D-RTNM xxxx, D-IDxxx, D-GDxxx

Manual

ALGE TIMING

Important Information

General

Before using your ALGE-TIMING device read the complete manual carefully. It is part of the device and contains important information about installation, safety and its intended use. This manual cannot cover all conceivable applications. For further information or in case of problems that are mentioned not at all or not sufficiently detailed, please contact your ALGE-TIMING representative. You can find contact details on our homepage www.alge-timing.com

Safety

Apart from the information of this manual all general safety and accident prevention regulations of the legislator must be taken into account.
The device must only be used by trained persons. The setting-up and installation must only be executed according to the manufacturer's data.

Intended Use

The device must only be used for its intended applications. Technical modifications and any misuse are prohibited because of the risks involved! ALGE-TIMING is not liable for damages that are caused by improper use or incorrect operation.

Power supply

The stated voltage on the type plate must correspond to voltage of the power source. Check all connections and plugs before usage. Damaged connection wires must be replaced immediately by an authorized electrician. The device must only be connected to an electric supply that has been installed by an electrician according to IEC 60364-1. Never touch the mains plug with wet hands! Never touch live parts!

Cleaning

Please clean the outside of the device only with a smooth cloth. Detergents can cause damage. Never submerge in water, never open or clean with wet cloth. The cleaning must not be carried out by hose or high-pressure (risk of short circuits or other damage).

Liability Limitations

All technical information, data and information for installation and operation correspond to the latest status at time of printing and are made in all conscience considering our past experience and knowledge. Information, pictures and description do not entitle to base any claims. The manufacturer is not liable for damage due to failure to observe the manual, improper use, incorrect repairs, technical modifications, use of unauthorized spare parts. Translations are made in all conscience. We assume no liability for translation mistakes, even if the translation is carried out by us or on our behalf.

Disposal

If a label is placed on the device showing a crossed out dustbin on wheels (see drawing), the European directive 2002/96/EG applies for this device.
Please get informed about the applicable regulations for separate collection of electrical and electronical waste in your country and do not dispose of the old devices as household waste. Correct disposal of old equipment protects the environment and humans against negative consequences!

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Subject to changes.

1 In General

This manual applies for all D-IDxx, D-RTNMxx and D-GDxx LED-Matrix display systems. Between all of these diplay systems the only differences are at the pixel spacings and the resolution.

2 Connections

Temperature sensor (OPTION)

Connection for timing device and external power supply 12 VDC (OPTION).

RS232 and RS485 (OPTION)
RS232 for ALGE-TIMING timing device (OPTION)

Ethernet

Range: 90-130VAC or 180-260V, 50-60Hz .. ajust according to country!

!!!Always check the switch setting 110/230V at switching power supply (open casing) before initial operation at a new location!!!
USA=110V Europe=230V

3 Configurations

All LED-fullmatrix-displayboard of type D-xxx will be configured with the PC-Software DisplayStudio. Please refer to the separate manual for this DisplayStudio software.

3.1 Network-connection

Together with your D-xxx displayboard, a „Cross-Patch“ network-cable is provided. This enables a direct connection between control-computer and displayboard. In case that the displayboard is used in a network with hubs and switches, you have to use a simple network-cable (straight) instead of the “Cross-Patch” cable.

3.2 IP-address

IP-addresses enable a logic addressing of devices (hosts) in IP-networks like e.g. the internet. One host possesses at least one unique IP-address. An IP-address of IP version 4 normally appears as a series of four figures between 0 and 255, while each will be separated by a dot, e.g. 192.168.0.34 or 127.0.0.1.
Every used device within a network must possess an own unique IP-address!
This means that there are at most 2^{32} possibilities (4.3 billion addresses!).

D-xxx displayboards must receive an appropriate IP-address for communication with the PC-Software DisplayStudio. Also the computer at which DisplayStudio is installed must be configured correctly.
In order to configure an IP-address of a D-xxx displayboard in a non-configured network, a special cofiguration-software is installed together with the installation of DisplayStudio.

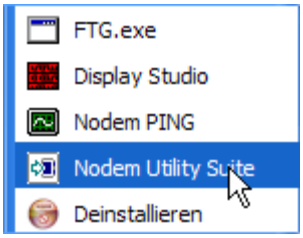
At point 3.2.1 you can find a description for adjusting an IP-address with the help of Network Device Toolkit.

3.2.1 Network Device Toolkit

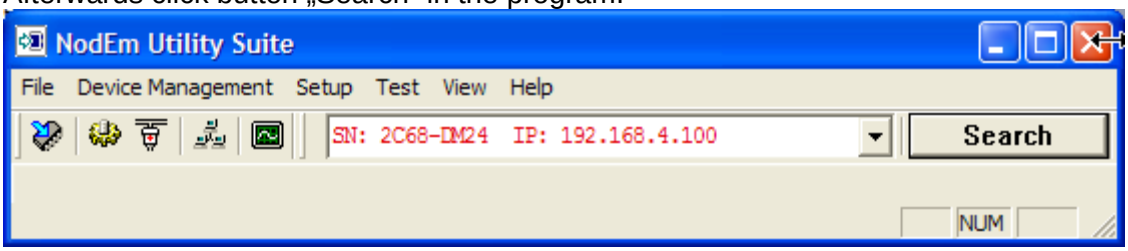
This program serves for basic adjustments like setting the IP-address at your displayboard D-xxx.

Below we describe how an IP-address of a displayboard can be arranged for its network.
If you use a network with more than 2 user, these settings should be managed by a system administrator.

- Connect displayboard D-xxx with provided „Cross-Patch“ to the computer and switch on both devices.
- Start PC-Software programs – ALGE-TIMING – DisplayStudio – Network Device Toolkit



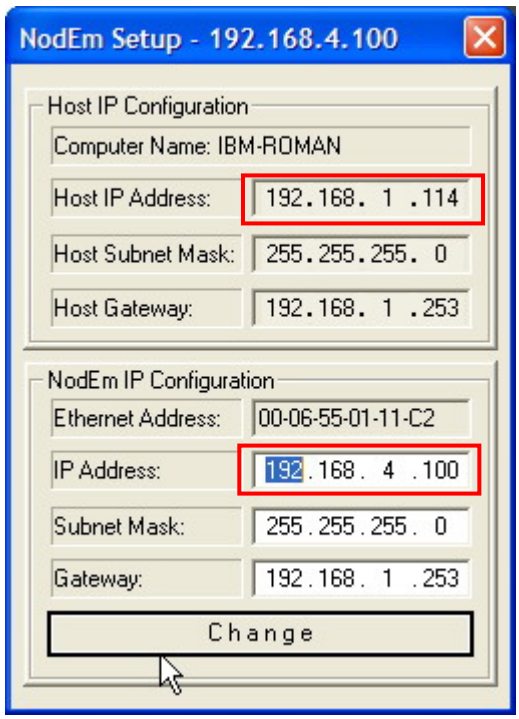
- Afterwards click button „Search“ in the program.



- If the IP-address appears in red like in the example above, you have to change the address. If several IP-addresses are found, several displayboards are connected to the network. The displayboards can be distinguished from each other by the figures in front of the IP-address. This is the internal unique serial number.

  For this click on button  .

- Configuration window to set the local IP-address for displayboard D-xxx opens.



IP-address of the computer

Net mask, only filters suitable addresses. In the example, the first 3 figures of all connected computers must correspond if the network is to work (192.168.1.xxx)

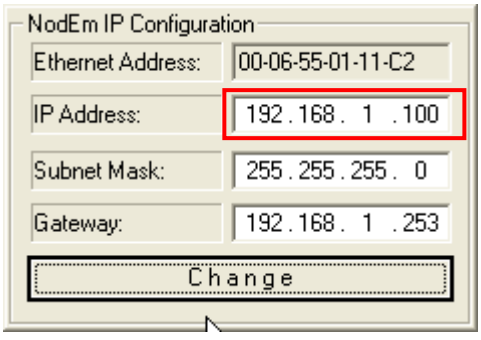
Present IP-address of displayboard.

Present net mask.

Present adjusted gateway.

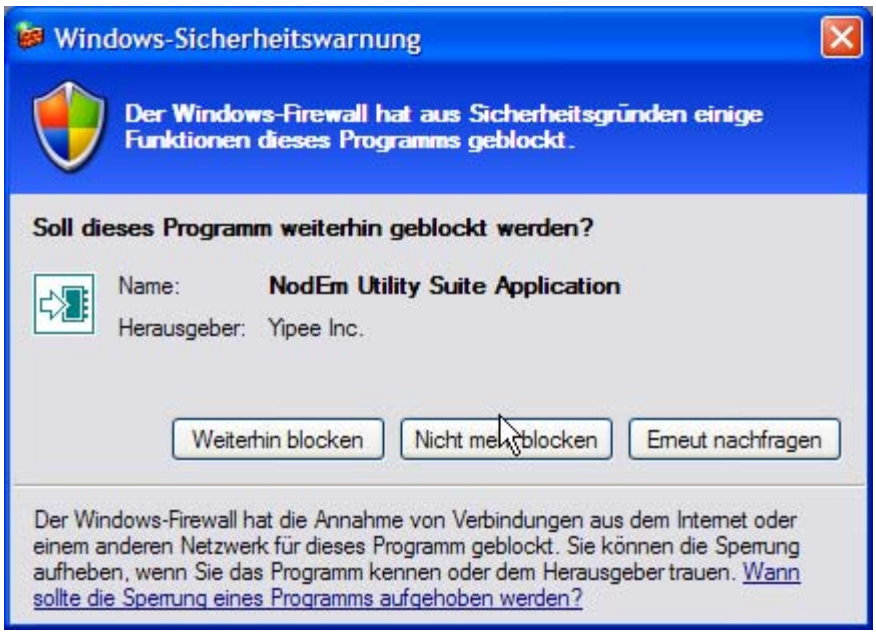
Remarks for red framed boxes: here the first three lines of figures have to correspond in order to guarantee a communication between computer and display board! (In the above example the figure 4 would have to be replaced by a 1 in the lower red framed box so that the first three lines of figures correspond with those in the upper box. Click on Change – the formerly red figure should now be black.)

- You have to change the IP-addresses as mentioned below so that the displayboard can communicate with the computer.
  ATTENTION!: You should never use the addresses xxx.xxx.xxx.1 or xxx.xxx.xxx.255, since these IP-addresses were formerly used for special network applications. We cannot guarantee that these addresses will work properly!



- After activating the button „Change“, the IP-address in the search window of Network Device Toolkit will turn black.
  Now you have an operating network.

IMPORTANT! With WindowsXP, Sevicepack2, the communication via netwerk must be released at the first start of the application.



If you fail to do so, Network Device Toolkit and DisplayStudio cannot communicate with the displayboard!!

This release can also be subsequently set at your computer. At “System control” – “Safety center” – “Window-Firewall” you can adjust the necessary changes. Please also refer to the manual of your operation system!

4 Control with ALGE devices

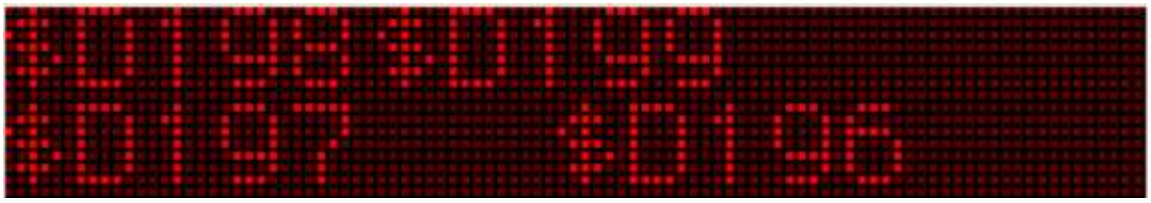
The D-RTNM display-systems possess an internal storage and an interface which allow timing devices as TDC8001, Timy or Multisport console D-CKN to change lists and to display running times, scores, fouls, start numbers, ranks and names to the start numbers. The layout of the displayboard can be programmed freely with the help of variables.

The below described variables are added as text to a list and will then show the requested data at the corresponding positions.

4.1 Variables for Timing devices

$ Variable	Describtion
$D195	Name of the bib last received from the scoreboard software
$D196	Current time from timing-device, automatic format, hh:mm:ss.th
$D197	Current rank sent by timing-device
$D198	Current bib sent by timing-device
$D199/nn	Name of current bib, nn length of field in characters, max. 16
$D200	Nation of current bib
$D201	Club of current bib
$s000	Name of bib 001-999
$sA00	Nationality of bib A00-A99=000-099; B00-B99=100-199;…
$sa00/nn	Club of bib a00-a99=000-099; b00-b99=100-199; nn length of field in characters, max. 10
$D000-$D194	Byte from data string

Example:



4.2 Variables for Multisport-usage

$ Variable	Description
$B00	Score HOME – 3 digit, clear leading zeros
$B01	Score GUEST – 3 digit, clear leading zeros
$B02	Time minutes
$B03	Time seconds
$B04	Time 1/10 seconds
$B05	Remaining TimeOut time
$B06	HOME team name
$B07	GUEST team name
$B08	GUEST team name, left allignment
$B09	Number of fouls HOME team
$B10	Number of fouls GUEST team
$B11	Last player who committed a foul
$B12	Number of fouls for that player
$B13*	1 point ratio HOME team
$B14*	2 points ratio HOME team
$B15*	3 points ratio HOME team
$B16*	2 and 3 points ratio HOME team, field
$B17*	Number of fouls HOME team
$B18*	1 point ratio GUEST team
$B19*	2 points ratio GUEST team
$B20*	3 points ratio GUEST team
$B21*	2 and 3 points ratio GUEST team, field
$B22*	Number of fouls GUEST team
$B23*	Name of the team exchanging player(s)
$B24	Penalty1 HOME in format PP mm:ss (PP – player number, mm - minutes, ss – seconds)
$B25	Penalty2 HOME in format PP mm:ss (PP – player number, mm - minutes, ss – seconds)
$B26	Penalty1 GUEST in format PP mm:ss (PP – player number, mm - minutes, ss – seconds)
$B27	Penalty2 GUEST in format PP mm:ss (PP – player number, mm - minutes, ss – seconds)
$B28	Misconduct penalty HOME in format MPP mm:ss (M – sign for misconduct PP - player number, mm - minutes, ss – sekonds)
$B29	Misconduct penalty GUEST in format MPP mm:ss (M – sign for misconduct PP - player number, mm - minutes, ss – sekonds)
$B30	Score HOME in 1. time period
$B31	Score GUEST in 1. time period
$B32	Score HOME in 2. time period
$B33	Score GUEST in 2. time period
$B34	Score HOME in 3. time period
$B35	Score GUEST in 3. time period

$B36	Score HOME in 4. time period
$B37	Score GUEST in 4. time period
$B38	Sign for ball possession HOME or set HOME (volleyball)
$B39	Sign for ball possession GUEST or set GUEST (volleyball)
$B40	Game Period (has value E for extra time period)
$B41	Number of timeouts HOME team
$B42	Number of timeouts GUEST team
$B43	Attacking Time
$B44	Attacking Time or TimeOut
$B45	Penalty HOME that expires first. (when only one penalty is shown format: PP mm:ss)
$B46	Penalty GUEST that expires first. (when only one penalty is shown format: PP mm:ss)
$B47	Misconduct penalty HOME that expires first (when only one penalty is shown format: MPP mm:ss)
$B48	Misconduct penalty GUEST that expires first (when only one penalty is shown format: MPP mm:ss)
$B49	Score HOME - two digit score (format xx)
$B50	Score GUEST - two digit score (format xx)
$Hxx*	HOME player name, xx is player number from 00 to 99
$H9:*	HOME coach name
$H9;*	GUEST coach name
$H9<*	1st referee
$H9=*	2nd referee
$H9>*	official delegate
$H9?*	Number of spectators
$Gxx*	GUEST player name, xx is player number from 00 to 99
$Pxx*	Player name leaded with player number. Depending on xx is: 0-4 5 Home players currently in the field 5-9 5 Guest players currently in the field 10-14 Home players who were in the field 15-19 Guest players who were in the field 20-24 Home players who were and who are currently in the field 25-29 Guest players who were and who are currently in the field 30-34 Players of the team exchanging player(s) who are currently in the game 40-44 Players of the team exchanging player(s) who were in the game 50-54 Players of the team exchanging player(s) who were and are in the game
$hxx	Home player name, typed from command console, xx can be 0-11
$gxx	Guest player name, typed from command console ,xx can be 0-11
$ixx	Home player number, typed from command console, xx can be 0-11
$jxx	Guest player number, typed from command console, xx can be 0-11
$Mxx	Messages typed from command console, xx is message number, can be 00-19

* Those variables are entered from Scoreboard software or Basketball statistic software

4.2.1 Loading of start lists

This function serves for the usage of the displayboard together with timing devices. Before the run starts, you can load a start list into the display.
This will remain stored until a new start list or a new display list will be loaded.

You can find the tool ExcelToDisplay in the DisplayStudio under tool – ExcelToDisplay.

With „open“ you can load the excel –file.

With „send“ you can transmit the start list to the display.

4.3 Change of display-lists

You can switch the active display-list by indicating special start numbers. In the DisplayStudio under “tools - parameter” you can find the item “serial communication”, the adjustment for special startnumbers.

Beginning at this start number, you can add or activate up to 32 lists.

Recommandation:
List 1 for programming timing
List 2 for advertisement
List 3 for advertisement etc.

If you add start number 902 at the TdC, the list 2 will be played once, afterwards the display will jump back to the list active before.
903 is list 3 etc.

If you would like to activate the list permanently, you have to indicate start number 932.

5 Technical data

Here you can find a list of the most popular technical data of the different models.
If your displayboard is not listed, please contact ALGE-TIMING for the technical data in detail.

Model	LED per Pixel	Vertical Pixel	Horizontal Pixel	Vertical Pixelpitch (mm)	Horizontal Pixelpitch (mm)	Length (mm)	Height (mm)	Depth (mm)	Usage
D-RTNM-P3-16x96-I	3	16	96	21.6	21.6	2200	400	97	indoor
D-RTNM-P3-16x160-I	3	16	160	21.6	21.6	3500	400	97	indoor
D-RTNM-P4-16x96-I	4	16	96	20.7	25.4	2200	500	97	indoor
D-RTNM-P4-16x160-I	4	16	160	20.7	25.4	3500	500	97	indoor
D-RTNM-P3-16x96-O	3	16	96	21.6	21.6	2200	400	97	outdoor
D-RTNM-P3-16x160-O	3	16	160	21.6	21.6	3500	400	97	outdoor
D-RTNM-P4-16x96-O	4	16	96	20.7	25.4	2200	500	97	outdoor
D-RTNM-P4-16x160-O	4	16	160	20.7	25.4	3500	500	97	outdoor

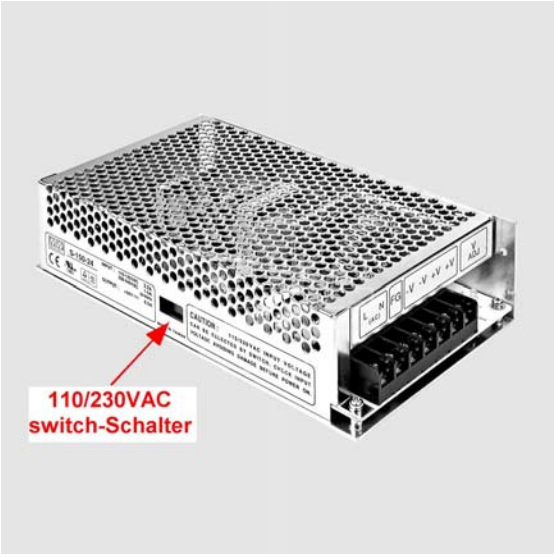
Additionally we have the following Pixelpitches for customized applications available.

Model	LED per Pixel	Vertical Pixelpitch (mm)	Horizontal Pixelpitch (mm)
D-RTNM-P1V1	1	10	10
D-RTNM-P1V2	1	15	10
D-RTNM-P1V3	1	15	15
D-RTNM-P7	7	46,4	36,8
D-RTNM-P12	12	65,6	55,2

6 Data protocol

Data protocols are not publizied in the standard manual.
On request, we will provide you with informal protocols in English!

7 Adjustment of input voltage



The switching power supplies are situated in the casing (quantity according to type of display).

All switching power supplies have to be commutated to the corresponding input voltage!