1<br>C1<br>C1<br>C1<br>C1<br>C1<br>C1<br>C1<br>C1<br>C1<br>C1<br>C1<br>C1 | S.R5  | NE 204<br>Christmas Bulb Driver with NE555<br>Power supply: 8-18V<br>Consumption: 4mA at 9V<br>Dimensions: 25x35x10mm  |
| rt No.  | Ord.N | lo   |
| 204   | 45320 | 0  |
|   |       | NE 209<br>Animated Bell<br>Animated Bell with 68 LEDs. Based on popular<br>NE555 IC<br>Power supply: 12V (possible for use in cars,<br>lorries, trucks)  |
| rt No.  | Ord.N | lo   |
| 209   | 46744 |  |
| 2   | 9     | NE 503<br>Blinking Arrow (4049)<br>This blinking arrow can be used for many  |



applications, such as advertising, decoration, in games or as indicator of direction in dark places 8 LEDs Power supply: 6-12V

Dimensions: 55x42x15mm

Part No. S NE 503

Ord.No 9649

Part No.

S NE 017

Р

# Sound Effect Kits



Economic Flashing LED Light (4011)

Very low current consumption Very powerful flash effect (short, bright pulses) For emergencies, warning signs, as eye-catcher, 'alarm-active' - simulation, etc ... Power supply: 3,3-10V Dimensions: 40x30x15mm

Part No.

S NE 515



#### NE 528 Mini-Color Organ (LM324)

The circuit is based on an Integrated Circuit LM324, which provides three sharp active filters for each channel. Three independent controls vary the brightness for low, midrange and high frequencies. Three high-intensity LEDs light up and react simultaneously to every sound. For different funny and practical applications e.g. sound indicator, simple sound-to-light unit for music, tuners or CD-player Power supply: 15-24 V Dimensions: 95x80mm

|   | Part No. | Ord.No |
|---|----------|--------|
| s | NE 528   | 45338  |

Ord.No

45343

Ord No

9656



NE 533 Two-Colour Blinking Flower (555) Based on NE555 7 two-colour LEDs Adjustable speed of blinking Power supply: 9-12V Dimensions: 39x39mm

Part No. S NE 533



# NE 534

Two-colour LED Bar (4017) This 5-channel LED chaser can be used anywhere requiring LED light effects. The circuit is based on Integrated Circuit which drives all 5 two-colour LEDs LEDs light up and fade

Supply voltage: 9-12V Dimensions: 43x34mm

Part No. Ord.No S NE 534 45345



#### NS 018 Light Snake

(4001,4017,4011) This kit can be operated in a wide range of supply voltage 3-30V and can drive up to 48 LEDs.

| s | NS 018 | 11633 |  |
|---|--------|-------|--|
|   |        |       | NS 05<br>Light 3<br>Based of<br>LEDs lig |

Part No. Ord.No

Snake with 18 LEDs (NE555) on NE555 which drives 3x6LEDs ght up and fade Possibility of connection 10x10LEDs Supply voltage: 9V

|   | _        |        |
|---|----------|--------|
|   | Part No. | Ord.No |
| s | NS 059   | 11648  |
|   |          |        |

# Sound Effect Kits



NE 004 Sound Effect Generator (Acoustic Signalization) (NE555) Great for model railroads, radio controlled toys,

stage or as a gadget. Based on NE555 Low power consumption Dimensions: 25x25x10

Part No. Ord.No S NE 004 9607



#### NE 006 4-Sound Effect Generator

(UM3561) Ambulance, Fire, Police, and Machine Gun Sounds Kit Based on UM 3561 (DIL8) Supply voltage: 1,5-3V Dimensions: 51x20x46mm Suitable speaker: ARO 3618

#### Part No. Ord.No

S NE 006 9608



NF 008

9V Electronic Siren (555) A simple siren circuit and a surprisingly loud output. Good as a sound module to attach to an alarm system, etc. 9 volt DC operation. Output Power: 5W/4Ohm Frequency: 300-1000Hz Dimensions: 46x50x30mm

#### Part No. Ord.No NE 008 9610



**NE 009G** Music Box – 3 Melodies(M948) Based on M948 Supply voltage: 4-9V

Dimensions: 30x45x20mm

Part No.



#### NE 024

Ord.No

Ord.No

9621

9611



Part No. S NE 024



# NS 006

Bird Song Sound Generator This unit create a realistic "Bird Song" sound. It is a useful unit having many applications such as door bells, alarms, telephone ring, clocks, timers, shop entrance bell, etc. Min. Impedance: 500hm Supply voltage: +5...+12V/12mA

Part No. Ord.No S NS 006 11627

# Sound Effect Kits

(continued)



NS 017 SMD Police Siren Based on 555 IC

A realistic "American style" police siren imitating device. Supply voltage: 9V

|   | Part No. | Ord.N |
|---|----------|-------|
| s | NS 017   | 11670 |
|   |          |       |

# **Car Kits**



## NF 104

**Digital Tachometer** For cars or motorcycles with a petrol engine. May be used as a general purpose rounds counter. Range: 100 - 7000 rounds/minute 3 digit LED display Power supply: +11... +16V Dimensions: 83x55x30mm

Part No. S NE 104

Ord.No 45301

# NE 120

Electronic burglar alarm for Cars This electronic circuit can be used in cars as a simple engine blocking device. The car can be started only by using a unique electronic key.

Ord.No

9659

Part No. S NE 120

45310



#### NE 521 Windshield Wiper Interval Timer

Different time intervals can be selected for the windshield wipers of your car. It can also be used for driving a slide projector. power supply: 12 V

PCB dimensions : 30x60x25mm

|   | Part No. | Ord.No |
|---|----------|--------|
| s | NE 521   | 45334  |

Part No.

S NE 523

# NE 523

Car Alarm Simulator Kit Want to deter your local thief without spending hundreds on a car security alarm? LED with 'realistic-appearing' flash sequence simulates active car alarm system. Activates automatically when the engine is turned off. Easy to install

Power supply: + 12V Dimensions: 35x20x15mm

# Ord.No





## NE 524N, NE524N SMD

Car-Battery Indicator The alarm detects sudden voltage drops of the battery 5xLED Dimensions: 57x28x10mm



#### Part No. Ord.No S NE 524N 61429 61430

0 NE 524N SMD

SMD



Part No.

Part No.

NE 526

S NE 525

## NE 525

Acoustic Signalization of Reverse Driving (555) This electronic circuit generates an acoustic warning signal for pedestrians when gearbox is switched to reverse.

Power supply: 12V or 24V Dimensions: 70x30x25

#### Ord.No 9661



#### NE 526 Interior Light Driver

The interior light driver delays bulbs switch OFF, for comfortable leaving of the car Power supply: 12V Dimensions: 58x26mm

# 45336

Ord.No

Ord.No

11637

Ord.No 11674

Ord.No

41362



#### NS 027

Converter 12V/22V/2A Converter from 12VDC to 22VDC at maximum rated output power 2A Efficiency: 90% Transformerless

Part No. NS 027

Part No.

NS 100

SMD

Part No.

S HWK1



#### SMD Car-Battery Indicator

The alarm detects sudden voltage drops of the battery Three LEDs indication (over 13,6V; from 13,6V to 10,6V; under 10,6V)

# HWK1



## The alarm detects sudden voltage drops of the battery when the car lights are switched on. Continuously repeated alarm tone indicate

Headlight Warning Kit

that the lights are activated, so that you will not forget to switch them off. Only 3 wires are required for hook-up Supply voltage: 12V DC



# Measurement and Test Kits

43138

9620

Ord.No

45265

Ord.No

**NE 041** 

taneously

NE 023

,2-24V/3A



S NE 005

NE005

Power Supply 2-12V/0,5A Based on UA723 IC

Power Supply 5/12V 1A;

1,2-24V/3A Input voltage: 12V/1A and 24V/3A

Output voltage: +/-5V, +/-12V or 5V,12V Dimensions: 125x90x75mm

Suitable for motors, bulbs...not suitable for audio equipment. Continuosly adjustable voltage Input Voltage: 15-17V Dimensions: 30x55x85mm



NF 049

ISP Programmer For AT89Sxx, AT AVR, EEPROM with I2C and some PIC processor programming



NE 054

#### Adjustable Power Supply 1,2-24V



Ord No

56478

Adjustable output voltage from 1,2V to 37V Dimensions: 92x42mm



## **NE 100**

**Professional Power Supply** 13.8V/10A

Regulated power supply for 13,8V and 10A With short-circuit and thermal protection Suitable for radio transceviers and more de-manding applications.

Part No.

Part No.

Part No.

S NE 041

S NE 028

S NE 023

# Ord.No

#### NF 028

Regulated Adjustable Power Supply 1,V-17V/3A Based on LM317

Universal power supply for regulated voltage 5V and 12V/1A

Adjustable power supply with voltage regulation

Adjustable power supply for all common kits based on a stabilized DC voltage between 1,3 and 17V at max. power 3A. Of course this power supply unit can also be used for other purposes Output voltage: adjustable from 1 to 17V, sta-

bilized Output current: max. 3A

Kit uses pre-programmed micro-controller to drive up to 8 model/hobby servo motors simul-

Transformer not supplied Dimensions: 132 x 67x 25mm

Servo-Motor Driver RS232



Part No.

#### NE 122 LED Tester

Ord.No

For standard or low current LEDs. For test-ing function, brightness and polarity. Ideal for goods received, goods testing, the laboratory, in production and hobby use. Voltage supply: 9V Dimensions: 51x49mm

Part No. Ord.No S NE 122 45312



### NF 123

Battery Tester (with LM3914) Suitable for 1,5V AAA (LR3), AA (LR6), C (LR14), D (LR20), and 9Vblock batteries Battery status indicated on 10 LED indicator Not suitable for rechargeable batteries Voltage supply: 12V



#### NE 504

Adjustable Mini-Drill Supply

Suitable for all Types of minidrills which are supplied with DC voltage up to +17V and with maximum current consumption 5A Easy mounting



# **NE 046V**

Digital Voltmeter This high-brightness digital panel meter is based on 12-bit converter ICL 7107 Supply voltage: 7-15V (regulated 5V± 5%) 4-Digit display Range: 200mV to 20V Dimensions: 91x65x35

lo 2

|   | Part No. | Ord.N |
|---|----------|-------|
| s | NE 046A  | 58622 |
| s | NE 046V  | 45269 |



DIY Kits

P



This high-brightness digital panel meter is based on 12-bit converter ICL 7107 Supply voltage: 8-15V 4-Digit display Range: 200uA to 20A Dimensions: 84x53x36mm

Part No. Ord.No NE 504 s

9650

# **Measurment and Test Kits**

(continued)

| R |                               | 1 |
|---|-------------------------------|---|
| 1 | $\langle \mathcal{O} \rangle$ |   |
|   | Y                             |   |

#### NS 012 Digital LED Voltmeter Module 0-199mV 3,5 digit LED display Character height: 14mm Based on 7107 IC

Voltage range: 0-199,9mV Voltage supply: +5V



#### NS 013

C/U Meter 1pF-10uF Digital capacitance meter, output frequency determines measured capacitance. Capacitance range: 1pF-10uF

Ord.No

Ord.No

11632

Ord.No

11629

Part No. S NS 013



L/U Meter 0uH-500uH



## This electronic kit acts like simple L to U converter. The output voltage can be measured by a standard voltmeter. Based on 74HC132 IC Inductance range: 0-500uH Voltage supply: 5V

Part No. S NS 015



#### NS 045 Power Supply 2-36V/2A with

possible limitation of output current Based on L200 IC Max. input volatage: 40V

|   | Part No. | Ord.No |
|---|----------|--------|
| s | NS 045   | 11640  |
|   |          |        |

#### NS 089

Power Supply 0-30V with possible limitation of output current and transformer Based on LM317 IC Incl. 130VA toroidal transformer

| Part No. | Ord.No |
|----------|--------|
| S NS 089 | 11663  |



## NF 001

Ord.No

Ord.No

Ord.No

54638

Ord.No 45268

9628

Temperature Controlled Digital Thermometer -50°C ...+150 This thermometer with its red LED indicator can be placed anywhere you wish to measure temperatures from -50 to +150  $^\circ\text{C}.$ Temperature stabilization from 15°C to 30°C 4 Digit LED display / 1% accuracy Thermostat adjustable with potentiometer

| NE 001 4526 | 2      |
|-------------|--------|
|             | 1      |
|             | T<br>1 |

# NE 031

12 LED Thermometer Temperature counting by 1°C in range from 17°C to 28°C 12 LEDs Dimensions: 90x42x20mm

Part No. Ord.No S NE 031 9625

Part No.

s



## NF 035

Digital Thermometer -20°C...+99°C Electronic thermometer Temperature range: from -20 to +99 °C. Temperature regulation from 15°C to 30°C 7 Digit LED display Supply Voltage: 12V Dimensions: 80x40x90mm

Part No. NE 035 s



# NE 044

Thermometer -50°C ...+125°C Two - output thermometer for displaying f.e indoor and outdoor temperature Measuring range: from – 50 to +125°C/ 0,5% accuracy With temperature sensor DS18B20 Two LED displays with 14mm characters Power supply: 9V battery

Part No. NE 044

s



#### NF 045 Digital Thermometer -50°C +150°C

Based on ICL7107 IC 3,5 Digit LED display Temperature range: from -50 to +150°C Power supply: 7,5-10V Current consumption: 250mA Operating temperature: 0-70°C Dimensions: 91x65x35mm





## **NE 047**

Digital Thermometer with DS18B20 and Dot Matrix

8x8 LED Matrix with displaying temperature or other patterns (heart, arrow...) Power supply: 9-12V Dimensions: 60x60x17mm

Part No. S NE 047

Ord.No 56477



# **Kits for Home Application**



NE 052 Thermostat (MA741) For keeping constant temperature e.g. in aquariums

Indication with two LEDs Dimensions: 25x40x80mm

Part No.

S NE 052

Ord.No 9634 NE 088



45295

Ord.No

45303

Ord.No

11628

NE 107

NS 010

With ICL7107

Power supply: 5-15V

LED indication

onds With electromagnetic relay

NE 088 2-channel LCD Thermometer -20°C...120°C For displaying e.g. indoor and outdoor temperature Measuring range: from -20 to +120°C Power supply: 9V



Part No.

Part No.

S NS 010

S NE 107

# Power supply: 9V Dimensions: 77x85x17mm

Universal Start/Stop Timer Start/Stop push button switches.

Digital LED Thermometer Measuring range: from -99°C to +150°C

Time adjustable from 10 seconds to 500 sec-



9624

Ord.No

9627



#### NE 029 Dimmer (MA741)

By separately adjusting the threshold levels for light and dark, numerous applications are made possible. For automatic switching of alarm systems in the night, for controlling window shutters and awnings, general use as a light dependent switch, when differences in brightness should be recognised and used for control purposes Output relay 24V/3A

Dimensions: 20x45x55mm

Part No. Ord.No

S NE 029



#### NE 034N Mini Central Alarm Kit(4538, 4093)

This affordable kit offers you a comprehensive security system.

The loops can be used independent of each other in a self-learning way as break contact, closed-circuit contact or with monitored loop resistance. A lapsed alarm continues to be displayed via an LED. Current consumption: 20mA/60mA Power supply: 12-15VDC Dimensions: 90x60x25mm

Part No.

S NE 034N



#### NE 037 Clap ON/OFF Switch

Control your lamps simply by clapping your hands

Good immunity against surrounding noises Microprocessor-controlled Output relay with LED indicator Current Consumption: 9,5mA/50mA Dimensions: 80x50x15mm

Part No. Ord.No.

S NE 037 9630

### NEC

Ord.No

9637

9638

1-chanell IR Reciever LED indication Range: 10m Current consumption cca 50mA Dimensions: 81x52x20mm



# NE 056A

IR Transmitter Power supply: 12V battery (incl.) Dimensions: 23x53x10mm

|   | -        |  |
|---|----------|--|
|   | Part No. |  |
| s | NE 056   |  |
| s | NE 056A  |  |



NE 086 IR Light Barrier Applications : announce visitors, warn against burglars, set boundaries, scientific projects,... Specifications Range: 3,5m Dimensions: transmitter: 35x45mm

Cord.No

S NE 086 9643

Part No.



DIY Kits

Р



With NE555 timer Basic time range: 100min. – 20 hours Possible range: 1min. – 20 hours Power supply: 12V

 Part No.
 Ord.No

 S
 NS 085
 11660

Ord.No

41363



Part No

S TEMP1

#### TEMP1 Thermometer

Max. measuring range: up to 150°C Resolution: 0,1°C Suitable for all digital multimeters with input resistance 10MOhm Ord.No

45305

Ord.No

Ord.No

9653

9652

......

NE 508

easy to define. 7 digits

Relay output

NE 509

## Kits for Home Application (continued)

#### NE 114 1-Channel Remote Control

|--|

Part No.

Part No.

Part No.

Part No.

Part No.

S NE 512

S NE 509

S NE 508

S NE 114

Reciever and transmitter Suitable for all kinds of applications such as light control, cars, garages. Reciever Ultra compact Indication through LED Dimensions: 30x35mm Transmitter: 310MHz operation

LED indication Dimensions: 82x52mm Input power: 12Vac / 500mA

Code Lock (4022)

Power supply: 9 - 14V DC

Dimensions: 90x50x15mm

1,25V NiCd Batteries

LED indication

NE 511

Charging current 90/250mA

Dimensions: 70x57x20mm

This code lock may be used to switch an alarm

on and off, or to open a door lock. The code is

Power supply: 12V/1A (AC) or 13-15V/1A (DC)



#### NF 531

Stroboscope (555) Based on NE555 Flashing light effects Power supply: 12V Bulb 12V/20W

Part No. Ord.No NE 531 45341



SUPERGATE "A"

#### GSM Supergate"A" Main features:

Sending up to 8 SMS/calling up to 16 numbers on the state change of the 4 contact inputs Programmable through SMS Control of relay with phone call Remote interception of the locality from authorised number Technical data: Working frequency: GSM 900/1800/1900 MHz Supply voltage: 12-14 VDC Current consumption: Nominal: 40mA Maximum: 2000mA (during registration to network and calls) Operating temperature: -20°C - +70°C Dimensions: 100 x 54 x 20mm Weight: 60g

# GSM Supergate"B" Main features:

Sending up to 8 SMS/calling up to 16 numbers on the state change of the 4 contact inputs Programmable through USB, SMS Control of 2 relays with SMS LCD display, aluminium enclosure Technical data: Working frequency: GSM 900/1800/1900 MHz Supply voltage: 12-14 VDC Current consumption: Nominal: 60mA Maximum: 2000mA (during registration to network and calls) Operating temperature: -20°C - +70°C Dimensions: 100 x 54 x 20mm Weight: 120g

#### GSM Supergate"C"

Main features: Sending up to 8 SMS/calling up to 16 numbers on the state change of the 4 contact inputs Programmable through SMS Control of inputs (armed/disarmed) with phone call from up to 4 authorised numbers Output relay can controll directly alarm siren Aluminium enclosure Technical data: Working frequency: GSM 900/1800/1900 MHz Supply voltage: 12-14 VDC Current consumption Nominal: 40mA Maximum: 2000mA (during registration to network and calls) Operating temperature: -20°C - +70°C Dimensions: 100 x 54 x 20mm Weight: 110g

|   | Part No.      | Ord.No |
|---|---------------|--------|
| s | SUPERGATE "A" | 64509  |
| s | SUPERGATE "B" | 64506  |
| s | SUPERGATE "C" | 64507  |

# Miscellaneous Kits



Part No

S NE 026

e

|   | (7493, 7400)                                      |
|---|---|
|   | Electronic dice with LED indication. Slowly rolls |
| - | to a stop when the push button is released.       |
|   | Dimensions:55x45x20mm                             |
|   |   |



SUPERGATE "B"



SUPERGATE "C"

|   | Part No.      | Ord.No |
|---|---------------|--------|
| s | SUPERGATE "A" | 64509  |
| s | SUPERGATE "B" | 64506  |
| s | SUPERGATE "C" | 64507  |
|   |               |        |

| 0   | NE 026               |
|---|----------------------|
|   | Electronic Dice      |
| 0 0   | (7493, 7406)         |
| Contra a la contra de la contra d | Electronic dice with |
|   | to a stop when the   |
|   | Dimensions: 55x45    |

Ord.No

9622

alarm device.

Part No. Ord.No

NE 514 45330

#### (MA741, NE567) Relay output For different funny and practical applications e.g. sound indicator, simple sound-to-light unit for music. The unit can also be used to indicate impaired.

Ord.No

when the doorbell or the telephone is ringing, which is particluarly interesting for the hearing-

**Optical/Acustical Switch** 

Dimensions: 70x40x20mm



NE 512

Water Alarm (4011) Gives alarm sound when water is detected Optical or acoustical signalization is possible Water sensor can be placed at a distance by cutting the board and using wires to connect the sensor

Power supply: +12VDC Dimensions: 60x30x20mm

Ord.No 9655

#### NE 514

#### Liquid Level Controller (4093) You forget to turn off the tap, the washing ma-

chine leaks, the water level in your aquarium drops, the water tank is empty or suddenly overflows, there's water in your cellar, etc. Prevention is still better than cure and that's where this kit comes in. This multifunctional device is easy to use in a variety of applications : 1) LED control of set fluid level : LOW, MIDDLE, HIGH ; 2) Controller : the relay automatically switches a pump and/or valve to keep the fluid level between the LOW and HIGH marks ; 3) Alarm : if the sensor detects a level which is too high or too low (selectable), the relay will operate an

#### Dimensions: 50x45x15mm

# Kits for Home Application

Ord.No

9623

NF027

Electronic Roulette (7493, 74154) 16 LEDs. Push-button operation. Microprocessor technology.

Low power consumption Dimensions: 75x75x20mm

Part No. S NE 027



#### NE 081N Mini FM Transmitter

This FM transmitter runs on four "AA" size batteries and has good frequency stability. The transmitting frequency is adjustable. A sensitive microphone and an LED indicator are also incorporated right on the board. Supply voltage: 12V DC ( "AA" size battery) Frequency adjustable: 88 to 108MHz Power consumption: 10mA Dimensions: 60x10mm

Part No. S NE 081N Ord.No 61437

Ord.No

Ord.No

Ord.No

9658

9657

9654



#### NE 510 Ultrasonic Insect Repellent (4093) Working at 20kHz frequency

Current consumption: 4mA Power supply: 9V Dimensions: 55x50x25mm

|          | Part No. |
|----------|----------|
| s        | NE 510   |
| <u> </u> | NL 010   |



#### NF 517 **Electronic Fuse** 2 LED Indication Working voltage up to 24V Max. current: 0,3A Dimensions: 40x30x15mm

Part No.

S NE 517



NE 518 Thermal Fuse (MA741)

Adjustable temperature range: 80-150°C Power supply: 12-24VDC Dimensions: 45x55x20mm

|   | Part No. |  |
|---|----------|--|
| s | NE 518   |  |
|   |          |  |

SMD

NS 101 Mini FM Transmitter with autotuning (TDA7088T Based on TDA7088T SMD This transmitter is an exciting product that will

broadcast a quality signal in the 0,5 - 110MHz FM band. Power supply: 3V (max.5V) RESET button **RUN** function

| Part No. | Ord.No |
|----------|--------|
| NS 101   | 11675  |

# VOLTIK I

#### Experimental/Educational Kit This series of Snap Circuit

educational labs is perfect for learning about electronics. More than 35 different electronic experiments. All

parts snap together, so there is no soldering involved. All the pieces have graphics that represent real electronic symbols and terminology. The many Snap Kit experiments include bells, alarms, flash lights and much more. Suitable for beginners and ages 7 and up.



# **VOLTIK II**

# Experimental/Educational Kit

Experimental/Educational Kit This series of Snap Circuit educational labs is perfect for learning about electronics. More than 50 different electronic experiments. All parts

Experiment/Educational

This series of Snap Circuit educational labs is perfect for learn-

ing about electronics. More than 50 different electronic

experiments. All parts snap together, so there is no soldering involved. All the pieces have graphics that represent real

snap together, so there is no soldering involved. All the pieces have graphics that represent real electronic symbols and terminology. The many Snap Kit experiments include radio, telephone, alarms, flash lights and much more. Ages 10 and up.

**VOLTIK III** 

Kit



#### rolling

|   | Part No.    | Ord.No |
|---|-------------|--------|
| s | VOLTIK I.   | 44535  |
| s | VOLTIK II.  | 44536  |
| s | VOLTIK III. | 44537  |

EDU 1





Part No. Ord.No S EDU 1 73889

messages and much more. Ages 12 and up.

#### Electronicl Kit Based on Magnetic Forses

EDU 1 kit enables connecting electronic components based on magnetic forces Every single component is mounted on PCB in ABS plastic constructional base stands with magnets. Electronic components are then connected with galvanic coated steel spheres (27pcs) and contacting copper terminals in two lengths (15pcs of short, 5pcs of long ones).

EDU1 kit is equipped with basic components as: resistor, capacitor, diode, LED diode, transistor, photoresistor, switch and buzzer (19 components altogether) + two additional, empty segments enable the more advanced users to use any double-terminal electronic element. There is also power supply with a switch (short circuit resistant) made from four AA 1,5V batteries + supply wires.

In this way the number of possible electronic circuits is almost unlimited.



## Miscellaneous Kits (continued)





MERKUR 2.2 Experimental Electronic Kit - Electric Motors

Experimental Electronic Kit - Elec-

Learn about motors and simple machines 17 parts - includes electromotor, battery-holder

Learn about motors and simple machines 106 parts – includes electromotor, batteryholder and set of gear-wheels

#### **MERKUR E1**

**MERKUR 2.1** 

tric Motors

and set of gear-wheels

Experimental Electronic Kit - Electricity and Magnetism 88 various experiment Ages 10 and up



**MERKUR E2** Experimental Electronic Kit - Electronic 60 various electronic experiments Ages 10 and up

|   | Part No.   | Ord.No. |
|---|------------|---------|
| s | MERKUR 2.1 | 63786   |
| s | MERKUR 2.2 | 63787   |
| s | MERKUR E1  | 63781   |
| s | MERKUR E2  | 63782   |



Part No.

#### **MERKUR Steam Engine** Standard

Create your own steam engine! Alcohol-fueled engine

Ord No 63785 S Merkur Steam Engine Standard

# Ordering Online



