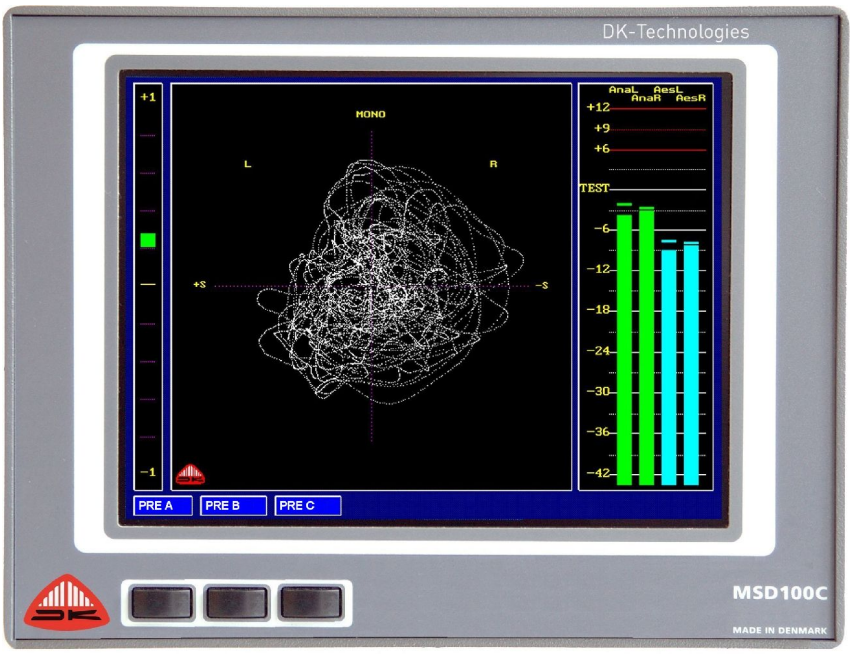
Rev. 1.2

MSD-Config for the MSD100C

By DK-Technologies A/S



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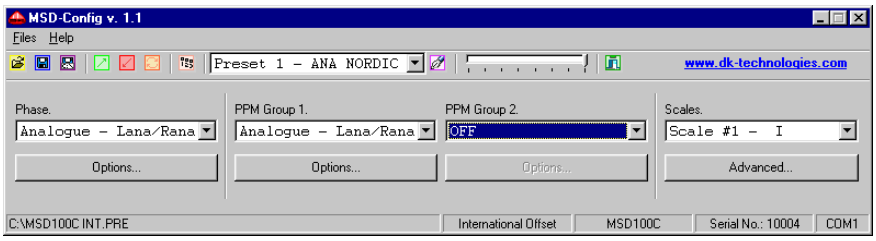
With MSD-Config you can modify the configuration of the MSD100C.

There are 11 presets in the configuration of which all are user definable, i.e. colours, scales. Out of the 11 presets 3 are directly available on the MSD100C via a single keystroke.

Your MSD100C has been delivered with a configuration package that contains the most commonly used settings for your area.

Main Window.

When a configuration is loaded from file or uploaded from the MSD100C the main window will look similar to the picture below.



The main window consists of the following elements:

- The Toolbar.
- The Configuration Area.
- The Statusbar.

The Toolbar.

Open (CTRL+O): Use this to load a configuration from file.
Tip: The item Recent files in the files menu will show a submenu with the last four opened files.

Save: Saves the current configuration to a file.
Note: This is only active if there has been made changes to the preset and the configuration previously has been saved with “Save As…”

Save as (CTRL+S): Saves the current configuration to a file with a new filename.

Upload (CTRL+U): Reads the configuration from the MSD100C.

Download (CTRL+D): Saves the current configuration to the MSD100C.

Restart (CTRL+I): Restarts the MSD100C connected to the PC.

Assign Softkeys: Selects the 3 presets directly available on the MSD100C.

Rename: Used to rename the currently selected preset.

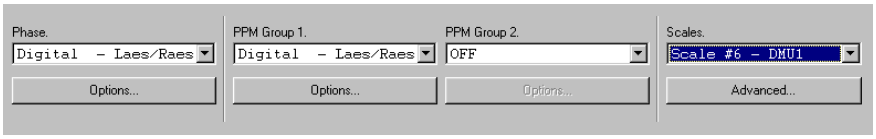
Exit: Closes the program.

This slider is used to set the backlight intensity.
Note: This setting affects all 11 presets.

This dropdown box is used to select which of the 11 presets in the configuration to modify.

The Configuration area.

When a configuration has been loaded the configuration area becomes visible.



This area is divided into three parts: Phase, PPM Group 1 and 2, Scales.

Phase: The dropdown box in this area selects which input (analogue or digital) is routed to the Audio Vector Oscilloscope and the Phasemeter. It is also possible to select the item OFF, which will disable the Audio Vector Oscilloscope and Phasemeter, and only show the PPM Groups. The OPTION button opens a window with advanced options.

PPM Group 1 and 2: The MSD100C can as a maximum show four PPM bargraphs, grouped in pairs. The two dropdown boxes in this area selects which input is routed to the PPM bargraphs. The OPTION buttons opens a window with advanced options.

In group 2 it is also possible to select the item OFF, which will disable this group and only show two PPM-bars on the MSD100C (Group 1), i.e. analogue input only or digital input only

Scales: This dropdown box contains the seven scales installed in the MSD100C. Use this to select which scale the MSD100C will use for the selected preset.

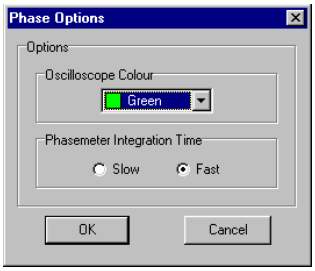
To edit or install other scales you need to use the MSD-Load / DK-Scale program. Please refer to the DK-Scale program for further information on editing scales. In DK-Scale you have to open the scale package that corresponds to the current offset used in the MSD100C (INT.DAT, US.DAT or DE.DAT). The offset is shown in the second field of the statusbar.

Observe: If you download other scales to the MSD100C you must set the scale dropdownbox to the same scalenumber (Scale #1 to Scale #7) as you set the Key Number in DK-Scale.

The ADVANCED button in this section is only active if MSD-Config has been loaded with the commandline parameter [**/A**] (see the section “Advanced Functions” on how to do this). This option is **ONLY** for very skilled engineers as it offsets the scalepackage to one of the three variables: International, United States or Germany.

Phase Options.

In the Phase Options window, it is possible to change the appearance of the Audio Vector Oscilloscope.



Oscilloscope Colour:

Use the dropdown box to select one of seven possible colours used by the Audio Vector Oscilloscope.

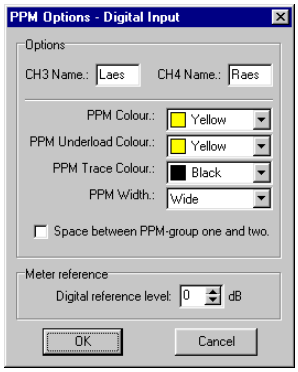
Phasemeter Integration time:

Slow and Fast sets the phasemeter integration time. Slow mode is with a normal 10ms integration time, while the Fast mode is without any integration.

Click OK to save the changes or Cancel to abandon the changes.

PPM-Options.

In the PPM-Options window it is possible to change the appearance of the PPM-bargraphs.



The window title will show whether it is the analogue or digital input that is being configured.

In the top of the window it is possible to change the name of the inputs. These names are shown above the PPM-bargraphs on the MSD100C. These names will also be shown in the dropdown boxes in the main window.

The colour and width can be set individually for each PPM group. There are seven colours to choose from (green, yellow, blue, fuchsia, aqua and white. Black is also possible thus the PPM-bargraph would be 'invisible'). The width of the PPM-bargraphs can be altered according to your display requirements. There are three bargraph widths to choose from (X-WIDE, WIDE, NORMAL). Wide is the default setting.

To change colour of the PPM bargraphs select the area you want to change:

PPM Colour determines the colour of the PPM bargraph itself.

UNDERLOAD Colour is the PPM bargraph from the 'underload' mark to the bottom.

TRACE Colour is the 'track' or background colour of the PPM bargraph (This would normally be selected black and thus be 'invisible').

Note.: To select a colour for the full length PPM bargraphs, both **UNDERLOAD Colour** and **PPM Colour** must have same colours. The PPM will always become RED in the “Overload” area. “Overload” and “Underload” are defined by the individual standards in DK-Scale.

Selecting “Space between PPM-group 1 and 2.” will insert a space between PPM group 1 and PPM group 2.

If you set PPM-group 2 to OFF the space will be removed automatically.

This checkbox will not be enabled if you have selected PPM group 1.

Meter Reference is only enabled if MSD-Config has been loaded with the commandline parameter [**/A**] (see the section “Advanced Functions” on how to do this).This option is **ONLY** for very skilled engineers as it offsets the internal reference used by the PPM bargraphs.

Click OK to save the changes or Cancel to abandon the changes.

The Statusbar.

The statusbar is placed at the bottom of the main window and is divided into five fields.

The left field of the statusbar shows the filename of the currently opened configuration-file. If the configuration -file has been uploaded from the MSD100C and hasn't been saved, the statusbar will show the text "Uploaded from MSD…", it can also show other types of relevant information.

The second field provides an indication of the offset loaded in the configuration.

The three different offsets available is: International, US and German. The scales installed will be offset to follow the standards at the selected region, i.e. International for areas following the AES/EBU, US for areas referring to the SMPTE and finally German for areas following the German offsets.

The third field will show which type of MSD that is connected to the computer. If no MSD is connected, the field will show the message "Not Connected". If you connect the MSD100C after MSD-Config has been loaded you should restart the instrument by pressing the Restart button on the toolbar (Ctrl+I), this will update the information on the statusbar.

Note: MSD-Config is only capable of communicating with a MSD100C.

The fourth field shows the serial number of the connected MSD. This will also be updated after you have selected restart.

The fifth field on the statusbar will show which serial port is currently in use. MSD-Config supports up to 256 serial ports. Please refer to your computers documentation for further information.

Use the Interface item in the Files-menu to select which comport to use.

Set Meter Reference.

Meter Reference in the window "PPM Options" is considered an advanced function and is **ONLY** for very skilled engineers, it is only enabled if MSD-Config has been loaded with the commandline parameter [**/A**].

See the section "Advanced Functions" on how to enable the advanced functions.

Meter reference allows the user to offset the internal reference used by the PPM bargraphs. This reference can be set individually for the analogue and digital inputs.

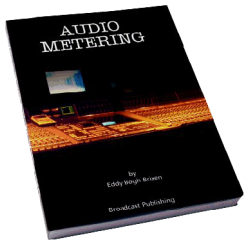
Note: These settings are global and will therefore affect all 11 presets.

Tip: If the meter reference input box is selected you can use the scroll wheel on your mouse to change the value.

The MSD100C is factory calibrated to match the regional standards for the used PPM scales.

	International.	United States.	Germany.
Scale Package.	MSD100C INT.PRE	MSD100C US.DAT	MSD100C DE.DAT
Analogue Offset.	0 dB	-6 dB	+3 dB
Digital Offset.	0 dB	-6 dB	+3 dB

For further information on the subject, we encourage you to read chapters 11 through 15 in the book "Audio Metering" written by Eddy Brixen.



"Audio Metering" is an audio text book, that explains the why's and how's of metering. It's ideal as a reference book, and equally well suited for those who need to brush up on metering. The book is 224 pages, soft bound, illustrated with plenty of diagrams, and is available in English and Danish. The book can be ordered through all our distributors, please visit our web page for further information.

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Scale Offset.

The Advanced button below the scale selection opens a window for scale offset, but this button is only active if MSD-Config has been loaded with the commandline parameter [**/A**]. See the section “Advanced Functions” on how to enable the advanced functions of MSD-Config.

This feature is ONLY for very skilled engineers as it offsets the scalepackage to one of three variables: International, United States or Germany.

Please note that if you are changing the scales via the DK-Scale program you have to load a scale package that corresponds to the currently selected offset. (INT.DAT, US.DAT or DE.DAT)

The offset is indicated in the second field of the statusbar.

Therefore please refer to the DK-Scale program for further information as well as relevant literature on the subject.

OBSERVE:

If you are using Windows 2000™ or Windows XP™ you have to copy the scale-files to your harddrive in order to open them, otherwise Windows™ will declare a “File Access Denied” error.

In Windows XP™, Microsoft® has provided a “Program Compatibility Wizard” which will enable MSD-Load / DK-Scale to work correctly in Windows XP™. This wizard can be found in the START-menu in the folder Accessories.

If you wish to use this wizard you should in step 2 of the wizard, select the option ”**I want to locate the program manually**“

In step 3 enter **X:\MSD-LOAD.EXE** where **X** indicates the driveletter of your CD-Rom drive.

In step 4 you should select the option ”**Microsoft Windows 98 / Windows Me**”.

Don’t change anything in step 5.

In step 6 just press `next`.

In step 7 you should select “**Yes, set this program to always use these compatibility settings**”.

In step 8 select “**No**”, and press `next` and then `finish` to finish the wizard.’

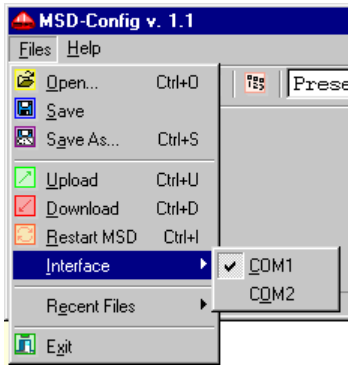
The settings is now saved, and will apply the next time you run MSD-Load/DK-Scale, so it is possible to open the scales directly from the CD-Rom.

Select Serial Port.

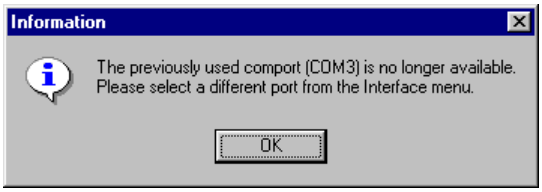
In order to communicate with the MSD100C you have to select which serial port to use.

The first time MSD-Config starts it selects COM1 as default. *(If installed.)*

Use the Interface item in the Files-menu to select which comport to use. The Interface item has a submenu that only shows the serial ports actually installed in the computer. If no serial ports is installed the submenu will state “No ports installed.”



If you are using a USB to RS232 converter it might not be available the next time you run MSD-Config, if that is the case the communication functions will be disabled until a new port has been selected in the Interface menu. The following message will also appear.



Please refer to your computers documentation for further information about installing and assigning serial ports.

Communication.

Use the upload button (CTRL+U) to read the configuration from the MSD100C.
The upload can be aborted by pressing the close button in the top right corner of the window.

Use the download button (CTRL+D) to write the configuration to the MSD100C.
The download can be aborted by pressing the close button in the top right corner of the window.

THIS IS NOT RECOMMENDED!!!

A partially downloaded configuration can prevent the MSD100C from starting or result in wrong readings.
If you abort a download you **MUST** download a new configuration before restarting the MSD100C.
If the MSD100C doesn't start correctly, remove power and reapply power while holding down one of the softkeys on the MSD100C. When the screen turns blue release the softkey and a small window called "MSD BIOS Utility" in the top left corner of the LCD will appear.
You can now use MSD-Config to download a new configuration, when done reset the MSD100C and it should now start correctly.

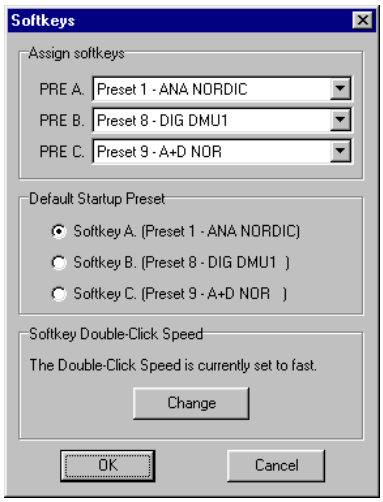
Use the restart button (CTRL+I) to restart the MSD100C and load the default start-up preset. This will also update the MSD100C's information on the statusbar.

Tip: If the upload and download buttons are disabled it might be because you have attached the MSD100C to the serial port after MSD-Config has been loaded. Try pressing the restart button on the toolbar this will update the MSD100C's information on the statusbar, and it will enable the appropriate upload and download functions.

Related Information: Select Serial Port.

Softkeys.

In the Softkeys window, assignment of the 3 pushbuttons on the front of the MSD100C is made. The softkeys are denoted PRE A, PRE B and PRE C. Any of the 11 presets can be assigned to any of the softkeys.



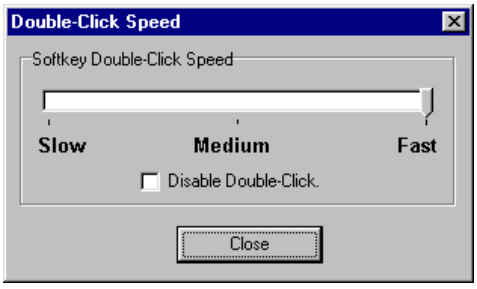
In the part of the window called “Default Startup Preset” selection of the Startup preset is chosen, i.e. the preset the MSD100C will boot with after power down or reset.

In the part called “Softkey Double-Click Speed”, it is possible to set how fast it is necessary to double-click the softkeys on the MSD100C in order to assign new presets. If you click the change button, the window “Double-Click Speed” will appear.

Double-Click Speed.

In the window Double-Click Speed you can set the double-click speed necessary to re-assign the presets on the MSD100C using the MSD-Softkeys ***(Please refer to the section softkeys.)***

Using the slider it is possible to select between three different settings, Slow, Medium or Fast. Fast is the default setting.



If you select the checkbox “Disable Double-Click” you will not be able to re-assign the presets on the MSD100C using the softkeys on the MSD, thus the only presets available will be the three already assigned by the MSD-Config program. (PRE A, PRE B and PRE C).

When you have finished the changes just press close and you will return to the previous window. The changes will take effect when you press OK in the softkeys window.

Advanced Functions.

Some functions in MSD-Config is considered advanced functions and is **ONLY** for very skilled engineers they are therefore normally disabled.

To enable the advanced functions of MSD-Config, MSD-Config has to be loaded with the commandline parameter [**/A**]

To do this you should select RUN from your start menu and then type **command** and the press OK. This will start a Command Prompt. If you are using Windows 2000™ or Windows XP™ you should instead type **cmd** followed by OK.

At the Command Prompt you should switch to your CD-Rom drive and at the root of the CD-Rom type **MSD-CFG /A** This will run MSD-Config with the advanced functions enabled.