

## 1.2 New Features of CadnaA 4.3

The list of new features offered by **CadnaA**, release 4.3, is subdivided into the following sections:

- Calculation/Configuration
  - **CadnaA-Objects**
  - Further New Features/Miscellaneous
  - Import/Export
  - **CadnaA-Options**
  - Bug Fixing
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- new option on the tab **Configuration|DTM**: „Area sources with constant relative height follow terrain“ (see chapter 6.2.6 "DTM Digital Terrain Model Tab") Calculation|  
Configuration
  - RVS 4.02: new option "Double screening limited to 25 dB" according guideline ÖAL 36, Part 2 (see German Reference Manual)
  - NMPB 2008: new option „Use reference DLL“ and „Calc Atalus“ (see chapter 6.2.10.8 "NMPB 2008")
  - NMPB 2008: new meteorological values for France (for 2 or 3 time periods, see chapter 6.2.10.8 "NMPB 2008")
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- Object Building: new context menu command **Edit Facades** enables to enter sources and receivers on a 2D projection of all facades, facade textures may be edited using bitmaps (see chapter 3.1.4 "Edit Facades") CadnaA-Objects
  - Object Barrier: roof top edges can be entered using the object „Barrier“, barriers inside building polygons will be considered by triangulation when calculating screening, roof textures may be edited using bitmaps (see chapter 3.2.2 "Barrier with special Crowning" and chapter 3.1.5 "Defining a Roof Ridge")
  - Object Railway (for NMPB-Fer): new attributes TRAM (option „Tram“) and BABS (option „Ground Absorption“, see chapter 2.6.6 "NMPB-Fer 1996")

## Further New Features

- new commands **Compress/Decompress** (on **Grid** menu): The compression reduces the amount of data of „old“ grids with tilted calculation areas, the amount of data to be stored. With „new“ grids the data is compressed automatically (see chapter 5.3 "Receiver Grid").
- dialog **3D-Special|Properties**: new option "Building Noise Map" (rectangle, octagon, sphere) to display facade textures and the building noise map simultaneously (see chapter 9.14 "3D-Special View").
- dialog **Print|Preview**, option „Copy“: Now metafiles can be stored directly as well, besides bitmaps (*Note: Windows 7 cannot copy large metafiles to the clipboard*).
- dialog **Grid Arithmetics**: option „New Grid is Intersection of Input Grids“ is default
- new attribute: PO\_AREA3 (3D surface area of closed polygons)
- new attributes: railway emission spectra Day SD\_31..8000, Evening SE\_31..8000, Night SN\_31..8000 (*read only*)

## Miscellaneous

- global bitmap directory can be assigned via the INI file: [Main] BMROOT= <default path of bitmaps> (see Chapter 10 - Bitmaps)
- ground attenuation based on the 2D distance using the Alternative Method of ISO 9613-2 can be reproduced using a local block (Name: OPT\_OLD\_CALC, Text: ISO\_HM\_X137 = 1)
- description of attributes in list boxes can be suppressed via the INI file: [Main] DoAttrDescr=0
- new interface languages: Turkish, Korean
- objects which have been deactivated via dialog **Options|Appearance** are no longer shown on the object caption (object „Symbol“).

- Import **CadnaA**: When importing **CadnaA** files containing sound level, sound reduction or absorption spectra having the same ID as library objects in the present file, copies will be generated in the respective library - provided their data differs from the original - using a new ID (numbering attached) and linked. **Import**
- Import LimA: new option „Unknown Attributes to Memo-Variables“
- Import ASCII Grid DTM: new options "Import just every N-th point", "Store height points as cluster" and "Import Only Section"
- Export ArcView Shape, option „Export Iso-dB Lines“: Now, when exporting noise contours as lines or areas the level intervals defined in the currently selected color palette are applied (and no longer the values on „Level Range“ on dialog **Grid|Appearance**). **Export**
- Export ArcView Shape: Now, auxiliary polygons can be exported as open or closed polygons.
- Export ArcView Shape: new object „Triangulation“ enables to export triangle areas (option "3D" on) or distinct polygons (option "3D" off)
- option BPL: The iteration step width can be controlled using a local text block in order to optimize the calculation time required (e.g. Name: BPL, Text: DELTA\_L = 1.0 sets iteration step width to 1 dB). **CadnaA-Options**
- option FLG: new option „Parameter Check“ for AzB08 checks based on the airport type selected according to the German Aircraft Noise Act (FlugLärmG) for the following configuration settings prior to a calculation (and sets them if necessary): Threshold for NATs, option „Normalize NATs down to 24“ ON, evaluation parameters (1:  $L_d+3*\Sigma_d$ , 2:  $L_n+3*\Sigma_n$ , 3:  $NAT+3*\Sigma_{NATn}$ )
- option FLG: adjustable number of corridors (from 1 to 15) for AzB08 and DIN 45684
- option FLG: DIN 45684 now with option "strictly according to DIN"



- option FLG: new DIN 45684-option "Use Version 2011" offers AzB08 compliant calculation (ON is default).
- option FLG: with option "strictly according to DIN" activated no lateral diffraction is calculated (and applying De limit 20/25 dB for single/multiple diffraction).
- option SET: When importing **CadnaA** files containing SET-S or SET-T modules having the same ID as modules in the present file, copies will be generated in the respective library - provided their data differs from the original - using a new ID (numbering attached) and linked.

#### Bug Fixing

- Nordic Prediction Model, Road: When calculating maximum levels no gradient correction is applied, even when „Road Gradient, auto“ is selected.
- CRTN (UK): Low Traffic Correction (clause 30) is now calculated also correctly with hourly traffic figures (no specification of counts Q Veh./ 18 h)
- CRN (UK): correction for reflective screen (according to CRN, Chart 6c) now applying limit 0.80 (instead of 0.99 formerly)
- NMPB 2008 (F): Now, for barriers the selected absorption spectrum is used (left/right).

## 1.3 Notations

The following table comprises all types of notations used in the **CadnaA**-documentation.

setup	text to be typed in
RETURN, CTRL, DEL	keyboard keys
CTRL+v	key combinations  (e.g.: hold down the CTRL-key while typing the letter v)
down arrow key	arrow keys  (move cursor to left/right/up/down)
<b>Program Files/Datakunstik</b>	directories
<b>Grid Appearance, 3D-Special</b>	menus and commands
„Geometry“, „TransLoss“	buttons in dialogs and other options in dialogs
double-click, double-clicking	Instructs you to rapidly press and release the left mouse button twice.
•	The focal point requires an action or a sequence of actions.
	remark or comment
 Examples\ 04_Topography\HP.cna	reference to file on the <b>CadnaA</b> - CD. Used the indicated file path to open the file.

