

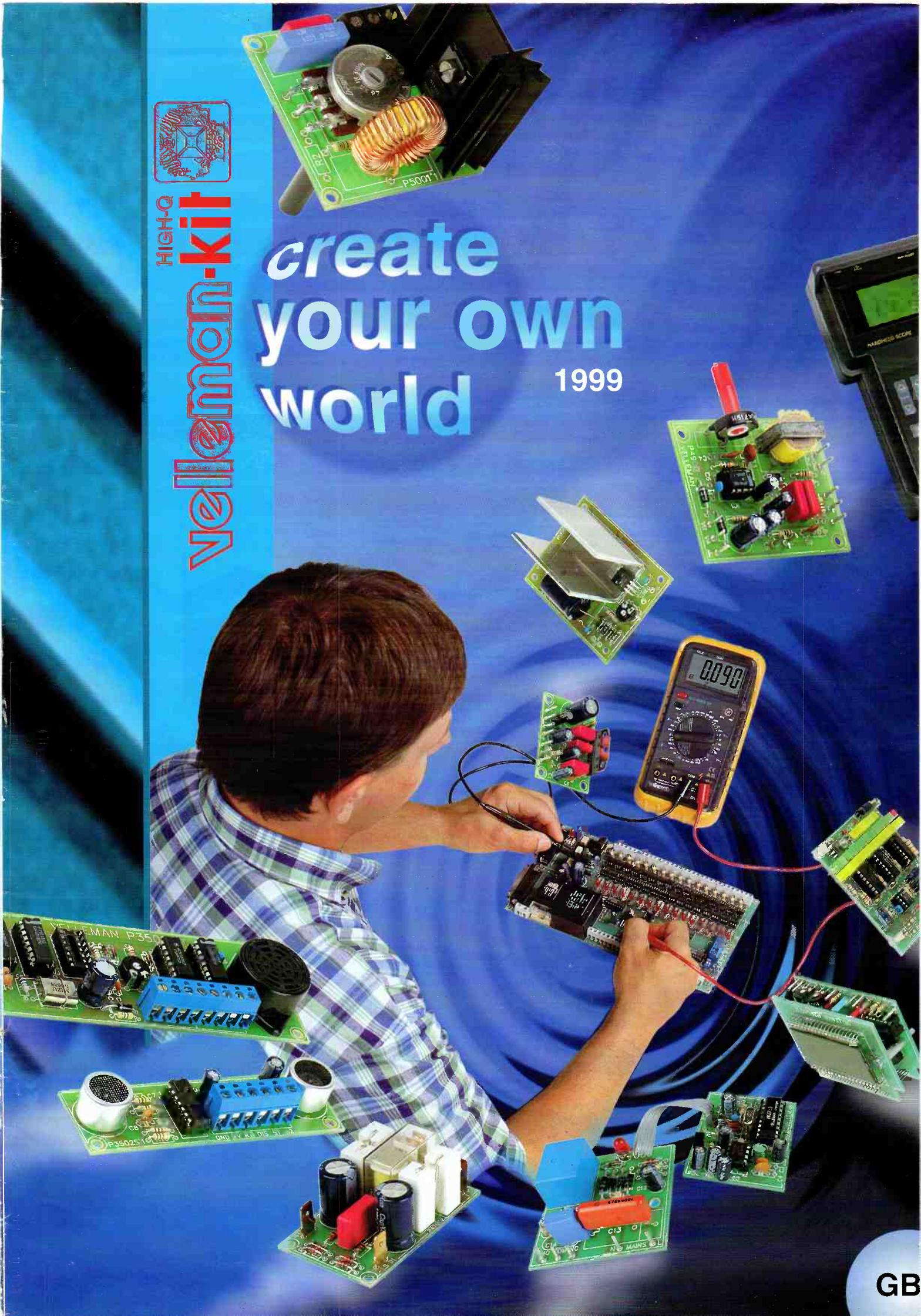


HIGH-Q

velleman-kit

create
your own
world

1999



GB



VELLEMAN KIT IS HAVING ITS 25TH ANNIVERSARY !

We would like to thank you, dear customer, for the trust in our products. During these 25 years we have tried to please all electronic freaks with a broad range of different applications. We always assure full service, not only for our new Mini Kits, simple and easy to construct but also for our more specialised kits, such as our excellent Hand-held oscilloscope and the Digital Storage scope. Velleman Kit, the way to electronics... Lets make it together.
Stefaan Santens

REFERENCES : : exists also as module

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- : recommended housing
- : recommended transformer
- : recommended adaptors



MINIKITS



CHRISTMAS TREE WITH BLINKING LEDS

Never was Christmas so congenial! 16 blinking LEDs. Very low power consumption : max. 4mA. Power supply : 9V battery*

* Battery not included

MK100



The Mini-kits are a whole new series in the big family of already existing Velleman kits. They are small, easy and simple to build, without losing quality and performance. This new serie is specially designed for people who are making their first steps in the big fascinating world of electronics, but they can also be used by professionals. It's now up to you to try them ?



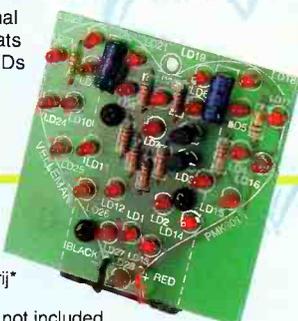
FLASHING LED SWEETHEART

Show your love in an original way that your heart still beats faster for him or her. 28 LEDs form 2 blinking hearts. Consumption : ± 8mA. Power supply : 9V battery*

MK101

Verbruik : ± 8mA. Voeding : 9V batterij*

* Battery not included



FLASHING LEDS

For different applications (such as model construction), and recreational. Adjustable flashing speed with two potentiometers.

Consumption : ± 8mA. Power supply : 9V battery*

* Battery not included



MK102



ELECTRONIC CRICKET

Can be used for fun or to simulate a hot summer night. Automatically comes on when it gets dark. Cricket repetition (time between two crickets), effect, light sensitivity and tone adjustable.

MK104

Adjustable light sensitivity.
Consumption : $\pm 5\text{mA}$.
Power supply : 9V battery*

* Battery not included



SOUND-TO-LIGHT UNIT

Four high-intensity LEDs light up and react simultaneously on every sound. For different funny and practical applications, such as : sound indicator, simple sound-to-light unit for music, for the hearing impaired : can be used to indicate the telephone, doorbell.

MK103

Adjustable sensitivity with potentiometer. Built in microphone.
Consumption : 0.5mA min. / 12mA max.
Power supply : 9V battery*

* Battery not included



SIGNAL GENERATOR

Signal output : sine wave, triangle, square wave and integrator (selectable through jumper). Signal frequency : about 1KHz (fixed). Output level : adjustable from 0 to 100mVrms (LEVEL potentiometer).

MK105

Power supply : 9V battery*

* Battery not included



METRONOME

Incorporated speaker included. LED beat indication. Adjustable volume and beats / minute with potentiometers. On / off switch on board.

MK106

Power supply : 9V battery*

* Battery not included



LED RUNNING LIGHT

8 LED's. Different LED running effects are selectable (PROG push button). Adjustable effect speed (SPEED potentiometer). Power stand-by push button (OFF push button).

MK107

Power supply : 9V battery*

* Battery not included



WATER ALARM

Gives alarm sound when water is detected. Incorporated alarm buzzer. Water sensor can be placed at a distance by cutting the board and using wires to connect the sensor.

MK108

Power supply : 9V battery*

* Battery not included



ELECTRONIC DIE

Electronic die with LED indication. Rolls slowly out when the push button is released.

MK109

Power supply : 9V battery*

* Battery not included



SIMPLE ONE CHANNEL LIGHT ORGAN

With loudspeaker input. Modulates a lamp according to the music signal at the input.

MK110

Optical isolated loudspeaker input. Adjustable sensitivity.
Input sensitivity: 2W to 60W. Maximum load: 120W at 120VAC and 230W at 230VAC.



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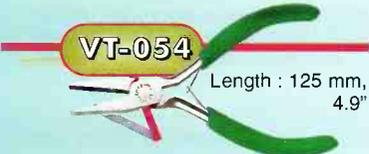
VIDEO APPLICATIONS

VELLEMAN PRODUCTS



VT-046

Length : 150 mm, 5.9"



VT-054

Length : 125 mm, 4.9"



VT-055

Length : 125 mm, 4.9"



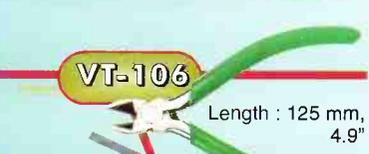
VT-056

Length : 115 mm, 4.5"



VT-057

Length : 110 mm, 4.3"



VT-106

Length : 125 mm, 4.9"

Universal pliers "heavy duty".
Length : 190 mm, 7.5"



VT-03

Universal cutter "heavy duty".
Length : 165 mm, 9.5"



VT-09



VT-SET

Set of 5 small, high quality pliers, made of special steel. It has been tempered specially to get unique cutting characteristics and a great durability. The edges are specially designed to cut copper and other mild metal. The spring ensures that the jaws return to the open position.

Set of 5 precision tools :
Diagonal cutter, Cutter, Bent nose pliers,
Flat nose pliers, Long nose pliers

VIDEO APPLICATIONS



K4601

Input : audio and video · Output : UHF channel 21 (450-500MHz adjustable) · Supply voltage : 12 to 15VDC / 100mA · Dimensions : 70 x 104 x 30mm, 2.8" x 4.1" x 1.2"

PS1203

VIDEO DIGITISER FOR IBM COMPATIBLE PC

This is a real time video digitiser card intended to use with IBM compatible personal computers (PC) with VGA or higher video-monitor. The card can be plugged into any expansion slot within the computer. The digitiser converts video signals supplied by a TV set, a camcorder, a video recorder, or a video camera into digital data that can be processed by the PC. The video signals (PAL compatible) are converted into 512 x 512 pixels and 256 grey levels ; still RGB signals (colour) are converted into 16.7 million colours. The digital image is converted into a TIFF (Tagged Image File Format) or BMP (Bitmap) file that can be processed further by almost any graphics program that runs under MS-DOS or Windows. High quality pictures are achieved by using rather high (10MHz) sampling rate and using a built-in phase locked loop.



K8100

System requirements :
PC 286 or higher ·
VGA video card or higher · Free XT slot · Windows 3.1 or higher

Black / white : Resolution : 512 x 512 pixels · Grey levels : 256 · Sample frequency : 10MHz · Input signal : composite PAL video (15625Hz line frequency)

· Output file format : TIFF (8 bits) or BMP

Colour : Resolution : 512 x 512 pixels · Colour input signal : RGB · Number of colours : 16.7 million · Output file in colour : TIFF (24 bits) or BMP



VIDEO RGB CONVERTER/PROCESSOR

To process a PAL colour video signal it first has to be converted back into the original Red, Green and Blue signals. In this way the colours can be adjusted separately along with, the colour intensity, brightness and contrast. After processing, the signal can then be converted back into the PAL video signal. A choice can be made between PAL Video or RGB outputs. In addition a place has been provided on the PCB for a UHF modulator (our type RFMOD), such that the antenna input of the TV or video can also be used. It is also possible to connect a SVHS input signal.

The RGB output is highly suitable for controlling our K8100 video digitiser card, so that PAL video signals can also be digitised in colour.



K4600

Colour system : PAL (CCIR) · Controls for brightness, contrast and saturation · Separated controls for Red, Green and Blue · Composite video input (RCA-connector) · RGB input (option) · Input level : 1Vpp · Input impedance : 75 ohm · Composite video output (RCA-connector) · RGB-output : 9-pin SUB-D (suited for Velleman digitiser card K8100) · Output level : 1Vpp · Output impedance : 75 ohm · RF antenna in/output (in option RFMOD) · Housing included · Power supply : 16VDC / 0.5A unregulated · PCB dimensions : 170 x 140mm, 6.7" x 5.5" · Dimensions : 200 x 67 x 170mm, 7.9" x 2.6" x 6.7"

PS1508



DUAL ELECTRONIC DICE



Board game provide an excellent source of pleasant and healthy entertainment. However, the dice can be a constant source of distraction : they fall off the table, allow cheating, one or more players don't see the results properly and so on. There can be no doubt at all about the result displayed on this electronic dice module, and cheating is out of the question.

K3400

Two fully independent dice · At your choice you can play with one or two die · Displays are switched off automatically after 30 seconds to save battery power · Power supply : 8 to 12VDC or 6VAC / 60 mA · PCB dimensions : 76 x 70mm, 3" x 2.8"

⊠ : BA4 ⚙ : 1060012M 🖱 : PS905

MULTI-TONE CHIME



Electronic tones can be generated simply and cheaply using the device. This kit is primarily intended for use as a replacement for the traditional mechanical doorbell. Of course, it can also be used for many other types of applications. The number of tones may be selected up to a maximum of three, each of which is output one after the other. This can be used to help locate the place being called. Volume and tone can also be set. The existing bell transformer can be used as a power supply.

K6600

Adjustable tone and volume control · 1, 2 or 3 tones selectable · Loudspeaker output : 0.3W / 8ohm · Supply : 6 to 9VAC / 0.2A or 4.5V battery (3 x 1.5V) · Idle current less than 10µA · Dimensions : 53 x 59mm, 2.1" x 2.3" · Usable battery housing : BH331B

⊠ : WCAH2851, G416, G410 ⚙ : 1090025M 🖱 : PS905AC

MORSE DECODER WITH LC-DISPLAY



Everybody who owns a shortwave receiver may already have tried to decode those mysterious morse messages. Unfortunately, intensive training is required to follow experienced signallers or automatic stations. This decoder easily keeps up with the fastest signallers, and neatly "notes" everything on a display. All messages can be easily read without any prior knowledge of morse code !

K2659

Alphanumeric LC-display · 1 line of 16 characters · Power supply : 2 x 7 to 8VAC / 150mA or 9 to 12VDC / 100mA · PCB dimensions : 70 x 115mm

⊠ : WCAH2851 ⚙ : 2090050M 🖱 : PS1203

ELECTRONIC RECORD/PLAYBACK MODULE



Excellent sound quality is what characterises this module. How many applications are there were a short message has to be repeated many times ? Think of the doorbell : let the visitor know that you will be with him in a moment. Or welcome your customers with a cheerful greeting. Make it clear to would-be burglars that although you are not a home, your alarm system will alert the whole neighbourhood if they make any attempt to gain entry. And then of course there are the less serious applications : in toys, ice-breakers at parties, etc.

K4400

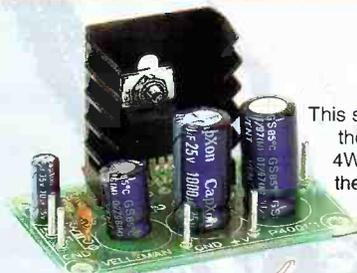
Recording time : approx. 12 seconds per module · Possibility for multiple modules to be connected in cascade · Up to a maximum of 5 different recordings can be selected (at 2.4 s/message, with optional rotary switch) · Recordings remain secure even without power · Loudspeaker output : 8 ohm · Supply voltage : 9 to 12VAC or battery supply 6VDC (4 x 1.5V) · Dimensions : 125 x 71mm, 4.9" x 2.8"

⊠ : WCAH2851 🖱 : PS1205AC

AUDIO/HIFI



7W AMPLIFIER



This small amplifier is constructed around the TDA2003 IC, capable of delivering 4Wrms at 4ohms. The IC is completely thermally and short-circuit protected. A conventional direct current can be connected as supply.

K4001

Music power output : 7W / 4ohm · RMS output : 3.5W / 4ohm and 2W / 8ohm · Total harmonic distortion : 0.05% (1W / 1kHz) · Frequency response : 20Hz to 20kHz (-3dB) · Signal/noise ratio : 86dB (A weighted) · Input sensitivity : 40mV / 150Kohm · Overload and short-circuit protected · Supply voltage : 15VDC (8 to 18VDC possible) / 0.5A · Dimensions : 55 x 35mm, 2.2" x 1.4"

Ⓜ : M4001 7W amplifier module
⚙ : 1150080M 🖱 : PS1208 of PS1508

SUPER MINI 2.5W AUDIO AMPLIFIER



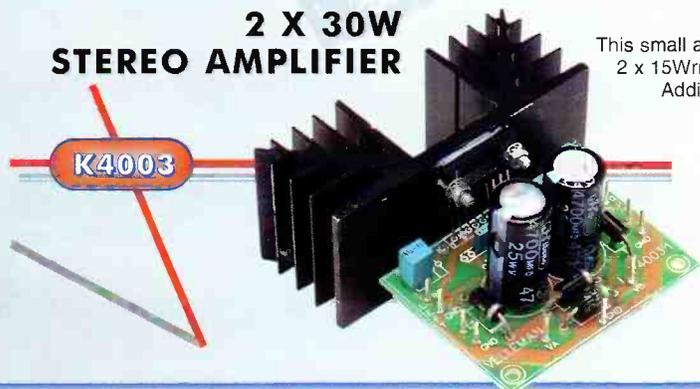
Small PCB for both pre-amplifier and power amplifier, which may be used separately. No adjustments required. Short circuit protection.

K2637

Power supply : 4.5 to 15VDC · Input sensitivity - power amplifier : 150mV / 20Kohm - pre amplifier : 20mV / 200Kohm · Frequency response : 60Hz to 15kHz · Max. output power : 2.5W (4ohms / 12V) · Dimensions : 42 x 32mm, 1.7" x 1.3"

Ⓜ : M2637 Supermini 2.5W audio amplifier module
⚙ : 1120050M 🖱 : PS1205

2 X 30W STEREO AMPLIFIER



This small amplifier is constructed with the TDA1521 IC, with a maximum supply capability of 2 x 15Wrms (4ohm) of 2 x 10Wrms (8ohm). The IC is thermally and short-circuit protected. Additional rectifier and smoothing filter are unnecessary, as alternating current can be directly connected to the unit.

K4003

Music power output : 2 x 30W / 4ohm · RMS output : 2 x 15W / 4ohm or 2 x 10W / 8ohm · Total harmonic distortion : 0.07% (1W / 1kHz) · Channel separation : 70dB · Frequency response : 7Hz to 60kHz (-3dB) · Signal/noise ratio : 98dB (A Weighted) · Input sensitivity : 300mV / 20Kohm · Transient suppression on switch on/off · Overload and short-circuit protection (max. 1h) · Supply voltage : 2 x 12VAC / 2A (50W transformer) · Dimensions : 69 x 51mm, 2.7" x 2"

⚙ : 212048 or 8012 Ⓜ : M4003 2 X 30W amplifier



STEREO VALVE AMPLIFIER

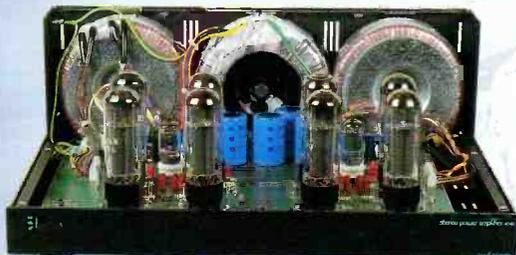
For most of us a high power valve amplifier is unaffordable. This kit changes that, so that now everybody can enjoy that sublime "valve sound". The sound of valves has never been surpassed, nor by transistors, nor by FETs. In the course of developing this amplifier, special attention was given to the housing so that the expensive valves are on display in a way that is very pleasing to the eye. The weakest point of an valve amplifier are the output transformers; that's the reason why we use ultra-linear and over-rated output transformers (toroidal) to guarantee a rich bass response. To extend the life of the precious valves, the amplifier is provided with an switch on delay, so that the high voltage is switched on when the valves are warmed up.



K4040B

BLACK VERSION (K4040B)

- TECHNISCHE SPECIFICATIES :
- Output power : 2 x 90Wrms music power for loads of 4 or 8 ohms
 - Up to 2 x 15Wrms in class A
 - Power bandwidth : 15Hz - 40KHz (-3dB ref. 50W)
 - Frequency range : 8Hz - 80KHz (-3dB ref. 1W)
 - Harmonic distortion : 0.08% (1KHz / 1W) / 0.7% (1KHz / 90W)
 - Signal-to-noise ratio : > 105dB (A-weighted ref. 90W)
 - Channel separation : > 75dB (ref. 90W)
 - Input impedance : 34Kohms
 - Input sensitivity : 1Vrms at 95W
 - Damping factor : > 10 (100Hz)
 - Weight : 17Kg
 - Dimensions : 425 x 130 x 350mm, 16.7" x 5.1" x 13.8"



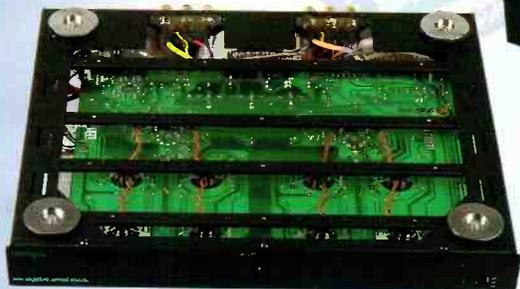
One big main PCB, for easy mounting and wiring, use of high quality capacitors and components.



High quality gold plated speaker terminals.



Easy bias adjustment behind front panel, with LED indication.



Removable bottom cover for easy access and service.



- FEATURES :
- Pure valve sound with high quality EL34 valves
 - High quality black and chrome housing
 - Chrome valve socket covers
 - Easy bias adjustment with LED indication
 - Removable bottom for easy access and service
 - High quality capacitors and components
 - Gold plated input and speaker terminals
 - Standby function
 - "Soft start" circuit for power transformer

Available in black finish (K4040B) or in chrome finish (K4040)
Also available mounted : M4040B (black finish) and M4040 (chrome finish)



CHROME VERSION (K4040)

K4040



K4004/5 UNIVERSAL MONO/STEREO AMPLIFIER

Universal, robust and compact are the words to describe this amplifier.

UNIVERSAL :
A stereo or a mono amplifier. Three input sensitivities are selectable.

SOLID :
Overload and short-circuit protection, protection against incorrect power supply polarity and thermally protected too (option for K4005). Speaker transient suppression.

COMPACT :
The PCB housing also functions as the heat sink. The amplifier may be used as a built-in module, or as a free-standing unit using one of our enclosures



200W MONO/STEREO AMPLIFIER

For installing a single amplifier an HB220921 plate set and ALP210 front panel can be used, together with an APS200 power supply and a 16020 or 22520 transformer. For installing two amplifiers, the HB330922 plate set can be used with an APS200 power supply and 30020 transformer.

K4004

RMS output power : 2 x 50W / 4ohm ; 2 x 40W / 8ohm · RMS mono-bridged power : 100W / 8ohm · Total music output : 200W · Harmonic distortion : 0.01% at 1KHz · Signal-to-noise ratio : 102dB (A weighted) · Stereo channel separation : 85dB · Damping factor (at 100Hz) : > 1000 · Input impedance : 22Kohm · Input sensitivity : 300mV, 550mV or 1V switchable · Thermal protection (max. 1h) · Short-circuit and overload protection (max. 10 sec.) · Power supply : + 28VDC and - 28VDC max. · Consumption 2 x 4ohm or mono-bridge 8ohm : 4A max. · Consumption 2 x 8ohm : 2.5A max. · Dimensions : 210 x 85 x 64mm, 8.3" x 3.3" x 2.5"

M : AMP100

APS200 POWER SUPPLY FOR K4004 AND K4005

Needs transformer :

Kit Nr.	Speaker	Power supply	Transformer
K4005	2 x 8ohm	2 x 30VAC / 225VA	type 22530
K4005	2 x 4ohm	2 x 22VAC / 300VA	type 30022
K4005	1 x 8ohm	2 x 22VAC / 300VA	type 30022
K4004	2 x 8ohm	2 x 18VAC / 160VA	type 16018
K4004	2 x 4ohm	2 x 18VAC / 225VA	type 22518
K4004	1 x 8ohm	2 x 18VAC / 225VA	type 22518

APS200

OPTIONAL : see label



400W MONO/STEREO AMPLIFIER

For installing a single amplifier an HB360928 plate set and ALP350 front panel can be used. For installing two amplifiers, the HB430936 plate set can be used. A power supply module APS200 (without transformer) and a special power supply to use the amplifier in the car (K3508 or SPS200) are also available.

K4005

RMS output power : 2 x 100W / 4ohm ; 2 x 75W / 8ohm · RMS mono-bridged power : 200W / 8ohm · Total music output : 400W · Harmonic distortion : 0.003% at 1KHz · Signal-to-noise ratio : 96dB (A-weighted) · Stereo channel separation : 76dB · Damping factor (at 100Hz) : > 2000 · Input impedance : 22Kohm · Input sensitivity : 150mV, 300mV or 950mV switchable · Supply voltage for 8 ohm : + 40 to 45VDC and - 40 to 45VDC / 2.5A · Supply voltage for 4 ohm or mono : +30 to 35VDC and - 30 to 35VDC / 5A · Dimensions : 350 x 62 x 85mm, 13.8" x 2.4" x 3.3"

M : AMP200

IN-CAR POWER SUPPLY FOR AMPLIFIER

This Power Supply Unit allows a conventional amplifier or amplifier module to be used in a car. Our K4005 amplifier or the AMP200 module are ideally suited for this purpose. The advantage of a separate supply-module is that the thick connecting wires to the battery can be kept very short, reducing power-loss to a minimum. The amplifier can be placed as close as possible to the loudspeakers (car-boot), maintaining optimum damping giving an excellent bass response. To avoid interference the 0V output is separated from the car chassis. The unit comes with its own case.



K3508

12 V

K3510

24V

Input voltage K3508 : 10 to 15VDC / 30A max. · Input voltage K3510 : 20 to 28VDC / 15A · Output voltage : + 35V and - 35V symmetrical (non-regulated) · Maximum output power : 300W · Efficiency : 90% max. · Separate 0V output · Switched by remote control (12V) · Only suitable for music loads · Dimensions : 210 x 84 x 50mm, 8.3" x 3.3" x 2"



600W MONO/STEREO MOSFET AMPLIFIER

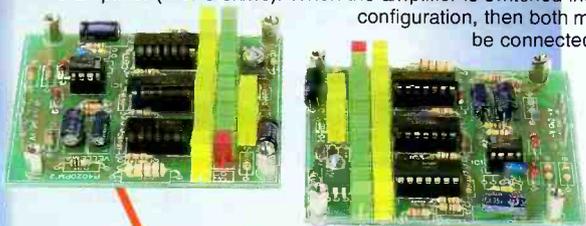
This audio power amplifier meets the strictest standards for quality and robustness. Using a very special circuit the end stage is always set to CLASS A, without any unnecessary loss of power. That is why it is called "EFFICIENT CLASS A". It is made up of two separate mono amplifiers. By switching both channels into a bridge configuration, a mono amplifier with double power is obtained. A major advantage of this amplifier kit is that NOT A SINGLE ADJUSTMENT is needed to any of the settings ! It comes complete with heat sinks, transformers, housing and front panel. Optionally, a K4021 LED power meter is available.

K4020

Music power : 2 x 300W / 4ohm ; 2 x 200W / 8ohm · RMS power : 2 x 155W / 4ohm ; 2 x 100W / 8ohm · Bridged power : 600W music power : 300Wrms / 8ohm · Harmonic distortion : 0.005% · Damping factor : > 600 · Input sensitivity : 1Vrms · Signal-to-noise ratio : 112dB (A-weighted) · Frequency response : 3Hz - 120kHz · Speaker switch-on delay and protection · Thermal and short-circuit protection · Dimensions : 425 x 90 x 355mm, 16.7" x 3.5" x 14" · Weight : 11Kg, 24 lb

LED POWER METER FOR K4020

This is built into the K4020 MOSFET amplifier in order to display amplifier power output. The meters are mounted behind the correct scale, which is also illuminated, according to the speakers connected to the amplifier (4 or 8 ohms). When the amplifier is switched into a bridge configuration, then both meters may be connected in series.



K4021

Stereo scale (vertical) : 0.001 to 100W / 8ohm ; 0.002 to 200W / 4ohm, divided over 12 LEDs · Scale distribution with mono bridge configuration (horizontal) : 0.001 to 400W / 8ohm divided over 24 LEDs · 2 x 16 LEDs for scale illumination · Supply voltage : + and - 40V from K4020

300W MONO MOSFET AMPLIFIER



This amplifier is the mono version of the K4020 amplifier, but comes without a housing. Heat sink and transformer are included. Ideally suited for installation in disco bars and active speaker systems.

If the assembly should be enclosed in a housing, a number of panels are available which, together with the heat sink, form the complete enclosure.

Mono (1 x K4020) panel set HB360928
Stereo or bridged (2 x K4020) : panel set HB430936

K4010

see K4020 but mono · Dimensions (without transformer) : 350 x 140 x 90mm, 13.8" x 5.5" x 3.5"

DIGITAL SYNTHESISER FM TUNER



This high-quality FM receiver is the ideal complement to our K4100 pre-amplifier. It can be used with other amplifiers also. The idea behind is to make adjustments as easy as possible, without special measuring equipment. The high-frequency end is therefore assembled and pre-set in the factory. Comes complete with housing.

K4500

Functions : 40 presets · Station name input for each preset · 2 antenna inputs (selectable) · Automatic recognition of stations already stored during tuning · Signal strength indication · K4101 remote control unit in option · Dimensions : 425 x 50 x 350mm, 16.7" x 2" x 13.8" · Weight : 5kg, 11 lb

DIGITALLY CONTROLLED PRE-AMPLIFIER

A pre-amplifier is an indispensable device for controlling a power amplifier, such as e.g. our K4040 valve amplifier or K4020/K4010 MOSFET amplifiers. When developing this pre-amplifier we opted for DIGITAL control of all functions, so that it contains no potentiometers at all ! All functions, such as volume, tone control, balance and input selection can be operated using push buttons and a LED display gives a clear indication of all settings. All functions may be operated with a remote control unit (K4101 available as option). A switched mains power output has also been provided, which allows the rest of the installed equipment to be switched on and off using the remote control unit. Your own priority settings can be programmed in, which become the default setting when the unit is switched on, and can be recalled at any time.

K4100

Input sensitivity : PHONO : 5.5mV / 50kohm ; CD : 500mV / 32kohm ; TUNER, TAPE1 & 2 : 360mV / 22kohm · Output level : LINE : 1V · Signal-to-noise ratio (A weighted) : PHONO : 75dB ; TAPE, CD, TUNER : 100dB · Total harmonic distortion : 0.01% · Frequency response : 8Hz - 150kHz (-3dB) · Channel separation : 90dB · Crosstalk : -99dB · Headphones output : 280mW / 32ohms · Mains output : 5A · Consumption : 6W max. · Dimensions : 425 x 50 x 350mm, 16.7" x 2" x 13.8" · Weight : 5kg, 11lb

15 CHANNEL INFRARED TRANSMITTER FOR K4100 / K4500

This IR transmitter may be used to remotely operate our pre-amplifier (K4100) or tuner (K4500). A special key has been provided, which allows the memory content (or stations in the case of the tuner) to be preserved. Not only its versatility, but also its aluminium housing and the special VELLEMAN tactile keyboard makes this remote control unit kit unique.

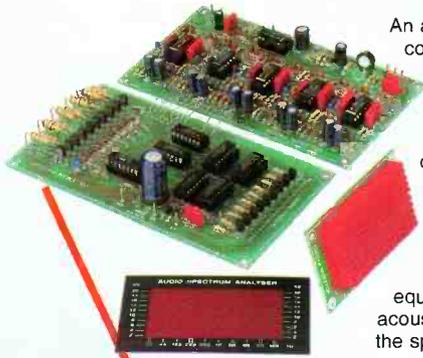
K4101

Transmitter/receiver range : +/- 30m, 98' · Supply voltage : *9V battery · Dimensions : 50 x 22 x 175mm, 2" x .9" x 6.9"



AUDIO SPECTRUM ANALYSER

An audio equaliser to display the composition of an audio signal. For this purpose the spectrum is divided into 10 frequency bands, to each of which a type of VU meter is connected. This analyser can be used together with a good microphone (flat response from 20Hz to 20KHz) and a pink noise generator to adjust the equaliser in accordance with the acoustic behavior of the room and the speakers, or simply connected to your amplifier.



K4300

Number of bands : 10 · Center frequencies : 32, 64, 125, 250, 500, 1K, 2K, 4K, 8K, 16KHz · Frequency range : 20Hz .. 20KHz (+/-2dB) · Range : 20dB · Resolution : 2dB / LED · Sensitivity : Line input : adjustable between 1000mV and 2Vrms / Microphone input : adjustable between 1mV and 20mVrms · Input impedance : Line input : 100Kohm / Microphone input : 10Kohm · Power supply : 2 x 9V transformer or 12-15VDC / 0.75A

WCAH2507

2090180M

PINK NOISE GENERATOR

To analyse the acoustic properties of a room (usually a living room), a good pink noise generator together with a spectrum analyser (e.g. kit K4300) is indispensable. Moreover, a microphone with as linear a frequency characteristic as possible (from 20Hz to 20KHz) is needed. If you have an equaliser (e.g. kit K4302) available, then the response can not only be checked but also corrected. Easily adapted to produce "white noise"



K4301

Pseudo random digital noise · Regulator sliding length : 33 bit · Clock frequency : adjustable between 30 and 100KHz · Pink noise filter : 3dB / octave (20Hz .. 20KHz) · Output voltage : 150mVrms · Output impedance : 1Kohm · Power supply : 9 - 12VAC or 12 - 15VDC / 5mA · PCB dimensions : 72 x 43mm, 2.8" x 1.7"

G410

1120007M

PS1205

POWER SUPPLY AND SWITCHING MODULE

This kit consists of 2 parts :

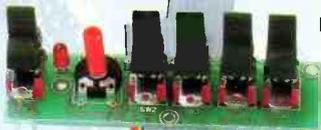
1. Power supply and connection module (on the back panel). This consists of : power supply for all modules (transformer 2 x 12VAC / 1A not included ; equaliser connections : EQUALISER IN - EQUALISER OUT - TAPE OUT.



2. Switching module for all functions of the spectrum analyser and the equaliser.

This consists of : mains switch ON / OFF + LED indicator ;

Equaliser input PINK NOISE/LINE ; Tape output : LINE/EQUALISER ; Analyser input : LINE/EQUALISER ; Level control for the spectrum analyser.

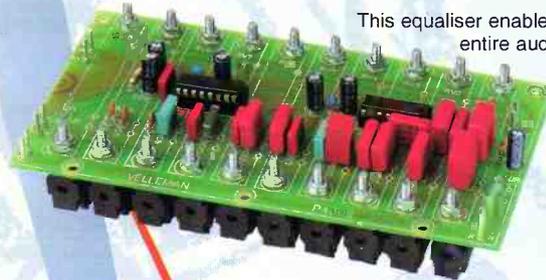


K4303

2120250M*ST of 1512

10 BAND GRAPHIC EQUALISER

This equaliser enables you to adjust the entire audio spectrum to suit your own taste, octave by octave. The equaliser is built in such a way that it can be easily extended to stereo applications (2 x K4302).



K4302

Number of bands : 10 · Centre frequencies : 32, 64, 125, 250, 500, 1K, 2K, 4K, 8K, 16KHz · Frequency range (controls set to zero) : 5Hz .. 100KHz (-3dB) · Gain (controls set to zero) : 0dB · Control range : -10dB to + 10dB · Total harmonic distortion (1KHz / 0dB) : <0.02% · Signal-to-noise ratio (controls at zero) : >110 dB (A-weighted) · Channel separation (1KHz / 0dB) : >95dB · Max. output voltage : 2.5Vrms · Input impedance : 4.7Kohm · Power supply : 10VDC / 10mA regulated · PCB dimensions : 140 x 80mm, 5.5" x 3.1"

1120007M

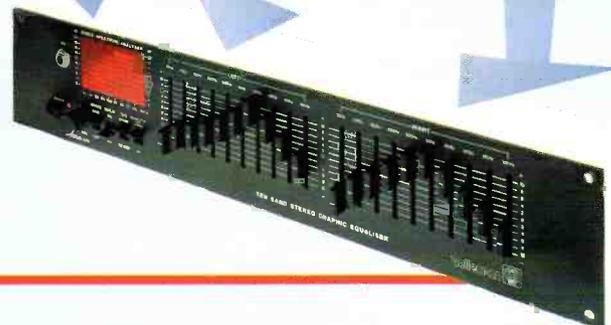
FRONTPANEL FOR VELLEMAN EQUALISER SYSTEM

This front panel has been designed for the following Velleman kits, to provide a complete unit :

- K4300 : spectrum analyser display
- K4301 : pink noise generator (command button)
- K4302 : 10 band graphic equaliser (two required for stereo)
- K4303 : power supply and switching module (the switching module is mounted onto the front panel)

This front panel has been developed for mounting in a standard 19" rack, 2 units high. A corresponding knob for the sliders is available (KNSLEQ) (20 knobs required).

F4302





TECHNICAL SPECIFICATIONS OF THE VELLEMAN AUDIO MIXER

INPUT IMPEDANCES

- Phono	47Kohm / 180pF
- Stereo line	47Kohm
- Mono line	100Kohm sym. / 47Kohm asym.
- Microphone	10Kohm sym. / 5.6Kohm asym.
- Effect return	47Kohm

INPUT SENSITIVITIES

- Phono	5mV...80mVrms
- Stereo line	100mV...1.5Vrms
- Mono line	50mV...1.5Vrms
- Microphone	1mV...30mVrms
- Effect return	775mVrms

SIGNAL-TO-NOISE RATIO (A-weighted)

- Phono	80dB
- Stereo line	83dB
- Mono line	81dB
- Microphone	80dB

FREQUENCY RESPONSE

- Phono	RIAA curve ± 1dB
- Stereo line	20Hz - 100kHz (-3dB)
- Mono line	20Hz - 100kHz (-3dB)
- Microphone	20Hz - 15kHz (-3dB)

OUTPUT IMPEDANCE : 1 Kohm

AUTOSTART OPEN COLLECTOR OUTPUT : 24VDC / 50mA(max.)

TONE CONTROL

- Per channel	BASS 50Hz ± 12dB MIDDLE 1KHz ± 15dB TREBLE 15KHz ± 12dB
- Master	BASS 50Hz ± 15dB TREBLE 15KHz ± 15dB
- Monitor Center frequency : 100Hz - 10KHz	Q-factor 0.4 - 2.5 Attenuation 0dB - 30dB

OUTPUT LEVELS

- Master	0.775 / 1.5 / 2.5Vrms
- Monitor	0.775 / 1.5 / 2.5Vrms
- Effect	0.775Vrms
- Tape rec.	0.775Vrms
- Headphones	0.1W (40hm) / 0.2W (8ohm) 0.4W (16ohm) / 1.25W (32ohm) 0.5W (100ohm) / 0.1W (400ohm)

OVERLOAD LIMIT : 7dB

OVERLOAD INDICATION : 3dB

TOTAL HARMONIC DISTORTION : 0.05%

CROSSTALK : (1KHz) 45dB

FADER RANGE : 90dB

AUTOSTART TRIGGER LEVEL

10% of slider hub ON
25% of slider hub OFF

The front consist of two parts :
- a blank 3mm, .118 in, thick aluminium panel, with all the necessary holes and slots.
- a self-adhesive polyester film (black with white text), with windows for the VU meters and peak indicators, and with all the necessary perforations for switches and potentiometers.

They are available in two sizes :
F/S : 6 channels of 267 x 482mm, 10.5" x 19"
F/L : 12 channels of 428 x 800mm, 16.9" x 31.5"

For both versions one set of knobs is available :
KN/MIXS : for the 6 channel version
KN/MIXL : for the 12 channel version

PROFESSIONAL MODULAR MIXER PANEL



MAKE YOUR OWN MIXING PANEL



DUAL INPUT AMPLIFIER MODULE

Two input amplifiers, each may be built as :
- Mono microphone input, symmetric or asymmetric
- Mono line input, symmetric or asymmetric
- Stereo line input
- Stereo phone input
Each amplifier has one gain control (±25dB)



K2661

Two stereo channels ·
Gain adjustment : 25dB · Signal to noise ratio : > 80dB · Total harmonic distortion : <0.05%
· Frequency response : 20Hz - 20KHz (0.5dB)
· RIAA correction : >1dB
· PCB dimensions : 63 x 98mm, 2.5" x 3.9"

Needed modules :

nr.	6-channels	12-channels
K2661	3	6
K2662	3	6
K2663	-	6
K2664	1	1
K2665	-	1
K4306	-	1
K2667	1	1
K2668	3	6
F/S	1	-
F/L	-	1
KN/MIXS	1	-
KN/MIXL	-	1
3018	1	-
5018	-	1

DUAL FADER MODULE

By using high-quality, DC controlled electronic volume controls, crackling from slide potentiometers has been completely eliminated. For each channel a PFL (Pre-fade listening) switch, a peak indicator (+3dB) and an auto start output for turntables (pulse or continuous) is available.



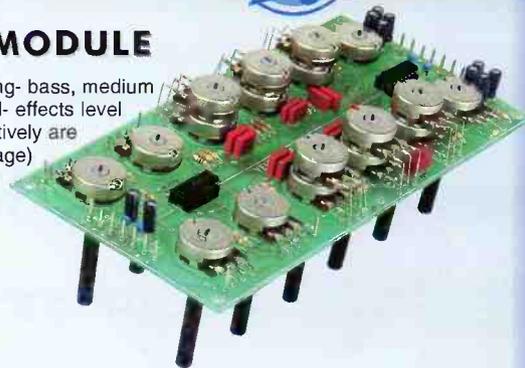
K2662

Two stereo channels · Peak indication : +3dB · Signal to noise ratio : >90dB · PCB dimensions : 138 x 98mm, 5.4" x 3.9"



DUAL TONE CONTROL MODULE

Two stereo channels on a single PCB : Independent control of : - balance and panning- bass, medium or treble tone- monitor level- effects level
The monitor and effects signals coming from the different tone control modules respectively are converted by the K2665 monitor and effects module, to a mono monitor output (for stage) and a mono effects output (for echo chamber etc.)



K2663

Two stereo channels · Tree tone controls (50Hz, 1KHz, 15KHz, + and -12dB) · Signal to noise ratio : >92dB · PCB dimensions : 203 x 98mm, 8" x 3.9"

MASTER AND HEADPHONE MODULE

Stereo mixer amplifier with controls for output level, balance, treble and bass tones. Mono/stereo switch.



K2664

Small VU meter with two rows of 5 LEDs · Headphone amplifier with volume control and selector switch for PFL, master output, monitor and effects · Three output levels : 0.775, 1.55 and 2.5Vrms · Signal to noise ratio : >90dB · Bass : +/- 15dB · Treble : +/- 15dB · PCB dimensions : 148 x 143mm, 5.8" x 5.6"

MONITOR AND EFFECTS MODULE

Monitor mixer amplifier (mono). Parametric equalizer with controls for attenuation, center frequency and bandwidth to prevent microphone "howl". Effects mixer amplifier with output level control. Effect return control to mix the processed signal directly into the master output, without using an additional input channel.



K2665

Two stereo channels · Three band tone control : 50Hz, 1KHz, 15KHz (+ and - 12dB) · Signal to noise ratio : > 92dB · PCB dimensions : 58 x 203mm, 2.3" x 8"

POWER SUPPLY MODULE

Ideal for both types of mixer panels, up to 12 channels. Transformer not included. (Toroidal core 2 x 18V / 30VA for 6 channels, or 2 x 18V / 50VA for 12 channels).

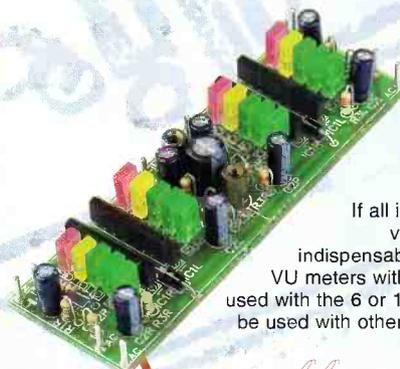


K2667

Symmetric voltage output : + 24VDC and - 24VDC / 2A max. · PCB dimensions : 60 x 60mm, 2.4" x 2.4"

DUAL STEREO VU METER MODULE

If all inputs of the mixer panel are to be viewed or pre-adjusted, then this is indispensable. This module contains 2 stereo VU meters with 2 x 5 LED indicators and can be used with the 6 or 12 channel mixing panel. May also be used with other equipment, to indicate the output level of an amplifier.

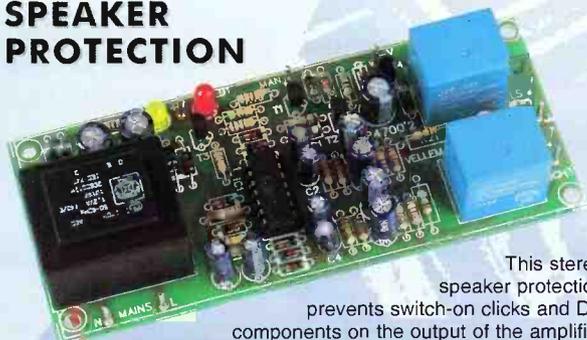


K2668

Indication : -13, -8, -3, 0, +3dB · Sensitivity : 0dB = 0.775Vrms (easily adjustable) · Supply voltage : 14 - 18VDC / 62mA · PCB dimensions : 28 x 98mm, 1.1" x 3.9"

SPEAKER PROTECTION

This stereo speaker protection prevents switch-on clicks and DC components on the output of the amplifier connected.



K4700

Switch-delay : +/- 6 seconds · DC protection : +1V/-1V · Max. input voltage : 200Vpp + DC · Max. switching current : 10A · LED indication for : WAIT (switch-on delay) and ERROR (DC on speaker output) · Supply voltage : 220VAC · PCB dimensions : 55 x 125mm, 2.2" x 4.9"

DC PROTECTION FOR LOUDSPEAKER

Burn out of a power amplifier's output stage nearly always results in a dangerous direct current to the loudspeaker's terminals. In turn, this results in loudspeaker burn out. This protection unit, requiring no supplementary supply, is simply mounted between the amplifier and the speaker in the speaker cabinet and disconnects the speaker as soon as a direct current appears. Also ideally suited for use in the car.

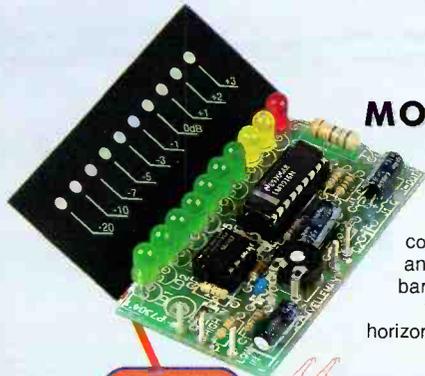


K4701

Maximum input voltage : 90VDC · Maximum contact current : 10A · Minimum safety voltage : 10VDC · No external supply needed · Dimensions : 40 x 67mm, 1.6" x 2.6"



M4701A : Loudspeaker DC protection up to 30W max. M4701B : Loudspeaker DC protection up to 300W max.



MONO 10 LED VU METER

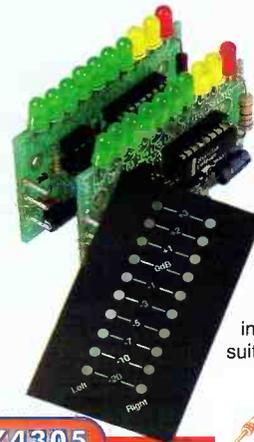
VU meter with a scale consisting of 10 LEDs and an adjustable input. Dot or bar indicator. Supplied with 1 front panel suitable for horizontal or vertical mounting.

K4304

- Range : -20dB to +3dB
- Power supply : 10 - 15VDC / 250mA
- Input sensitivity : low input 150mV to 6Vrms (47K), High input 1.5V to 60Vrms (470K)
- Dimensions : 37 x 68mm, 1.5" x 2.7"

PCB : 1120007M

PS : PS1203



STEREO 2 X 10 LED VU METER

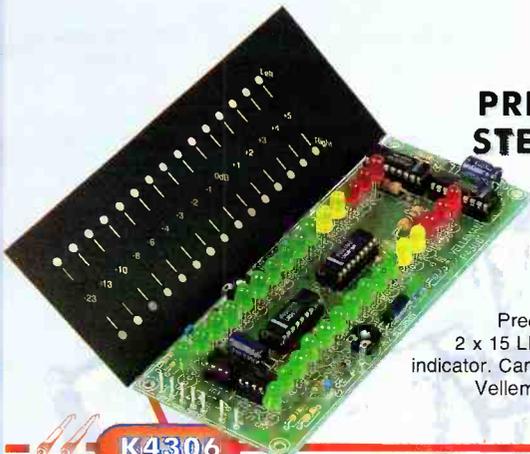
Stereo VU meter with 2 x 10 LEDs (dot or bar indicator) and an adjustable input. Included in package : 1 front panel suitable for horizontal or vertical mounting.

K4305

- Range : -20dB to +3dB · Power supply : 10 - 15VDC / 250mA · Input sensitivity : low input 150mV to 6Vrms (47K) / High input 1.5V to 60Vrms (470K)
- Dimensions : 37 x 68mm (x2), 1.5" x 2.7" (x2)

PCB : 1120007M

PS : PS1203

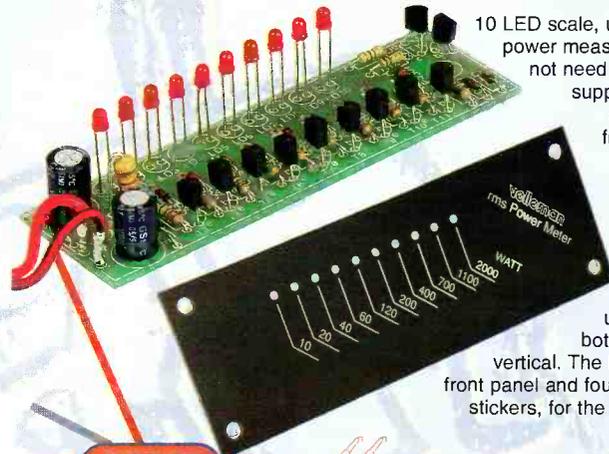


PRECISION STEREO VU METER 2 X 15 LEDs

Precision VU meter, 2 x 15 LEDs. Bar or spot indicator. Can be used for the Velleman Audio Mixer.

K4306

- Scale from : -23dB to +5dB (linear scale between -4 and +5dB) · Precision : ± 0.5dB (1KHz) · Input impedance : low input : 150mV - 5Vrms ; high input : 1.5V - 50Vrms · Frequency range : 20Hz - 30kHz (-3dB) · Power supply : 12 - 15VDC / 300mA · Dimensions : 150 x 57mm, 5.9" x 2.2"



AUDIO POWER METER

10 LED scale, up to 2000Wrms power measurements. Does not need a special power supply, because it is supplied directly from the speaker output. Ideal for car audio systems and PA systems. Also usable for bridged amplifiers. The unit can be used both horizontal and vertical. The kit comes with a front panel and four attractive front stickers, for the different scales.

K4307

- Four different scales :
 - at 4 ohm load in low power mode : 0.3 to 400Wrms
 - at 4 ohm load in high power mode : 10 to 2000Wrms
 - at 8 ohm load in low power mode : 0.15 to 200Wrms
 - at 8 ohm load in high power mode : 5 to 1000Wrms
- Minimum input sensitivity : 1.1Vrms (low power mode) · Maximum input voltage : 130Vpeak (high power mode) · Current consumption : 25mA at full scale · Luminous intensity : 8 to 20mcd / LED
- Dimensions : 120 x 40 x 28mm, 4.7" x 1.6" x 1.1"



- M4307A : 8 ohm load in low power mode : 0.15 to 200Wrms
- M4307B : 4 ohm load in low power mode : 0.3 to 400Wrms
- M4307C : 8 ohm load in high power mode : 5 to 1000Wrms
- M4307D : 4 ohm load in high power mode : 10 to 2000Wrms

SOUND GENERATOR

The ideal device for DJ's, jingles for radio stations or just to attract attention. With one output for direct connection to a speaker and one line output for connecting to a mixer panel or amplifier. The following effects may be generated directly by means of a push button :

- Machine gun
- European siren · Phasor gun
- Racing car with motor howl
- Screeching of car tires on a curve · Explosion · Mortar fire followed by explosion
- Music : "Wild charge tune" or "Snake charmers tune"
- US siren



K4401

- Supply voltage : 8 - 10VDC / 100mA or 9V battery · Line output : 1Vrms · Speaker output : 1W
- PCB dimensions : 75 x 75mm, 3" x 3"

PCB : WCAH2851

PS : 1090030M

PS : PS905

TELEPHONE AMPLIFIER

This telephone amplifier may be used as a free-standing amplifier with speaker, e.g. to listen to a telephone conversation, or the output may be connected to an amplifier or mixing panel (e.g. radio stations). The circuit is ideally suited for integration with the Velleman modular mixing panel.



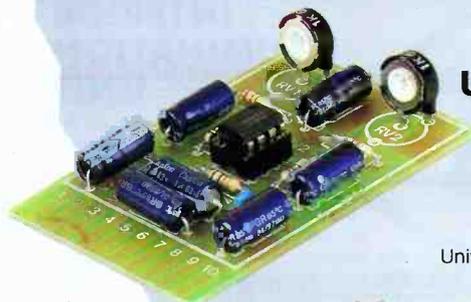
K4900

- Input : isolation transformer interface · Speaker output : 0.5W / 8ohm
- Line output : 0dB (0.775Vrms) · Power supply : 7 - 9VAC or 9 - 12VDC / 150mA
- PCB dimensions : 63 x 52mm, 2.5" x 2.1"

PCB : G416 or WCAH2853

PS : 2090060M

PS : PS1203



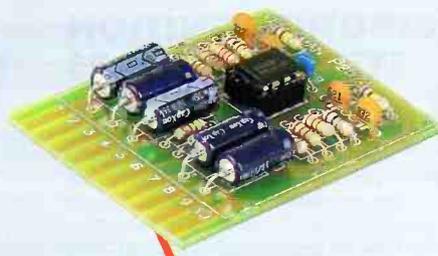
UNIVERSAL STEREO PRE-AMPLIFIER

Universal low-noise stereo pre-amplifier.

K2572

Frequency range : 40Hz - 30kHz
 (-3dB) · Gain : 40dB · Max. input voltage : 50mVrms · Adjustable gain : 40dB max.
 · Output impedance : 1Kohm
 · Power supply : 10-30VDC / 5mA
 · PCB dimensions : 44 x 65mm, 1.7" x 2.6"

⊞ : 1150007M



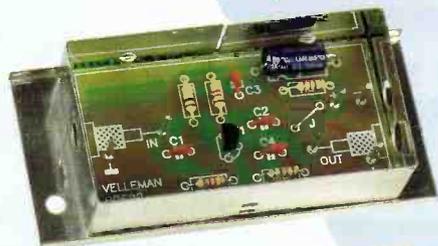
STEREO RIAA CORRECTION

RIAA stereo pre-amplifier for md pick-ups.

K2573

Supply voltage : 10 - 30VDC / 5mA regulated · Gain (1KHz) : 35dB · Input signal : 5 - 10mV · Input impedance : 47Kohm · Adjustable output voltage · PCB dimensions : 44 x 65mm, 1.7" x 2.6"

⊞ : 1150007M



AM/FM ANTENNA AMPLIFIER

The K2622 provides 22dB gain wherever you need it. DC power supply directly or via the coax cable. Metal housing included.

K2622

Gain : 22dB · Power supply : 12V to 15V / 3mA · Input- and output impedance : 50 - 75ohm · Frequency range : 10MHz to 150MHz · Dimensions : 86 x 36 x 24mm, 3.4" x 1.4" x 1"

⊞ : 1120007M



FM OSCILLATOR

Mini FM modulator (100-108MHz). Integrated pre-amplifier, to which any type of microphone may be connected. Family broadcasts, babyphone, security. May be received by any portable FM radio or tuner.

K1771

Power supply : 9 - 12VDC · Input sensitivity preamplifier : 5mV · PCB dimensions : 45 x 70mm, 1.8" x 2.7"

⊞ : G410 or WCAH2853



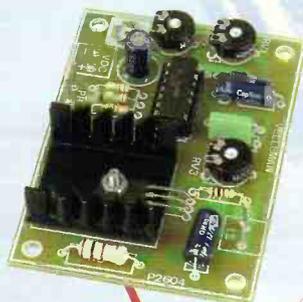
UNIVERSAL MONO PRE-AMPLIFIER

This kit has been developed as pre-module for a number of audio applications where there is insufficient input signal. Applications as a microphone pre-amplifier or for level correction.

K1803

Power supply : 10-30VDC / 10mA · Output impedance : 1Kohm · Adjustable output level · Frequency range : 20Hz to 20KHz ± 3dB · Max. input signal : 40mV · PCB dimensions : 30 x 44mm, 1.2" x 1.7"

Options for power supply : 1120007M + K1823



POLICE SIREN

Enter the world of amazing electronic sounds and noises. Create or imitate sirens of all kinds by adjusting three trimmers. Powerful sound with an additional 2W amplifier on the PCB.

K2604

Required power supply : 8 - 14VDC / 1A · Speaker not included · PCB dimensions : 79 x 57mm, 3.1" x 2.3"

⊞ : WCAH2851 ⊞ : 1120120M



GUITAR PRE-AMPLIFIER WITH HEADPHONE OUTPUT

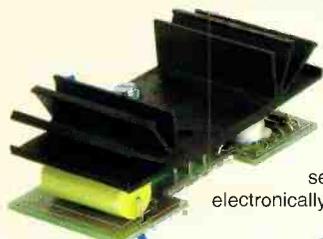
An electric guitar cannot be connected to just any amplifier or audio installation. This pre-amplifier has been designed for this purpose and provides you with a headphone output, allowing you to practice without disturbing others. Moreover, it is fitted with a special device for tone adjustment, allowing anyone to create their personal sound.

K4102

Tone adjustment · Adjustable input sensitivity · Low noise · Headphone output : max. 2 x 50mW / 32ohm · Housing included · Power supply : *9V battery · Dimensions : 70 x 30 x 105mm, 2.8" x 1.2" x 4.1"



ELECTRONIC IGNITION SYSTEM FOR CARS



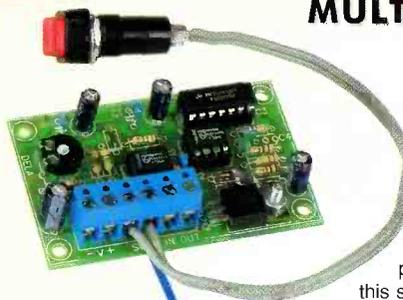
K2543

Gives your car the feel of an expensive luxury car. Better starting and smoother running, particularly at very high and very low RPM. Lower fuel consumption, less pollution, lower servicing costs. Drive economically, drive electronically. Only for petrol/gasoline engines. Only for cars with negative ground.

- Connection current : 4A
- Connection speed : up to 500KHz
- PCB dimensions : 70 x 35mm, 2.8" x 1.4"

⊠ : G304

MULTIFUNCTION CAR INTERIOR ILLUMINATION UNIT



K3500

If, like most of us, you do not have infrared eyesight, then at times you have probably found yourself fumbling for the ignition switch or seat belt in the dark. For people like you we have developed this solution, our car interior illumination unit. With extra control and battery protection.

- Switch-off delay adjustable for 0 to 60 seconds
- Power consumption : 13mA
- PCB dimensions : 45 x 70mm, 1.8" x 2.8"

⊠ : WCAH2855

2 X 100W CAR BOOSTER AMPLIFIER

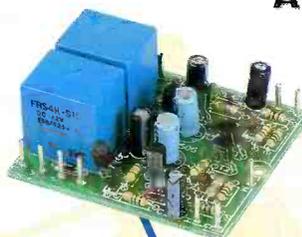
At last a kit that enables you to build an affordable high power amplifier for your car. Thanks to its universal connections, this power amplifier may be connected to any equipment. For trucks, it can be adapted to be supplied from a 24V source. Complete with heat sink and housing.



K3503

- Output power : 2 x 100W max.
- Power supply : 14.3VDC (10 - 16VDC allowed)
- Adjustable to 24VDC (20 - 30VDC allowed)
- Double switched mode power supply (PWM) with MOSFET transistors
- CD/LINE/LS input, selectable
- Frequency response : 10Hz - 100KHz (CD input)
- Input impedance : 47K or 135ohm
- Supplied with housing
- Dimensions : 250 x 190 x 50mm, 9.8" x 7.5" x 2"

ANTI SPEAKER PLOP FOR K3503 CAR BOOSTER

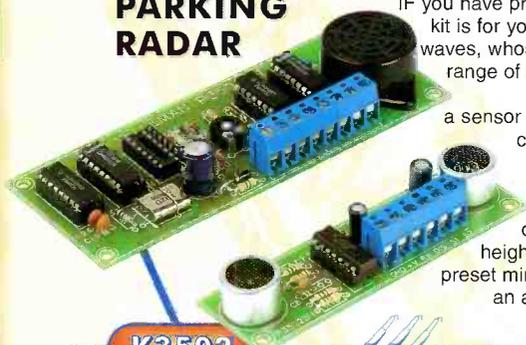


K3506

This kit was developed to prevent any annoying plop occurring in speakers when switching the K3503 car booster on and off. In addition, it provides protection for the MOSFET transistors and the car battery (monitoring the voltage drop). The entire circuit can be built into the car booster housing.

- Soft start of the switched mode power supply
- Switch-on delay of the speakers : +/- 2 seconds
- Immediate switch-off of the speakers when switching off the booster
- Voltage monitor : switch off at +/- 10V
- Only suitable for VELLEMAN K3503 2 X 100W car booster
- PCB dimensions : 57 x 51mm, 2.3" x 2"

PARKING RADAR



K3502

IF you have problems in parking then this kit is for you. Using (ultrasonic) sound waves, whose frequency is beyond our range of hearing, we can "measure" a distance. Consequently, a sensor mounted at the back of the car can give an indication of the distance between your car and the car parked behind you or other obstacles (only at the same height as the sensor). When the preset minimum distance is crossed, an audible signal is generated.

- Detection range : 5cm - 1.5m (adjustable)
- Detection angle : 5°
- Supply voltage : 10 - 15VDC / 16mA
- Sensor PCB dimensions : 28 x 95mm, 1.1" x 3.7"
- base PCB : 48 x 125mm, 1.9" x 4.9"

⊠ : G416 G407



K3504

CAR ALARM

The alarm detects sudden voltage drops of the battery when the interior, trunk, or hood lights are switched on. To ensure correct operation, a number of control indications have been included, such as : flashing LED to indicate that the alarm is in standby mode after a set time (after you have left the car). Pre-alarm (built-in buzzer) to indicate that the alarm is activated, so that you will not forget to switch it off. The alarm is easy to switch on and off, either automatically or by means of the ignition switch or a remote control unit, such as the

K6706A/K6707 or K6708/K6709.

- Detects voltage drops of the battery
- Entry delay time : 2 to 30 seconds with buzzer indication
- Exit delay time : 2 to 180 seconds with LED indication
- Alarm period : 60 seconds with automatic reset
- Power supply : 12V
- Standby current : 25mA
- Relay output : 5A
- PCB dimensions : 62 x 100mm, 2.5" x 4"

⊠ : WCAH2853

HEAD LIGHT INDICATOR



K3505

This head light indicator may be set for one or two functions. To indicate that the head lights (or the side lights) should be switched off after switching off the ignition contact (battery protection). Or to indicate that the head lights should be on once ignition contact is switched on (obligatory in some countries).

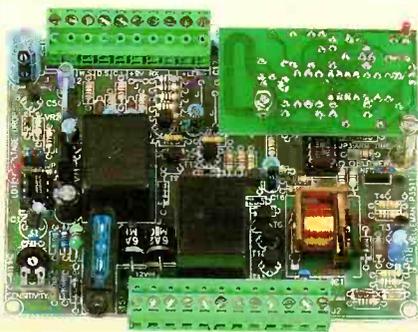
- Continuously repeated alarm tone for lights ON (may be disabled)
- Repeated alarm tone for lights OUT
- Only 3 wires are required for hook-up
- Supply voltage : 12V battery
- PCB dimensions : 48 x 57mm, 1.9" x 2.3"

⊠ : WCAH2855



K3511(RF) / K3512(IR) REMOTE CONTROLLED CAR ALARM SYSTEM

This outstanding car alarm is full of potential, able to connect up with and operate a variety of sensors. In addition, the remote control facility (infra red for K3512) allows the central locking system to be operated together with the alarm.



- Microprocessor technology
- Multi-functional remote control operation
- Audio and visual on/off indicators
- Multifunction dashboard mounted LED
- Automatic reset after alarm
- Adjustable voltage drop (reaction to interior lighting)
- Voltage drop detection active immediately, or after 5 minutes
- Direct alarm trigger input (direct alarm after triggering)
- Warning alarm trigger input (2 triggers within 15 seconds = alarm)
- Warning input can be switched off with the remote control
- Adjustable shock detector (can be switched off with the remote control)
- Detector input for ventilator in order to avoid false alarms
- Contact switches for bonnet and boot
- Internal siren for on/off signal and alarm
- Output for external siren and pager (5A)
- Alarm time : 30 seconds
- Starter interrupter for ignition or diesel fuel pump (15A)
- Special starter motor interrupter relay (30A) supplied
- Switch on protection if contact is on
- Output to hazard lights (2 x 6A max.)
- Output for central locking (100mA)
- Selectable code for remote control transmitter and receiver (8.748 codes)
- An unlimited number of remote control transmitters can be used (K6706A, K6708)
- Automatically resets in the event of accidental switch off (60 seconds)
- Connection for extra starter interrupter via security code lock module, SP150
- Special output for triggering record-play module K4400
- Diagnosis facility to identify a triggered sensor at a later time
- Supply voltage : 12VDC, Consumption : 50mA in standby
- Temperature range : -40 to +85°C
- Battery for remote control unit : 12V type V23GA, GP23GA

K3511

K3512

G313

IN OPTIE :



ULTRASONIC DETECTOR

Detects glass breakage or other movements within the car.

AM951



Professional design · Separate detectors · Adjustable sensitivity · Easy installation · LED indication · Power supply : 12VDC



ULTRASONIC DETECTOR

Detects glass breakage or other movements within the car.

AM950

Adjustable sensitivity · Easy installation · LED indication · Power supply : 12VDC



RADAR INTRUSION DETECTOR

This model emits a high frequency field that immediately detects intrusions. Ideal for open cars, boats, etc. The detector is not affected by wind, temperature, sound or vibrations. Can be installed out of view.

AM959

LED indication · Adjustable sensitivity · Power supply : 12VDC



IGNITION CUT-OFF SYSTEM WITH KEYPAD

This set consists of a illuminated keyboard and a relay. Can be armed/disarmed with a personal 4 digit code. Special key for disarming. Ignition cut-off system will be automatically armed after 15 sec. A flashing red LED indicates that the alarm is armed.

SP150

Power supply : 12VDC · 20A STST relay · Dimensions : 55 x 45 x 18mm, 2.2" x 1.8" x 0.7"



WINDSHIELD WIPER CONTROL



Up to 3 different time intervals (2 - 10 - 15 seconds) can be selected for the windshield wipers of your car. It can also be used for automatic slide projection. Manual includes installation instructions for most cars.

K2599

- Relays on PCB
- Power supply : 12 - 15VDC
- PCB dimensions : 82 x 56mm, 3.2" x 2.2"
- WCAH2853
- 1120012M

DIGITAL TACHOMETER

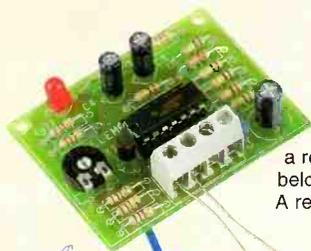


For cars or motorcycle with a petrol engine. May be used as a general purpose revolution counter.

K2625

- Range : 100 - 9900 revolutions/minute
- 2 digit display
- Easy calibration
- Required power supply : 10 - 15VDC / 200mA
- PCB dimensions : 80 x 45mm(3.1" x 1.8") + 80 x 60mm(3.1" x 2.4")
- Front panel dimensions : 0 x 90mm, 2.8" x 3.6"
- 112002SM

FROST INDICATOR

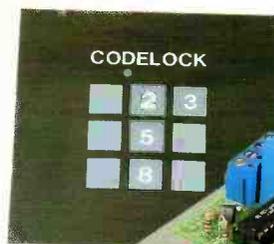


Drive more safely in freezing weather. This kit uses a flashing LED to indicate a road temperature close to freezing point ; below that point the LED is on continuously. A reliable temperature sensor with mounting stud is included.

K2644

- Power supply : 10 - 15VDC / 25mA
- PCB dimensions : 56 x 42mm, 2.2" x 1.7"
- G404 of WCAH2855
- 1120007M

CODE LOCK



This code lock may be used to switch an alarm (e.g. car alarm K3504) on and off, or to open a door lock. An LED on the operating panel indicates the position of the 'lock'. The code is easy to define. Because the operation panel is completely enclosed, it may be used inside and outside the house.

K6400

- More than 3000 codes (4 digits)
- Relay output : 5A / 220V
- Time limit for code entry : ± 5 seconds
- Power supply : 9 - 15VDC or 8 - 12VAC
- Power consumption : output on : 40mA, output off : 0.3µA
- Front panel dimensions : 80 x 80, depth 40mm; 3.2" x 3.2", 1.6" depth
- 1120007M

12V OR 24VDC TO 220VAC CONVERTER



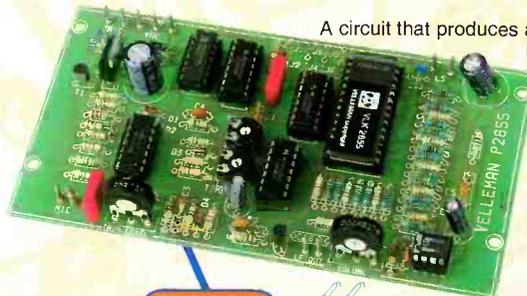
For use in cars, trucks, boats, caravans or other places where only 12 or 24 volt battery power is available. For supplying audio equipment, video recorders, television, computer, electric shaver, etc.

K3501

- 300W output power at 24VDC input
- 160W output power at 12VDC input
- 50Hz crystal oscillator
- FET power transistor (heatsink included)
- Output voltage monitor
- Battery voltage monitor
- Quiescent current : 0.5A
- Not suitable for motors
- Transformer available separately (for 12 or 24V)
- PCB dimensions : 82 x 110mm, 3.2" x 4.3"

- 80255
- 1609(12V) or 30022 (24V)

ELECTRONIC WATCHDOG



A circuit that produces a natural sounding barking dog with a sensitive "ear" to everything that comes near it. It is a faithful watchdog, which never sleeps and never has to be taken out for a walk.

K2655

- Power supply : 2 x 8VAC or 9 - 12VDC / 500mA
- Choice of two different "dog sounds"
- Reacts to surrounding noise with adjustable sensitivity
- Speaker output : 2W at 4ohms
- PCB dimensions : 142 x 75mm, 5.6" x 3"

- WCAH2851
- 2090120M
- PS1205

K3507 250W 12VDC TO 230VAC INVERTER K3509 250W 24VDC TO 230VAC INVERTER

Very compact considering the continuous power of 250W. Light weight (1.4kg, 3.1 lb) and therefore perfectly suitable as travel luggage. Automatic shut-off if battery power is too weak. Electronically protected against short circuit and overload. May start up on short term overloads when connecting difficult loads, such as television, drill, computer, etc. High efficiency and low consumption in case of no-load (0.2A). Fuse protection. Not suitable for refrigerators.

K3507

12V

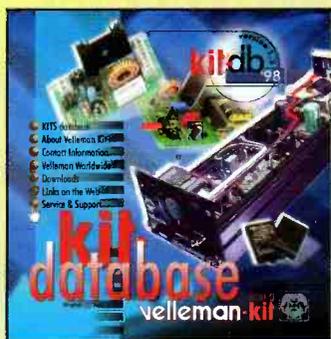
3509

24V

- Input voltage : 10.5 to 12VDC for K3507 (20.5 to 28VDC for K3509)
- Maximum current consumption : 25A for K3507 (13A for K3509)
- Output voltage : 230VAC (-10% (possibility of 110V))
- Continuous output power : 250W (150W with 110V)
- Peak output power : 500W
- Output frequency : 50Hz crystal quartz (possible 60Hz frequency)
- Output voltage wave : modified sine wave
- Size : 270 x 60 x 85mm, 10.6 x 2.4" x 3.4"



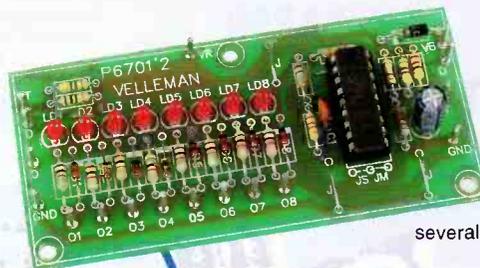
Do you want more information about the Velleman High-Q kits? Ask your distributor for the kit catalogue on CD ROM. This handy Dbase can be activated under Windows 3.1 of higher and gives you not only a comprehensive description but also a picture, technical specifications and some useful tips. Only an English version is available.



Visit our website : <http://www.velleman.be> for more information about our kits.

KIT DB

2 WIRE REMOTE CONTROL RECEIVER



This receiver works together with the 2-wire transmitter, K6700, and allows you to open or close 8 (extendible up to 16) different contacts. For use in model building, model trains, or wherever you want to establish several connections with only two wires. Easy to connect to K6714.

K6701

Power supply : 6-16VDC · Transmitter and receiver are extendible up to 16 channels · Open collector outputs with LED indications (max. 200mA) · Tested up to 50m, 164' · Dimensions : 95 x 45mm, 3.7" x 1.8"

WCAH2851 or G416 : 1 120007M

2-WIRE REMOTE CONTROL TRANSMITTER



This transmitter K6700 allows you to open or to close 8 (extendible up to 16) different contacts from just two wires. For use with K6701. For use in model building, model trains, or wherever you want to establish several connections with only two wires. Connection of several receivers on one transmitter is possible (several transmitters on one receiver is NOT possible !)

K6700

Power supply of the transmitter over the data line · Transmitter and receiver are extendible up to 16 channels · Tested up to 50m, 164' · Dimensions : 45 x 37mm, 1.8" x 1.5"

WCAH2855 or G404

NEW APPROVED DESIGN

TWO CHANNEL RF CODELOCK TRANSMITTER

This transmitter is suited to control the RF code lock receivers K6707 (one channel) and K6727 (two channels). A choice can be made from over 8000 codes.



K6706A

Two channels · Range transmitter / receiver : +/-30m, 98' · LED on / off and battery indication · Keyholder housing · Power supply : 12V battery type V23GA, GP23A · Dimensions : 35 x 15 x 57mm, 1.4" x .6" x 2.3"

TWO CHANNEL RF CODELOCK RECEIVER

This two channel RF code lock receiver forms the ideal remote control of all kinds of applications, where 2 different devices can be controlled on a distance. A choice can be made from over 8000 codes. It is also possible to use several receivers with one transmitter or vice-versa. Our housing WCAH2851 is perfectly suited for the receiver. Works with K6706A RF transmitter.



K6727

Two channels · Easy to assemble : no coils to be made · LED on/off and receive indication for each channel · Two relay outputs : 10A toggle or momentary contact · Separate output to switch on / off an car alarm · Power supply : 2 x 9VAC of 12 to 16VDC / 120mA max.

WCAH2851

ONE CHANNEL RF CODELOCK RECEIVER

This two channel RF code lock receiver works with K6706A and forms the ideal remote control of all kinds of applications where a device can be controlled from a distance. Some applications : garage doors, car alarms (e.g. K3504) and / or central door locking systems, as well as for wireless operation of in-door or out-door lighting, etc. A choice can be made from over 8000 codes. It is also possible to use several receivers with one transmitter or vice versa. Our housing WCAH2851 is perfectly suited for the receiver.



K6707

Easy to build : no coils to be made · LED on / off and receive indication · Relays output : 10A toggle or momentary contact · Separate output to switch on / off an car alarm · Power supply : 2 x 9VAC or 12 to 16VDC / 100mA max.

WCAH2851 (K6707)

2090060M (K6707)

ONE CHANNEL INFRARED CODE LOCK RECEIVER

If you consider mechanical locks to be difficult and old-fashioned and you keep forgetting the combination of your keyboard code lock or combination padlock, this kit, combined with kit K6708 (infrared code lock transmitter), will provide the ideal solution. In addition, this lock offers the advantage of remote control. The device can be used for a wide variety of applications, such as opening garage doors, securing buildings or houses, activating or deactivating your car alarm (e.g. K3504) and/or central door locking system, as well as for the wireless operation of in-door or out-door lighting, etc. A choice can be made from over 8000 codes. Moreover, it is possible to combine several receivers with one single transmitter or vice versa. Among others, our WCAH2851 can be used as a housing for the device.

INFRARED CODE LOCK TRANSMITTER

This transmitter is suitable to control the infrared code-lock receiver K6709. A choice can be made from over 8000 codes.

K6708

One channel · Distance transmitter / receiver : ± 7m, 23' · LED on / off indication and battery level indication · Keyholder housing · Power supply : 12V battery type V23GA, GP23A, 23, 23M, VR22 · Dimensions : 35 x 15 x 57mm, 1.4" x .6" x 2.3"

K6709

Works with the K6708 infrared code lock transmitter · One channel · 8748 possible codes · Distance transmitter/receiver : ± 7m, 23' · LED on/off indication · LED indication of reception strength · Relay output : 10A pulse or changeover contact · Separate output to activate or deactivate car alarm · Power supply : 2 x 9VAC or 12 to 16VDC / 100mA max. · Dimensions of the main PCB : 76 x 84 x 30mm, 3" x 3.3" x 1.2"

CALL CODE ACTIVATED SWITCH

This remote control system requires no authorization from network operators as there is no connection to the telephone line. The receiver is switched on and off by letting the phone ring several times (number of rings is adjustable). There are many applications : turning lights on and off at irregular intervals during a long absence, turning on the heating before you drive home or to your weekend residence, and so on ...

K2650

Coded : 42 different codes can be set · Switch-off timer : can be set from 3 seconds up to 56 hours · Relay output : 240V / 3A max. · Power supply : 12VDC regulated / 90mA · PCB dimensions : 140 x 73mm, 5.5" x 2.9"

WCAH2851 1120012M

REMOTE CONTROL BY TELEPHONE

This kit makes it possible to turn up to three devices on or off over the telephone. It is also possible to check the condition of a switch (open or closed). Example : when you are away on holiday, you may switch the lights on and off from time to time, check the alarm or turn on the heating before returning home. A major advantage of this circuit lies in the fact that audio signals are used to tell whether a specific output has been turned on or off. Operation is protected by a user defined code, which is simply keyed in from the telephone keypad. If you do not have a DTMF telephone, our separate DTMF generator type PD888 may be used.

K6501

A relay is included for one output : 10A / 250VAC · Automatic pick-up can be selected for ± 8 or ± 3 rings · Automatic hang-up if no code is entered within 20 seconds · Supply voltage : 12VAC / 300mA · PCB dimensions : 105 x 130mm, 4.1" x 5.1" · Housing type D30 not included

D30B 1120038M PS1205AC

THERMOSTAT WITH REMOTE CONTROL VIA THE TELEPHONE

The thermostat is used as any other one, but with the added facility of choosing the day or night temperature setting by means of a telephone. The remote control facility is operated via the telephone keypad, thus a DTMF type phone is required. From audio signals sent down the line, the user receives a report back on how the thermostat is set. Switching is protected by a security code, set by the user, which is keyed into the telephone in a simple manner. If a DTMF phone is not available, then the separately supplied available acoustic DTMF generator (our type PD-888) can be used. This unit is simply held against the telephone mouthpiece and the appropriate codes are then made. A already built version is available, ordercode : TT2000.

K6502

Separate settings for day and night temperature with LED indication · Relay output with LED indication : 5A / 240VAC (1200W) · Telephone pick-up after ± 8 rings · Report when the temperature has fallen below 3°C · Automatic hang-up if no code is received within 40 seconds · Possible security codes : from 000 to 999 · Day temperature : from 14°C to 26°C, 57°F to 79°F · Night temperature setting : from 6°C to 18°C, 43°F to 64°F · Hysteresis (allowed temperature swing) : 0.1°C · Local manual control · Supply voltage : 220VAC

BE 94RD0645



15-CHANNEL INFRARED TRANSMITTER



This IR transmitter can be used together with the K6711 universal 15-channel receiver and/or the K6712 / K6713 single channel receivers. One of the keys on the keyboard allows all outputs to be reset at once. Not only its versatility but also the aluminium housing and special VELLEMAN keyboard make this remote control kit unique.

K6710

- 15 independent channels
- Distance transmitter / receiver : $\pm 7m, 23'$
- Power supply : 9V battery
- Housing dimensions : 50 x 22 x 175mm, 2" x 9" x 6.9"

15-CHANNEL INFRARED RECEIVER



The receiver has 15 independent outputs. Each output can be operated separately and every output carries the option of being used as a change-over switch or pulse contact. The receiver is built around a microprocessor, allowing two output states to be stored in memory, which can be recalled at all times.

K6711

- 15 open collector outputs : 50V / 100mA
- LED indication for every output
- Change-over or pulse contact selectable per output
- Power supply : 8 - 14VDC or 2 x 12VAC / 150mA
- PCB dimensions : 70 x 145mm, 2.8" x 5.7"

WCAH2851

2120038M

PS1205

SINGLE CHANNEL IR RECEIVER WITH RELAY OUTPUT

This single channel IR receiver works together with the K6710 15 channel IR transmitter. The receiver code can be set to 1 of the 15 transmitter codes, so that 15 receivers can be operated (K6712 and / or K6713) independently of each other. Fits into adapter housing B6713.

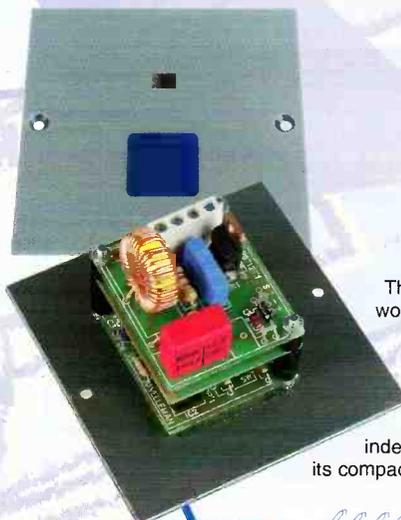


K6713

- Transmitter / receiver range : up to 9m, 29.5'
- Relay output : 240V / 5A (switch or pulse contact)
- Supply voltage : 220VAC (110VAC possible)

B6713

IR REMOTELY CONTROLLED DIMMER



This one channel IR receiver/dimmer works together with the 15 channel IR transmitter (K6710). The receiver code can be set to 1 of the 15 transmitter codes so that 15 receivers can be operated (K6712 and/or K6713) independently of each other. Thanks to its compact design this kit fits into a standard light switch housing.

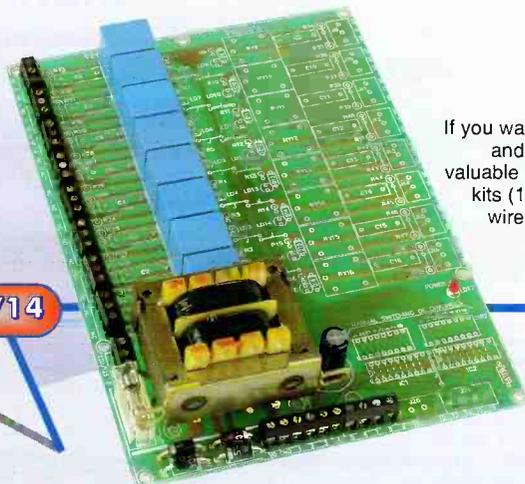
K6712

- Max. load : 2A (4A with heat sink)
- Supply voltage : 220VAC 50/60Hz (110VAC possible)
- Transmitter / receiver distance : max. 7m, 23' - Not suitable for halogen lights

UNIVERSAL RELAY CARD

If you want to switch large electric currents using an electronic control and require control isolation at the same time, then this card is a valuable asset. This card is ideally suited for connection to our K6711 kits (15 channel IR receiver) one or even two K6701s (8 channel 2 wire receiver). For these two kits the power supply may be taken directly from the relay card. It can also be used in other applications.

K6714



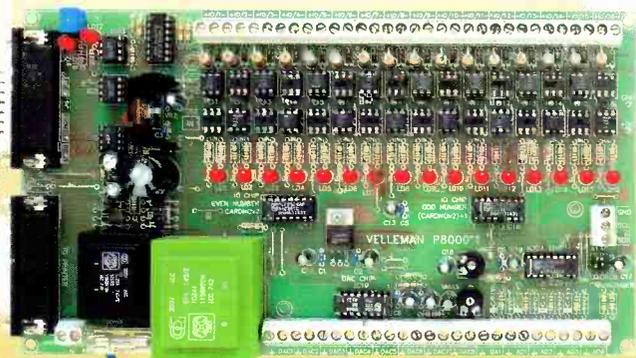
- 8 relays included (extendible to 16)
- Relay switch-over contact : max. 5A at 220V
- Output voltage : 12V / 250mA for power supply of K6711
- Power supply : 220 or 115VAC / 12VA
- PCB dimensions : 150 x 212mm, 5.9" x 8.3"

WCAH2507



COMPUTER INTERFACE CARD

To enable a computer to communicate with the outside world, it is usually fitted with a keyboard, a display and perhaps a mouse. If however it is to be used in certain control applications, or certain control functions are to be carried out, then an interface is needed. The interface card here excels in its simplicity of use and installation. The card is connected in a very simple way to the printer port (there is no need to open up the computer). Likewise there is no need to install an extra printer port, even if a printer is to be used. This can be connected to the card in the usual manner. Connection to the computer is optically isolated, so that damage to the computer from the card is not possible. Works under Dos, Win3.11, Win95 and Win98. The card is controlled in a simple way using Turbo Pascal, Qbasic, Visual Basic or C++ procedures. These procedures are pre-programmed and are provided along with a number of test and example programs on the diskette supplied. The card itself has 16 optically isolated digital connections, which can be freely chosen as either inputs or outputs (eg. 6 inputs and 10 outputs) according to how they are set up by the user. Furthermore, the card has 9 analogue outputs, of which one is high precision, and 4 analogue inputs. If this capacity is not sufficient for a particular application then up to 4 cards can be connected together (1 master and 3 slaves), such that an enormous potential exists. The card can be used with many of our other kits such as : K6714, 16 channel relay card, K6710 and K6711 15 channel remote control, K2607 thermometer adapter, K6700 and K6701 two wires communication (max. 16 channels),



K8000

Dimension PCB : 237 x 133mm, 9.3" x 5.2"

For bi- and unipolar motors (maximum 1A). Easy to connect with K8000. Up to 16 stepping motor cards can be connected with one

STEPPER MOTOR CARD

PC. A high power card can be connected to drive motors with a maximum current of 5A. High precision possible (up to 0.9°, or even more when using a motor with reduction). While the motor turns you can simultaneously check the status of switches using K8000, or drive another motor. You can always give an emergency stop signal.

Test program included. Manual test buttons to test the card without K8000 interface. Can be used in every application where positioning is needed (for example a plotter, a printer, a valve, ...). High precision motor included (12V).

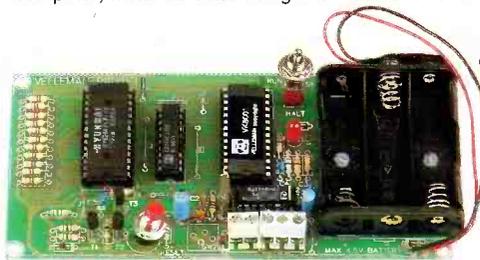


K8005

· I²C controlled via K8000 - Communication address of the card (from 0 to 15) selectable via DIP-switches on the PCB · Adjustable drive speed · Programmable in TurboPascal for DOS, Quick Basic and Visual Basic · Emergency stop can be sent to one or all cards · Power supply : 7 to 25VDC or AC / 1.5A (Maximum current depends of the motor type) · Dimensions : 100 x 90mm, 3.9" x 3.5"

INDEPENDENT PROGRAMMABLE CONTROL MODULE

If it is desired to use the interface card independently, without connecting to a computer, it can be done using this module. The module can be easily connected to the K8000 card, once programmed it can be decoupled from the computer and the system can continue to work independently. Programming is done using its own instruction set (± 2500 steps) developed for this purpose. Not suitable for use with the K8005 stepper motor card.



K8001

Dimensions : 149 x 73mm, 5.9" x 2.9"

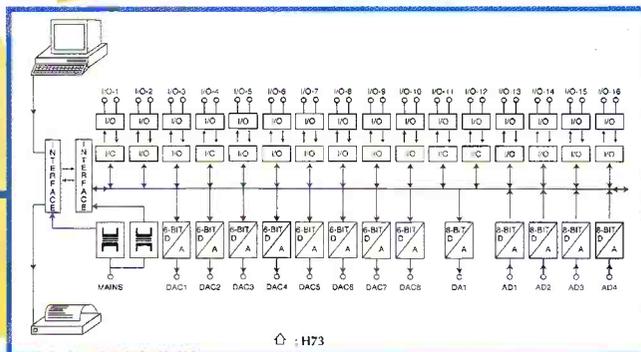
DC CONTROLLED DIMMER

This small but handy circuit is ideal for replacing an existing dimmer or switch, in order to be able to control a lamp, set of lamps or even a motor via an adjustable DC voltage. One obvious application is control via the K8000 interface board, thanks to its optically isolated input.



K8003

Supply voltage : 110V or 220-240V, 50 or 60Hz · Also suitable for 24VAC supply · Max. load : 3.5A · Stepless control · Control voltage from 0 to 10VDC · Dimensions : 48 x 74mm, 1.9" x 2.9"



↑ : H73

DC TO PULSE WIDTH CONVERTER

This control circuit is ideal for the accurate control of DC motors, lighting levels, small heaters as well as other applications. The circuit converts a DC voltage into a series of pulses, such that the pulse duration is directly proportional to the value of the DC voltage. The great advantage of such a circuit is that almost no power is lost in the control circuit. Protected against overload and short circuit.

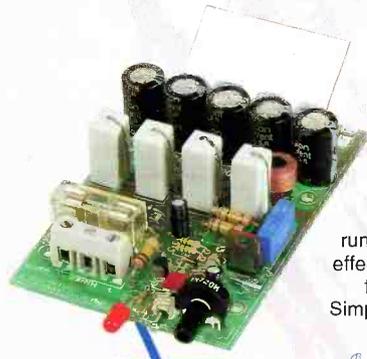


K8004

Operating voltage : 8 to 35VDC · Maximum output current : 6.5A · Input voltage : between 2.5 and 35VDC · Dimensions : 85 x 48 x 45mm, 3.4" x 1.9" x 1.8"



DUAL FUNCTION STROBE



Create fantastic light effects for disco, photographs, signalisation ... Two operation modes. The first operation mode flashes on power down, for use in combination with light computer K5201, running lights K5200 or K2602, or other light effect generator. The second operation mode flashes continuous with adjustable speed. Simple two-wire connection. High power flash tube. Power on LED. Reflector included.

K5203

- Power supply : 230VAC / 50Hz
- Power consumption : 20W max. / 3W standby
- Max. flash rate : 20 flashes per second
- Dimensions : 70 x 120 x 50mm, 2.8" x 4.7" x 2"

SUPPRESSED 3.5A DIMMER



Due to its small size, this small dimmer easily replaces an existing switch, permitting you to vary the brightness of a light or group of lights. The dimmer may also be used to adjust the speed of a motor, vacuum cleaner, or any other motor with carbon brush. A mains suppresser is provided eliminating undesirable RFI. It is not suitable for halogen lamps.

K5001

- Isolated triacs
- Protected against induction voltage peaks
- Load : 3.5A : 750W at 200V and 380W at 110V
- PCB dimensions : 45 x 47mm, 1.8" x 1.9"

WCAH 2853

STROBOSCOPE



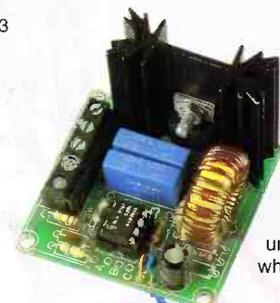
Flashing light effects for discos. Make your own snapshots and "lightning" light effects. Flash frequency adjustable from 2 to 20Hz.

K2601

- Required power supply : 220V - 240VAC
- PCB dimensions : 87 x 65mm, 3.4" x 2.6"

WCAH2853

HALOGEN LAMP DIMMER



This small circuit may be used to dim lighting as well as inductive currents, such as transformers for halogen lamps, motor power, etc. The dimmer can easily replace a switch, and can do so without additional wiring. The switch may be controlled by means of an ordinary push-button. It is possible to mount an unlimited number of push-buttons in parallel, which means you can control the device from different locations.

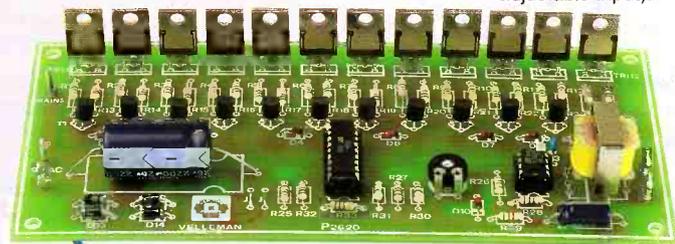
K5002

- Mains voltage : 110 or 220-240VAC, 50 or 60Hz
- Maximum power : 750W / 220V or 380W / 110V
- Isolated triac
- Dimming duration : approx. 3.5sec.
- Three dimming functions with memory function
- Dimensions : 45 x 48mm, 1.8" x 1.9"

WCAH 2853

GIANT VU METER

This kit drives 12 lamps mounted in a row to provide a giant VU light column. Interfaces to all equipment (electrically isolated, adjustable input).



K2620

- Input sensitivity : 100mV - 3V
- 12 triac outputs 24 to 240VAC / 2A
- Required power supply : 9VAC / 0.5A
- PCB dimensions : 170 x 85mm, 6.7" x 3.3"

WCAH2852 PS905AC

SLOW ON / SLOW OFF DIMMER

This dimmer could be called a "soft switch" : the lamp does not go on or off instantly, but slowly. Dimming times are adjustable within a wide range, while the number of possible applications is increased by the following two modes of operation : a) Dimming slowly. Dimming on and off times adjustable independently (2 seconds up to 1 hour). b) Timer / dimmer. Timer and dimming speed adjustable independently (1 sec. up to 30 min.). Can be used as a staircase light control. It is NOT suitable for halogen lamps.

K2657

- Mains voltage : 110 - 125V or 220 - 240V, 50 or 60Hz
- Max. load : 2A (400W at 220V or 200W at 110V)
- PCB dimensions : 70 x 95mm, 2.8" x 3.8"

WCAH 2851 or G416

MUSIC CONTROLLED RUNNING LIGHT



Get your running-lights to keep time with your favourite disco hits. Compatible with all sound equipment.

K2602

- The electrically isolated input is adjustable (100mV - 5V)
- Speed adjustable from 0.25 to 3Hz
- Required power supply : 220 - 240VAC
- Four 2A Triac outputs
- PCB dimensions : 155 x 113mm, 6.1" x 4.5"

WCAH2505



ADVERTISEMENT LED DISPLAY WITH RED OR GREEN LEDs

Create your own message for personal advertisements. Can be used for home, shop, car or truck... 12 self definable characters, which are made by de customer. 150 bright LED's supplied with the kit.

Many spectacular light effects on the message, (scrolling, blinking, rolling, panning...). Adjustable effect speed. Vertical or horizontal position possible. Fixed displaying is possible (no effects). Different displays can be synchronised, to create longer messages, or to create giant advertisements. Special housing available ordercode : B5600 Extra LED's available, ordercode : K/LEDHR (red) and K/LEDHG (green)

- : B5600
- : PS1208

K5600R



- : B5600
- : PS1208

K5600G



ADVERTISEMENT LED DISPLAY WITH RED LEDs

12 character positions · 5 x 7 LED matrix for each character · Bright LED's, 60 to 80mcd (max.) · Microprocessor technology · Oscillator output for synchronisation with other display(s) (master / slave configuration) · Power supply : 12 to 28VDC · Reverse polarity protected · Consumption : 760mA · Dimensions : 80 x 473mm, 3.2" x 18.6"

ADVERTISEMENT LED DISPLAY WITH GREEN LEDs

LIGHT EFFECTS



K5200

4 CHANNEL MULTI-FUNCTION RUNNING LIGHT

This circuit does more than an ordinary running light : it not only runs in both directions, but it also flashes with two groups of lamps (flip-flop) and with all the lamps at the same time. The four light effects follow each other automatically.

4 triac outputs : max. 2A each (400W at 220V or 200W at 110V) · Can be synchronised to mains or can work asynchronously · Running speed : adjustable in asynchronous mode, fixed speed in synchronous mode · Suppression of radio interference in synchronous mode · Supply voltage : 220VAC · PCB dimensions : 110 x 85mm, 4.3" x 3.4"

: WCAH2851

: 2060012M

Sixteen different programs and seven outputs make this light computer a unique showpiece. This kit can find applications in party lighting, discotheques, advertisement lighting, signalling, etc. To be able to view the programs directly, each output is provided with a LED.

LIGHT COMPUTER



K5201

The complete circuit can be installed (eg in our housing type PRG1) so that all operations and LEDs are available from the front panel. To enhance the spectacle further, an unlimited number of circuits can be connected together to work synchronously. Moreover, two programs are provided which are specially adapted to operate two light computers in cascade.

7 triac outputs : 1.5A max. · Supply voltage for the lights : 24VAC to 240VAC · Supply voltage of the circuit : 7.5 - 9VAC / 250mA · 16 programs · Speed controllable · Input for external clock · PCB dimensions : 134 x 79mm, 5.3" x 3.1"

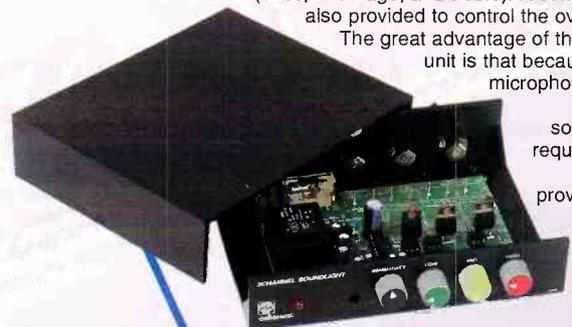
: PRG 1 or WCAH2852

: 1090030M

: PS905AC

3-CHANNEL SOUND TO LIGHT

This sound to light unit contains 3 outputs, that can be separately controlled. Each output reacts to different parts of the music spectrum (bass, midrange, and treble). A combined control is also provided to control the overall sensitivity.



K5202

The great advantage of this sound to light unit is that because of its built-in microphone, no electrical connection to a source of music is required (although a line input is provided). The kit is complete with housing, knobs and connectors. Not suitable for halogen lights!

Triac outputs : 2A (440W at 220VAC) · Place for interference filter on the PCB · Adjustable sensitivity per channel · Control circuit and outputs are optically isolated · Power supply : 230VAC or 110VAC · Dimensions : 167 x 42 x 140mm, 6.6" x 1.7" x 5.5"



GEIGER-MULLER COUNTER

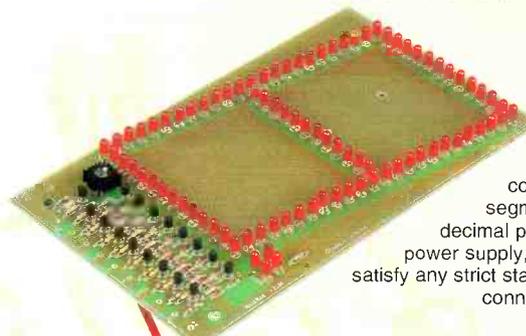
This kit provides an acoustic measurement of radiation levels. The sensitivity is at its highest for gamma rays and high energy beta rays. The assembly is compact and may be mounted into a small box, together with the 9V-battery.

K2645

Life of 9V battery : approx 2 months at continuous use and normal radiation levels · Dimensions : 99 x 54 x 25mm, 3.9" x 2.1" x 1"

⊠ : G416

K2567 20CM DISPLAY "COMMON ANODE" K2568 20CM DISPLAY "COMMON CATHODE"



This kit contains a 7-segment display consisting of 12 LED's per segment and 4 LED's for the decimal point. Using an additional power supply, which does not have to satisfy any strict standards, it may be easily connected to existing circuit.

K2567

or

K2568

Power supply : 22-26VDC non - regulated · Segment current : 40mA, multiplex : 75mA · Total current in static mode : max. 400mA · PCB dimensions : 150 x 252mm, 5.9" x 9.9"

⊠ : 1240120M

UNIVERSAL CRYSTAL TIME BASE



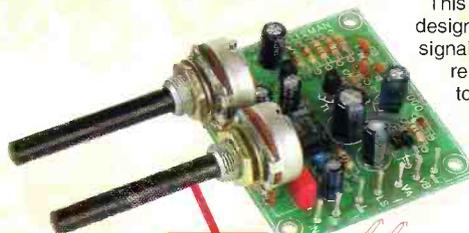
In many clocks and circuits mains frequency is used as the time base, because of its high accuracy. If these devices are to be supplied by batteries (e.g. in the event of power failure) another time base should be provided to prevent the clock from stopping. This kit provides the standard 50Hz mains frequency, 100Hz (for devices operating with hundreds of seconds) or 400Hz signals (selectable).

K2656

Output frequency : 50, 100 or 400Hz · Adjustable to 1Hz · Supply voltage : 5 - 25VDC / 5mA · PCB dimensions : 50 x 45mm, 2" x 1.8"

⊠ : 1120007M

SIGNAL TRACER/INJECTOR



This signal tracer /injector has been designed to inject or detect a specific signal into an audio circuit in need of repair (such as amplifiers, radios, tone controls, ...) so as to detect the fault. In this way problems can be traced more easily. The signal tracer may also be used as a simple monitor or amplifier.

K7000

Independent injector/tracer · Injector : 0-2.5Vrms output (adjustable) · Output impedance : 1.5Kohm · Frequency : ± 1KHz · Tracer : 3.5mV to 10Vrms sensitivity (adjustable) · Gain : 40dB · Input impedance : 50Kohm · Output power : 0.5W / 8ohms · Power supply : 7-9VAC or 9-12VDC / 150mA · Dimensions : 60 x 53mm, 2.4" x 2.1"

⊠ : WCAH2853

⊠ : 2090050M

METAL DETECTOR



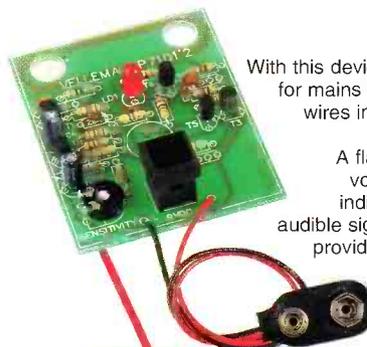
To come up against an electric cable while drilling a hole in a wall can have catastrophic consequences. Likewise, drilling into gas, water pipes or central heating pipes can be extremely hazardous. With a handy metal detector it can now be determined beforehand whether there are metal objects to be found in a wall, ceiling or floor. An LED indicates if a metal object is in the vicinity. If an audio signal is also desired, space has been provided on the PCB for buzzer type SV4/12 to be connected. The PCB has been specially constructed to fit entirely into the separately available box type G407.

K7102

Metal detecting distance adjustable (up to 8cm, 3.15") · Battery supply : 9V · LED indication (optional buzzer SV4/12) · Dimensions : 56 x 64mm, 2.2" x 2.5"

⊠ : G407

MAINS VOLTAGE DETECTOR



With this device wires can be very easily checked for mains voltage. It can be used to search for wires installed in or behind walls or to trace interruptions in wiring.

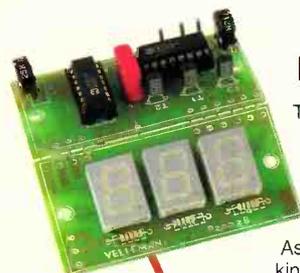
A flashing LED indicates whether or not voltage is present. The flashing speed indicates how close by the wire is. If an audible signal is also desired, space has been provided on the PCB for buzzer SV4/12 to be connected. The PCB has been specially constructed to fit entirely into the separately available box type G407.

K7101

Detection of mains conducting cables · LED indication (buzzer optional) · Adjustable detection distance (max. 10cm, 3.9") · Distance indication · Supply voltage : 9V battery · Dimensions : 56 x 64mm, 2.2" x 2.5"

⊠ : G407

DIGITAL PANEL METER



This panel meter is an almost ideal replacement for the traditional moving-coil type instrument. Not only is its price about the same, but its accuracy is many times better. The high precision and stability offered by this meter are illustrated in the technical specifications. As it is very compact, this unit can be built into all kinds of housings or even into existing equipment.

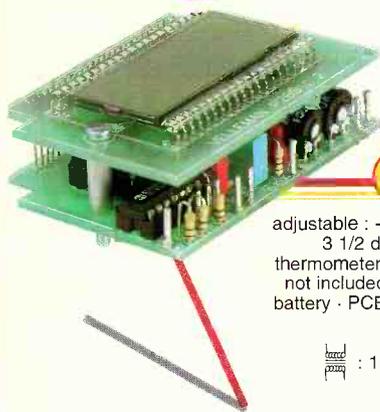
K2032

Supply voltage : 5VDC / 250mA · Display : +999mV and -99mV full-scale · Overload indication (positive and negative) · Resolution : 1mV · Input impedance : 100Mohms · PCB dimensions : 33 x 65mm, 1.3" x 2.6"

⊠ : 1060018M



LCD PANEL METER



K2651

Range : adjustable : - 200mV to +200mV or - 2V to +2V · 3 1/2 digit LCD display · May be used as a thermometer from -50 to +150°C (KTY10 sensor not included) · Power supply : 8 - 15VDC or 9V battery · PCB dimensions : 50 x 72mm, 2" x 2.8"

⏏ : 1120007M

📦 : PS905

UNIVERSAL 4 DIGIT UP/DOWN COUNTER WITH COMPARATOR



K2574

Supply voltage : 5VDC / 150mA regulated · Input impedance : 15Kohm · Carry output (cascade possibilities) · Output signals : 5V max. / 50mA · Max. counting frequency : 2MHz · PCB dimensions : 120 x 90mm, 4.7" x 3.5"

📦 : PRG1

⏏ : 1060018M

DIGITAL STORAGE SCOPE FOR PC

The K7103 is a digital memory oscilloscope that is operated from any IBM compatible computer, using the computer screen as the oscilloscope display. The oscilloscope software is available from DOS program supplied. Operation seems like a normal oscilloscope, with one difference that most operations are performed using the mouse. Connection is via the parallel port of the computer. This digital storage scope has standard 1 channel with a sampling frequency of 32MHz (in option : K7104 : second channel). Any waveform on the screen can be stored in TIFF format so that it may be retrieved later for use in documentation or for comparison to other waveforms.



DOS & WINDOWS. INCLUSIVE SPECTRUM ANALYSER AND RECORDER FOR WINDOWS

K7103

GENERAL INFORMATION

- input impedance : 1Mohm // 30pF
- maximum input voltage : 100V (AC + DC)
- input coupling : DC, AC and GND

- power supply : 9 to 12VDC / 800mA max. (PS1208)
- charging circuit for battery provided

SYSTEM REQUIREMENTS

- IBM compatible PC using 386 or higher microprocessor
- VGA display card and mouse
- 460kb conventional memory available
- math co-processor required for True RMS and Spectrum Analyser (if not present, these functions will not work) (software Spectrum analyser and Transient recorder not included) - works with DOS, Windows 3.11, Win95 and Win98



Option K7104 : **SECOND CHANNEL FOR K7103**
Upgrade software (Spectrum analyser and Transient recorder) : US7103

Zie ook P 26

THERMOMETER ADAPTER

It can be very useful to have a voltage available that varies in proportion with temperature : just think about computerised or non-computerised control systems, temperature monitoring, or simply a digital (or analogue) thermometer. The zero point is adjustable over a wide range and does not necessarily have to be zero volts for zero degrees. The output is buffered and can be connected directly to an analogue or digital millivoltmeter, such as kit K2032 or an ordinary multimeter.



K2607

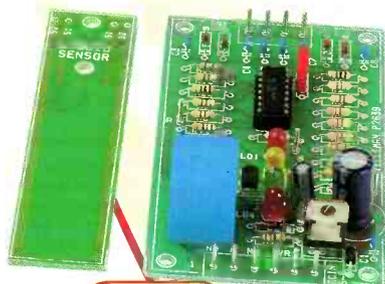
Sensitivity : selectable 10, 20 or 40mV per degree Celsius.
· Range : -25 to +85°C · The sensor may be located remotely · Supply voltage : + and -12 to 15VDC, non-regulated · PCB dimensions : 65 x 35mm, 2.6" x 1.4"

📦 : G401

⏏ : 1090030M

LIQUID LEVEL CONTROLLER

Forgotten to turn off the tap, leaking washing machines, water level dropping in your aquarium, rain tank or water tank suddenly dry or over flowing, water in your cellar, etc. Such situations are often the cause of trouble and financial burden. Prevention is better than cure. So use this fluid detector. 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 a bell or other alarm device.



K2639

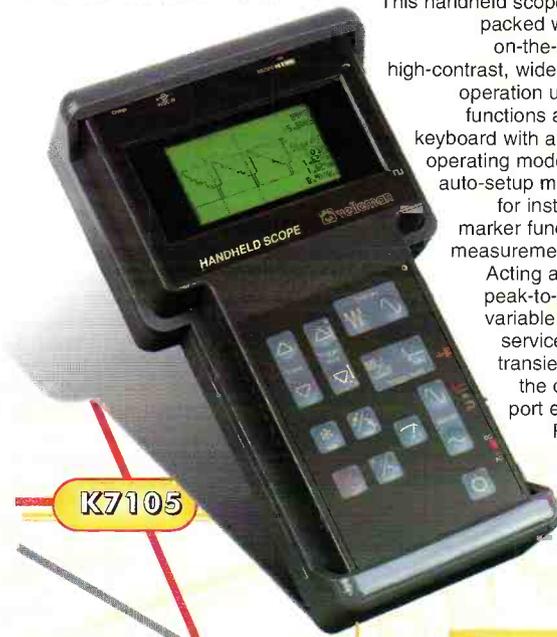
Supply voltage : 12-14VAC or 16-18VDC / 100mA · Relay output : 240V / 3A max.
· Dimensions : controller PCB : 104 x 60mm, 4.1" x 2.4" ; sensor PCB : 104 x 25mm, 4.1" x 1"

⏏ : 1120038M

📦 : PS1203



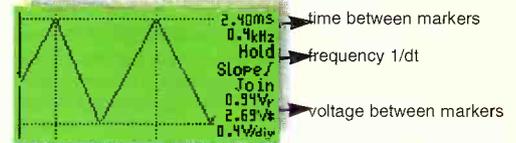
HANDHELD SCOPE



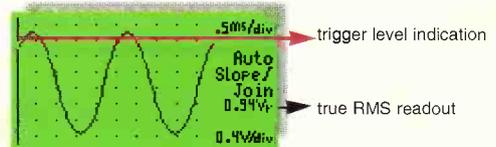
K7105

This handheld scope features options never seen in its category. It is packed with handy features which enables you to perform on-the-spot measurements quick, easy and accurate. Its high-contrast, wide viewing angle LCD screen enables operation under normal daylight conditions. All functions are accessible by means of a tactile keyboard with a pleasant touch feeling. The current operating mode is displayed on-screen. If desired, auto-setup mode takes care of all scope settings for instant visualisation of waveforms. The marker function enables you to make accurate measurements of voltage, time and frequency. Acting as a DVM, it displays True rms, dB, peak-to-peak and DC volts. With its built-in variable gain sine generator, it allows easy service of audio equipment, etc.... Probe transient response can be adjusted using the calibration output. Finally, a RS232 port enables screen data to be sent to a PC for use in different applications.

A charge circuit with indicator led for rechargeable batteries is provided.



Markers



Grid

SPECIFICATIONS :

- Maximum sample rate for repetitive signals : 5MHz
- Maximum sample rate for single shot events : 0.5MHz
- Input impedance : 1Mohm // 20pF
- Maximum input voltage : 100Vp (AC + DC)
- Input coupling : DC, AC and GND
- Vertical resolution : 8 bit (6 bits displayed on LCD)
- dB range from -73dB to +40dB
- Linearity 1 bit (of 8 bit data)
- LCD : 64 x 128 pixels
- Timebase : 2µs to 20s / div in 22 steps
- Input sensitivity : 5mV to 20V / div in 12 steps
- Sine wave generator : 400Hz / 1Vrms // 1Kohm (adjustable)
- Square wave output : 400Hz 3.5Vpp
- Supply voltage : 9VDC / 300mA
- Rechargeable battery : 6 x type AA / 800mAh
- Charge current : 90mA
- Charging time : 14 hours
- Autonomy : 5 hours
- Operating temperature : 0 to 50°C (32 to 122°F)
- Dimensions : 130 x 230 x 43mm (5.1" x 9" x 1.7")

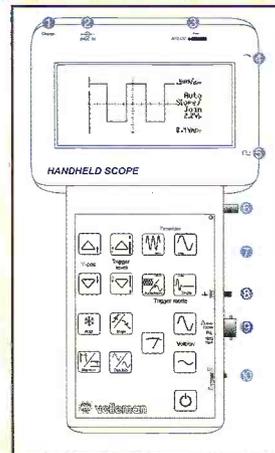
FEATURES :

- True RMS or peak to peak read-out
- dB measurements
- Markers for voltage and time
- Auto setup function
- DC readout with zero reference function
- Frequency readout through markers
- Dot join function
- Screen hold function
- Grid or ruler function
- Adjustable trigger level
- Trigger mode : normal, auto or single
- Trigger edge : rising or falling
- Waveform memory (1 location only)
- RS232 data output to computer
- Auto power off (can be disabled)

OPTIONS :

- Carry case : BAG13X24
- Probe : PROBE20 or isolated probe : PROBE60S
- AC adapter : PS903
- HOLSTER = PCASE
- OPTRS232

HOLSTER EXCL.



1. LED indication when charging
2. 9Vdc power supply connection
3. RS232 and sine wave output
4. Sine wave amplitude adjustment.
5. Fixed square wave output
6. Contrast adjustment.
7. LED on/off indication.
8. GND push button.
9. BNC connector signal input (max. 100V peak AC + DC)
10. AC or DC input selection

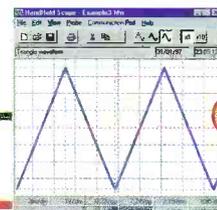
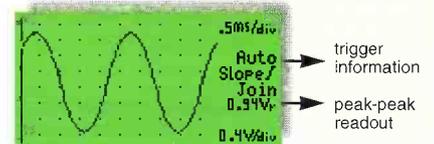


Dot mode



Dot join mode

(these are simulated screen shots)



OPTIONAL CABLE + WINDOWS SOFTWARE

OPTRS232

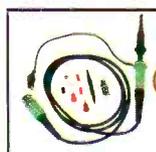
Exists also in assembled version : HHS5A incl. :

- PCASE
- NiCd batteries
- PCASE
- NiCd batteries
- adaptor

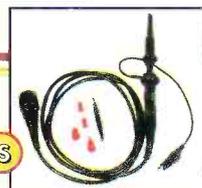
PROBE20



PROBE100



PROBE150



PROBE60S

PROBE

PROBE20, PROBE60S, PROBE100, PROBE150

High quality probes, suitable for almost any scope. Both probes have a slide switch for X1 and X10. PROBE60S has an insulated BNC plug and satisfies IEC-1010 standard.



US7103 UPGRADE SOFTWARE FOR K7103

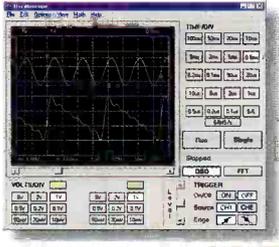
Besides using the K7103 as an oscilloscope, it can also be used as spectrum analyzer up to 16MHz or as a transient signal recorder for recording voltage variations or for comparing two voltages over a longer period (up to more than 1 year !). The oscilloscope includes True RMS read-out capability.

Minimum system requirements : * IBM compatible PC * VGA display card * Mouse * Free printer port LPT1 * 460Kb free conventional memory * Math processor needed for RMS readout and spectrum analyzer

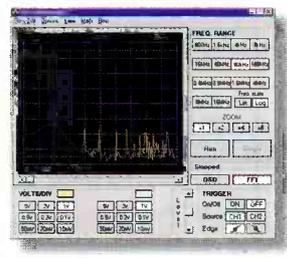
US7103



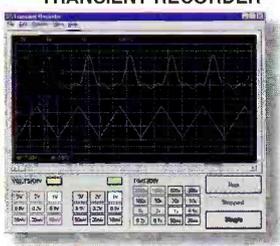
OSCILLOSCOPE



SPECTRUM ANALYSER



TRANSIENT RECORDER



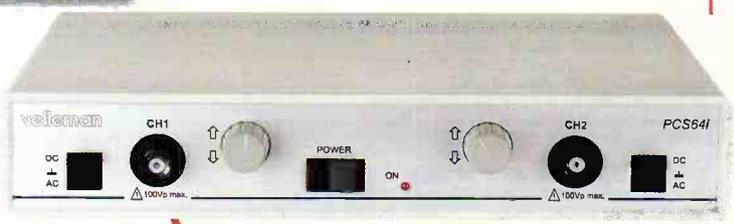
PCS64i DIGITAL STORAGE SCOPE FOR PC

The PCS64i is a digital storage oscilloscope, using an IBM compatible computer and its monitor to display waveforms. All standard oscilloscope functions are available in the DOS or Windows program supplied. Its operation is just like a normal oscilloscope with the difference that most operations can be done using the mouse.

The markers for indicating voltage and frequency also provide considerable ease of use and can be operated without difficulty using the mouse. Apart from being used as an oscilloscope, the unit can also be used as a spectrum analyser up to 16 MHz, and as a transient signal recorder, for recording voltage variations or for comparing two voltages over a longer period (up to more than 1 year!).

Connection is through the computer's parallel port, the scope is completely optically isolated from the computer port.

The oscilloscope and transient recorder have two completely separated channels with a sampling frequency up to 32 MHz in real time, oversampling of 64MHz is possible in the Windows software. Any waveform displayed on the screen can be stored for later use in documents or for comparison of waveforms.



PCS64i

- ASSEMBLED DEVICE : IS NOT AVAILABLE IN KIT-VERSION

- ✓ DOS & WINDOWS
- ✓ OPTICALLY ISOLATED FROM PC

GENERAL INFORMATION

- two separate channels
- input impedance : 1 MOhm/30pF
- input bandwidth : 13MHz
- maximum input voltage : 100V (AC + DC)
- maximum readout error : 2.5%
- input coupling : DC, AC and GND
- vertical resolution : 8 bit
- real time sampling frequency : 32MHz (max.)
- oversampling : 64MHz (only in Windows)
- memory : 4Kb/channel
- supply voltage : 9 - 10VDC / 800mA
- charger circuit for rechargeable batteries : 90mA
- AC/DC adapter included
- dimensions : 225 x 165 x 40mm, 8.9" x 6.5" x 1.6"

SYSTEM REQUIREMENTS

- IBM compatible PC
- Windows 95 or 3.11 or MS-DOS
- VGA display card (min. 800x600 for Windows)
- mouse
- free printer port LPT1
- 480Kb free conventional memory (Dos software)
- arithmetic coprocessor needed for RMS readout and spectrum analyser

OPTIONAL ACCESSORIES

- battery pack : BP9
- oscilloscope probes (2x) : PROBE60S (isolated)
- carry case : BAG21X19

OSCILLOSCOPE

- timebase : 100ns to 100ms per division
- trigger source : CH1, CH2 or free run
- trigger edge : rising or falling
- trigger level : adjustable in steps of 1/2 division
- step interpolation : linear or smoothed
- markers for voltage and frequency
- input sensitivity : 10mV to 5V/division
- pre-trigger function (not in 64MHz mode)
- true RMS readout (only AC component)

SPECTRUM ANALYSER

- frequency range : 0 .. 800Hz to 16MHz
- linear or logarithmic timescale
- operating principle : FFT (Fast Fourier Transform)
- FFT resolution : 2048 lines
- FFT input channel : CH1 or CH2
- zoom function
- markers for amplitude and frequency

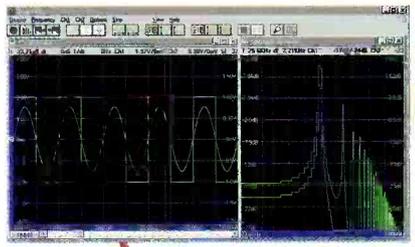
TRANSIENT RECORDER

- timescale : 20ms/Div to 2000s/Div
- max record time : 9.4hour/screen
- automatic storage of data
- automatic recording for more than 1 year
- max. number of samples : 500/s
- min. number of samples : 1 sample/20s
- markers for time and amplitude
- zoom function
- record and display of screens
- data format : ASCII

SCOPE-IT

Technical extended Software for Windows95 / 3.11 Digital storage oscilloscope and spectrum analyser for the K7103 DIGITAL STORAGE OSCILLOSCOPE or the PCS64i DIGITAL OSCILLOSCOPE.

ALSO AVAILABLE :



SCOPE-IT

MEASURING INSTRUMENTS



velleman

VELLEMAN PRODUCTS

TIMERS & CONTROLLERS



velleman

VTS25



Electrical soldering iron.
25W / 230VAC

VTD45



Electrical soldering pump.
45W / 230VAC

VTD



Soldering pump

VT-SS20



ELECTRONIC SOLDERING STATIONS

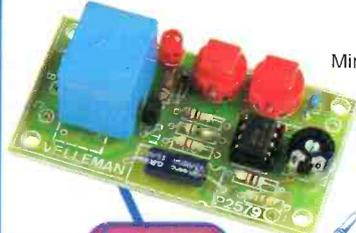
VT-SS30



STAND40



UNIVERSAL START/STOP TIMER



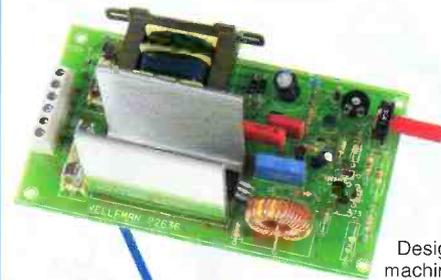
Miniature timer for all applications requiring a delay of up to 60 minutes. The control range may be adjusted.

K2579

Power supply : 15VDC / 55mA · Relay : 3A / 220V switchable · Time interval (without modifications) adjustable from 0 to 15 minutes · PCB dimensions : 38 x 69mm, 1.5" x 2.7"

IC : 1120012M

Transformer : WCAH2853 of PS1 203



K2636

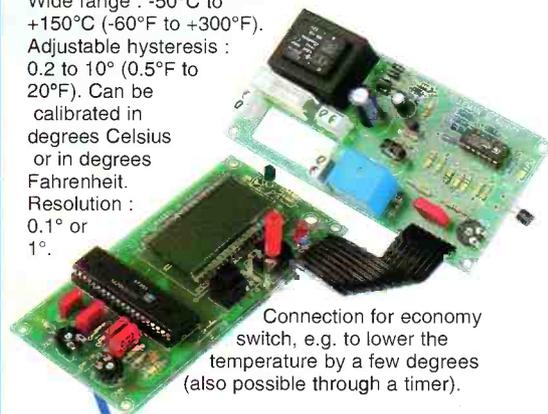
Designed to control AC motors with carbon brushes (drilling machine, vacuum cleaner, saw, ...). High torque, even at low r.p.m. May also be used for low voltage loads (24V). Supply and load circuit electrically isolated from one another.

Required power supply : 220-240V · Load voltage : 24-240VAC / 5.5A max.
· Adjustable minimum r.p.m. · Low interference level · Range : 5-95%
· PCB dimensions : 130 x 75mm, 5.1" x 3"

Transformer : D40 of D40B

THERMOSTAT WITH LCD DISPLAY

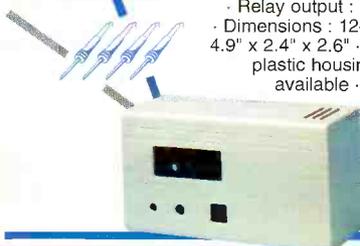
Wide range : -50°C to +150°C (-60°F to +300°F).
Adjustable hysteresis : 0.2 to 10° (0.5°F to 20°F). Can be calibrated in degrees Celsius or in degrees Fahrenheit.
Resolution : 0.1° or 1°.



Connection for economy switch, e.g. to lower the temperature by a few degrees (also possible through a timer).

K2649

Transformer included.
· Relay output : max. 3A / 240V
· Dimensions : 124 x 62 x 65mm, 4.9" x 2.4" x 2.6" · Corresponding plastic housing (B2649) also available · Power supply : 230VAC



Transformer : B2649

MICROPROCESSOR TIMER

This timer is used to program four independent outputs from min. 1 minute to max. 1 year. 336 steps (including on/off, 2 sleep functions and enable/disable) may be stored in memory. The sleep times may be programmed independently from 1 second to 99'99". In addition, memory is protected against accidental deletion, and can be internally protected. The kit comes complete with housing, keyboard and relays (transformer TR2603 not included).



K2603C

Flat keyboard with key beep and visual LED control · C-MOS memory for 336 functions (560 without date) · Memory back-up with Ni-Cd batteries, protected memory and clock for several months · 4 relay outputs : 3A / 240V · Power supply : 8VAC / 1A or 12VDC / 1A non-regulated · Dimensions : 242 x 116 x 59mm, 9.5" x 4.6" x 2.3"

Transformer : TR2603

SPEED CONTROLLER

0 TO 60 HOURS START / STOP TIMER

If a device has to be switched off after a specified amount of time, then this timer is the ideal solution. Because of the large range of the timer, it may be used in almost any applications, such as switching off television and hifi-equipment, lights (staircase lighting), safety timer for coffee machine, dark-room timer, providing a short ringing signal, etc. Push buttons are provided for starting and early stopping, but it is also possible to control the circuit by means of a relay or an open collector (e.g. our 15 channel remote control receiver K6711).



K6200

Relay output : 5A / 220V · Range : from ± 3 seconds to ± 60 hours
· Supply voltage : 24VAC / 50mA, 220VAC or 110VAC
· Fits in adapter housing B6713 (optional)

Transformer : B6713

TIMERS & CONTROLLERS

MICROPROCESSOR CONTROLLER/TIMER

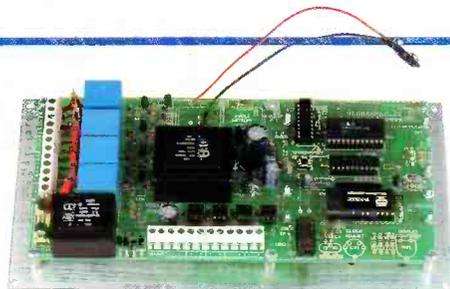


This marvellous controller does not just have the features of a conventional week/day timer; it can also be used to control temperature independently with one or all four outputs. For temperature measurements the K6001 or K6003 sensor is required for each measuring point (max. 4). The advantage of these sensors is that temperature may be measured far from the actual controller. The controller displays a message when a sensor is out of order and will switch off the corresponding output. The controller/timer is equipped with an LCD display, where all data, such as output number, temperature or on/off, day and time are displayed. Housing type B6000 is optional.

K6000

4 noise-free relay outputs : max. 5A / 220V · 4 optocoupler inputs for temperature sensors K6001 or K6003 · 50 program steps per output (total 200) · Week or day programming possible · Supply voltage : 220VAC · Memory back-up : 24 hours with 9V battery / 8 hours with 4.8V NiCd battery · Dimensions (front panel) : 234 x 120mm, depth 50mm; 9.2" x 4.7", depth 2" · Transformer included

⊞ : B6000



TEMPERATURE SENSOR



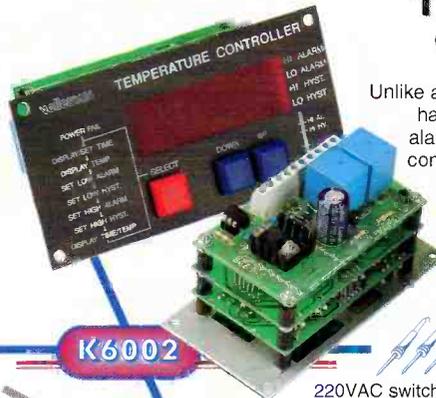
This kit has been developed especially to be combined with the K6000 or K6002 to build a temperature regulation and control system. The advantage of a separate sensor lies in the fact that the distance between the actual controller and the sensor is of no importance.

K6001

Sensor temperature range : -40°C(-40°F) to +150°C(302°F) · Pulse width modulation : 200µsec/°C · Linearity from -10°C(14°F) to 50°C(122°F) : better than 0.5% · Tested up to 50m, 164' (distance between sensor PCB and controller) · Supply voltage : 12VDC (± 2V) non-regulated · Current : 20mA max. · PCB dimensions : 45 x 47mm, 1.8" x 1.9"

⊞ : MODEL AI or G404

TEMPERATURE CONTROLLER



Unlike a normal thermostat, this kit has two inputs, one for "high" alarm, e.g. to switch on the air conditioning, and one for "low" alarm, e.g. to switch on the central heating. Both alarms are adjustable independently, each with their own hysteresis. Sensor K6001 included.

K6002

Relay outputs : 5A / 220VAC switch-over contact · Resolution : ± 0.1°C(0.2°F) · Display from -40°C(-40°F) to +150°C(302°F) · 24-hour clock (50Hz mains frequency) · Alarm setting from -50°C(-58°) to +154°C(309°F) · Separate optocoupled sensor input (for K6001) · Power supply : 9VAC / 300mA · Front panel dimensions : 60 x 117mm, 80mm depth; 2.4" x 4.6", 3.2" depth

⊞ : 1090025M

⊞ : PS905AC

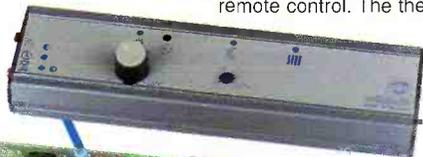
DAY / NIGHT THERMOSTAT

Very easy operation combined with great versatility and low cost were the design targets with this thermostat. Both day and night temperature may be set by means of easy-to-use rotary knobs. Switch-over time from day to night is repeated automatically every day once programmed.

Manual switch-over from day to night temperature is also possible by means of a push button. A one hour sleep function is also available, which may be of interest in the bathroom or other rooms which are only used occasionally.

As an option, the thermostat may be switched from day to night temperature by means of an external switch, e.g. our K6501 telephone remote control. The thermostat also has an alarm output for when the

temperature drops below 5°C (41°F). This output may also be connected to the K6501 remote control, to allow the user to check the condition of the heating from anywhere. It comes complete with aluminium housing.



K6004

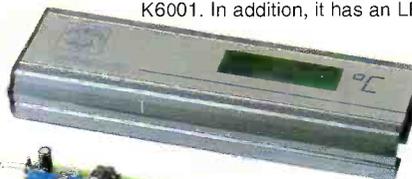
Memory for day of night switch-over time (19 steps) · Minimum time between two steps : 4 seconds · Adjustment range : 5°C (41°F) to 30°C (86°F) · Relay output : 10A, 250V toggle contact · Alarm output (open collector 55V / 50mA) at 5°C (41°F) · Clock accuracy : 50 or 60Hz mains frequency · Connection for telephone remote control K6501 · Hysteresis : ±0.2°C (±0.4°F) or ±0.4°C (±0.7°F) · Supply voltage : 9 to 12VAC / 100mA · Dimensions : 170 x 50 x 23mm, 6.7" x 2" x .9"

TEMPERATURE SENSOR WITH LED DISPLAY

This temperature sensor has the same features as the K6001. In addition, it has an LED display, showing the following three items :

- 1) Current temperature reading ;
- 2) Minimum temperature setting ;
- 3) Maximum temperature setting.

A splendid aluminium housing with front sticker is included.



K6003

Min. and max. thermometer · Sensor temperature range : -50°C (-58°F) to +150°C (302°F) · Can be set to degrees Fahrenheit · Display : 3 ½ digits (0.1° display resolution) · Supply voltage : 12 to 15VDC / 150mA · Dimensions : 144 x 50 x 22mm, 5.7" x 2" x .9"

⊞ : P51203



1 AMP POWER SUPPLY



This small power supply provides a regulated voltage adjustable between 1.5 and 35 Volts at 1 Amp. With the LM317 regulator remarkably better ripple and regulation characteristics are given than with conventional regulators. Current limiter and thermal overload protection are included in the chip. Supplied without heat sink.

K1823

Output current : 1.5A max. · Max. dissipation : 15W (cooled) · Max. input voltage : 40VDC · PCB dimensions : 52 x 52mm, 2.1" x 2.1"

⊠ : 80105 ⚙ : 2120250M*ST

0..30V / 0..10A POWER SUPPLY

A laboratory power supply is no doubt a valuable device both for the professional and amateur electronics engineer. Both a digital voltmeter and a digital ampere-meter are provided. Because of the integrated fan the power supply is capable of operating at full load for an extended time. Supplied complete with housing, knobs, transformers and K7201 digital display.



K7200

Output voltage continuously adjustable from 0 tot 30V · Output current limitation adjustable from 0 tot 10A · LED indication for current limitation · Output current : 8A continuous, 10A peak · Ripple max. : 0.5mVrms · Short-circuit protection · Technical specifications for display : see K7201 · Power consumption : 300W max. · Power supply : 220VAC · Dimensions : 330 x 90 x 215mm, 13" x 3.5" x 8.5"

0..30V, 0..5A LABORATORY POWER SUPPLY

This power supply is short-circuit protected and continuously adjustable from 0 to 30V and from 0 to 5A. A connection is provided for both a voltmeter and an ampere-meter. Our special K7201 digital volt/amp meter is ideally suited for this purpose.



K7202

Output voltage continuously adjustable from 0 to 30V · Fine adjustment over 1V · Output current limitation continuously adjustable from 0 to 5A · Fine adjustment between 0 and 1A · LED display of current limitation · Output current 4A continuous; 5A peak · Short-circuit protection · Ripple : max. 0.5mVrms · Input voltage 2 x 15VAC / 5.3A · Connection for K7201 digital volt/amp meter

A front transfer film and accompanying knobs are included, to give the housing a professional look. Housing + heat sink (HB270928 + HSP265) and transformer (2 x 15V 160VA) are not included.

UNIVERSAL BATTERY CHARGER

Many battery chargers are available on the market, but few of them are universal chargers. Using our kit, NiCd and NiMH batteries of different voltages and capacities can be charged both quickly (52 minutes) and normally (14 hours). In order to ensure that the battery is fully discharged prior to charging and thus has a longer life cycle, an automatic discharger is also fitted.



K7300

Charge current : from 15mA to 750mA (selectable) · Charges both of NiCd and NiMH batteries · Usable battery voltage : 1.2V, 2.8V, 3.6V, 4.8V, 6V, 7.2V, 8.4V and 9.6V · Quick charge in 52 minutes · Normal charge in 14 hours · Automatic discharge and charge cycle · Usable mains adapter : 15VDC / 800mA (PS1508) · Dimensions : 85 x 78mm, 3.4" x 3.1"

⊠ : G311 ⚙ : PS1508

UNIVERSAL POWER SUPPLY 5-14VDC / 1A



Suits all Velleman kits requiring a regulated power supply between 5 and 14VDC, and no more than 1 A.

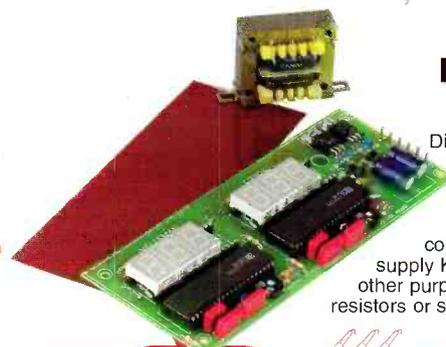
K2570

Input voltage : 7-16VAC / 1A · Output voltage : 5-14VDC, regulated · Output current : max. 1A · Power limitation and thermal overload protection · Max. dissipation : 7W · PCB dimensions : 77 x 61mm, 3.0" x 2.4"

⊠ : D40 of D40B ⚙ : 2070250M*ST

DOUBLE DIGITAL PANEL METER

Digital (i.e. accurate) read out of both voltage and current is by no means an unnecessary luxury in a laboratory power supply. This display was designed especially for connection to our 0..30V, 0..5A power supply K7202. Naturally, it may be used for other purposes as well, provided the required resistors or shunts are connected. Power supply transformer included.

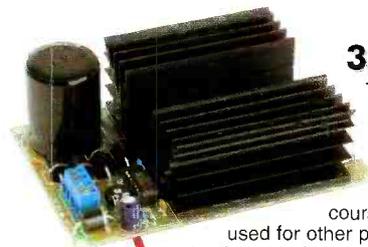


K7201

3 digit LED display · Display one from 0 to 99.9 (0.1 resolution) (e.g. for voltages) · Display two from 0 to 99.9 (0.01 resolution) (e.g. for currents) · Full-scale input sensitivity : 99.9mV · Automatic reset · Input impedance : 100Mohms · Overload indicator for current display · Supply voltage : 125 or 220VAC · Dimensions : 170 x 70mm, 6.7" x 2.8"

3 TO 30VDC / 3A POWER SUPPLY

This kit is meant as an auxiliary or as a permanent power supply for all common Velleman kits based on a stabilised DC voltage between 3 and 30V provided that the consumption does not exceed 3A. Of course this power supply unit can also be used for other purposes. By replacing the trimmer by a potentiometer, it may even be used as an adjustable power supply unit. Supplied with heatsink.



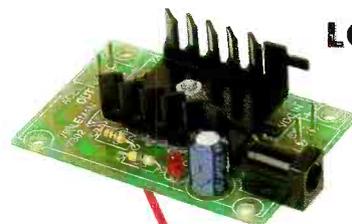
K7203

Output voltage : adjustable from 3 to 30V, stabilised · Output current : max. 3A · Output ripple voltage : 0.5mV · Short circuit stable · Overload protected · Input voltage : 9 to 30VDC (depending on the desired output voltage) · Transformer not supplied · Dimensions : 130 x 91 x 50mm, 5.1" x 3.6" x 2" · Suitable for the housings of type : L750, L760 and MODELB1

⊠ : L750, L760, MODELB1

LOW COST BATTERY CHARGER

Charges NiCd or NiMH batteries. Ideal for in car use. Transforms a mains adapter into a charger (adapter socket included). Charge cellular phone, toys, portables, video batteries ... Selectable charge current. LED charge indication



K7302

Charge current: 50mA, 100mA, 200mA, 300mA, 400mA. (selectable) · Supply voltage: from 6.5V to 21V (depending on used battery) · Supply current: same as charge current · Power supply polarity protected · LED function indication · Dimensions : 40 x 60 mm, 1.6" x 2.4"

⊠ : G403



HIGH END CLASS A MONO POWER AMPLIFIER WITH KT88 VALVES

Mono bloc class A amplifier, in a very attractive housing.

K8010

60Wrms class A (85W max.) at 4 or 8 ohm · Input sensibility : 1Vrms · Response of 4Hz to 90KHz



MONO VALVE POWER AMPLIFIER MODULE 90WRMS

For everyone who wants to integrate a valve amplifier in his applications. Comes in a very attractive housing. Ideal for use as guitar amplifier or as part of an high quality Hifi sound system.

K8011

90Wrms at 4 or 8 ohms · Input sensibility : 1Vrms · EL34 end valves



DOMOTICA LIGHT SYSTEM BUS PRINT

Bus print with optical isolated push-buttons. Up to five modules can be connected to the bus system.



DIMMER MODULE

Several dim-possibilities.

K8007



K8006

Power supply : 24Vac / max. 2.5A per module · Voltage : 110V - 230V · Bus print comes with no modules

TIMER ON/OFF MODULE

Timer on/off module for bus print, adjustable delay.

K8008



MULTIFUNCTIONAL CLOCK

With date & temperature indication, chronometer, count function to a specific date, scoreboard function. With remote control.

K8009

dimensions : 255 X 80 mm, 10.0" x 3.1"



LEAD BATTERY CHARGER

K8012

SIREN SOUND GENERATOR

4 different sounds are selectable.

MK113



MINIKIT ADJUSTABLE TIMER WITH RELAYS OUTPUT

Pulse adjustable between 0.5 and 5 seconds. Pause adjustable between 2.5 and 60 seconds.

MK111

LOW VOLTAGE LIGHT ORGAN

12 to 24V AC or DC. With loudspeaker input.

MK114

POCKET VU METER

With microphone input. Ideal as gadget.

MK115



VELLEMAN PRODUCTS

LOW COST 3 1/2 DIGITS DIGITAL MULTIMETER



Automatic polarity indication. Low battery indication. Transistor and diode test. DC current max. 10A. AC voltage max. 600V. Max. resistance measurements : 2Mohm

DVM830

3 1/2 DIGITS DIGITAL MULTIMETER



Automatic polarity indication. LCD display with character height of 21mm. Diode and audible continuity test. DC / AC current measurements : max. 20A. Voltage measurements : DC (max. 1000V) and AC (max. 750V). Resistance measurements : max. 20Mohm. With protections holster.

DVM92

3 1/2 DIGITS DIGITAL MULTIMETER



Low battery indication, overload protection and auto power off function. Transistor, diode and audible continuity test function. DC and AC current measurements up to 20A max. Voltage measurements : DC (max. 1000V) and AC (max. 700V). Capacitance measurements : 2000pF to 20µF. Frequency measurements up to 20kHz. Temperature test range from 0 to 40°C by built-in sensor (-50° to 1000°C with K-type thermocouple). With protection holster

DVM890

TRUE RMS MULTIMETER WITH 4 1/2 LCD



True RMS digital multimeter with 4 1/2 LCD display. 10 different functions and 32 ranges. Data hold function. DC and AC voltage measurements : DC (max. 1000V) en AC (max. 700V). DC and AC current measurements : max. 10A. Resistance (up to 200Mohm) and continuity measurements. Diode- and transistor test. Capacitance measurements up to 20µF. Frequency measurements up to 20kHz. With protection holster.

DVM98

DUAL DISPLAY DMM WITH RECORD FUNCTION



3 3/4 LCD display with automatic polarity indication. Autorange and manual range. Data hold function. Special functions as : 1) retains the maximum, minimum and average value in the measurement time period. 2) relative measurements : relative value, relative % value, percentage tolerance of a measurement. ACV (max. 750V) and DCV (max. 1000V) measurements. DCA and ACA measurements (max. 10A). Resistance (up to 40Mohm) and continuity measurements. Diode and transistor (hFE) tests. Frequency measurements (up to 800kHz). With protection holster.

DVM66

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