

DMBuilder v0.88.g

Dungeon Master Builder

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DMBuilder Guide

Welcome to DMBuilder !

DMBuilder is a map editor for Dungeon Master 1 and Dungeon Master 2 (The Legend of Skullkeep).



DMBuilder lets you edit almost every aspect of a Dungeon Master “dungeon” or so-called “dungeon.dat” file.

Note: this version currently edits only dungeon files for PC-DOS DM & DM2 versions.

Disclaimer

This software is provided *as is* without any guarantees or warranty. It's an old amateur project and may still contain bugs or unexpected behavior.

Use it at your own risk — Sphenx is **not responsible for any data loss or damage** that may occur while using it.

Always **save your work frequently and keep backups** of your dungeon files.

Quick Start – Tutorial

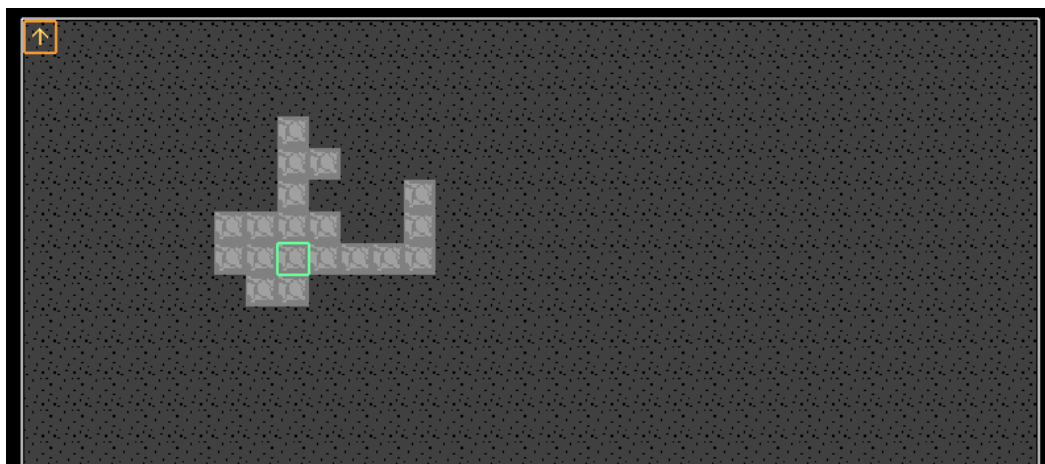
Start DMBuilder (run DMBuilder.0.88.g.exe for Windows). You get the main map view.



Create a New Dungeon from scratch

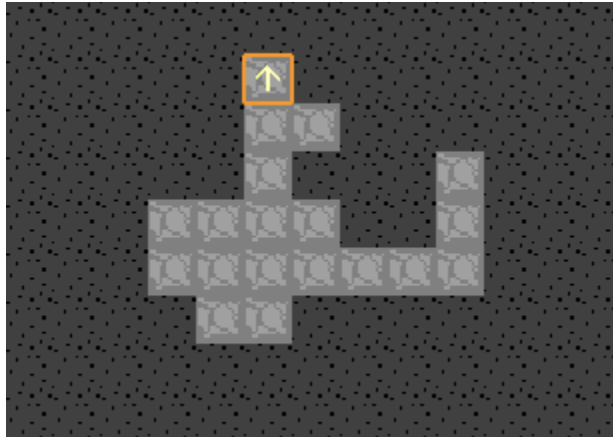
Modify map layout

Paint a layout of **floors** and **walls** on the main map using the mouse. **Click left** to paint an **open floor**, **click right** to paint a **solid wall**.

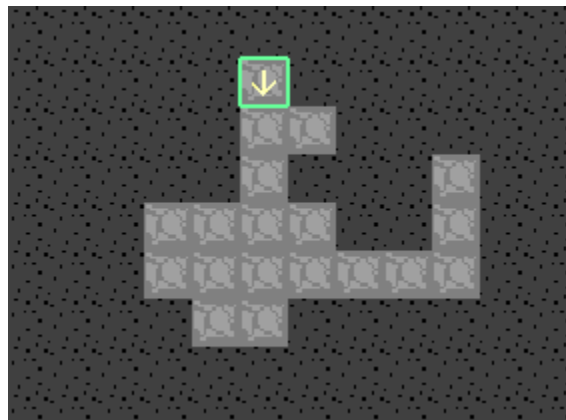


Place the **player's starting position** by pressing **SHIFT+S** on the selected position. The starting position is represented by the orange square and arrow.

Note: you can only use the starting position on the first map (index 0) – this is a limitation of the Dungeon Master engine.

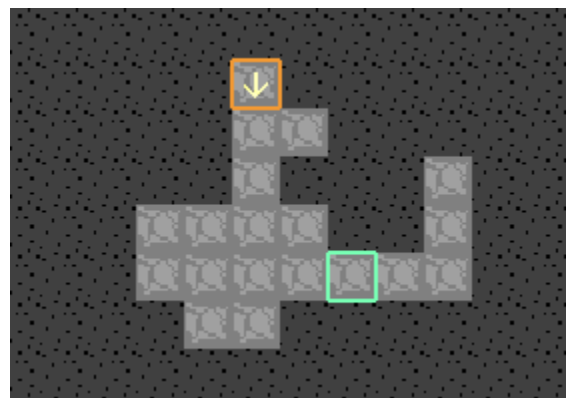


Press P twice on the starting position **to rotate twice its facing** towards south. That way, player will face the corridor at start of the game.



Place Objects

Place your cursor over a floor tile surrounded by two walls (at least) so that we can place a door on it.



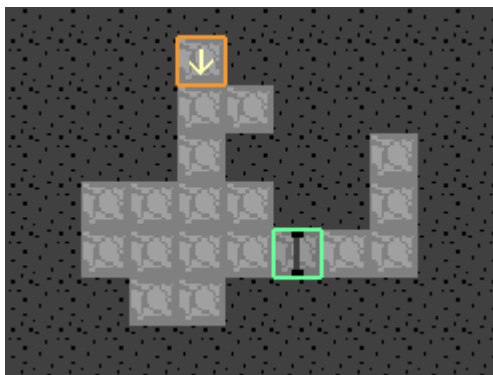
Press “+” to open the “**New Object**” panel. Use left and right arrow to select a new type of object. These objects are in order : **Door, Teleporter, Text, Actuator, Creature, Weapon, Clothing, Scroll, Potion, Chest, and Misc. Item.**

Select a **New Door** type then press **ENTER**.



A new door appeared on the tile.

Note: when your cursor is on an object, its properties will be shown on the stack information on the right part of the screen.

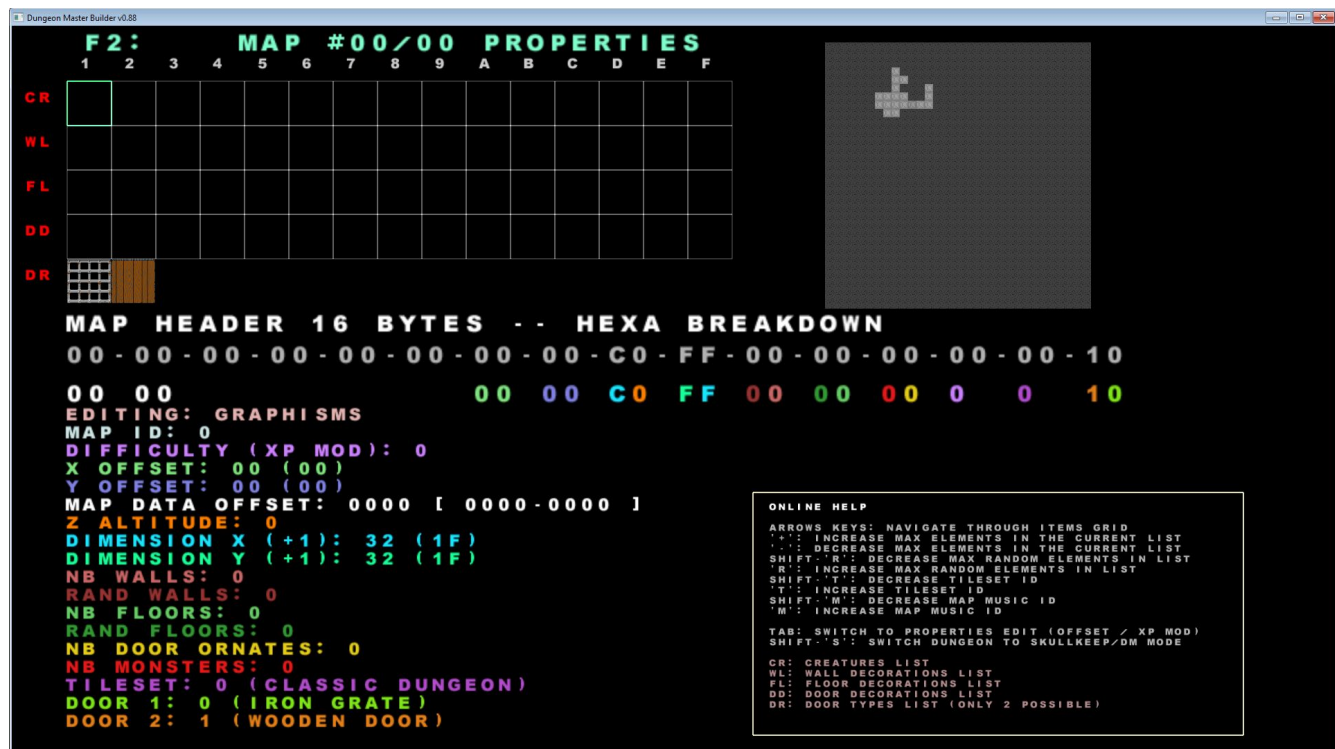


Edit Map Graphics

Let's now place a **floor pad** that will open this door when player steps on it.

First, we need to **add a new graphics** for the floor pad. By default, no decoration nor creatures are set on a new map, so you'll have to add them manually before using them for objects.

Press **F2** that brings the main map graphics & properties screen.



There is much information displayed (mostly for explaining the hexa values within the binary `dungeon.dat` file). Your current map is displayed as a minimap.

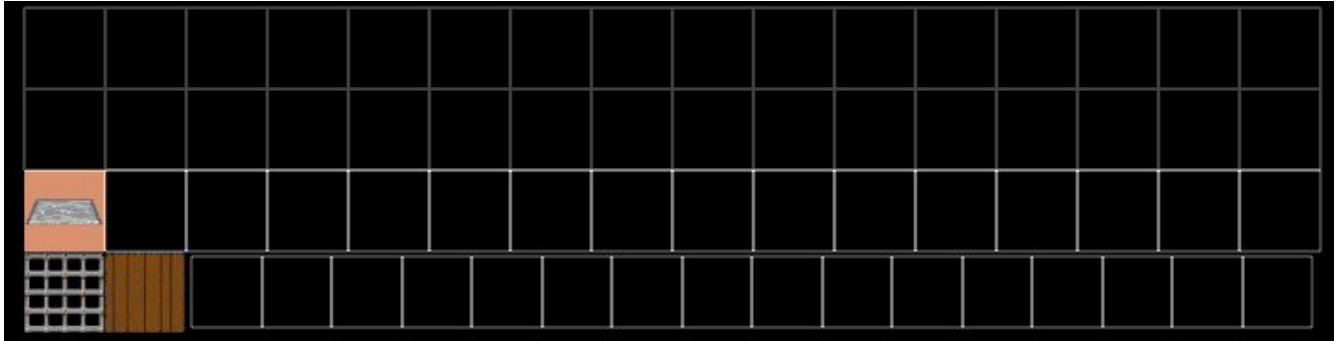
For adding graphics, move your green square cursor on the 4 different lists. **CR** are for “**Creature List**”, **WL** for “**Walls List**”, “**FL**” for “**Floors List**”, “**DD**” for “**Door Decorations List**”.

Press “+” to add a new graphics slot in the current list. Then select your new graphics with **left and right arrows** on the displayed list. Press **ENTER** again to validate your new graphics.

For adding the floor pad, move on the “**FL**” line, press “+”, select the **floor pad graphics** and press **ENTER**.

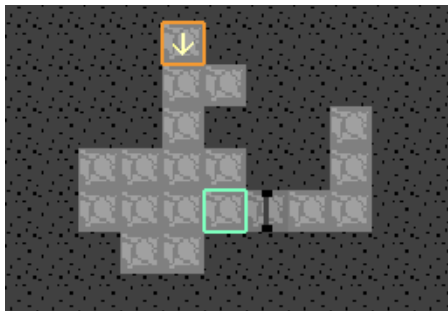


Exit this screen by **pressing ESC**. You go back to the main map screen. You can now see your possible graphics for this map in the grid list under the map.



Create an Actuator

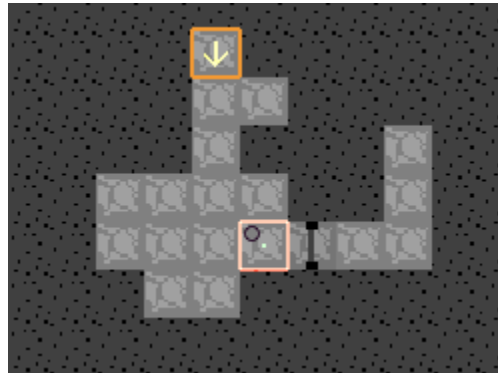
Place your cursor before the door, **press “+”** to bring the New Object panel then selects a **New Actuator** type and **press ENTER**.



The new actuator has been placed. You can now edit its graphics and functions by pressing **ENTER** again on the **selected tile**. This will **lock the editing** on that object's properties.

A new object is represented by a **colored dot** on the tile. An **actuator** is a **grey dot**. Each other object types has a different color.

When the tile is locked for object editing, the tile cursor **turns red**.



On the right of the screen, the object properties are displayed. An actuator has many information attached since it allows the engine to perform specific commands and generate events during the game.

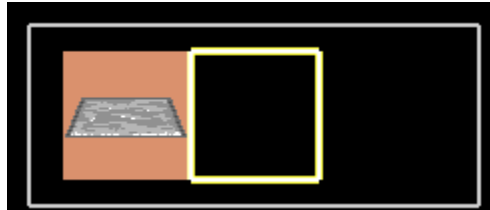


The first blue grid indicates the **position** of the object on the tile. It is actually not relevant for a floor actuator (which looks always centered on the tile).

The second square shows the **graphics** used for the object. A new actuator is actually invisible if no graphics is selected.

The third position (gear icon) represents the **actuator's function**. By default, the actuator's function is "do nothing". It allows making floor or wall decorations with no command.

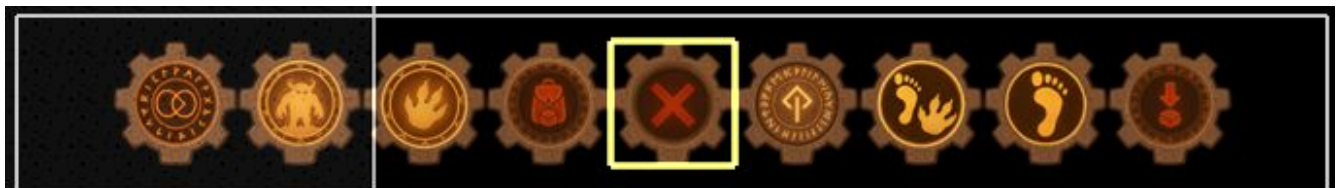
Below the properties is a selection bar that let you choose the graphics for the floor actuator. Use left and right arrows to move through the possible graphics. Here it is either no graphics (invisible) or the floor pad (added previously).



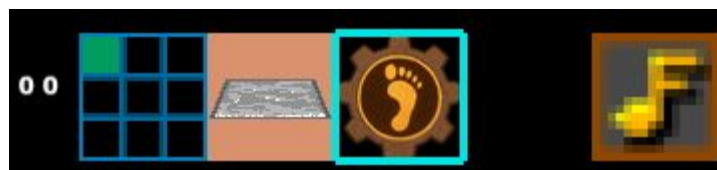
Once graphics is selected, use **TAB** for switching editing between **graphics**, **function**, and **function's value**. Your current selection is shown by the **cyan square**.



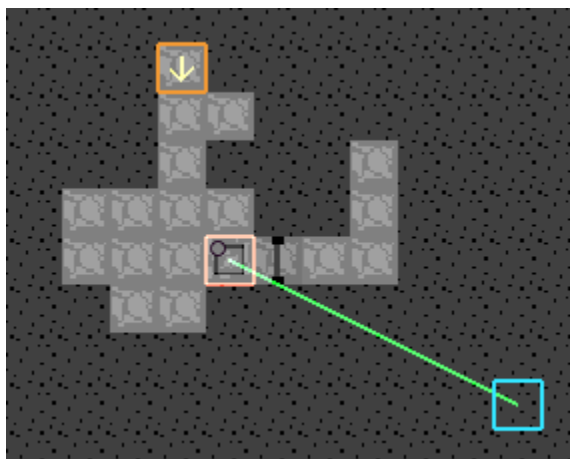
Once on the **actuator's function**, you can use **left and right arrow** to select its **function**, like for the graphics. Select the “**foot gear**” which is the symbol for an actuator **triggered by the player's team stepping on it**.



The actuator now gets the selected function. **Press S** to activate the **sound flag** on this actuator, so that stepping on it will make the standard **switch sound**. By default, an actuator does not make sound. That allows to hide traps or make “invisible” pads.



You then **choose the target** of this actuator by **pressing T**. The map cursor then **turns cyan** and you select a **target location** by using **arrows** (left, up, down, right) (the mouse is not used here for target selection). Move the cursor onto the door, then **press T again** to leave the “**target selection**” mode.



The next important step is to define the action (or effect) that will have this actuator when it is triggered by the party when stepping on it. By default the effect is “ON: OPEN/SET”, which means when stepped on, the trigger will tell to open the object found on its target location – which should then be the door for this actuator.

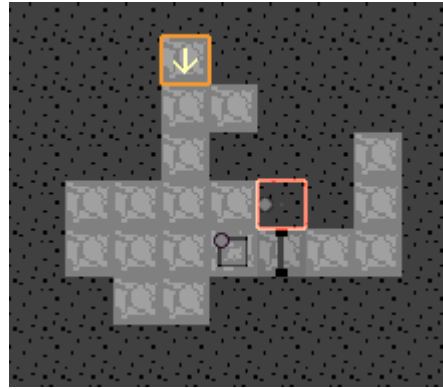
Press E to switch through the different **possible effects**. Press **SHIFT+E** to switch back.

For example, **press twice E** to get effect “**ON: TOGGLE**”, which means if the door is closed, it will open; otherwise, if it is opened, it will then close.



Setup a Champion's Mirror

Let's now place a **Champion's Mirror** so that we can select a champion. Place a **new actuator** next to the door on a wall. As this new actuator is on a **wall**, its **position** on it matters. **Press 3 times P** to change its **position** to the **WEST** side of the wall. By default the position is **NORTH**. The order of positions goes from **NORTH, EAST, SOUTH** to **WEST**.



Change the actuator type to **-1** (left to default actuator type). Once done, the **actuator's value** displays the **corresponding champion's portrait**. You can change it the same way as changing graphics and object's type.



Use **TAB** to switch to the **portrait selection** :



The **selection bar** then displays all **possible champions graphics**. Use left and right arrows. Select whatever champion you want.

Note: this only change the portrait, not the champion's stats.



As seen before, **press F2** to add and select a new **Wall Decoration graphics**. Select the **Mirror's graphics**.



Press ESC to go back to map editor; use **TAB** to switch to **graphics** slot then select the **mirror**.



You now have a champion, but its stats are missing.

The statistics of a champion are handled by using a specific text information put on the floor tile in front of the mirror. But first you need to create that specific text.

Press F10 to enter the **Text Editor** screen.



This screen allows to add and edit text either in **normal mode** (for wall, scrolls or narrative texts) and in **champion mode** (stats values).

Press ‘+’ to add a **new text**, select the mirror (for champion stats) then **press ENTER**.



A **default champion’s text** is created, named **“BOGUS ILLEGAL HERO”** (it’s a reference from CSBWin code)

AVAILABLE TEXTS

000) **H** BOGUS ILLEGAL HERO M AABBAABBAABB ABABABA

The champion's stats are displayed on the right panel.

TEXT : #000

FIRST NAME: BOGUS

LAST NAME: ILLEGAL HERO

GENDER: M

HEALTH : 0017

STAMINA: 00017

MANA : 0017

LUCK : 0001

STRENGTH : 0001

DEXTERITY : 0001

WISDOM : 0001

VITALITY : 0001

ANTI - MAGIC: 0001

ANTI - FIRE : 0001

FIGHTER:

SWING : 2

THRUST: 2

CLUB : 2

PARRY : 2

PRIEST:

IDENTIFY : 2

HEAL : 2

INFLUENCE: 2

DEFEND : 2

NINJA:

STEAL : 2

FIGHT : 2

THROW : 2

SHOOT : 2

WIZARD:

FIRE : 2

AIR : 2

EARTH : 2

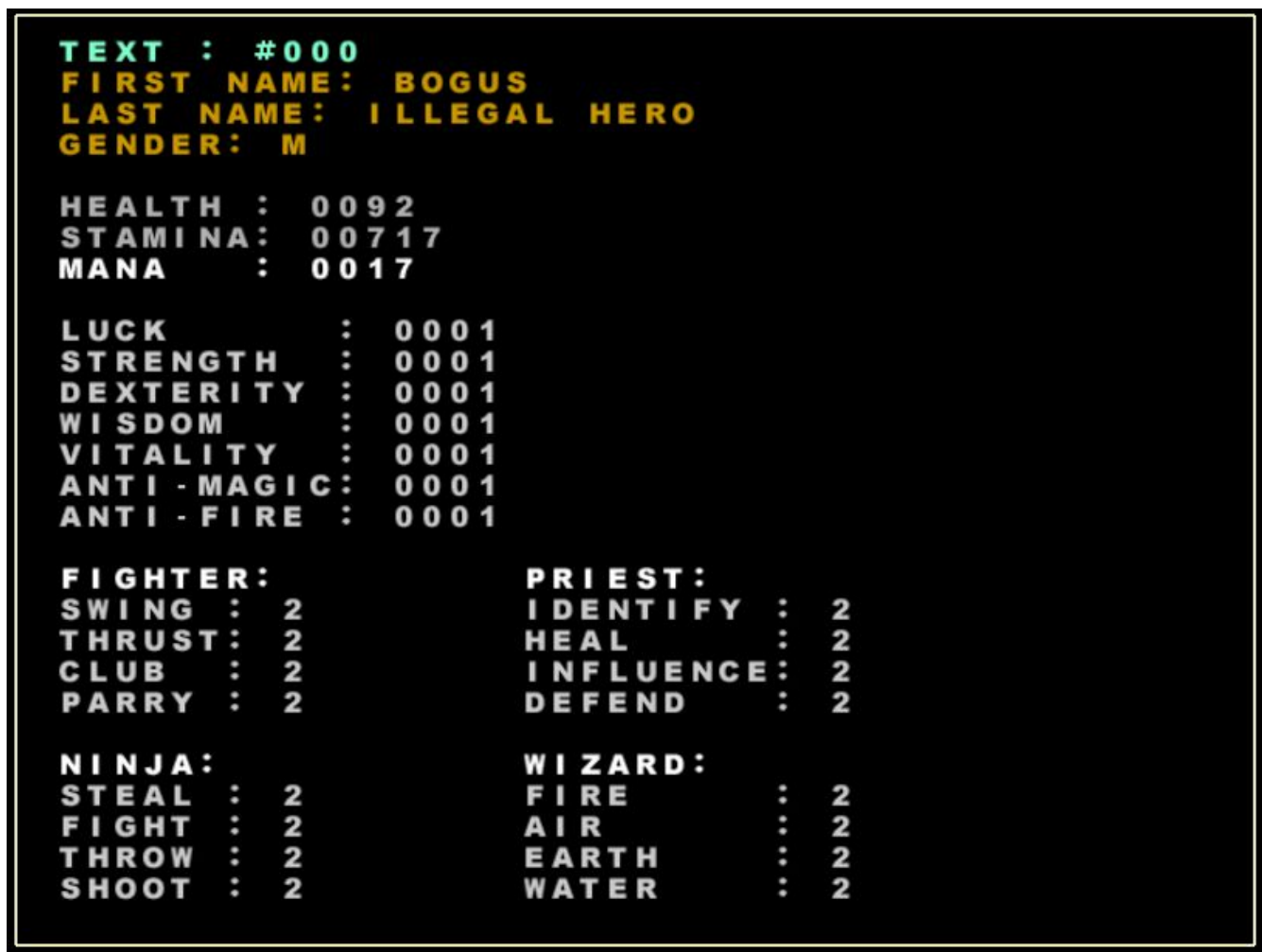
WATER : 2

You select the text to edit in the list by using **up** and **down arrows**, then **press ENTER** to start **edit a text**. In that case, the text becomes **yellow**.

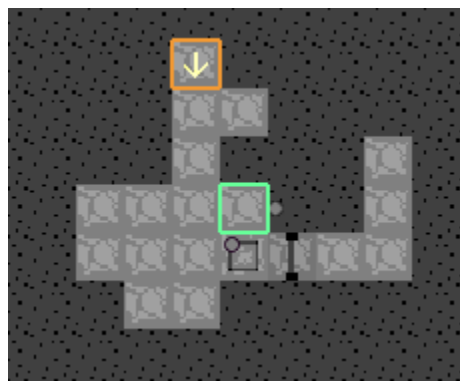
000) **H** BOGUS ILLEGAL HERO M AAFMACMNAABB ABABABA

You can then select the subpart of text to edit **names** and **stats** by using **up** and **down arrows** to **navigate** through them. Then use **left** and **right arrows** to **decrease** or **increase the values**.

*Note: **Stamina** is actually indicated in **tenth**, then the ingame stamina value displayed is 10 times less than the real stats value.*



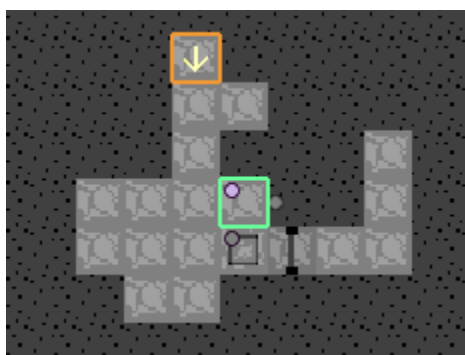
Press **ENTER** to end this text editing, then **ESC** to go back to the main map view.



Select the tile in front of the mirror and add a **New Text** on it (**Press “+”**, select **text symbol** then **press ENTER**)



You now have a “floor” text which contains the stats of champion. It is represented by a light pink/grey dot.



You get the text properties on the right. By default the text will be visible when you step on it (or when it is a text on a wall).



On the selected tile, **press ENTER to lock onto it**, and you can now edit text properties: **press S** to make the text “**silent**” which will make it **invisible**. That way, you won’t see champion’s text displayed when standing before the mirror in the game.

Press ENTER to unlock the object editing.



To give this new champion some starting items, you have to create new items on the wall tile where the champion’s actuator is.

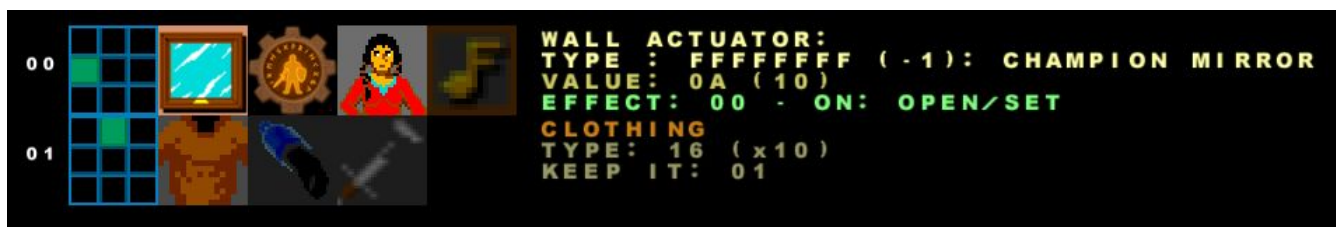
Press “+” to select and add a **New Clothing** (then **press ENTER**).



The new clothing created is represented by an orange dot.



By default, it is “stacked” above the actuator already existing, and it is facing NORTH.



While your cursor is still on that tile, **press ENTER** to **lock the Object Editing mode**, use **UP** and **DOWN arrows** to navigate through the objects within the stack. Once the clothing is selected, **press P** to change its position: it must match the **same position as the mirror** for it to appear into the inventory of the champion.



Use **LEFT** and **RIGHT** arrows to navigate through the different possible clothing types.

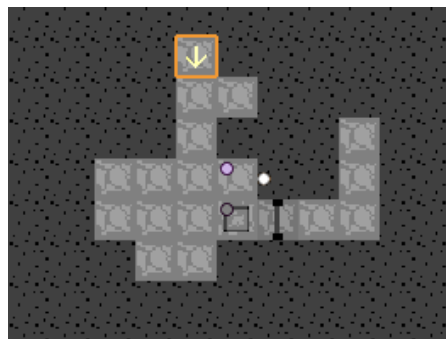


Before adding a new item, press ENTER to unlock the edit mode. Then repeat the process of adding new items for that champion.

Let's have a full armor for this champion:



While not containing much, this small dungeon has everything needed to start a functional game.

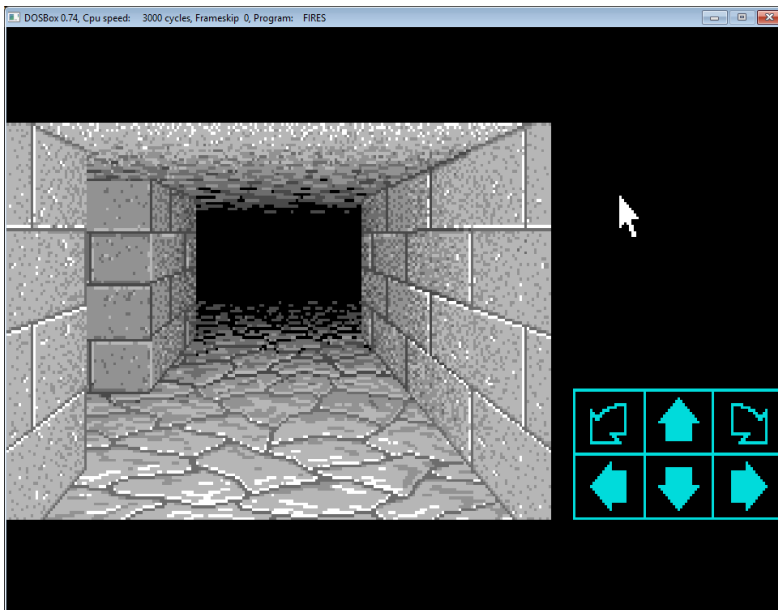


Testing the map

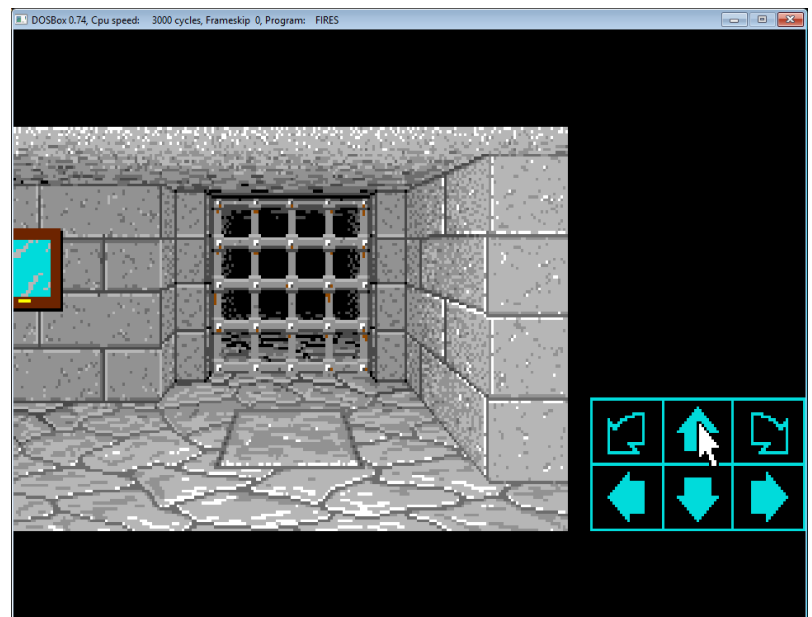
You can test right away your new map by **pressing F5**: this will invoke the DOSBox emulation of PC-DOS version of Dungeon Master **with your current dungeon**.

Let's now see how this looks !

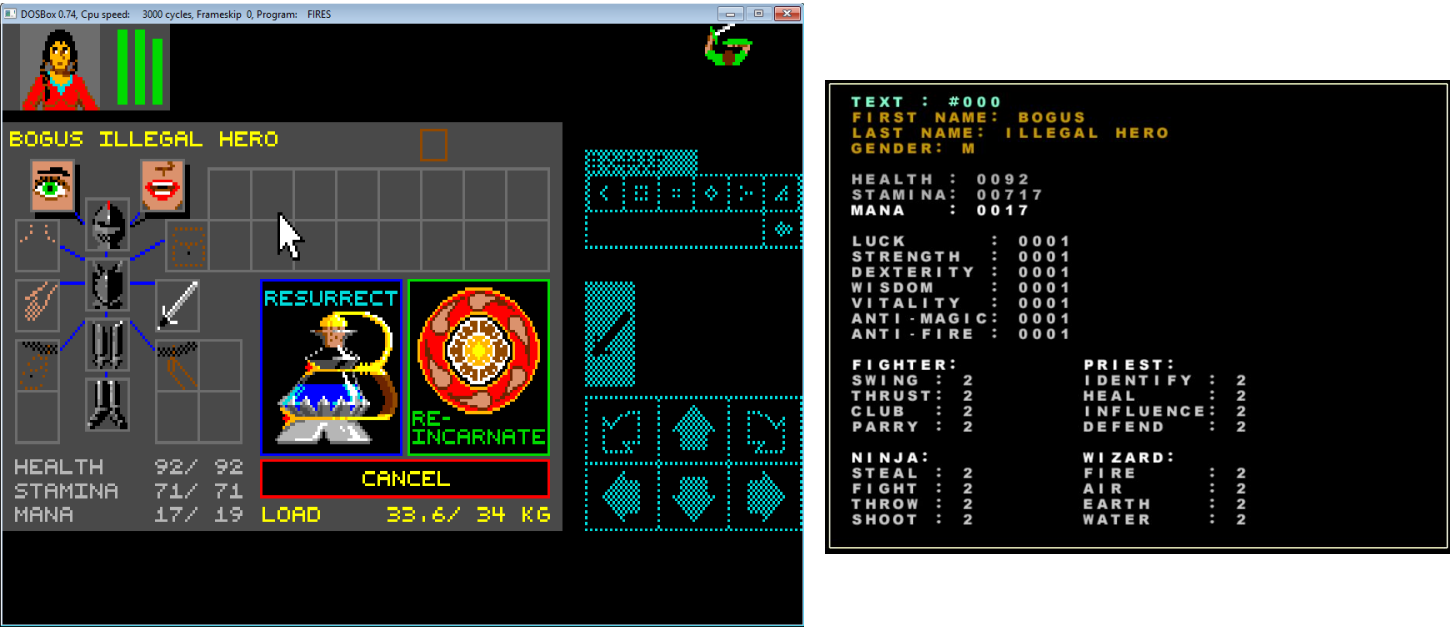
The starting place :



The view before the door : floor pad, mirror, iron grate



Reaching the champion : stats and items are those set up from text items in wall.



Stepping on the floor pad will open the iron grate (or close it if you step on it again)

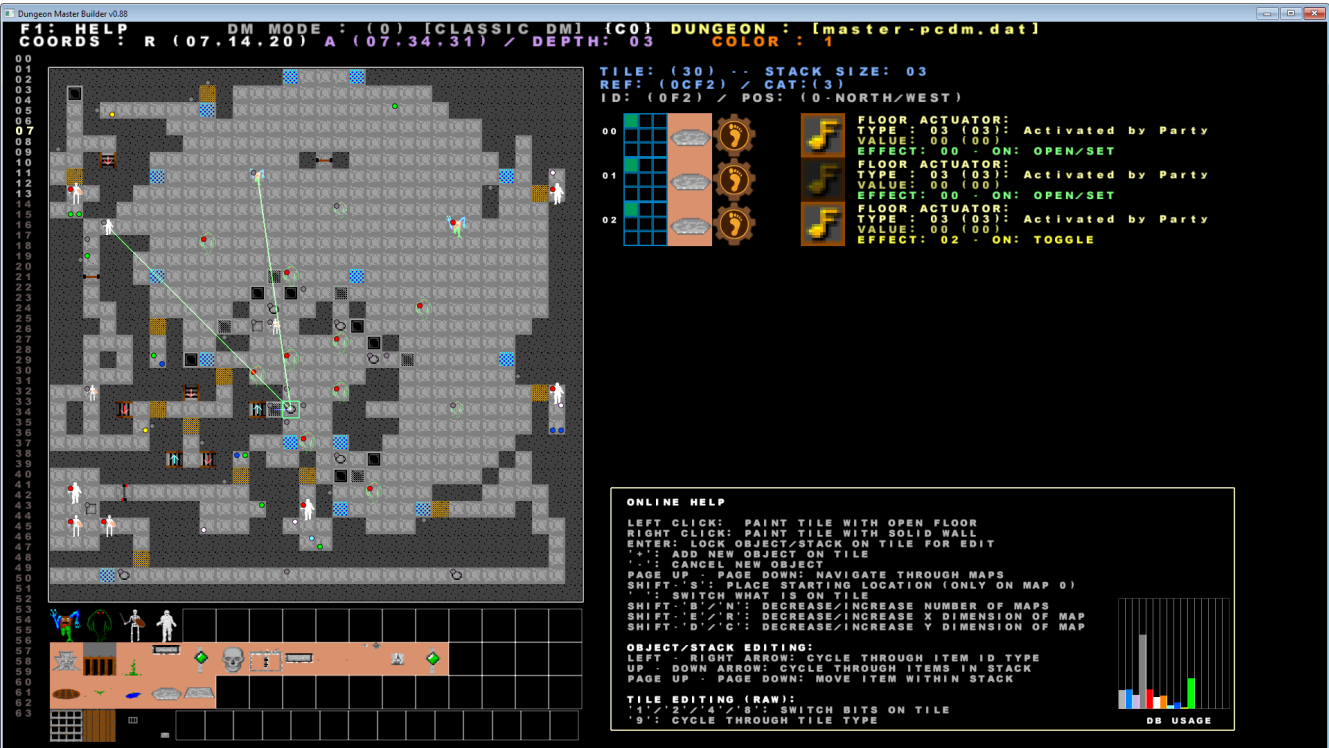


That's it for the quick start tutorial. Have fun building more dungeon !

Screens Overview

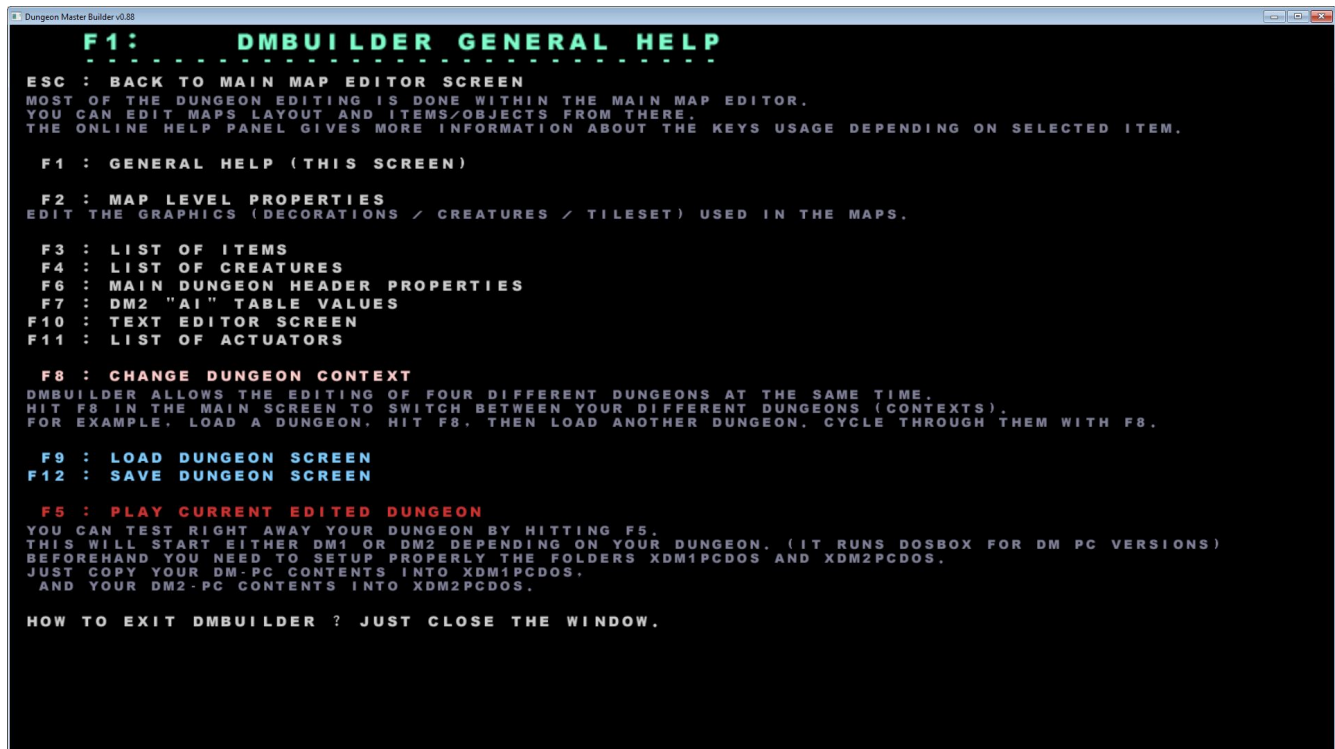
DMBuilder has a main screen which is the view for map and items for editing. It has some other screens more or less useful.

The main view is accessible at start and from any other screen by pressing ESC.



F1 : General Help

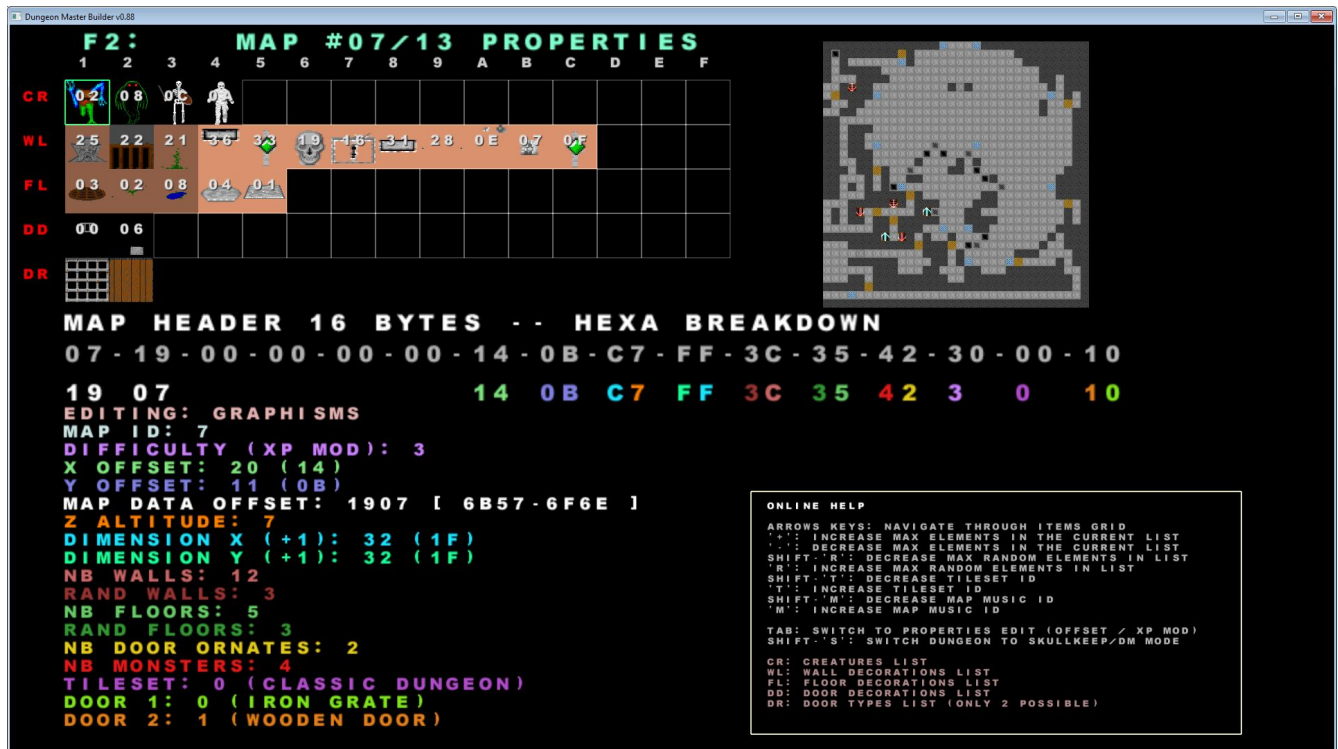
Press **F1** to get the **GENERAL HELP** screen.



This is online help that tells about the other screens.

F2 : Map Properties

Press **F2** to get the **MAP PROPERTIES** screen.



This screen allows you to set up the different graphics within the current map as such as **Wall Decorations**, **Floor Decorations**, **Door Decorations**, **Creatures** and **Door Types**. The screen also displays a breakdown of the different values used in the internal DM map header structure.

You can also change these different values :

- **Difficulty level (XP map modifier)**
- **X Offset**
- **Y Offset**

Note: X and Y offsets are the relative positions of the current map. It affects then how stairs and pits will line up between different maps. Please be careful while changing the offsets so that everything is in place between maps. For that matter, the main view displays the **absolute coordinates** (purple color) (then taking into account X and Y offsets for that map).

COORDS : R (07, 24, 09) A (07, 44, 20) / DEPTH: 03

F3 : Creatures List

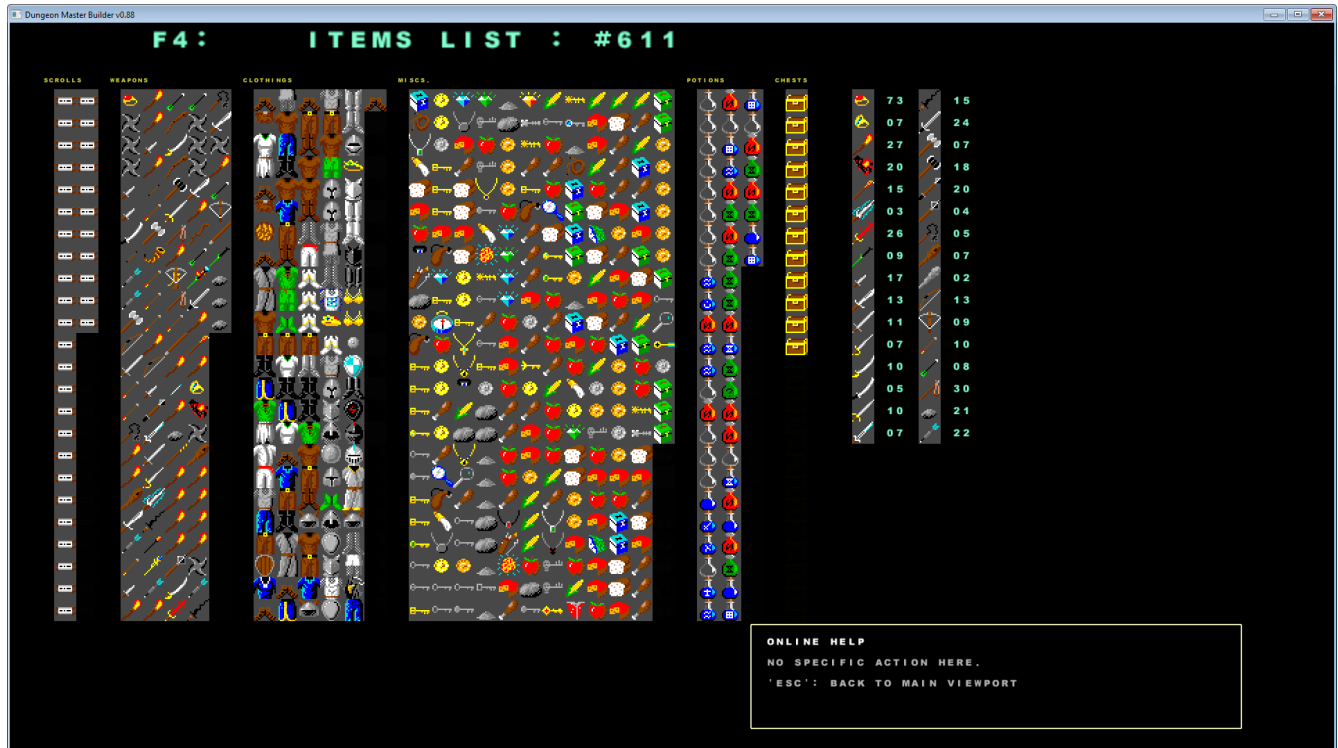
Press **F3** to get the **CREATURES LIST** screen.



There is no specific available action possible in this screen. It lists all creatures in the dungeon in a visual way. The right part counts every occurrence of creatures per type.

F4 : Creatures List

Press **F4** to get the **ITEMS LIST** screen.



There is no specific available action possible in this screen. It lists all items in the dungeon in a visual way. The right part counts every occurrence of weapons per type.

F5 : Test Run Current Dungeon

Press **F5** to start testing your dungeon in **Dungeon Master**. There is a minimum configuration required for it to work as **DMBuilder** package **does not provide Dungeon Master** binaries. **DMBuilder** attempts to run the **PC-DOS** versions of **Dungeon Master** and **Dungeon Master 2** through **DOSBox**. You must then use your own copy of **Dungeon Master** and/or **Dungeon Master 2** and put them into the **DMBuilder** folders.

DMBuilder comes with 2 special folders for that matter : **XDM1PCDOS** and **XDM2PCDOS** :

Name	Date modified	Type	Size
dungeons	2025-10-25 03:14 PM	File folder	
GFX	2025-10-25 03:14 PM	File folder	
XDM1PCDOS	2025-10-26 09:54 PM	File folder	
XDM2PCDOS	2025-10-25 06:37 PM	File folder	
DMBuilder.0.87.a.exe	2025-10-24 10:04 PM	Application	116 KB
DMBuilder.0.88.g.exe	2025-10-25 10:52 PM	Application	188 KB
font.tga	2025-10-24 10:04 PM	TGA File	65 KB
glut32.dll	2025-10-24 10:04 PM	Application extens...	232 KB

Copy your **Dungeon Master** files into **XDM1PCDOS** and copy your **Dungeon Master 2 : The Legend of Skullkeep** files into **XDM2PCDOS**.

Once done, your **XDM1PCDOS** should look like this:

Name	Date modified	Type	Size
DATA	2025-10-25 03:14 PM	File folder	
DM.EXE	1992-06-15 04:41 PM	Application	12 KB
dosbox.conf	2025-06-22 07:56 AM	CONF File	8 KB
dosbox-dm.bat	2025-09-17 09:28 AM	Windows Batch File	1 KB
dosbox-dm.sh	2025-09-20 07:16 PM	Shell Script	1 KB
EGA	1992-03-12 11:49 AM	File	5 KB
END	1991-10-25 08:40 PM	File	356 KB
FIRES	1992-05-05 07:24 PM	File	93 KB
IBMIO	1992-05-05 07:33 PM	File	8 KB
INSTALL.EXE	1992-06-15 04:28 PM	Application	9 KB
SELECTOR	1992-05-05 07:36 PM	File	16 KB
STATS.EXE	1991-12-12 07:12 AM	Application	8 KB
TANDY	1991-10-27 06:09 AM	File	5 KB
VGA	1992-05-05 07:33 PM	File	5 KB

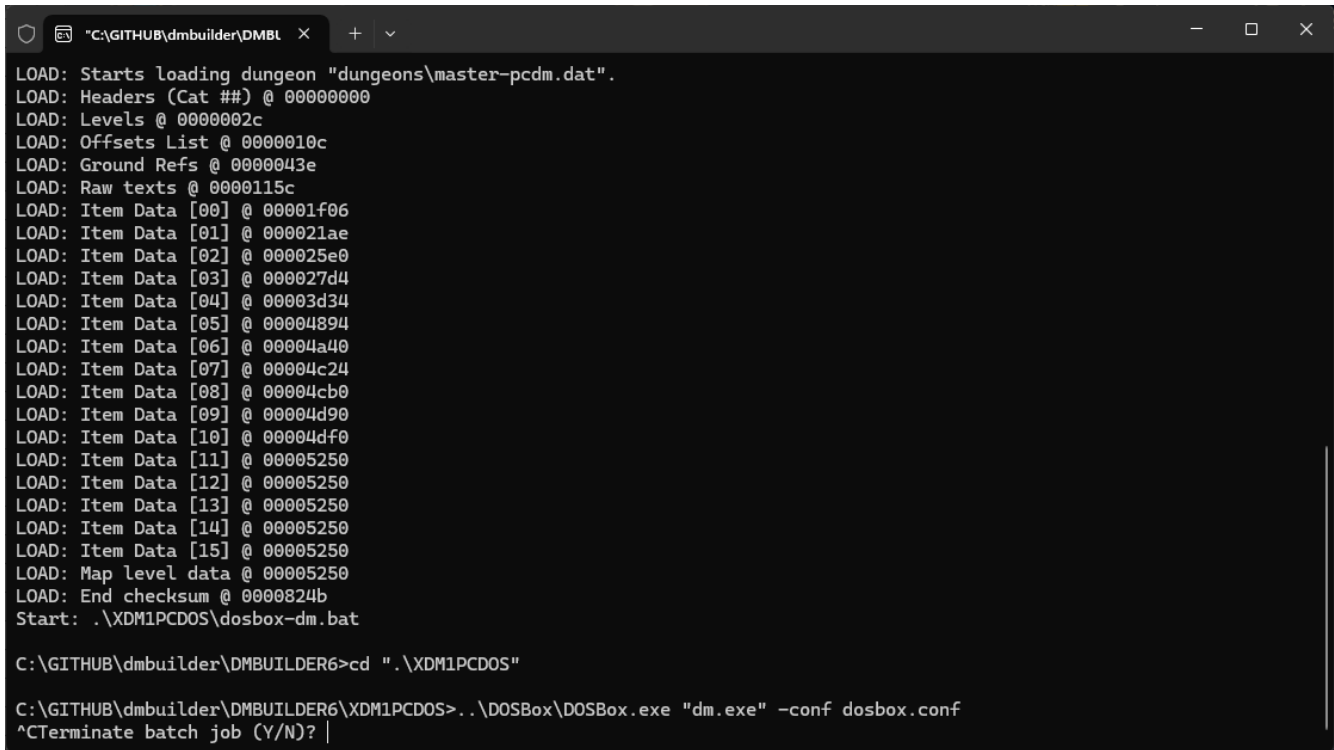
Similarly, your **XDM2PCDOS** should look like this:

Name	Date modified	Type	Size
DATA	2025-10-25 03:14 PM	File folder	
DM2.BAT	2003-08-09 11:19 AM	Windows Batch File	1 KB
DM2E.BAT	2010-06-11 07:24 AM	Windows Batch File	1 KB
DOS4GW.EXE	2003-08-09 11:18 AM	Application	260 KB
dosbox.conf	2025-06-22 07:56 AM	CONF File	8 KB
dosbox-dm2.bat	2025-09-17 11:16 AM	Windows Batch File	1 KB
dosbox-dm2.sh	2025-09-20 06:50 PM	Shell Script	1 KB
DRUM.BNK	2003-08-09 11:18 AM	BNK File	6 KB
END	2003-08-09 11:18 AM	File	4,960 KB
HMIDET.386	2003-08-09 11:18 AM	Virtual device driver	82 KB
HMIDRV.386	2003-08-09 11:18 AM	Virtual device driver	310 KB
HMIMDRV.386	2003-08-09 11:18 AM	Virtual device driver	116 KB
IBMIOP.EXE	2003-08-09 11:19 AM	Application	13 KB
INTRPLAY.PCX	2003-08-09 11:18 AM	PCX File	15 KB
MELODIC.BNK	2003-08-09 11:18 AM	BNK File	6 KB
SETUP.EXE	2003-08-09 11:19 AM	Application	184 KB
SETUP.INI	2003-08-09 11:19 AM	Configuration sett...	3 KB
SKULL.CFG	2010-05-13 12:52 AM	CFG File	1 KB
SKULL.EXE	2003-08-09 11:18 AM	Application	511 KB
TEST.HMP	2003-08-09 11:18 AM	HMP File	10 KB
TEST.RAW	2003-08-09 11:18 AM	RAW File	40 KB

If it is correctly set up like this, you will be able to start either **Dungeon Master** or **Dungeon Master 2** depending on your current edited dungeon.

Note: during that time, **DMBuilder** is frozen. You should then exit properly **Dungeon Master** or **Dungeon Master 2** to get back to **DMBuilder**.

Please note that by using **F5**, **DMBuilder** itself will be stuck while waiting for **Dungeon Master** game to complete in order to get back to its sense. So you'll have to **exit/quit properly** from **Dungeon Master**. As it is launched from **DOSBox**, you should verify the console window for "**Terminate batch job (Y/N)?**" in case you closed **Dungeon Master/DOSBox window** to terminate it.



```
C:\GITHUB\dmbuilder\DMBL
LOAD: Starts loading dungeon "dungeons\master-pcdm.dat".
LOAD: Headers (Cat ##) @ 00000000
LOAD: Levels @ 0000002c
LOAD: Offsets List @ 0000010c
LOAD: Ground Refs @ 0000043e
LOAD: Raw texts @ 0000115c
LOAD: Item Data [00] @ 00001f06
LOAD: Item Data [01] @ 000021ae
LOAD: Item Data [02] @ 000025e0
LOAD: Item Data [03] @ 000027d4
LOAD: Item Data [04] @ 00003d34
LOAD: Item Data [05] @ 00004894
LOAD: Item Data [06] @ 00004a40
LOAD: Item Data [07] @ 00004c24
LOAD: Item Data [08] @ 00004cb0
LOAD: Item Data [09] @ 00004d90
LOAD: Item Data [10] @ 00004df0
LOAD: Item Data [11] @ 00005250
LOAD: Item Data [12] @ 00005250
LOAD: Item Data [13] @ 00005250
LOAD: Item Data [14] @ 00005250
LOAD: Item Data [15] @ 00005250
LOAD: Map level data @ 00005250
LOAD: End checksum @ 0000824b
Start: .\XDM1PCDOS\dosbox-dm.bat

C:\GITHUB\dmbuilder\DMBUILDER6>cd ".\XDM1PCDOS"

C:\GITHUB\dmbuilder\DMBUILDER6\XDM1PCDOS>..\DOSBox\DOSBox.exe "dm.exe" -conf dosbox.conf
^CTerminate batch job (Y/N)? |
```

Then enter **Y** and **DMBuilder** will be available again.

F6 : Dungeon Header Information

Press **F6** to get the **DUNGEON INFORMATION** screen.

```

Dungeon Master Builder v0.88
F6:      DUNGEON INFORMATION
63-00-FB-2F-0E-00-D5-06-61-08-8F-06
63 00 FB 2F 0E      D5 06      8F 06

RANDOM SEED: x0063 (99) [c
MAP DATA SIZE: x2FFB (12283)
NB. MAPS: 14 (xE) (MAX = 255?)
UNUSED: x0 (00)
TEXT DATA SIZE: x6D5 (1749)
START X: 01
START Y: 03
START F: 02
START M: 00 (IGNORED)
ITEM LIST SIZE: x68F (1679)

AA00B3007D00AC02B6006B00790002300
38000C00180100000000000000000000
#NB.      DOOR      : 0170 (00AA) (16 %)
#NB.      TELEPORT  : 0179 (00B3) (17 %)
#NB.      TXT/SIMPLE ACT. : 0125 (007D) (12 %)
#NB.      ACTUATOR   : 0684 (02AC) (66 %)
#NB.      MONSTER/OBJ. : 0182 (00B6) (17 %)
#NB.      WEAPON     : 0107 (006B) (10 %)
#NB.      CLOTHING   : 0121 (0079) (11 %)
#NB.      SCROLL     : 0035 (0023) (03 %)
#NB.      POTION     : 0056 (0038) (05 %)
#NB.      CONTAINER/MAP : 0012 (000C) (01 %)
#NB.      MISCELLANEOUS : 0280 (0118) (27 %)
#NB.      EXT - 1    : 0000 (0000) (00 %)
#NB.      EXT - 2    : 0000 (0000) (00 %)
#NB.      EXT - 3    : 0000 (0000) (00 %)
#NB.      MISSILE    : 0000 (0000) (00 %)
#NB.      CLOUD      : 0000 (0000) (00 %)
ONLINE HELP
NO SPECIFIC ACTION HERE.
'ESC': BACK TO MAIN VIEWPORT

```

There is no specific available action possible in this screen.

This screen breaks down hexa information found in the first header from the “**dungeon.dat**” file.

F7 : Dungeon Master 2 AI Stats Info

Press **F7** to get the **DM2 AI STATS INFO** screen.

[illegible]

This screen loads static contents from **DM2** executable “**SKULL.EXE**” and display the specific table of “**AI**” values, in other words, the internal data stats for each **CREATURE/OBJECT** types in **DM2**. The main purpose of this screen is to get an overview of all these values and explain some when possible.

One need good eyes to check those ...

Keyboard controls:

- '0'** → Set value to 0
- '1'** → Switch bit 0 of the value (from right) → binary mask 0x01
- '2'** → Switch bit 1 of the value (from right) → binary mask 0x02
- '3'** → Switch bit 2 of the value (from right) → binary mask 0x04
- '4'** → Switch bit 3 of the value (from right) → binary mask 0x08
- '5'** → Switch bit 0 of the value (from right) → binary mask 0x10
- '6'** → Switch bit 1 of the value (from right) → binary mask 0x20
- '7'** → Switch bit 2 of the value (from right) → binary mask 0x40
- '8'** → Switch bit 3 of the value (from right) → binary mask 0x80

F8 : Switch Dungeon Context

Press **F8** to switch current **DUNGEON CONTEXT**.

DMBuilder holds **4 memory contexts** for dungeon editing, meaning there can be **4 different dungeons edited** on the same session.

The **context ID** is indicated on the top screen as **C0 to C3** before the dungeon name.

```
F1: HELP      DM MODE : (0) [CLASSIC DM] {C0} DUNGEON : [master-pcdm.dat]
COORDS : R (00,26,15) A (00,26,15) / DEPTH: 00      COLOR : 7
```

```
F1: HELP      DM MODE : (0) [CLASSIC DM] {C1} DUNGEON : [chaos-pcdm.dat]
COORDS : R (00,00,20) A (00,17,34) / DEPTH: 07      COLOR : 7
```

```
F1: HELP      DM MODE : (1) [SKULLKEEP] {C2} DUNGEON : [skullkeep-pcdm.dat]
COORDS : R (00,00,20) A (07,21,56) / DEPTH: 00
```

```
F1: HELP      DM MODE : (0) [CLASSIC DM] {C3} DUNGEON : [kid2-amiga-pcdm.dat]
COORDS : R (00,00,20) A (00,06,30) / DEPTH: 00      COLOR : 7
```

Warning: *this function is experimental and not fully tested : there may be graphics lists issues between contexts if you mix DM and DM2 dungeons, as well as confusion about items ID when creating new items.*

My advice is to not use several contexts when you are seriously editing your dungeon. In that case, once you have finished comparing dungeons with contexts, close DMBuilder, open a new one, then continue editing your dungeon as usual.

F9 : Load Dungeon

Press **F9** to get to the **LOAD DUNGEON** screen.



It is pretty straightforward : this screen reads the files in the “**dungeons**” folder of *DMBuilder*.
Select the file you want to open/edit.

Keyboard controls:

UP and DOWN ARROWS → Select a filename within the list.

ENTER → Confirm file to open.

F12 : Save Dungeon

Press **F12** to get to the **SAVE DUNGEON** screen.



As for the loading screen, this screen reads the files in the “**dungeons**” folder of **DMBuilder**. Select the file you want to save into.

Note: if you want to save a new dungeon into a new file, you need to create first an empty file from your File Explorer, like “**new-dungeon.dat**”. It will then appear in the list to save into it. This is because **DMBuilder** does not have (yet) option to save into a new filename not in the list.

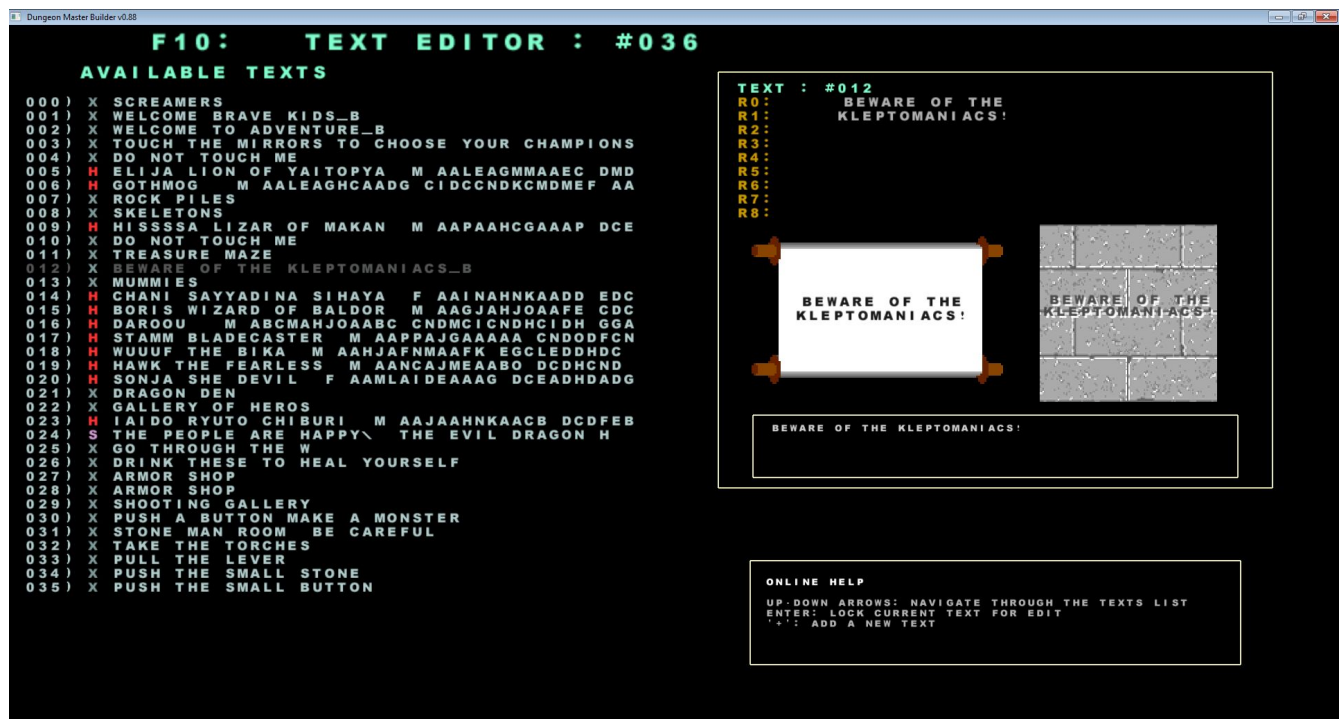
Keyboard controls:

UP and DOWN ARROWS → Select a filename within the list.

ENTER → Confirm file to save.

F10 : Text Editor

Press **F10** to get to the **TEXT EDITOR** screen.



This screen shows the different texts available from the dungeon, and how they will look for **scrolls**, **walls** or **narrative texts** (the 4 possible lines of text under main viewport).

The champions' stats are stored like texts, so they also appear here and are available for editing.

Each text has a flag letter which tells which usage the text is for:

- **H** : Hero / Champion's stats
- **S** : Scroll or Narrative → A scroll may have more lines of text than a wall.
- **X** : Wall, Scroll, or Narrative → A text with 4 lines or less that could be used for all.

Keyboard controls:

UP and DOWN ARROWS → Select a text within the list.

ENTER → Lock editing on that text

“+” → **Add a new text**, either in **NORMAL** (Scroll/Wall) or **CHAMPION** mode

“-” → **Cancel** the new text bar (no new addition).

Adding a new text



When you add a new text, use **LEFT / RIGHT arrow** then press **ENTER** to select the new text type.

Editing a text

When you select a text, press **ENTER** to **lock editing** on it. The text becomes **yellow**.

```
026) X PUT THE GEM BACK...
027) X THIS WALL SAYS NOTHING
028) X STEP INSIDE TAKE A RIDE
```

On the right part, you can move over text using **ARROWS** keys then write on it. Use **DEL/BACKSPACE** to remove characters. If the text is more than **4 lines**, the wall will display “messed display!”



Press **ENTER** when you're done. The text will then be updated.

Editing a champion stats

You edit the stats on the right panel, *DMBuilder* will internally translate into DM text (notably, stats are coded using letters from 'a' to 'p' – representing 0 to 15).

```
TEXT : #023
FIRST NAME: ALEX
LAST NAME: ANDER
GENDER: M

HEALTH : 0050
STAMINA: 00570
MANA : 0013

LUCK : 0047
STRENGTH : 0044
DEXTERITY : 0055
WISDOM : 0045
VITALITY : 0040
ANTI - MAGIC: 0035
ANTI - FIRE : 0040

FIGHTER:
SWING : 0
THRUST: 0
CLUB : 0
PARRY : 0

PRIEST:
IDENTIFY : 0
HEAL : 0
INFLUENCE: 0
DEFEND : 0

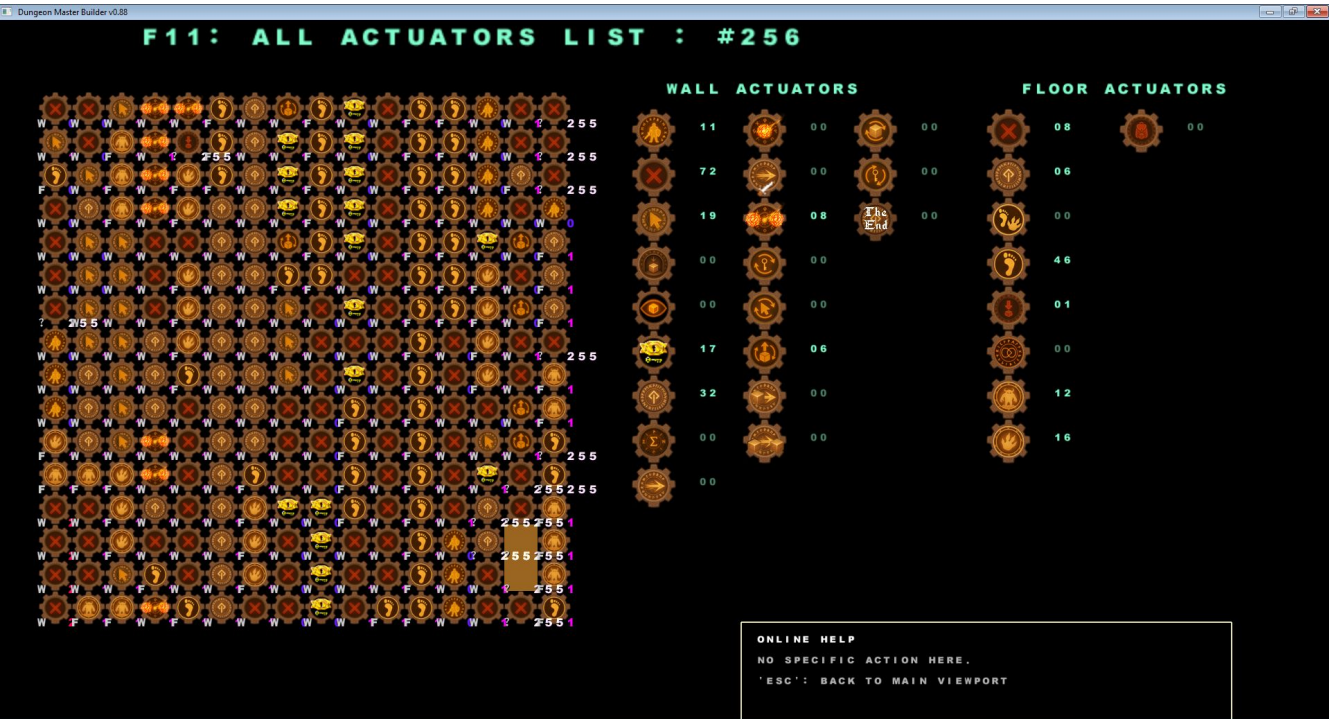
NINJA:
STEAL : 3
FIGHT : 2
THROW : 3
SHOOT : 2

WIZARD:
FIRE : 2
AIR : 2
EARTH : 1
WATER : 2
```

Press **ENTER** when you're done. The text will then be updated.

F11 : Actuators List

Press **F11** to get the **ACTUATORS LIST** screen.



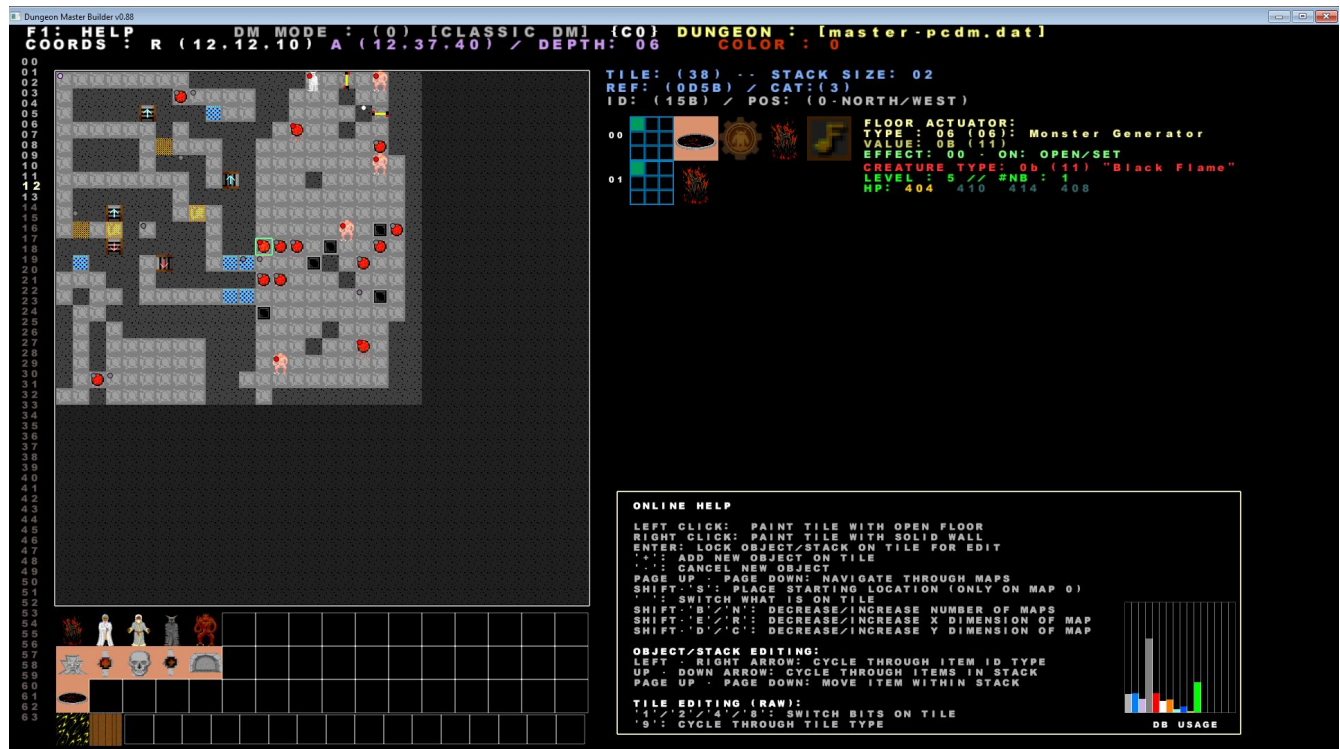
There is no specific available action possible in this screen. It lists all actuators in the dungeon in a visual way. The right part counts every occurrence of actuators per type, for wall and floor ones.

Map Editing

The main map view allows you to:

- **edit** the **main layout** of maps
- **place objects/items** on map
- **edit objects/item attributes**

This is the place to spend most of the time editing a dungeon.



Zones of the main view

- Top part :

Edit mode : **CLASSIC** (for Dungeon Master 1) or **SKULLKEEP** (for Dungeon Master 2)

Dungeon filename

Coordinates : **R** → Relative coordinates within map; **A** → Absolute coordinates within world

Depth = Experience Modifier on map

If “**depth**” = **0**, then there is a permanent full light on map.

Color = Priority color on monsters

This color is determined by the last monster in graphics monsters list having a specific color. This lets you know about the global colors for monsters, in case some combination of monsters in the same map may produce weird colors on them.

- Left part:

The **map index**. This goes from **0** to **63 at most**. The last value is the last available map in the dungeon. You navigate through this using **PAGE DOWN** and **PAGE UP**.

- Bottom part:

Graphics grid : this is a visual reminder of graphics set up for the current map, then showing all possible decorations for **Creatures**, **Walls**, **Floors**, **Door Decorations** and **Door Types**.

Note: if you place a monster that is not in the creatures list, it will then immediately dies at initialization (because the engine won't have loaded the graphics for that monster). That mechanism can be used as a trap for instantly destroying monsters that fall into a pit.

- Right bottom part:

Online Help panel : this panel gives a reminder of key controls to be used on map or on edited object.

The category/database usage diagram is also shown in this part. The higher the bar, the more objects of that category exist in the dungeon. When the bar reaches the top, it means there is no more room for new objects of that category.

- Right part:

Tile information : hexa value of the current selected tile

Stack of objects/items : display of all items on the current tile and their attributes.

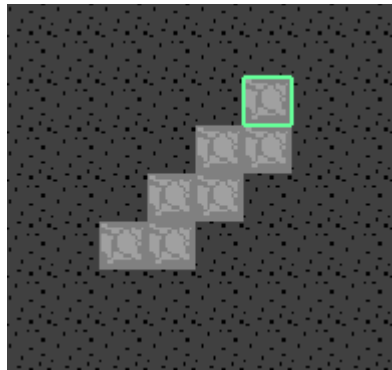
Tile Layout Editing

The tile layout is where you choose the different tiles for your map. The different tiles are listed in a table below.

Mouse controls:

Left click → paint a **FLOOR** tile on map

Right click → paint a **WALL** tile on map



You can set all types of tiles from keyboard

Keyboard controls:

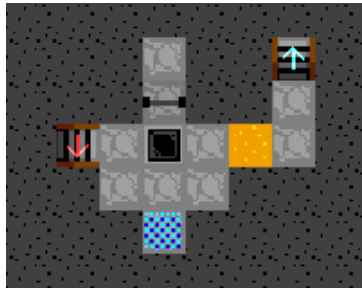
'W' → place a **WALL** tile on map

'F' → place a **FLOOR** tile on map

'P' → place a **PIT** tile on map

'S' → place a **STAIRS** tile on map

'I' → place an **ILLUSIONARY WALL** (trick wall / false wall) on map



Tiles are presented using the visuals from the *Chaos Strikes Back* magic map.

Note: you can't directly place a **DOOR** or **TELEPORTER** tile. You actually need to add a new **OBJECT** for that; the corresponding tile will be set along.

The tile hex value is displayed as information on the right side

```
TILE: ( 20 )
REF: ( FFFE ) / CAT: ( F )
ID: ( 3FE ) / POS: ( 3 - SOUTH / WEST )
```

Here are the basic values for tiles:

TYPE ID	HEX VALUE	TILE TYPE
0	00 / 0x00	Wall
1	20 / 0x20	Floor
2	40 / 0x40	Pit
3	60 / 0x60	Stairs
4	80 / 0x80	Door
5	A0 / 0xA0	Teleporter
6	C0 / 0xC0	Trick Wall / False Wall
7	E0 / 0xE0	External Tile*

**External Tile* is not used in *Dungeon Master 1*, while considered a “transparent” tile in *Dungeon Master 2* for overlapping maps.

You can change manually the tile value to set it with any value.

Keyboard controls:

'9' → Cycle tile type to next type

'1' → Switch tile low value / function with 1 → + **0x01** or - 0x01

'2' → Switch tile low value / function with 2 → + **0x02** or - 0x02

'4' → Switch tile low value / function with 4 → + **0x04** or - 0x04

'8' → Switch tile low value / function with 8 → + **0x08** or - 0x08

Note: the value + **0x10** is not manually controllable. It correspond to a **FLAG** telling there is at least one object/item on the tile. Having this value without any item on it would break the game.

In addition to that, on certain tiles, you can control an open/closed state with LEFT CLICK on it.

Mouse controls:

Left click on PIT → **open or close the PIT**

Left click on STAIRS → **change direction** of STAIRS for **DOWNSTAIRS** or **UPSTAIRS**

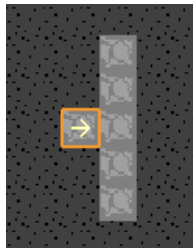
Left click on DOOR → **open or close the DOOR**

Left click on TELEPORTER → **activate or deactivate the TELEPORTER**

Left click on TRICK WALL → **open or close the WALL**

Starting position

The **player starting position** can only be placed on the map 0. It is represented by an orange arrow within an orange square.



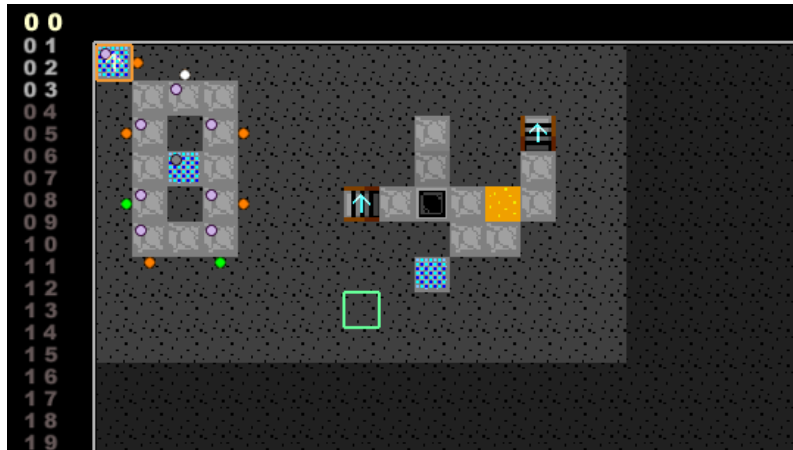
Keyboard controls:

SHIFT+S → Place the **STARTING POSITION** on tile.

'P' → Turn the direction of the **STARTING POSITION**.

Changing Dungeon / Map Dimensions

You can change the dimensions of a map on X and Y axis. The maximum dimensions for a map is 32*32 tiles. Tiles outside the map boundaries will appear in dark.



Keyboard controls:

SHIFT+E → Decrease **X dimension** by 1

SHIFT+R → Increase **X dimension** by 1

SHIFT+D → Decrease **Y dimension** by 1

SHIFT+C → Increase **Y dimension** by 1

You can also change the number of maps contained within the dungeon. Minimum is **1**, maximum is **64**. You can see the number of available maps on the maps ID column on the left part of the screen.

If not available, the map ID will appear in dark grey.

Keyboard controls:

SHIFT+B → Decrease **number of maps** by 1

SHIFT+N → Increase **number of maps** by 1



Item Editing

The map contains many different types of objects/items, there are generic commands to handle these, then special commands depending on their type.

This section will first document both generic then special commands.

Create a New Item

Wherever on the map, press '+' to display the **NEW OBJECT** panel then select the category of the new object/item you want to add. The new object will be created and added to the tile your cursor is on.



Keyboard controls:

'+' → Invoke **NEW ITEM** selection bar

'-' → Cancel **NEW ITEM** selection

ENTER → Validate **NEW ITEM** creation

Each object/item is represented by a **colored dot**, depending on its type, except for **doors** and **teleporters** that have a special tile display instead (because they do need a special tile type).



The colored dots represent:

- **mauve dot** : floor text or wall text
- **grey dot** : actuators
- **red dot** : creatures / monsters / special objects
- **cyan dot** : scrolls
- **blue dot** : potions
- **yellow dot** : containers (chest) or magic map
- **green dot** : miscellaneous items

General Item Editing

Objects/Items on a tile are on a **STACK**. The right part of the screen shows this **STACK** information and **ITEMS** on it, with their main attributes.



The top part gives the number of objects/items within the STACK and some other internal information.



REF is the internal **hex value** of the **REFERENCE** object on tile (the first one on the **STACK**).

CAT is one part of **REF** which is the **CATEGORY ID** of that object.

ID is other part of **REF** which is the **ITEM ID** within that **CATEGORY**.

POS is the last part of **REF** which tells the **POSITION** of that object.

Keyboard controls:

'-' → Remove current selected item from the **STACK**.

'P' → Turn object facing from **NORTH to WEST** or **NORTH-WEST to SOUTH-WEST**.

LEFT / RIGHT ARROWS → Cycle through **ITEM TYPE**.

PAGE UP / PAGE DOWN → **Exchange** position of current object in **STACK**.

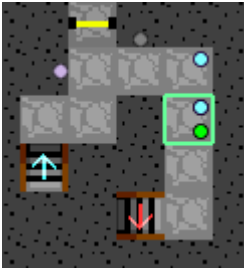
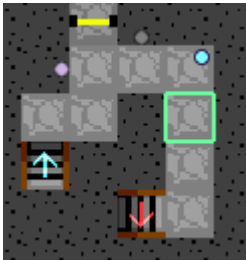
'T' → Switch to "**SELECT TARGET MODE**", for **Teleporters, Actuators** and **Monsters/Containers**

Cut & Paste a Stack

In case you want to move a stack from one tile to another, you can use the “**Cut & Paste**” action.

CONTROL+X → Cut a **STACK** of items from a tile.

CONTROL+V → Paste the cut **STACK** onto a tile.

Select a tile where you want to move the objects from 	“Cut” this stack 	Move onto another tile then “Paste” over 
--	---	---

Warning: not much control has been made (yet) for this function, so be careful not to “cut” several stacks before “pasting” them because you would lose those not pasted yet. Thus the recommendation is to cut then paste on stack at a time before performing any other editing.

Doors (Category / Database 0)

Doors are special items to edit. Lock onto one to change its attributes.
The corresponding attribute symbol is lit when it is activated.



Keyboard controls:

' ' (space) → Switch the **DOOR TYPE**. There are only 2 possible types per map. You choose these types from the **MAP PROPERTIES** screen (F2).

'B' → Switch the **BUTTON** bit

'O' → Switch the **OPENING** bit (*the door opens either vertically or horizontally*)

'S' → Switch the **BASHABLE** bit (*the door can be destroyed by melee weapon attack*)

'D' → Switch the **DESTROYABLE** bit (*the door can be destroyed by fireball/lightning spell*)

LEFT/RIGHT ARROWS → Cycle through the available **DOOR DECORATIONS** for this door.
These decorations are to be defined from the **MAP PROPERTIES** screen (F2).

Teleporter (Category / Database 1)

Teleporters are special items to edit. Lock onto one to change its attributes.
The corresponding attribute symbol is lit when it is activated.



Keyboard controls:

'H' → Switch the **HAZE** bit. This controls if the teleporter is visible (blue haze) or not.

' ' (space) → Switch the teleporter **ON/OFF**. When OFF, it is like the teleporter does not exist, and no effect will happen. You can turn ON/OFF a teleporter with **ACTUATORS**.

'A' → Switch the **ABSOLUTE FACING** bit

'R' → Cycle through the **ROTATION** value (0 to 3)

'O' → Switch the **SOUND** bit

'S' → Switch the teleporter **SCOPE**.

'T' → Use **TARGET** mode

Table values:

The combination of “**ABSOLUTE FACING**” and “**ROTATION**” value tells how the teleported object will have its facing changed.

ABSOLUTE FACING	ROTATION	MEANING
1	0	The object will face NORTH
1	1	The object will face EAST
1	2	The object will face SOUTH
1	3	The object will face WEST
0	0	The object won't change direction
0	1	The object will rotate 90° RIGHT
0	2	The object will rotate 180°
0	3	The object will rotate 90° LEFT (<i>technically 270° RIGHT</i>)

Text (Category / Database 2)

Teleporters are special items to edit. Lock onto one to change its attributes.
The corresponding attribute symbol is lit when it is activated.



Keyboard controls:

‘S’ → Switch the **SILENT** / **VISIBLE** bit.

LEFT / RIGHT ARROW → Cycle through the available texts

Monster (Category / Database 4)

Monsters are special items to edit. Lock onto one to change its attributes.



Basically, a **MONSTER** is a **group** with a **number** of individuals having each their **Hit Points**. **DMBuilder** does not let (yet) to set exact values of HP for each but rather uses the internal HP calculation from their level.

Monster HP formula:

Each monster type **M** has its own stats like **Base HP** and **Random HP**.

The calculation formula is:

$$\text{Monster HP} = \text{Base HP}_{(M)} * \text{Level} + \text{Random HP}_{(M)}$$

***Note:** that formula does not apply for a DM2 game, where there can only be 1 monster (no group) and HP is initialized from internal value (see DM2 AI table for that) whatever you set for its HP.*

Keyboard controls:

‘**M**’ → Cycle number of monsters in group (from 1 to 4)

‘**1**’ → Decrease **LEVEL** by 1

‘**2**’ → Increase **LEVEL** by 1

‘**4**’ → Decrease **LEVEL** by 10

‘**5**’ → Increase **LEVEL** by 10

‘**0**’ → **Roll again HP** values for the current **LEVEL**

‘**8**’ → Set **LEVEL** to 1

‘**T**’ → Select **target** stack of items to link to the **MONSTER**

‘**U**’ → **Unlink / Unload** contained items from the **MONSTER** to another tile.

Weapons (Category / Database 5)

Weapons are basic items to edit. Lock onto one to change its attributes.



Keyboard controls:

- '1' → Decrease **POWER** by 1
- '2' → Increase **POWER** by 1
- 'C' → Switch the **CURSED** bit
- 'O' → Switch the **POISONED** bit (*actually of no use as not implemented in the game*)
- 'B' → Switch the **BROKEN** bit (*actually of no use as not implemented in the game*)

Clothes (Category / Database 6)

Clothes are basic items to edit. Lock onto it to change its attributes.



Keyboard controls:

- 'C' → Switch the **CURSED** bit
- 'B' → Switch the **BROKEN** bit (*actually of no use as not implemented in the game*)

Scroll (Category / Database 7)

Scrolls are special items to edit. Lock onto one to change its attributes.



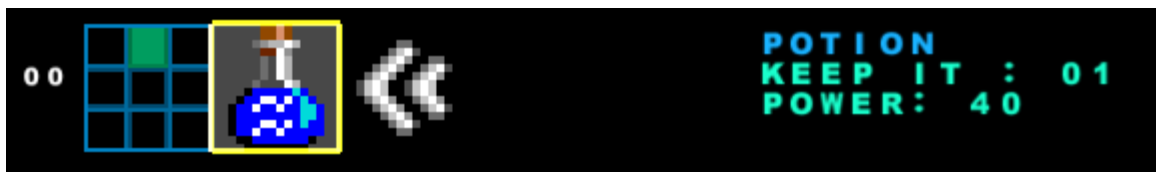
Keyboard controls:

LEFT / RIGHT ARROW → Cycle through the available texts

Potions (Category / Database 8)

Potions are basic items to edit. Lock onto one to change its attributes.

There is specifically a **POWER** associated to the potion. The corresponding **POWER** symbol is displayed along its internal value.



Keyboard controls:

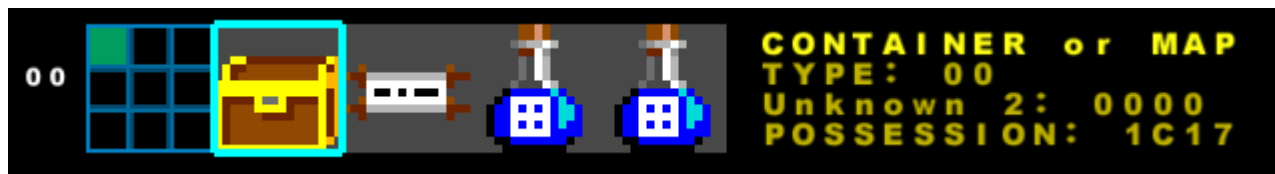
- '1' → Decrease **POWER** by 1
- '2' → Increase **POWER** by 1
- '4' → Decrease **POWER** by 40 (one symbol)
- '5' → Increase **POWER** by 40 (one symbol)

Chest (Container) / Magical Map (Category / Database 9)

Containers and Magical Maps are special items to edit. Lock onto one to change its attributes.

For **DM1**, there is only one type of container which is the CHEST.

For **DM2**, this category is extended to other types of containers and even to MAGICAL MAPS.



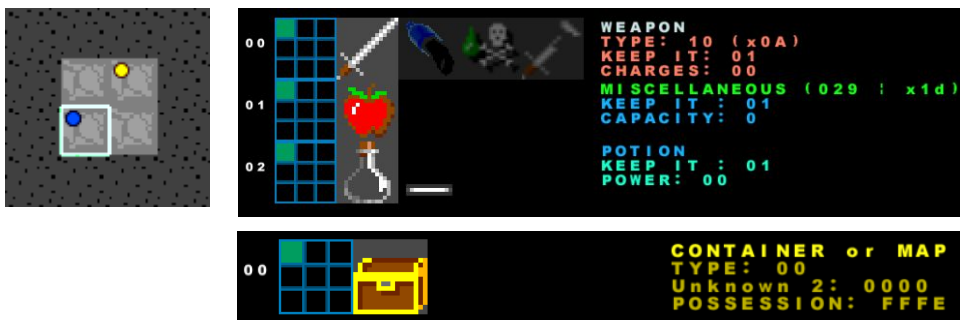
Keyboard controls:

- 'T' → Select a TARGET STACK of objects to be chested into
- 'U' → Unchest contents of CHEST to a selected tile.

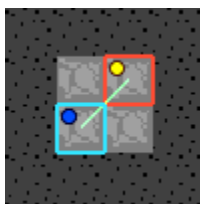
DMBuilder does not allow (yet) directly editing contents of a CONTAINER, so the way to do this is to edit contents outside the CONTAINER, then link or unlink it.

Let's break down steps with an example:

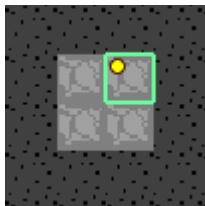
Here is a stack of 3 items (bottom left), and a chest (top right).



Put your cursor on the CHEST tile, **lock onto it** (press ENTER), **activate the TARGET mode** (press T) then move the cursor onto the stack of these 3 items.



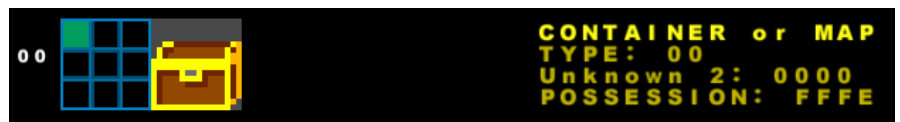
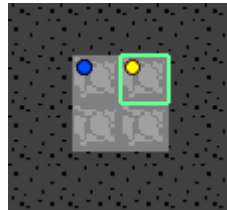
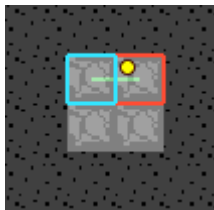
Press **ENTER** to validate your target and this stack will then be linked to the **CHEST**. The stack disappears because it is now contained within the **CHEST**.



Once items are within the **CHEST**, they cannot be edited.

If you need to edit these items, you need to **UNLOAD** them from the **CHEST**.

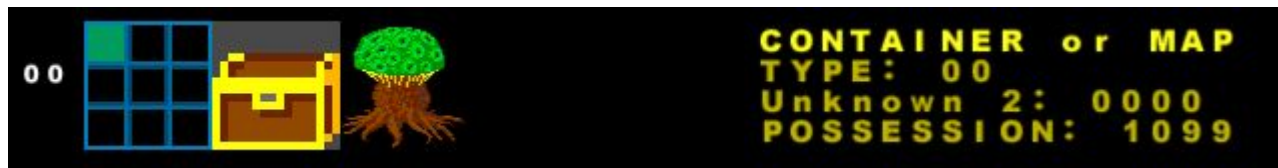
For that, lock onto the **CHEST** (press **ENTER**), activate the **TARGET** mode (press **T**), then move the cursor towards a tile you want to **UNLOAD** its contents, then press **“U”**, to confirm the **UNLOAD**. The contents will now reappear as a new stack outside the **CHEST**.



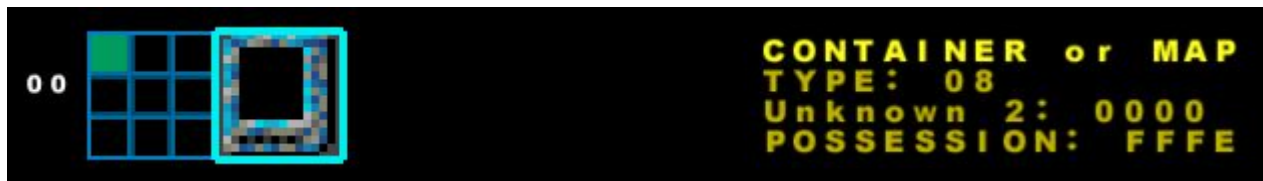
Note:

You cannot add new content into a **CHEST** if there are already some items in it. For that, first manage the contents outside the **CHEST**, then link it when the stack is ready.

Please also note that there is no control about what can be linked into a **CHEST**, so that you may link with anything like **CREATURES**, but nothing will be guaranteed during the game.



In **DM2 mode**, you can then setup **MAGICAL MAP** with this same item category. No specific attributes are editable.



Miscellaneous Item (Category / Database 10)

Misc. Items are basic items to edit. Lock onto one to change its attributes.

The **CAPACITY** attribute ranges from **0 (default) to 3**, and is used for special items like **WATERSKIN**.



Keyboard controls:

'1' → Decrease **CHARGE/CAPACITY** by 1

'2' → Increase **CHARGE/CAPACITY** by 1

Actuators (Category / Database 3)

Actuators are special items to edit and the most complex to manage. They are used to convey triggers, events, mechanisms and traps into the dungeon. Lock onto it to change its attributes.



Note : the possible types of **ACTUATORS** will depend whether it is placed onto a **WALL tile** or a **FLOOR tile**. Depending on that, we'll refer to either **WALL ACTUATOR** or **FLOOR ACTUATOR**. The attributes and principles are the same, but the functions will be different depending on the type.

DM1 Floor Actuators Table:

ACTUATOR ID	ACTUATOR SYMBOL	DESCRIPTION
0		None / No Function: Whatever is setup for this actuator, nothing will happen.
1		Activated by Anything: This actuator is triggered either by any monster, the party or any item that is put on it or removed from it.
2		Activated by Party or Monster: This actuator is triggered when any monster or the party steps on it or steps out from it.
3		Activated by Party: This actuator is triggered when the party steps on it or steps out from it. This is typically used for floor pad triggers.
4		Activated by Item: This actuator is triggered when a specific item is put into it or removed from it.
5		And / Or Gate:
6		Monster Generator: This actuator will spawn a Monster on it when it is triggered (this means a Monster Generator needs to be the target of another actuator to trigger).

7		Activated by Monster: This actuator is triggered when any monster steps on it or steps out from it.
8		Activated by Carried Item: This actuator is triggered when the party happens to have a specific item within inventory.

DM1 Wall Actuators Table:

ACTUATOR ID	ACTUATOR SYMBOL	DESCRIPTION
0		None / No Function: Whatever is setup for this actuator, nothing will happen.
1		Push Button / Activated by Player's Hand: This actuator is triggered when player clicks on it.
2		Alcove Item Activator: This actuator is triggered when a specific item is put into an alcove or removed from it.
3		Item Activator: This actuator is triggered when a specific item is put (shown) on it. Contrary to the " <i>Item Eater</i> ", the item is not consumed by this.
4		Item Eater (Key Hole): This actuator is triggered when player gives it a specific item. That item is then consumed afterwards. It is typically used for Key Hole mechanism.

5		General Trigger: This actuator is a very important one as it is used to receive message and activate other actuators/objects.
6		Counter: This actuator holds a value that can be changed by other actuators. It can then trigger when that value is zero or non zero.
7		Shooter: This actuator shoots an item. <i>I am actually not sure of how to use this.</i>
8		Spell Shooter: This actuator shoots a spell missile when triggered.
9		Weapon Shooter: This actuator shoots a weapon when triggered.
10		Double Spell Shooter: This actuator shoots 2 spell missiles when triggered.
11		Item Eater Toggler: This actuator is triggered when player gives it a specific item. That item is then consumed afterwards. The actuator then exchange its place with actuator/decoration under.
12		Mouse Last Toggler: This actuator triggers when player clicks on it. It then exchange its place with actuator/decoration under.

13		Remove Item Toggler: This actuator allows player to take item from wall then triggers when a specific item is removed from it. It switches its place with the actuator decoration under it. This typically used for “wall torch” mechanism.
14		General Item Shooter: This actuator shoots a generic item from stack on the same tile/face. It shoots until all items have been used.
15		Double General Item Shooter: This actuator shoots 2 generic items at once from stack on the same tile/face. It shoots until all items have been used.
16		Actuator Toggler: This actuator allows player to take item from wall then triggers when a specific item is removed. That specific item is then removed. It switches its place with the actuator decoration under it. This typically used for “firestaff amalgam” mechanism.
17		Item Eater Toggler 2: This actuator is triggered when a specific item is presented to it. That item is then removed. This actuator’s decoration is then removed and it switches its place with the actuator decoration under it. This typically used for “firestaff amalgam” mechanism.
18		The End: This actuator starts the End Game sequence when triggered.
127		Champion’s Mirror: This is a special actuator that holds a portrait of a champion. It must be completed with a special “Champion’s Text” to get an operational Champion’s Mirror. (Check Quick Start – Tutorial on how to set it).

Generic keyboard controls:

'1' → Decrease **ACTUATOR TYPE** by 1 (change **ACTUATOR type**)

'2' → Increase **ACTUATOR TYPE** by 1 (change **ACTUATOR type**)

→ You can also change **ACTUATOR TYPE** through **selection bar** when TAB is on ACTUATOR symbol.



'D' → Change **DELAY** value (from 0 to 15)

'O' → Set the **ONCE** bit : this actuator will only trigger once and will then deactivate itself.

'S' → Set the **SOUND** bit.

'I' → Set the **INACTIVE** bit. If set, the actuator is disabled.

'E' → Increase the **EFFECT** value (from 0 to 7)

SHIFT+E → Decrease the **EFFECT** value (from 0 to 7)

'F' → Cycle through target **FACING** (from 0 to 3, i.e. **NORTH** to **WEST**)

TAB → Switch from **GRAPHICS** to **ACTUATOR TYPE** then **ACTUATOR VALUE** for editing.
The **Actuator Value** is used for some actuators, typically those requiring a **special item**.

Actuator F06 : Monster Generator

A **Monster Generator** actuator has different meaning for its value like:

- **Generation type** : how many **Monsters** will be generated (1, or 2, or 4, or randomly 1 to 4, etc ...)
- **Toughness** : the **HP Level Modifier** used for monster generation.
- **Cooldown** : the duration between two possible monsters generations.



Keyboard controls:

'G' → Increase **GENERATION** value

SHIFT+G → Decrease **GENERATION** value

'7' → Decrease **TOUGHNESS** value by 16 (0x10)

'8' → Increase **TOUGHNESS** value by 16 (0x10)

'4' → Decrease **COOLNESS** value by 16 (0x10)

'5' → Increase **COOLNESS** value by 16 (0x10)

Actuator W08 : Shooter

A Shooter actuator has 2 specific attributes which are **POWER** and **RANGE**.



Keyboard controls:

‘L’ → Increase **RANGE** value by 1

SHIFT+L → Decrease **RANGE** value by 1

‘W’ → Increase **POWER** value by 1

SHIFT+W → Decrease **POWER** value by 1