in

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REVISION HISTORY			
NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

in

1.1 AlienBreed 3DII Level Editor

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                          Welcome to the revised AlienBreed 3DII Level-editor V2 ↩
                              .12
                        Original written by: Andy Clitheroe
                          ReWritten by: Jens Vang Petersen

  Upgrades and add-on's can be found on 'http://home8.inet.tele.dk/top_cat/'
                                        or the Aminet

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```

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AMIGA RULEZ - Home of 'The Ultimate Extension list' for AMOS TC & AMOS PRO

1.2 Disclaimer

NOTE:

- All the usual stuff: I accept no responsibility for any damage on any devices (including Sister, Parents, Computer & Cat)..
- This program is MAILWARE, so if you use it please send me an E-Mail or Snail-Mail and tell me what you think about it.
- This program may be included on CD-ROMS, PD-Collections, Homepages, Cover-disks, etc. The only thing I demand is a Mail telling me where I can find my program (If I've send it personaly somewhere then you don't need to.)

- This program was designed to enable you to create your own levels to use with 'Alien Breed 3D II', this is not a crack or hack of the original game...

1.3 Why, Who and HOW

Why:

Well I tried to make some levels with the original editor, but I quickly ran into a bunch of errors, besides it was almost imposible to find out what options that realy was.. Then I found the source-code on a cover-cd from Amiga Format, so I started to study it and this is the result of that work.

Who:

You can contact me:

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How:

This Editor was written using:

- AMOS Pro 2.00
- Turbo + 2.00
- Craft 1.00
- Easylife 1.10
- DOOM music 2.00
- Locale 0.26
- OS DEVkit 1.55
- Tools 1.01
- GUI 1.62

- GoldEd 4.7.2 (With Guide-env-add-on)
- CatEdit 1.20
- PPaint 7.0
- Dopus 5.5
- Stone Cracker 4.10.2 pro

I would like to pay my respects to the folowing persons, without them it would be imposible to make something like this....

Peter Folkmann
Peter Jørgensen

1.4 You'll need

The Editor should run on WB2.0 with 4 Mb of RAM, however the game requires AGA so I don't suspect anyone to try and run it on anything older than 3.0 anyway. It runs on all processors known to me, however 030/50 is highly

recomended.. The Editor supports locale with KS2.1+.. Please note that the 'new' converters NEEDS AGA and OS 3.0 (with datatypes) to operate...

The editor relies on several external programs and filez:
(if you'd installed the original editor + the patch, the most of the files should be in the right order)

You'll always need:
 - 'Endcli' command in your path
 - 'FailAt' command in your path
 - 'Execute' command in your path
 - 'Delete' command in your path
 - 'Copy' command in 'C:'
 - 'T:' assigned to a directory somewhere
With a normal WB installed these should not pose a problem

 - 'SBDepack' must be in 'C:' if you want to load packed files..

The editor needs the folowing on startup:
 - 'Ab3:' assigned
 - 'Easylife.Library' Libs: or path.
 - 'Asl.Library' Libs: or path
 - 'Gadtools.Library' Libs: or path (is in ROM for 3.0+)
 - 'Ab3:Includes/test.lnk' Datafile
 - It needs the files and directories pointed by the 'test.lnk' file too...

!! If 'Ab3:' isn't set then the editor will try and set it to the current directory (The catalog where the editor itselve is located)

To use the 'pack files' options you'll need
 - the 'Lha3' program in 'C:' (Normal)
 - the 'Lhaconv' program in 'C:' (!!!!!!!!!!!!!!!!!!!!!!!!!)
As standard the 'lhaconv' program is placed in 'S:', however I can't get the scripts to work allright with that position.

1.5 How to Install the Editor

Intalling the editor

I dind't had time to write an install-program, but if you've got the 'original' editor, you've proberly had to use either the shell or an directory utility to get it running anyway..

The editor should be installed 'on top' of the old editor to work best, an alternative is to install on top of the game itselve, thereby using the original GFX and data files..

To install:
   Set an assing to 'Ab3:', if you've used the old editor it'll be there..

That should do it..

NOTES:
- If you don't assign 'Ab3:', then the editor will try and make the assign to the directory where the editor itselve is located..

- The content of the drawer 'C' may be moved to C:, or it should be in the editor's directory.

- The catalogs can be moved to 'locale:' if you'd like, but it works from the editorpath as well..

1.6 Supported tooltypes....

TOOLTYPES (NEW in Version 2.12)

Tool types is a very convinient way of sending information to a program, they are set by clicking once on the icon, and then select information from the WB menu. Tooltypes can be deactivated by putting () around them..

The editor supports some tooltypes set in the icon of the editor, the supported ones is as folows, defaults is shown in []..

HELP=[LevelED_213.guide] (* New in 2.12)

Should point to an amigaguide file that holds helping texts for the editor this file will be loaded when the user presses help. Normal procedure is to point it to this guide. But this option is open in case you'd like another guide (perhaps in another tounge..)

!! If no path is specified, the editor will seek the file in the same directory as the program itselve.. !!

PREFS=[AB3DII-Edit.prefs] (* New in 2.12)

Points to the prefsfile used by the editor. This file will be used for both saving and loading prefs. This is done to provide possibility of several prefs files..

!! If no path is specified, the editor will seek the file in the same directory as the program itselve.. !!

1.7 Please help the author.....

In developing the editor further I'd like some help from all of you using it, I'm currently looking for:

- Locales, both guide and catalogs, or just catalogs to various countries, the .cd and .ct files are included with the program, but please let me know before starting out, course others might be trying to write a locale for the country allready.. When you finish your locale, please send it to me and I'll put it in with the next version of the editor..

- Vector files, I'm looking for the layout of the vector-data files as I'd like to be able to show them on screen..

- New Ideas, if you got any..

1.8 Changes to program

The history of the Editor:

- Future plans:
  - Getting level-data back from a save game..
  - Get checker to find 'empty holes'..
  - Write a better sample-REplayer :)
  - Write an installer program..
  - Get the entire editor to run on Intuition-screens..
  - YOUR IDEAS :)

- News in V2.13 (Released: 15-02-1998)
  - That was REALY stupid, something went wrong when I packed the archive down for distribution..

- News in V2.12 (Released: 14-02-1998)
  ! Certain parts of this version is not running 100% optimized, this is proberly most apparent in the programstartup, also the main EXE file is bigger than needed, this is due to my future plans to convert the editor to run in a true intuition system, and some preparing routines has been included for testing in this version !!!!!
  - Fixed the sample-replayer temporarely, now the editor relies on the external Play16 program to play..
  - Graphics definer now running AGA-256 colours..
  - Graphics definer places Wall-GFX's better on screen..
  - Graphics definer now uses gadgets rather than 'strange' keys..
  - Editor is now compiled with OSDevKit 1.55 for Intuition and system..
  - Help implimented, loads up the relevant section of this guide doc..
    (Currently only working in the drawing functions, just point at the menu and hit 'help'. Help on the setup-part is halted becouse I'm going to move them to intuition screens/windows..)
  - ToolTypes support added to editor.
    'HELP' and 'PREFS' is current active..
  - Set-level-textstrings now opens on intuition screen..
  - 'Check Level' is no longer called from the 'Make Level' as I've had many problems with that function..
  - Calling 'check level' from the menu spoiled the map visualy..
  - 'Check Points' SHOULD work now.. (Third time lucky, I hope)..
  - Fixed a bug in the 'bullet statistics'. The (in)visible state of the bullet was never shown on screen...
  - DT->??? converters had some problems with certain file-formats when using 'some' versions of 'picture.datatype'. I hope I've found the source of that problem.. (NOT tested !!!!)

- News in V2.11 (Released: 09-01-1998)

```
  - 'About' fixed (I'd deleted the wrong data-section)..
  - Removed problem with 'Check Points' keeps going (Wrong Index-ID)..
  - Snap size fixed (Forgot to do a '+1', resulting in '/0')..
  - 'Make Level' only preforms 'Check Level' when needed..
  - WallGFX's can now be removed from the list..
  - Fixed colour error in 'Show' menu..
  - 'Set GFX frames' can now handle packed files..
  - Small fix in the danish locale..
  - Added some bits and pieces to the guide :))..


- News in V2.10 (Released: 28-12-1997)
  ** NEW **
    - MAIN exe-file is now packed with 'StoneCracker'..
    - New zone-graphic definer added (Still testing it :)
      (See all walls, floor and roof at the same time)..
    - 'Floor -> AGA-IFF' added
      (Converts all floortiles to one 256col IFF with prober palette)
    - 'AGA-IFF -> Floor' added (Using datatypes !!!!)
      (Gets the floortiles from a 256col IFF, opens up for a faster  converter
      + you can use 256 colours in EACH tile)
    - 'Texture -> AGA-IFF' added
    - 'AGA-IFF -> texture' added (Supports DataTypes :)
    - 'Backdrop -> AGA-IFF' added
      (Get a sky/back-drop pic back to IFF)
    - 'AGA-IFF -> Backdrop' added' (Supports DataTypes :)
      (Converts an IFF-pic to the format for sky/back-drops)
    - 'DTsample -> AB3D-FIB'
      (Converts a sample supported by DataTypes to the AB3DII format.)
    - A 'bar' shows heights when defining 'em (Optional)..
    - Heights now measured  in  metric  system  and  turned  so  that  a  high
      number indicates a great height (Optional)..
    - Tiles for floors/roofs/walls is now  shown  as  either  a  shadow  or  a
      solid presentation (Set in prefs)..
    - Cordinates shown when editing level..
    - 'Textureconverters' now only generates glare-palette when REALY needed:)
      (Currently that's never, but if a palette-editor ever gets to work, then
      it'll be done :)
    - Zoom changed to center on screen..
    - Grid changed to reflect the 'snap-points'..
    - Moved 'Check Level' to 'Level-Setup'..
    - Added 'Optimize Zones' (Not 100% checked yet !!!!)
      (Removes empty zones, giving a better/safer/faster level-layout)
    - Added 'Optimize Points' (Not 100% checked yet !!!!!)
      (Removes unused points)
    - Save asks before overwriting existing levels..
    - Some small changes in the GUI-graphics..
    - Background music kicked out (doom-doom-doom-doom)..
    - Diana now rests in peace, may she do so forever..
    - Changed level-menus to lines, makes menu smaller..
    - Animation-sequences can be copied when defining aliens..
    - Complete alien definition can be copied..
    - Complete object definition can be copied..
    - Frame-numbers can be entered directly when defining object animations..
    - Frame-numbers can be entered directly when defining alien animations..
    - Frame-numbers can be entered directly when defining bullets..
    - Aliens, Objects & Bullets can be imported from other 'link-philez'..
```

```
    - Added 'about' screen.. :)
    - Added statistics function..
      (Shows used objects, aliens, points & zones)..
    - The alien 'name' is now entered in statistics..
    - The object 'name' is now entered in statistics..
    - The bullet 'name' is now entered in statistics..
    - Moved 'delete zones' to the 'define zones' rather than 'define walls'..
    - 'Make level' now only makes linkup and clip when needed..
      (Linkup and Clip will be done when saving a new level the first time)
    - 'Full Make' added, forces linkup and clip to be executed..
    - Made 'snap' defineble..
    - Added preferences to editor..
      (Stores view-modes, height-mode, grid, snap & external art-program)..
    - Level checker rewritten with more information shown..
    - Level checker now checks for zone convexity, sharp corners
      and loose points.
    - Sample replayer now uses 'DME' rather that 'AMCAF'..
    - Added 'Edit Floor'
      (select a floor tile, send it to an art-program, then getting it back)
    - Added 'Edit Texture' (Clone of 'Edit Floor')
    - Updated 'Texture2Iff' and 'Floor2Iff', now gets much better palette
      back, also returns the tiles in 64EHB now..
    - Editor can now start a link-file from scratch..
    - Added limit-check for points/zones/controlpoints/objects/aliens..
    - Now checks for needed external programs on startup..


  ** FIX **
    - Changed the sample-replayer (uhh-ahh, just a little bit)..
    - Sample converter can now read IFF-8SVX files correct..
    - Fixed crashes when selecting cancel in save-filerequesters..
    - Fixed '*' in patterns to '#?'..
    - Fixed error in the guide :)..
    - Fixed negative numbers where they have meaning..
    - Fixed the AUX-frames in alien-definition..
    - Fixed 'set objects', it didn't show the last 10 object-names..
    - Removed some strange crashes in the define wall functions..

  ** DOCS **
    - Added 'known bugs' to user-guide :)

  ! Changed locale-strings:
    600,606,609,610,611,612,613,614,645,700,1011,1028,1029,1102
  ! Removed locale-strings:
    615,616,669,681,682,683,684,685,686,687,688,689,690,691,692
  ! New locale-strings:
    774,775,776,777,778,779,780,781,851,852,853,854,855,856,857,858,
    1081,1176,1177,1178,1179,1180,1181,1182,1183,1184,1185,1186,1187,1188,
    1189,1190,1191,1192,1193,1194,1195,1196
    1300,1301,1302,1303,1304,1305,1320,1340,1500,1501,1502,1503,1504,1505,1506
    1507,1600,1601,1602,
    1610,1611,1630,1650,1651,1652,1653,1654,1700,1701,1702,1800,1801,1802,1803
    1804


- News in V2.01: (Released: 24-11-1997)
  - Small fixes in the danish locale..
```

  - 'Easylife.Library' included in archive..
  - Some changes in the build-in-text..
  - Enabled a 'missing-file-check'..

- News in V2.00: (Released: 21-11-1997)
  - Small fixes in GUI-GFX's..
  - Editor is now compiled using Turbo+ 2.00

- News in V2.00b2: (Released: 02-11-1997)
  - Editor sets 'Ab3:' if not found..
  - Editor's external files (The ones in 'C:') can alternatly be placed in relation to the editor as 'editor_path/C', where they'll be if the archive is unpacked in the normal way.
  - Danish locale included.
  - Wallconverter now gives warning if width >640 (the game won't handle it).
  - Editor now uses ASL filerequester..
  - Walls, Floor and Texture files can be packed directly..
  - Selecting cancel in filerequesters caused some crashes, fixed
  - Mouse-pointer fixed when loading/saving link-philez
  - Marking of inactive point in 'point-bright' removed..
  - Filepattern fixed in HQN generator..

- News in V2.00b1: (Test-version)
  - 'Define zone' fixed
  - 'Iconify' Fixed
  - Menu crash found and fixed
  - 'Wall 2 Iff' crashed if 'cancel' was choosen in the filerequester..
  - Locale support compleated
  - 'Floor 2 Iff' written
  - 'Texture 2 Iff' written
  - 'ObjFrames 2 Iff' written
  - 'Fib 2 Sample' written
  - Mousepointer gets busy
  - Editor reports load and save errors

- From 'Original' to 2.00a (Test-version)
  - Startup procedure.
    - Now shows missing files during start.
    - The ASM-procedures was included permanant in the program.
    - 'TEST.LNK' may be packed if you'd like
    - '256pal' is no longer needed, It's been included as fixed data in the program, but if it's present in 'ab3:includes/" it'll be loaded..
    - Startup has been made lots faster, as it no longer has to load floor data-tiles

  - Disc-operations:
    - Load function:
      - Moved to pull-down menu.
      - Filenamechecks.
      - Loads =SB= packed files (Standard AB3DII packing).
      - Uses path set by 'gamelinker' part of program..
    - Save function:
      - Moved to pull-down menu.

    - Error-catcher, shows error and exits to mainmenu
    - Filenamechecks.
    - Uses path set by 'gamelinker' part of program..
    - Errors becouse of 'missing' zones was corected.
  - Clip function:
    - Moved to pull-down menu.
    - Error-catcher, shows error and exits to mainmenu
    - Filenamechecks.
    - Uses path set by 'gamelinker' part of program..
  - LinkUp:
    - External Program included.
    - Placed in pull-down menu.
    - Error-catcher, shows error and exits to mainmenu
    - Filenamechecks.
    - Uses path set by 'gamelinker' part of program..
  - Level-packing:
    - New function in pull-down menu.
    - Filenamechecks.
    - Checks that pack-programs are present.
    - Checks the files are not packed allready.
    - Uses path set by 'gamelinker' part of program..
  - 'Make' function:
    - New function in pull-down menu, Clips, Saves, Links and Packs.
  - 'Check' function:
    - New function in program.
    - Checks teleports for destination.
    - Checks removed lifts.
    - Checks all zones for walls wrongly attached to lift/door.
    - Removes 'lose' rising walls.

- On The Map
  - Zoom functions moved to pull-down menu.
  - Grid added to aid in placing points. (Optional)
  - Indicator for start-point-player2.
  - Teleports shown on map. (Optional)
  - Heights shown on map. (Optional)
  - Lifts and Doors can be Hiden.
  - Fixed a few colour problems.
  - Map update was made a wee-bit faster..
  - Removed some of the gfx errors on the map..
  - Faster scrolling around was enabled using (shift/alt/ctrl)..
  - Possible to center map (back to square one)..
  - Wall-select indicates what wall will been chosen.
  - Checks on what needs to be draw, thereby increasing update speed.
  - Map now runs in highres, the map will look less crowded when you have many values on screen and the pull-down menus looks better..
  - Objects can be hidden on the map..

- Editing functions
  - All functions displays their keys on screen (if they have any).
  - Buttons with no function was removed from screen.
  - Set Points:
    - Del point function was included on RMB.
    - Del point won't delete a point belonging to a zone.
  - Move points:
    - Button moved next to set/del point.
  - Define zone:

  - Checks that points are selected clock-wise.
  - Don't crash when selecting another function when defining.
  - Selecting another function while defining will cancel the define.
  - Don't crash when choosing more than 10 point for a zone.
  - Cleans up the old data before adding new.
- Define walls:
  - Delete zone now clean up walls in bordering zones.
  - Automatic alter both sides of a wall. (Optional)
- Lift Defining:
  - Special menu, no hidden keys.
  - There are 16 lifts, not 17 as in the original editor.
  - Lift can only be placed once.
  - Can't place 2 lifts in one zone.
  - Can't place lift in door zone.
  - Rising wall must be placed next to lift-zone.
  - Lift-zone is auto-selected if defined.
  - Limit check on Speed
  - Limit check on SFX
  - Limit check on lift at top
  - Selector for SFX's (Shows names)
  - Can play SFX's (May even be packed SFX's)
- Door Defining:
  - Special menu, no hidden keys.
  - There are 16 doors, not 17 as in the original editor.
  - Door can only be placed once.
  - Can't place 2 doors in one zone
  - Can't place door in lift zone.
  - Rising wall must be placed next to door-zone.
  - Door-zone is auto-selected if defined.
  - Limit check on Speed
  - Limit check on SFX
  - Selector for SFX's (Shows names)
  - Can play SFX's (May even be packed SFX's)
- Object/Alien defining:
  - Special menu, no hidden keys.
  - Object type requester.. (No more stepping back/next)
  - Alien type requester.. (no more stepping back/next)
  - Shows BM-frames when choosing starting-frame..
  - Range-check on starting frame..
- Set Heights:
  - All 5 heights are now defined at the same time (One button).
  - Heights are limited to (-4000 -> 5000).
  - Roof can't be placed below the floor.
  - Floor can't be placed above the roof.
  - Copy to all zones from each height.
  - Roof and Floor in ground level can't be disabled..
  - Select what heights to be copied to a single zone...
  - Autostair systems, helps in building stairs..
- Set point bright:
  - Gathered in 2 buttons rather than 4.
  - Presents are shown on screen
- Painting walls:
  - Keys shown on screen
  - Texts are shown in visible colour
  - No Crashes when going to far when choosing walls
  - Walls may be packed..
  - Walltiles are shown scaled in full-height, so variations below line

```
      64 can be seen..
  - Painting roofs:
    - Keys shown on screen
    - Texts are shown in visible colour
    - Roof tiles is loaded from the file that the game uses,  and not from
      some bunch of IFF-files..
  - Painting Floors:
    - Keys shown on screen
    - Texts are shown in visible colour
    - Floor tiles is loaded from the file that the game uses, and not from
      some bunch of IFF-files..
  - WaterAnimations:
    - Settings shown on screen
  - Background SFX's
    - SFX names are show on screen
    - SFX's can be played

- GameLinker part
  - Gamelinker was included in the editor, a bit at a time..
    - Select Wall-GFX's has been included.
      - '256wall' was included, palette rurines was fixed..
    - Select Object-GFX's has been included.
      - ObjectFrame set has been included..
      - '256OBJ' was included..
      - 'Compobj' was included..
      - '256lit' included..
      - 'complight' included..
    - Select SFX's has been included.
      - Posibility to hear the SFX..
      - Sampleconverter/packer included..
    - Set background SFX's included..
      - Posibility to hear the SFX..
    - Set Echoed SFX's included..
      - Posibility to hear the SFX..
    - Set Level Directory is working..
      - Creation of sub-directories now selecteble..
    - Set Level Names has been included..
    - Set FloorFile is included..
      - '256Floor' is included..
    - Set TextureFile is included..
      - '256Texture' is included..
    - Set Vector Files included..
    - Set Bullet Types included..
      - Posibility to hear the SFX..
    - Set gun types included..
      - Posibility to hear the SFX..
    - Set Aliens stats included
    - Set Object Stats included
      - Fixed the 'damage' animation, making the frames selecteble.
    - Floor footsteps and Floor damage was included in one menu
      - Shows the tile you're working on
    - Set level backgroundmusic is included

- Texteditor for 'level-intro-texts' written
- Wall to IFF converter written

- Internaly in program
```

```
    - Subrutines changed to Procedures
    - App. 1300 lines of redundant code removed
    - Sprites are stored rather than defined
    - Removed double-definings.
    - The userinterface now based on AMOS-interface, makes it easier.
    - Improved Multi-tasking operation.
    - Gamelinker-data are run directly from memory, in the old linker most
      of the data was stored 2->4 times, making loading/saving quite slow.
```

1.9 Bugs known

```
This section is the worst to write, but I have to admit  that  some  of  the
problems can't be fixed, due to the way the game works..

Known bugs in the EDITOR
------------------------
- Entering negative numbers in boxes where they have no meaning will
  change the number to something odd..
- There appears to be some strange crashes from time to time in the
  object definer..
- Autolink controlpoints sometimes screws up and crashes..
- The 'get graphics back to iff' functions  don't  always  hit  the  colours
  that were originaly used (both the sequence and  the  actual  colours  can
  be changed a bit)
- Sample replayer sometimes screws up with long samples..
- New converters can't read 24-bit files proberly..
  (This is due to the way these formats work, you can't save a picture  with
  JPG and the bring it back with the accurate palette, this is  due  to  the
  format used.)


Known bugs in the GAME
----------------------
- I've been told that the palette can't be changed in the game..
  (This is why I haven't written a palette-changer)
- If defining the last wallGFX (no. 16) the game won't boot right..


Un-located bugs:
----------------
- Some zone-configurations makes the game look odd:
  - Lifts in 2-level zone.
  - Door in 2-level zone.
  - Door next to 2-level zone.
  - Zones with sharp corners (<90 degrees)
  (I don't know where to find these bugs, and sometimes they don't
   appear when the zones is created ??)
```

1.10 What to do on the map..

```
Keys: (Place pointer on map before pressing the keys)
```

```
 Cursor keys:        Move around on map.
 Shift+Cursor keys:  Move a wee-bit faster around.
 Alt+Cursor keys:    Move even faster around.
 Ctrl+Cursor keys:   Fastest way around.
 Shift+Help:         Center on map.


What is shown on the map:
 (n stands for a number or a character to indicate a id-number of the object)

 Characters shown on the map:
  - Ln   : Lift number n
  - Dn   : Door number n
  - TnS  : Source of teleport (take the id-number as a help to find the other
           end and nothing else)
  - TnD  : Destination of teleport
  - PL1  : Starting location for player 1
  - PL2  : Starting location for player 2
  - END  : Endzone, where the players should go to compleate the level.
  - URn  : Upper-roof height
  - UFn  : Upper-floor height
  - LRn  : Lower-roof height
  - LFn  : Lower-floor height
  - WAn  : Water height

 Zone borders:
  - Flashing  : This it the currently chosen zone
  - Light gray: A solid wall
  - Dark gray : Zone border to next zone, walk-through is alowed.
  - Blue      : A Rising wall for either a lift or door.

 Control-lines for aliens:
  - Blue line : Physical link between control-points
  - Blue line with red arrow : One-directional physical link
  - Purple line : Visual link..
  - Pink point : Control point in lower zone
  - Blue point : Control point in upper zone
```

1.11 Pull-down menus

```
                This is a brief list of commands in the pull-down menus

 The 'Project' Menu
 - "About"           Information about the editor..
 - "Load Level"      Level loader, moved from key 'l'..
 - "Save Level"      Level save, moved from key 's'..
 - "Build Clip-file" Clip-file builder, moved from button '3B'
 - "Link Level"      Perform the LinkUp, 'Linkup' program was included
                     in this main-program.
 - "Pack Level"      Packs the 3 files to the level,  that NEEDS to be packed
                     The packer will check to see if the two externaly needed
                     programs 'C:Lha3' and 'C:LhaConv'  is  present,  then  a
                     check is made to see if the level is saved correct,  and
                     finaly a check to see if the  level  has  allready  been
                     packed is done, then the pack is run..
```

```
- "Make Level"      Do 'Clip', 'Save', 'Link' and 'Pack'..
- "Full Make"       Like 'make level' but forces 'clip' and 'link'  even  if
                    they're not needed..
- "Iconify Editor"  Puts editor as an image on the wb..
- "Quit Editor"     Guess :-)
- "Save Iff"        Saves the current view of the level as iff..

The 'View' Menu
- "Zoom Out"        See more of the level at once
- "Zoom In"         See less of the level at once
- "Zoom Normal"     Resume normal view
- "Grid"            Sub-menu for grid-settings
- "Symbols"         Choose what symbols you want to see on the map
- "C.Points"        Choose what you'd like to see on the map  in  relations
                    to the control-points, links etc.

The 'Level-SetUp' Menu.
- "Text Strings"     Sets the 10 strings that's  availeble  in  each  level,
                     these are the ones that might pop up from time to  time
                     during play, they are normaly activated when picking up
                     objects, or killing aliens..
-
                Check level
                Checks the level for some Illegal definitons..
-
                Optimize zones
                Removes empty zone-definitions..
-
                Optimize points
                Removes unused points on map..

The 'Game-SetUp' Menu. (This is realy the old gamelinker program)..
- "Levels"
  -
                Set Levels Directory
                  -
                Set Level Names
                - "Graphics"
  -
                Set Object GFX Frames
                  -
                Set Floor Tile FileName
                  -
                Set Walls GFX Filenames
                  -
                Set Texture FileName
                - "Vectors"
  -
                Set Vector FileNames
                - "Samples"
  -
                Set SFX's FileNames
                  -
                Set Background SFX
                  -
                Set Echoed SFX
                - "Bullets"
```

```
  -
                Set Bullets Data
                - "Guns"
  -
                Set Gun Types
                - "Aliens"
  -
                Set Alien Stats
                - "Objects"
  -
                Set Object Stats
                - "Players"
  -
                Define Player Stats
                - "Misc"
  -
                Define Floor Stats
                  -
                Select Level Music Files
                The 'Tools' menu:
- "Level Intro Texts" Edit the text-screen shown before a level..
- "Pack file"         This is a free packer that is capable of packing  any
                      file to the AB3DII format, this is specialy  used  in
                      creating backround gfx or music..
- "Unpack file"       Unpacks any file from AB3DII format..

- "Edit Floor"        Select a single floortile to edit..
- "Edit Texture"      Select a single texture to edit..

- "Old converters"
    - "Wall -> IFF"       Converts a wall (.256wad) back to IFF picture..
    - "Floor -> IFF"      Converts floors back to IFF pictures (16 of 'em)
    - "Texture -> IFF"    Converts Textures back to IFF (32 of 'em)
    - "Frames-> IFF"      Converts A BMP-framefile back to IFF
    - "FIB -> Sample"     Converts Fib-packed samples back to normal..

-'New converters"         This area holds a  new  generation  of  graphic  &
                          sound converters. They generaly supports DataTypes
                          and AGA pics. Please see the section on converting
                          and creating the various graphics  and  sound  for
                          further information..
```

1.12 Object/Aliens BMP graphics

```
                BitMap Graphics for Objects/Aliens.

This is a Wee-bit complicated, but let's give it a shot:


Drawing Graphics

Graphics should be drawn in a Bitmap drawing program like DPAINT or  PPaint,
the  graphics MUST be drawn on a lowres screen using 32 colours. If you like
to be a little smart (and kind to yourselve), then you should define a  size
of  each  frame  you wish to draw (note the size down) and use this size for
```

each and every frame. And then fill the maximum of frames across the screen, so if your drawing on a 320 pix. wide screen and has each frame 32 pix wide then you put 10 frames in each row. This opens up for the possibility of automatic calculating the frames later on. If you're drawing aliens then you need to draw frames for at least 4 side-views (front, back, left, right) however the left/right can be combined as the game is capable of flipping frames..

Converting the graphics

Ok, now you have drawn your graphics as descriped before. Then you need to convert the picture into the format used by the game. Enter the 'Set Object GFX Frames' and select 'Conv. BMP Frames'. You'll now be asked to select the IFF file, and then to enter some information about the file (framesize and number of frames). Then sit back and wait a while for the converter to do it's job..

Now there's only left to put the converted file into the system and setting up the various frames..

Click Here to read about that

1.13 Sample Converter

Converting samples

The old sample converter has been enhanced in version 2.10, and a new one that uses datatypes has been added.

Preparing (old converter):

All samples is played with a rate of 8000 in the game, so it's up to you to make sure that samples sounds right at 8000.. Also note that the converter is only capable of reading RAW and IFF-8SVX samples, so you have to convert others to fit. I recomend you use something like the 'amisox' to do the trick, it can also resample to another rate..

Calling & Using:

It's called from the 'set-sfx' screen in the 'game-setup' part..

The procedure is very simple, just select the sample you wish to convert then wait, and finaly select a name to save it in your sound-store..

The converter will add '.fib' to the save-filename if you don't..

Preparing (New converter 2.10+):

Make sure that you've got a prober datatype installed on your system, if

you're in doubt then try playing it with something like 'PlayDT'..

You have to ensure that the sample is at a rate of 8000, the converter will convert it anyway, but it will proberly not sound very good..

Calling & Using:

Call it from the 'tools' menu. Select the sample you'd like to convert, then you'll be asked to enter a save-name.. And that's it..

NOTES:

- IFF-8SVX files can sometime be packed, the converter can NOT read these..
- When converting big samples you might sometimes find the the replayer in the editor is not capble of playing them correct, I'm aware of this problem and hope to solve it in a future version.. Please note that the sample is converted correct, it's a bug in the player I use..

1.14 Floor Graphics

Adding Floor/Roof graphics

There's 16 tiles for graphics to be used on floor/roof, they are created with this converter.

Drawing & Preparing (old system):

First you need to draw your tiles. They must be drawn on a lowres screen, the number of colours can be from 2->32 or 64EHB. Each tile must be drawn in the top-left corner of the screen and must be a size of 64*64 pix.

To make a complete set of tiles you need to draw 16 IFF-pics with one tile on each, they can have their own palette. The files MUST be saved as 'floor.n' with 'n' ranging from 1->16. If a tile is missing then the converter will put some strange pic in there, it won't fail. The 16 IFF-pics with names 'floor.n' must be placed in the same directory, what directory is not importaint. Unlike the old converter this one asks for the directory before converting..

Converting:

The converter is called from the 'set floor' screen in the game-setup menu. After selecting the converter will ask you to pick one of the floor-tiles to convert, then it'll run down the list and convert all 16 tiles for use in the game. Finaly you're asked to select a save-name for the new set of floor tiles..

Drawing & Preparing (NEW system from 2.10):

This is much simpler, you draw all your tiles on a single 256-colour IFF, you may use all 256 colours in each tiles (more colours, yes). You MUST ensure that you are using the 'brilpal' palette (In includes), if you're

editing a converted pic, then the correct palette is set by the converter. You draw your tiles in rows of 5, each is 64*64, so the first tile starts in 0,0 the second in 64,0 and so on. Number 6 then starts on 0,64. There's room for 16 tiles so you'll have 3 rows of 5 tiles and the last one on it's own. This means that you have to draw on a screen of 320*256 to make it fit. The screen may be in hires-lace or lowres at your desire. Just remember to use the right palette, unlike the old converter, this new don't match colours, it takes the drawing direct !!!!!

Converting:

Select the 'AGA-IFF -> Floor' in the tools menu, then select the IFF-pic.. The convertion takes some time, but at the end you'll be asked to enter a name for the new floor-tile-file :)

NOTES:

- The new converter uses DATATYES, this means that you can actualy save your pics in a space-saving format :)
- To use the floors you MUST ensure that the tile-file is the one pointed at in the floor-setup..
- The converter will try and match the colours as good as p osible, but in certain cases it can be cheated very badly :(..
- After converting all the tiles is held in just one file..
- Unlike the old editor this one uses the direct tile-file, so you don't need to secure your 16 IFF files, they can be put on a disc if you're in need of HD-space..
- To change to the new format, you should first create a tile-file from the old IFF-files, then select 'Floor -> AGA-IFF', that'll also create the right palette for the file :)

1.15 Texture Graphics

Adding Texture graphics

There's 32 tiles for graphics to be used on Vectores as textures, they are created with this converter.

Drawing & Preparing (old system):

First you need to draw your tiles. They must be drawn on a lowres screen, the number of colours can be from 2->32 or 64EHB. Each tile must be drawn in the top-left corner of the screen and must be a size of 64*64 pix.

To make a complete set of tiles you need to draw 32 IFF-pics with one tile on each, they can have their own palette. The files MUST be saved as 'floor.n' with 'n' ranging from 1->32. If a tile is missing then the converter will put some strange pic in there, it won't fail. The 16 IFF-pics with names 'floor.n' must be placed in the same directory, what directory is not importaint. Unlike the old converter this one asks for the directory before converting..

Converting:

```
-----------
The converter is called from the 'set texture' screen in the game-setup
menu. After selecting the converter will ask you to pick one of the
floor-tiles to convert, then it'll run down the list and convert all 32
tiles for use in the game. Finaly you're asked to select a save-name for the
new set of floor tiles..


Drawing & Preparing (NEW system from 2.10):
-------------------------------------------
This is much simpler, you draw all your tiles on a single 256-colour IFF,
you may use all 256 colours in each tiles (more colours, yes). You MUST
ensure that you are using the 'brilpal' palette (In includes), if you're
editing a converted pic, then the correct palette is set by the converter.
You draw your tiles in rows of 5, each is 64*64, so the first tile starts in
0,0 the second in 64,0 and so on. Number 6 then starts on 0,64. There's room
for 32 tiles so you'll have 6 rows of 5 tiles and the last two on it's own.
This means that you have to draw on a screen of 320*512 to make it fit. The
screen may be in hires-lace or lowres at your desire. Just remember to use
the right palette, unlike the old converter, this new don't match colours,
it takes the drawing direct !!!!!

NB: If you wish to draw 'glare' tiles for the new converter, you just draw
them on the right place, using the FIRST 32 colours, to make things more
like the 'old' way you can simply load the 'glare' palette up while drawing
the special tiles, and finaly load the 'bripal' back up when you draw the
others. The converter don't look at the palette, it simply converts the
points..

Converting:
-----------
Select the 'AGA-IFF -> Textures' in the tools menu, then select the
IFF-pic.. The convertion takes some time, but at the end you'll be asked to
enter a name for the new texture-tile-file :)


NOTES:
------
- The new converter uses DATATYES, this means that you can actualy save your
  pics in a space-saving format (Prefer GIF or PNG) :)
- To use the textures you MUST ensure that the tile-file is the one pointed
  at in the texture-setup..
- After converting all the tiles is held in just one file..
- Unlike the old editor this one uses the direct tile-file, so you don't
  need to secure your 32 IFF files, they can be put on a disc if you're in
  need of HD-space..
- To change to the new format, you should first create a tile-file from the
  old IFF-files, then select 'Textures -> AGA-IFF', that'll also create the
  right palette for the file :)
```

1.16 Sky/Back drops

```
Adding your own sky/backdrop graphics (NEW in 2.10)
---------------------------------------------------
Skydrops / Backdrops is one of many ways to create your levels in a totaly
```

different setting. This is the view you see from zones with no roof and a limited wall-height.. This option has been availeble through some manualy hard work, that has now been automated to make it much easier. But unfortunaly there are some very strange rules that has to be obeyed, among others the active tile MUST be named 'Rawbackpacked' and is located in 'ab3:includes/'. There's NO way of changing that, sorry..

Drawing & Preparing:

You MUST draw your backdrop on a 256 colour screen with the size of 656 (width) and 240 (height). You MUST use the 'bripal' palette to draw it in, or it'll look kinda odd.. :(

Converting:

Select the 'AGA-IFF -> backdrop' in the tools menu, then select the IFF-pic.. The convertion takes quite a long time, but at the end you'll be asked to enter a name for the new backdrop-file, please note that the game will always use the 'ab3:includes/rawbackpacked' file (default in saver).. :)

NOTES:

- The new converter uses DATATYES, this means that you can actualy save your pics in a space-saving format (Don't try JPG) :)

1.17 Level Checker

The level checker is called from the 'Level-Setup' menu..

The folowing errors is corrected without notice:

- Telezones with no prober destination is removed..
- Liftwalls and doorwalls in zones that don't border to lift or door is removed..
- Zonewalls that don't border to other zones (outline zones) is made solid..
- Non lift walls can by error be attached to a lift, these are removed..
- Non door walls is Unattached from doors..

The folowing is noted and reported as 'serious errors'
- Non convex zones..
- Loose points inside zones (can also be caused by zones-inside-zones)..

The folowing is noted in the 'report'
- Zones with sharp corners (pointy zones)..

1.18 Zone Optimizer

Optimize Zones

The game (and the editor) stores zones in a list of structures, when you've worked for some time on a level and removed several zones, then this structure can get quite messy and filled with holes. This option runs down the structures and removes empty ones. This causes a faster and better working level.

When ?

You should use this option before generating your level ('make'), the reason that I havn't included this in 'make' is that this option is not 100% tested, so you'll have to call it manualy..

NOTES:

- You should save your work before trying this, the procedure is not 100% tested yet, and might fail or ruin your level..

1.19 Point Optimizer

Optimize Points

The game (and the editor) stores points in a list of structures, when you've worked for some time on a level and removed several points, then this structure can get quite messy and filled with holes. This option runs down the structures and removes unused ones. This causes a faster and better working level.

When ?

You should use this option before generating your level ('make'), the reason that I havn't included this in 'make' is that this option is not 100% tested, so you'll have to call it manualy..

NOTES:

- You should save your work before trying this, the procedure is not 100% tested yet, and might fail or ruin your level..
- The procedure will remove ANY point that's not connected in a zone, this is done to optimize the structure as much as possible..

1.20 Editor Preferences

Editor Preferences. (NEW in 2.10)

- 'Snap size' Decides how close you can place points..

- 'Graphics editor' The editor-call for a paint-program..

- 'Show cords' Show cordinates when moving on level-map..

- 'Metric heights' Use the new way of setting heights..

- 'Height bar' Show the heights relative as a bar..

- 'GFX-tiles shadow' Uses the fast way of showing graphics..

- 'Keep graphics' Keep graphics in memory..

1.21 Action-buttons

The buttons are refered to by their position in the button grid, the top row is A, second row is B, etc, numbers from left to right.

Note that during the rewrite of the button-functions, my prime target has been to try and get all the functions visible, either as extra buttons on the menu or at least a key-legend shown..

Please read the
How to select something
too.

Buttons:

A1
Add/Delete point

A2
Move point

A3
<NOT IN USE>

A4
<NOT IN USE>

A5
<NOT IN USE>

A6
<NOT IN USE>

A7
Paint UPPER zone (NEW in 2.10)

A8
Paint lower roof

A9
Paint upper roof

A10
Change heights

A11
Water Animations

A12
Upper Wall Bright

A13
Background GFX

B1
Define/delete Zone

B2
Define wall..

B3

```
  <NOT IN USE>

 B4
  Define Upper point bright

 B5
  Define Lower point bright

 B6
  <NOT IN USE>

 B7
  Paint LOWER zones (NEW in 2.10)

 B8
  Paint Lower walls

 B9
  Paint Upper walls

B10
  Add Control Point

B11
  Connect controlpoints

B12
  Define lower wall bright

B13
  <NOT IN USE>


 C1
  Add object

 C2
  Move object

 C3
  Delete object

 C4
  Define player start/end

 C5
  Define Doors

 C6
  Define Lifts

 C7
  Define Teleporter

 C8
  Paint Lower roof
```

```
 C9
  Paint Upper roof

C10
  Connect zone to controlpoint

C11
  Connect upperzone to controlpoint

C12
  Move controlpoint

C13
  Program Information
```

1.22 How do I select something

```
Selecting Points:
-----------------
 Simply point close to the point you want, and click the button.  A  selected
 point will have a blue box around it.

Selecting Zones:
----------------
 Point inside the zone and hit the button. A selected  zone  will  have  it's
 border to flash, wrongly defined zones can't be selected.

Selecting Walls:
----------------
 Walls are defined by their starting point (Early clock) and by the zone they
 border. You have to make the zone active at first, then point to  the  first
 end of the wall (Early clock) and hit the button.

     X--------X   If you want to select the left-side wall then click at  the
     |        |2  '1'. Same way with the  right-side  wall,  select  that  by
     |        |   Choosing the '2'.
    1|        |
     X--------X

 In procedures requiring selection of walls, the wall  that  you're  pointing
 at will change the flashing to a more steady one as  an  indication  of  the
 wall.
```

1.23 Add Points

```
Add/Delete Points.
**
```

```
------------------
```

```
Well, not realy much to say here..

LMB to place a point.
RMB to delete a point.
```

1.24 Move Points

```
Move Points.

**
```

Simply:

RMB to select a point.
LMB for new location.

1.25 NOT USED

This Button has no function.

**

1.26 NOT USED

This Button has no function.

**

1.27 NOT USED

```
This Button has no function.



**




-----------------------------
```

1.28 NOT USED

This Button has no function.

**

1.29 Paint the UPPER zone

Paint the UPPER zone.

**

This is a new way of editing the graphics of a zone (New in V2 ↩
.10), due to
this it may not be complete documented and some bits may not work the way they should..

This graphics editor was rewritten with V2.12 to 256 colour-represantation..

After selecting the function, then you should go on by selecting the zone you'd like to define the graphics in..

Then use the gadgets to select your prefered wall/roof/floor..

1.30 Paint Lower Roof

```
                Paint The Lower Roof.




                **



                ----------------------
```

```
                 Here you paint the roof of the lower floor, this is very ↩
                    important  in  the
process of designing a level..

Use:
 ',' to select previous tile.
 '.' to select the next tile.
 'q' to make the scaling smaller.
 'w' to increase the scaling.
 LMB to put tile in a zone.
 RMB to grab the setting in a zone.
```

Notes:
- The number shown in the top line is the scaling-factor for the tile..
- When selecting the function there'll be a short delay while the editor gets the tile-data from your HD.
- The 'old' painter used the data from a number of fixed datafiles on the HD, this uses the tile-file set in the 'gamesetup' and this is the same as the one the game uses..

1.31 Paint Upper Roof

Paint The Upper Roof.

**

Here you paint the roof of the upper floor, this is very ↩
important in the

```
process of designing a level..

Use:
 ',' to select previous tile.
 '.' to select the next tile.
 'q' to make the scaling smaller.
 'w' to increase the scaling.
 LMB to put tile in a zone.
 RMB to grab the setting in a zone.

Notes:
 - The number shown in the top line is the scaling-factor for the tile..
 - When selecting the function there'll be a short delay  while  the  editor
   gets the tile-data from your HD.
 - The 'old' painter used the data from a number of fixed datafiles  on  the
   HD, this uses the tile-file set in the 'gamesetup' and this is  the  same
   as the one the game uses..
```

1.32 Changing Heights

```
Setting heights.




**


----------------
```

Mouse On Map:
LMB Click in a zone to alter the values here.
RMB Click in a zone will copy the current values into this zone.

Menu:
The '++' will add 8 to the height
The '+' will add 1 to the height
The '-' will sub 1 from the height
The '--' will sub 8 from the height

Holding shift while pressing the buttons above makes the stepvalue *32.

The 'ALL' function copies the value to ALL zones currently defined, it'll not affect future defined zones..

The copy function referes to the RMB-click, when an height is selected it'll be copied with RMB.

To disable a height simply click on the number showing the height.

Auto-stair is a help to create stairs, it works simply by each time you select a zone the floor+roof heights will be changed acording to a step value set by you, the changes can be made in upper or lower floor at your choice, and it's even posible to change floor in the middle of stepping up, so that you can make stairs in two levels, eg. if you need to go quite high up, you can save some usefull space by having a two-level stair-case, note that when auto-stairs runs it ONLY changes values in the selected level, say if you're working in upper-level with a stair, the lower level is not changed at all. When using auto-stair the height of the next zone you choose is shown in the selector, clicking on that will turn the function off (when you're done with your stair). The Auto-stair function always uses the values currently in the menu to set the starting level.

Notes:
- Numbers are working in reverse, meaning the smaler the number, the higher the thing get, all references are absolute, and are NOT relative to eachother in any way.
- Try to avoid zone-heights of 32 (eg. Floor=0, Roof=-32), players can be stuck under it, either make then lower so players can't get in, or make them higher so that it works normaly.
- Numbers are checked against eachother by the editor, making sure that the roof is heigher that the floor.

1.33 Water Animations

Water Animations.

**

There are 20 different animations slots, each can be defined with ↩
heights of
the waves, select an animation-number and the height and select a zone with
RMB, then hit place....

(I Haven't had the time to explore this further, sorry)

1.34 Upper Wall Bright

Define Upper Wall Bright.

```
**

-------------------------
```

```
                I think this has something to do with the colours of the walls,   ↩
                   anyway  you
select a zone with RMB and a wall with LMB, and then you can enter an offset
value in the requester..

(Haven't looked into this just yet..)
```

1.35 Background SFX

```
Set Background SFX.
```

```
**
--------------------
```

```
                Simpel function, alowes you to select one or more SFX's to play ↩
                   when the
player enters a zone.

RMB to select a zone.

Then highlight the SFX's you'd like to hear, the left side is for the upper
level, the right for the lower, hold shift to play a sound.
```

1.36 Define/delete Zone

```
                Define Zone.
```

```
------------
**
```

```
                Nothing to write about, simply select the points with LMB in ↩
                   clock-wise
order.

To delete a zone, first select it with RMB, then hit 'd'.

Notes:
 - There's a bunch of errorcathers in this routine, and I've had  a  little
   trouble with one of them, so if you're  getting  the  'define clockwise'
   error, when going the right way, then try to start at another point  and
   take the turn around..
 - If you select a zone with RMB while defining another, the one you were
   defining will be ignored if you hadn't completed it..
```

1.37 Define Walls

Define Walls.

**

By defining walls means that you can make an internal wall solid ↩
, so that
even if two zone are bordering, there'll be no trespasing. The definition is simpel, select a zone with RMB, then select the wall with LMB. That's it, a bright line indicates that the wall is solid, a dark line that it's not, and a dual-colour that the wall is solid from one side !!.

The Auto-Double-Wall function simply makes sure that a wall is either solid or not from both sides..

To remove a zone, simply select the zone with RMB and press 'd'..

1.38 NOT USED

This Button has no function.

**

1.39 Set pointbright at upper level

Set Upper Point Bright.

**

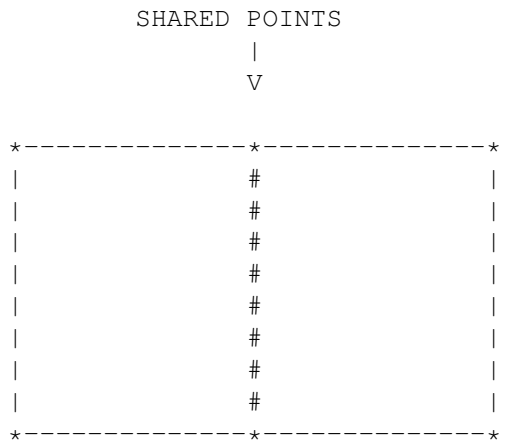
This is the way to alter the lightning in your level, dark, ↩ bright or flash
for the upper level.

To alter something, it worth remembering that the brightness referes to the points in a zone, in fact there are 4 bright-points pr. point, one for the upper-roof, one for the upper-floor, one for the lower-roof and the last for the lower-floor, to make it even more complex it's posible for a point to be included in several zones, then there's a group of brightsettings for that point for each of the zones. The roof and floor points are edited at the same time.

- RMB chooses a zone to edit in.
- LMB chooses a point in the selcted zone.
- The 10 presets can be choosen by clicking on them, they'll affect all the points in the zone
- If the copy button is activated then the current setting of the sliders is copied to the point that's selected with LMB.

-*- THE FOLOWING IS TAKEN FROM THE ORIGINAL DOCS -*-

NB: In the diagram below, where the two zones share two points, remember that you must define brightnesses for the two shared points in BOTH zones individually. This may sound odd and long-winded, but it allows you to have sharp edged bright and dark areas.



Values:

BRIGHT: The default brightness value, ranging from -20 to +20. NEGATIVE numbers represent the same on-screen brightness as positive numbers, BUT they contribute nothing to the illumination of aliens, vector objects (e.g. the player's gun) and so on. Also, remember that numbers close to 0 are BRIGHT, whereas numbers towards -20 or +20 are DIM. The reason for the positive/negative values is simple: the light-sourceing of objects doesn't work well without it! For example, a brightly lit room with glowing panels on the ceiling means that the light should be coming from above, and so aliens and guns should similarly be lit from above. In this case, the floor brightnesses should be set to -1, and the roof brightnesses to +1, so the room appears uniformly lit BUT aliens are lightsourced from above.

ANIM: There are several pre-defined lighting animations available:

```
0       = no animation
1-5     = 5 out of phase steady pulsing anims
6-7     = Flickering effects.
8-15    = Undefined at this time.
```

DIST: This is used to describe how far towards the animation the brightness of the point is 'pulled' from its default brightness. 0 means it doesn't animate at all, 15 means it animates completely, independent of the brightness it is given.

Set these values as desired.

1.40 Set pointbright at lower level

Set Lower Point Bright.

**

This is the way to alter the lightning in your level, dark, ↩ bright or flash
for the lower level.

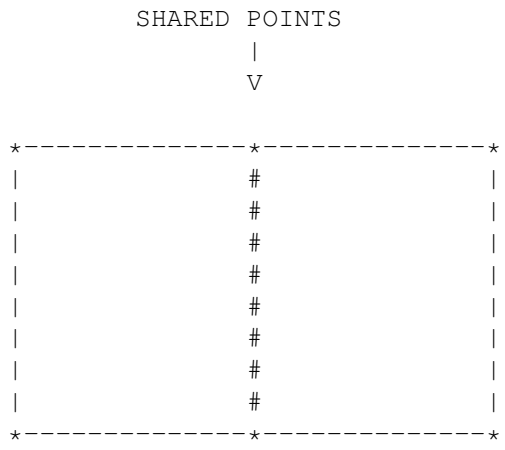
To alter something, it worth remembering that the brightness referes to the points in a zone, in fact there are 4 bright-points pr. point, one for the upper-roof, one for the upper-floor, one for the lower-roof and the last for the lower-floor, to make it even more complex it's posible for a point to be included in several zones, then there's a group of brightsettings for that point for each of the zones. The roof and floor points are edited at the same time.

- RMB chooses a zone to edit in.
- LMB chooses a point in the selcted zone.
- The 10 presets can be choosen by clicking on them, they'll affect all the

points in the zone
- If the copy button is activated then the current setting of the sliders is copied to the point that's selected with LMB.

-*- THE FOLOWING IS TAKEN FROM THE ORIGINAL DOCS -*-

NB: In the diagram below, where the two zones share two points, remember that you must define brightnesses for the two shared points in BOTH zones individually. This may sound odd and long-winded, but it allows you to have sharp edged bright and dark areas.



Values:

BRIGHT: The default brightness value, ranging from -20 to +20. NEGATIVE numbers represent the same on-screen brightness as positive numbers, BUT they contribute nothing to the illumination of aliens, vector objects (e.g. the player's gun) and so on. Also, remember that numbers close to 0 are BRIGHT, whereas numbers towards -20 or +20 are DIM. The reason for the positive/negative values is simple: the light-sourceing of objects doesn't work well without it! For example, a brightly lit room with glowing panels on the ceiling means that the light should be coming from above, and so aliens and guns should similarly be lit from above. In this case, the floor brightnesses should be set to -1, and the roof brightnesses to +1, so the room appears uniformly lit BUT aliens are lightsourced from above.

ANIM: There are several pre-defined lighting animations available:

0	= no animation
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6-7	= Flickering effects.
8-15	= Undefined at this time.

DIST: This is used to describe how far towards the animation the brightness of the point is 'pulled' from its default brightness. 0 means it doesn't animate at all, 15 means it animates completely, independent of the brightness it is given.

Set these values as desired.

1.41 NOT USED

This Button has no function.

**

1.42 Paint LOWER zone

Paint LOWER zone.

_____

**

This is a new way of editing the graphics of a zone (New in V2 ↩
.10), due to
this it may not be complete documented and some bits may not work the way they should..

This graphics editor was rewritten with V2.12 to 256 colour-represantation..

After selecting the function, then you should go on by selecting the zone you'd like to define the graphics in..

Then use the gadgets to select your prefered wall/roof/floor..

1.43 Paint walls at lower level

Paint Walls At Lower Level.

**

A level without various walls are boring, so you should spend some time using this option, I often find myselve spending hours trying to add GFX to the walls of a level..

Keys:
 ',' Scroll tile to the left..
 '.' Scroll tile to the right..
 'q' Decreese the width of the tile.
 'w' Increase the width of the tile.
 '<' Select previous wall-file..
 '>' Select next wall-file..
 '+' Activate stretching of the tile..
 '-' Activate squeezing of the tile..

```
 RMB Select a zone
 LMB Put current tile on a wall (Wall will flash in a special way..)..
 'f' Will put the current tile onto ALL walls of the selected zone..

Notes:
 - Tiles are scaled on the screen to alow you to see all of the tile..
 - Stretching a tile means that if the length of the wall  don't  match  the
   length of one or more tiles, the tiles will be streched to fit the wall.
 - Squeezing works like strectching except it will squeeze the tiles to make
   room for one extra tile..
```

1.44 Paint walls at upper level

```
               Paint Walls At Upper Level.









               ---------------------------




               **
```

```
                A level without various walls are boring, so  you  should  spend ↩
                    some  time
using this option, I often find myselve spending hours trying to add GFX  to
the walls of a level..

Keys:
 ',' Scroll tile to the left..
 '.' Scroll tile to the right..
 'q' Decreese the width of the tile.
 'w' Increase the width of the tile.
 '<' Select previous wall-file..
 '>' Select next wall-file..
 '+' Activate stretching of the tile..
 '-' Activate squeezing of the tile..
 RMB Select a zone
 LMB Put current tile on a wall (Wall will flash in a special way..)..
 'f' Will put the current tile onto ALL walls of the selected zone..

Notes:
 - Tiles are scaled on the screen to alow you to see all of the tile..
 - Stretching a tile means that if the length of the wall  don't  match  the
   length of one or more tiles, the tiles will be streched to fit the wall.
 - Squeezing works like strectching except it will squeeze the tiles to make
   room for one extra tile..
```

1.45 Add control points

```
               Add Control Points.

               --------------------

               **
```

```
Please see the
The use of Controlpoints
```

1.46 Connect control-points

```
Connect Control Points.
```

```
-----------------------
```

```
**
```

Please see the
The use of Controlpoints

1.47 Set Lower Wall Bright

Set Brightness of Lower Wall.

**

I think this has something to do with the colours of the walls, anyway you
select a zone with RMB and a wall with LMB, and then you can enter an offset
value in the requester..

(Haven’t looked into this just yet..)

1.48 NOT USED

This Button has no function.

**

1.49 Place Object

Place Object.

**

Objects is the key to make a level great, a simple designed level can be very nice to play with the right objects..

The Place object has it's own menu:

- Object type: (Alien/Object) this decides wich list should be used as defined in the 'game-setup', aliens moves around, while objects can be switches, keys, etc.
- Type: Click on this to bring up a requester to choose what object/ Alien you'd like to place
- Doors Held: The Doors locked by this object/alien..
- Lifts Held: The lifts locked by this object/alien..

```
 - Permanent calculation: Setting this to yes will force the game to update
                          the alien even if they are not  in  range,  slows
                          the game down..
 - Start in u/l: Where to place the object/alien, Upper/Lower floor
 - Team        : Aliens can work in teams. -1=no team
 - Text        : One if the leveltexts, will be shown when the object/alien
                 as activated/destroyed/killed..
 - Start Frame : Chooses what frame in the  'default animation'  should  be
                 shown first, opens up for several objects in each file..
 - LMB to place object..
 - RMB to grab the settings of an object/alien..
 - If you point at an object/alien and press  'p'  then  the  current  menu
   settings will be put into that object..

Notes:
 - Teams, Aliens with the same team-number will work together to get you..
 - Selecting the button next to the edit-field for startframe, will  show a
   requester where you can see the frames grahicaly...
 - If lift/door held is activated on aliens, the player has  to  kill  that
   alien to unlock the door..
```

1.50 Move Object

```
                Move Object.




                ------------




                **
```

```
                Simply:
RMB to select an object/alien.
LMB to select new location..
```

1.51 Delete Object

```
               Delete Object.
```

```
               --------------
```

```
               **
```

Well..
LMB on object/alien to remove it..

1.52 Place Start/End

Place Players.

**

Here you decide where each of the players should start, and where they need

```
to go to compleate the level.

Point and press LMB for start-player 1
Point and press RMB for start-player 2
Point and press 'e' to select end-point

NOTES:
 - The starting positions are fixed specific on the map..
 - The ending is relating to a entire zone..
```

1.53 Define Doors

```
                Defining Doors.

                ---------------

                **
```

Doors are defined in a zone, this zone will rise when activated..

First select the door you wish to place, you can define 16 doors, and each door may only be placed once. Then set the other values as you like, please note that the 'stays open' only aplys to the 'close on timeout' setting, by choosing one of the SFX settings you'll be presented with a selector that'll show the samples that have been set in the gamelinker program, just click on the one you'd like to hear at the choosen action. When you're satisfied with your settings then select the zone where you'd like to place your door with RMB, now select 'place' in the menu. Now the door is placed you can go on by selecting the walls you'd like to raise with the door, select a zone next to the door-zone with RMB, now press LMB at the 'low-clock-end' of the wall, if everything is allright the wall will become blue, thereby showing it's a raising wall, another LMB will return the wall back to normal.

NOTES:
- The '<C' and 'C>' buttons will copy the settings you're looking at to the prev./next door definition.
- There are several error-catchers in this procedure, you're likely to run into a few of them.
- If you have activated define-door mode and then loads a new level the definer will be confused, simply leave the definer and enter again.
- If you'd like a door to be locked and you'll need some key or switch to open it, then please refer to the 'add object' function, as the lock is attached to the 'key object' NOT the door.
- If you're low on doors, you can use a lift to simulate a door..

Errors:
- "This Zone Is A Lift"
  You can't make a zone both door and lift.
- "This Zone Is A Door"
  The zone was allready defined as a door.
- "Door Allready Placed"
  A Door may only be placed once.
- "This Wall Dosn't Border Two Zones"
  You can't define a outer-wall to rise.
- "This Wall Is Defined For Purpose"
  This Wall has a special setting, find out what and remove it.
- "Can't Rise Wall In Liftzone"
  You'd tried to raise a wall that belongs to a lift.
- "Can't Rise Wall In Doorzone"
  You'd tried to raise a wall that belongs to a Door.
- "Place Door First"
  You can't define a rising wall before the Door are placed.
- "The Wall Isn't Next To Current Door"
  A Rising Wall MUST border to the Door-zone.

1.54 Define Lifts

Define Lifts.

**

Defining Lifts

Lifts are defined in a zone, when activated the zone moves up/down.

First select the lift number you'd like to place, it's posible to define 16, each may only be placed once in the level. Now change the settings as you'd like, don't think about the 'top-height' for the moment. by choosing one of the SFX settings you'll be presented with a selector that'll show the samples that have been set in the gamelinker program, just click on the one you'd like to hear at the choosen action. When you're done select the zone where you'd like to place it with RMB and click on 'place'. Now look at the 'top-height' setting, this decides how high the roof of the lift is, normaly you'd set this to the height of the roof at the top-floor. Now there's only left to define the rising walls, you should only set these at the low level of the lift, at the top nothing should be done. Select the zone next to the bottom level of the lift with RMB, and click on the 'clock-low' end of the bordering wall with LMB, there by making it blue. Another click will turn this back to normal.

NOTES:
- The '<C' and 'C>' buttons will copy the settings you're looking at to

```
   the prev./next lift definition.
 - There are several error-catchers in this procedure, you're likely to
   run into a few of them.
 - If you have activated define-lift mode and then loads a new level the
   definer will be confused, simply leave the definer and enter again.
 - If you'd like a lift to be locked and you'll need some key or  switch
   to open it, then please refer to the 'add object'  function,  as  the
   lock is attached to the 'key object' NOT the lift.

Errors:
 - "This Zone Is A Lift"
   The zone was allready defined as a lift.
 - "This Zone Is A Door"
   A Zone can't be both lift and door.
 - "Lift allready defined"
   A lift can only be placed once.
 - "This Wall Dosn't Border Two Zones"
   You can't define a outer-wall to rise.
 - "This Wall Is Defined For Purpose"
   This Wall has a special setting, find out what and remove it.
 - "Can't Rise Wall In Liftzone"
   You'd tried to raise a wall that belongs to a lift.
 - "Can't Rise Wall In Doorzone"
   You'd tried to raise a wall that belongs to a Door.
 - "Place Lift First"
   You can't define a rising wall before the Lift are placed.
 - "The Wall Isn't Next To Current Lift"
   A Rising Wall MUST border to the Lift-zone.
```

1.55 Define Teleports

```
                Define Teleports.









                -----------------
```

**

Teleports allow you to 'send' a player from one zone to another..

Start by selecting the source of the teleport with RMB, then click where you'd like the destination to be with LMB, if you click outside any zone the teleport will be removed..

NOTES:
- Source referes to an entire zone..
- Dest is placed with cords. in a zone..

1.56 Paint LowerFloor

Paint Lower Floor.

```
**
```

```
                Here you paint the Floor of the lower floor, this is very ↩
                   important in  the
process of designing a level..

Use:
 ',' to select previous tile.
 '.' to select the next tile.
 'q' to make the scaling smaller.
 'w' to increase the scaling.
 LMB to put tile in a zone.
 RMB to grab the setting in a zone.

Notes:
 - The number shown in the top line is the scaling-factor for the tile..
 - When selecting the function there'll be a short delay  while  the  editor
   gets the tile-data from your HD.
 - The 'old' painter used the data from a number of fixed datafiles  on  the
   HD, this uses the tile-file set in the 'gamesetup' and this is  the  same
   as the one the game uses..
```

1.57 Paint UpperFloor

```
                Paint Upper Floor.
```

```
                ------------------


                **



                 Here you paint the Floor of the upper floor, this is very  ↩
                    importaint in  the
process of designing a level..

Use:
 ',' to select previous tile.
 '.' to select the next tile.
 'q' to make the scaling smaller.
 'w' to increase the scaling.
 LMB to put tile in a zone.
 RMB to grab the setting in a zone.

Notes:
 - The number shown in the top line is the scaling-factor for the tile..
 - When selecting the function there'll be a short delay  while  the  editor
   gets the tile-data from your HD.
 - The 'old' painter used the data from a number of fixed datafiles  on  the
   HD, this uses the tile-file set in the 'gamesetup' and this is  the  same
   as the one the game uses..
```

1.58 Link Zone to controlPoints

```
                Link Zone To Controlpoint.
```

```
--------------------------
```

```
**
```

```
 Please see the
 The use of Controlpoints
```

1.59 Link Upperzone to ControlPoints

```
Link Upper Zone to Controlpoint.
```

```
--------------------------------
```

```
**
```

```
 Please see the
 The use of Controlpoints
```

1.60 Move ControlPoints

```
Move Controlpoint.
```

```
------------------
```

```
**

 Please see the
 The use of Controlpoints
```

1.61 Information

```
Program Information.
```

```
--------------------
```

**
This is the most importaint thing in the program..... NOT..

It simply tells who I (The author) am, and a litle about the version of the editor.

It also shows a memory-status.. Compleatly Useless...

1.62 Set Levels Directory

Levels Directory

It's possible to have several groups of levels on the game, the active one is selected with this function, all level-oriented functions of the editor will respect this new location..

The create directories function builds the structure needed y the levels, you should call this after setting a new directory to be used, or both the game and the editor is in trouble..

NOTE:
- Remember to save the setup if you change it...

1.63 Set Level Names

Change Level Names

This function is just cosmetic, it decides what should be written on the game's menu when entering next level, normaly this will be something simple like 'Level A' or something, but you can use anything for t his, if you're building groups of levels you can name 'em 'Start' of 'Begining'....

NOTE:
- Remember to save the setup if you change it...

1.64 Set Objects GFX frames

```
                GFX-Frames (From Original Docs)
-------------------------------
```

Before any aliens or pickups can be defined, you must provide the graphics for them, and before you can do that, they must be converted using the appropriate supplied utilities.

1. You will see a list of currently loaded graphics and a blank space for inserting a new one. Either click on one to replace, or click on the blank space. In either case, you must use the LEFT mouse button. Use the requester which appears to select EITHER the '.ptr' or '.wad' file produced by the convertors.

2. Assuming all is well, the filename will appear in the list on the screen. Now you must define the frames of animation within the file. Click on the name but this time holding 'ALT' with the LEFT mouse button.

3. You will be shown a strip of the graphics, in the height you converted them. Do not worry if the palette is not right; this is a failing of AMOS. The following will be shown also, at the bottom of the screen:

X,Y:
 These are the mouse coordinates within the graphic file. Clicking with the LEFT mouse button with the cursor within the graphic file area of the screen copies the X and Y value shown into the FRAME LEFT and FRAME TOP values below.

SCROLL LEFT, SCROLL RIGHT
 These buttons can be clicked upon to scroll the graphic file across to display parts of it currently off-screen.

FRAME NUMBER
 This is the frame number you are currently defining, from 0 to 31.

PREVIOUS/NEXT FRAME
 Changes the current frame number.

FRAME LEFT/TOP/WIDTH/HEIGHT
 These values represent the left side, top side, width and height of the current frame. You can click upon and type to change any of them, the idea being that they enclose each seperate 'frame' of animation you have designed.

GENERATE FRAMES FROM GRAPHICS DATA
 If you have drawn and converted the graphics in line with the guidelines set down in the document mentioned below, you can shortcut this whole process and click on this button. The position and size of all the frames will be defined. However, you cannot use this function if some frames are different sizes, or located at different heights within the graphic file. In such cases you must simply type or click all the values in manually.

```
                How 2 draw/convert graphics
```

1.65 Set Floor-tile Name

```
                Floor File
----------
```

Very simple, select the file that you wish to use for the floor graphics, please note that this file MUST be converted with one of the special floor converters in the editor

See:

Creating Floorgraphics

1.66 Set Wall Names

```
                Wall Files
----------
```

There's 16 slots availeble for walls, please note that on my system the game won't boot right if you use slot 16. The walls your selecting for the various slots should be converted before selection as some informations from them is stored generaly. For the same reason you should re-select the wall if you later re-convert it..

See:

Creating Wall graphics

1.67 Set Texture-file Name

```
                Texture File
------------
```

You can only have 1 texture file active at a time, but you can have as many as you'd like 'off-line'. Here you select the active texturefile, this file MUST be created with the converter that can be accessed from this page, or the nwe converter that's lots more powerfull..

See:

How 2 Create Texturegraphics

1.68 Set Vector files

```
Vector Files
------------
```

Vectorfiles is generated by the anim-editor included with the original game.

Further description of this is beyond this guide. Vectorobjects are used as either aliens or objects, and gives a more smooth way of behaveour of these things. One of the things in the game that can be found as vector is the pass-keys and the belonging indicators. Also most of the guns is defined as vectors..

This area of the gamelinker allows you to choose the vector-files that you have availeble when you later want to define your objects/aliens..

1.69 Set SFX Names

SFX Names

You can have 32 sound-samples at a time, here you select the ones you'd like to be active. The samples should be packed down with the converter included in this editor before you use them..

NOTES:
- The sample-player in this editor is not capable of playing long samples..

1.70 Set Background SFX

Background SFX

There's 32 slots for SFX-samples to use, but only 16 of these may be used in the game as background noises. The rest is then availeble for screams, shots etc. The background SFX's is assigned to the zones, and you can simply select a zone to place a SFX in when you're drawing your level. When the player enteres the zone, then the SFX will be played. So you can play a scream, a little tune or perhaps a computer voice when the player moves on his way..

1.71 Set Echoed SFX's

Echoed SFX's

Here you simply define what SFX is an echo of another SFX..

1.72 Set Bullet Stats

Define Bullet Types

No doubt you will want aliens to shoot at you and vice-versa, and before you can make them do this, you have to define some bullet types. Aliens fire

selected bullet types, as do the player's guns, and ammo you collect also gives you specified ammounts of each bullet type to shoot. The term 'bullet' is a bit of a misnomer and should really be 'projectile' since it can refer to bullets, mines, grenades, rockets, and, curiously enough, the bits of splatch that aliens spurt when shot.

To define the NAME of a bullet, click on the existing name with the LEFT mouse button and type in your new name. You can now hold 'ALT' and click on the name to enter the status screen.

DAMAGE TO TARGET PER BULLET
This refers to the amount of damage the target (ie an alien, an object or you yourself) will take on being struck directly by the projectile. A value of zero disables collision with other objects, useful for stuff like the blood which spurts out of aliens.

VISIBLE BULLET OR INSTANT EFFECT
Bullets can either be visible, like grenades or plasma bolts, or invisible and instantly effective like shotgun blasts or rifle bullets.

GRAVITY VALUE
ONLY AVAILABLE FOR VISIBLE BULLETS
This indicates the effect gravity has upon the projectile. Grenades should have a value of about 20 or so, with 0 representing gravity having no effect. NOTE that negative values are possible, and will cause the bullet to fall towards the roof!

BOUNCE OFF WALLS Y/N
ONLY AVAILABLE FOR VISIBLE BULLETS
Toggles bouncing off walls on/off. NB: Bullets which are subject to gravity will be slowed down by contact with walls, but those unaffected by gravity (Gravity Value = 0) are assumed to be some sort of lazer weapon and are not slowed down.

BOUNCE OFF FLOORS/CEILINGS
ONLY AVAILABLE FOR VISIBLE BULLETS
Toggles bouncing off floors and ceilings. Slowdown rules same as above.

BOUNCE NOISE
NOT IMPLEMENTED IN THIS VERSION.
This setting has no effect at present, although updates may rectify this absence.

BULLET LIFETIME
ONLY AVAILABLE FOR VISIBLE BULLETS
Bullets may last forever (a value of -1 denotes this) or may fizzle out or detonate after a certain time. This value is measured in 50ths of a second. Projectiles not defined as bouncing will detonate or fizzle prematurely if they strike a wall, and will detonate in any case if they strike an enemy target (either you or an alien depending upon who fired it).

EXPLOSIVE FORCE
ONLY AVAILABLE FOR VISIBLE BULLETS
When the bullet runs out of time or hits an alien or wall, it may explode. A value of zero represents no explosion, with about 40-50 representing a reasonably powerful blast. NOTE: The visual effect of an

explosion is created by producing several copies of the 'impact' frames of animation around the central blast area, so if you have an explosive bullet, ensure that the impact frames are of a suitable type to look right when the explosion occurs.

MOVEMENT SPEED 0-7
ONLY AVAILABLE FOR VISIBLE BULLETS
The speeds of bullets are not measured linearly, but in powers of two. Thus '0' is very, very slow (in practice, not movement at all, particularly if you use it for mines which drop and hit the ground, slowing down and therefore stopping entirely) and 7 is, well, 128 times faster than that! A speed of 7 is extremely fast, with speeds of 5 and 6 more suitable for standard fireballs and so on.

IMPACT NOISE
ONLY AVAILABLE FOR VISIBLE BULLETS
Click on this and you will be presented with a list of the currently loaded samples. Select one to make the bullet trigger that noise when it hits, or click at the top of the screen to select 'none'.

BULLET GRAPHIC TYPE
There are three options, which should be selected according to what sort of graphic you have drawn:
BITMAP:
Simplest option of the three, this just draws the frame onto the screen scaled appropriately.
GLARE:
Uses the 'GLARE/SHADOW' rules to either brighten or dim the screen behind. See 'HOW2-Draw_And_Convert_Glare_Graphics' for instructions.
ADDITIVE TRANSPARENCY:
Uses a different routine again to 'add' the graphic in a transparent fashion to the graphics already on-screen, thus giving a 'firey' or 'smokey' or 'blazing plasma death bolt' impression. See 'HOW2-Draw_And_Convert_Additive_Transparency_Objects' for instructions.

IMPACT GRAPHIC TYPE
Same as above, but for the impact frames.

1.73 Set Guns

Define Player Guns

The player is likely to feel a little defenseless without guns to shoot, and indeed you MUST have the first weapon defined before you can play the game (the default game link file contains one pre-defined weapon, the shotgun).

You will be shown a list of 10 guns, along with various items of information:

<GUN NAME>
Click to type a new name for the gun.

<BULLET TYPE>

Click, and then select a bullet from the list shown. This is the type of bullet the gun will fire.

Bullets Fired/Shot
Click and type a number from 1 upwards. Only used by instant effect bullets, so shotguns can be double-barrelled and fire two bullets (either of which has an independant chance of hitting the target).

Delay between shots
A value in 50ths of a second representing the delay between the gun firing successive times. Thus a machine gun might have a value of 5, a rocket launcher a value of 50 or 100. Of course, you could always have a rapid-fire rocket launcher....

Gun SFX
Click and select a sound effect for the gun to trigger when you shoot.

On Screen Object
Click and select an object whose COLLECTED/ACTIVATED/DESTROYED frames are set up to work as the gun.

1.74 Aliens

Define Aliens (This is taken from the original docs)

This is probably the most arduous task facing the prospective game designer, as it requires the most data to be input.

You will be shown a list of aliens to define. To change their name, click on the existing name and type the new one.

Holding 'ALT' while clicking will bring up these options:

GRAPHIC TYPE (This can be one of three main types):
- BITMAP
The alien will use standard bitmap graphics converted by the OBJECTCONVERTOR program. The alien will only be lightsourced so far as to be made brighter in bright rooms and dimmer in dark rooms. This option is the one used in all other games of this sort.

- VECTOR
If you have designed animation frames for a vector alien, you can specify that you wish to use them by selecting this option.

- LIGHTSOURCED PALETTE 1/2/3/4
These options can be selected, but you won't be able to use them because the support programs for producing lightsourced graphics were not included in this package. Look out for a coverdisk with tutorials and support programs soon! For now, you'll have to be content with the options above.

DEFINE ANIMATION FRAMES

If you are designing a BITMAP alien, consult the file

HOW2-Define_Alien_Animations

otherwise check out

HOW2-Define_Vector_Alien_Anims

AFTER YOU HAVE READ THE REST OF THIS FILE!!!

Default Behaviour:
Aliens can either walk, or fly. This can be indicated by either WALK RANDOMLY or FLY RANDOMLY being selected (click to toggle)

Reaction time
This is the amount of time the alien must see you for (uninterrupted) before it will notice you and take appropriate action. If you shoot it and it doesn't die, it will immediately spot you. This value is measured in 50ths of a second. If your aliens are too easy, try decreasing this value rather than increasing hit points or whatever.

Default Movement Speed
This is the speed which the alien wanders around at when it can't see you and is not attacking. 5 is an average sort of speed, 10 is zippy and more than 10 is ludicrous.

Response Behaviour
This is what the alien will do when it notices you; either:

Response Movement Speed
Only used in charging aliens, this governs how quickly the alien will charge.

Response Timeout
You can make the alien 'get bored' and stop charging after a certain amount of time. IF you don't want this to happen, type in a nice big number like 10000, representing over three minutes! Value is measured in 50ths of a second.

Damage Taken Limit -> Retrest
NOT IMPLEMENTED IN THIS VERSION

Damage Inflicted Limit -> Followup
NOT IMPLEMENTED IN THIS VERSION

Followup Behaviour
Once the alien has executed its attack animation, or has timed out of its response counter, it will 'followup'

Followup Movement Speed
The speed at which the alien will approach you (if at all)

Followup Timeout
Assuming the alien can still see you once this timer expires, it will attack again. This value is measured in 50ths of a second.

RETREAT BEHAVIOUR/RETREAT MOVEMENT SPEED/RETREAT TIMEOUT
NOT IMPLEMENTED IN THIS VERSION.

NUMBER OF HIT POINTS

The 'toughness' of the alien. Think about how tough you want the alien to be relative to each of your guns. Do you want it to keel over after a single shotgun blast? Then make its hit points less than the damage done by your shotgun rounds. Want it to soak up rockets and laugh chestily? Then make its hit points HUGE, so that the damage of the rocket PLUS its explosive force (the maximum amount of damage it can do to an alien or yourself) is much less.

Physical Height

How tall is your alien? To make it walk on the ground, a good height to use is TWICE the SH (Scaled Height) of the animation frames you are using. Notice that aliens CANNOT WALK into rooms whose floor-ceiling height is LESS than this value, and CANNOT MOVE in rooms which are too short if you plonk them in there to begin with.

Minimum distance to walls

Small or thin aliens can get quite close to walls, so a value of 0 will suffice. But if it's a fat beasty, a value of 1 or 2 will prevent it squeezing unrealisically into narrow tunnels.

Projectiles Ejected Upon Death

Clicking on this will bring up a list of projectiles (bullets) which the alien can splurt out when it dies. Interestingly, you can make it spit out actual bullets (as long as they are VISIBLE ones) when it dies, thus allowing sneaky aliens to hemmorhage grenades as their innards rupture, which makes the player's situation just a little dicey...

Alternatively, you can choose to click on 'Select Alien to spawn instead' and pick a type of alien. Upon death, the alien will spawn FOUR of the aliens you selected. Please don't be silly and make aliens spawn themselves, or make them spawn other aliens which in turn spawn them back. You'll only get annoyed playing the game as hordes of replicating aliens engulf you mercilessly.

Auxilliary Object Type:

Click on this and select an object whose frames have been set up correctly.

By 'correctly', what do I mean? Well, if you define a DECORATION object, and make it look like an animation of a gun barrel flash, you can use it as an AUXILLIARY OBJECT. At any point in any animation sequence for the alien, you can make the game paste a frame from the auxilliary object somewhere over the top of the alien graphic. This is how the muzzle flashes and glaring lights of the various alien guards were produced. Auxilliary objects may be BITMAP or GLARE/SHADOW, but not VECTOR. If you are not using any auxilliary graphics on the alien, you don't have to define this value at all.

Torch Brightness

Aliens can carry 'torches', illuminating the level in front of them. A value of 30 is a reasonable torch brightness, whilst a value of 0 indicates no torch.

Bullet Source X and Y offsets.

These value indicate how far from the centre of the alien its bullets should originate. This is largely a matter of trial and error, but

remember that negative values mean the bullet comes from the left or the top, whilst positive values mean the right or the bottom.

1.75 Objects

Define Objects (This is taken from the original docs)

The term 'Object' in AB3DII has quite a broad meaning. Basically, anything which isn't a bullet, a player, an alien or background (walls, floors and ceilings) is an object.

Click on an empty space or an object you want to redefine with the LEFT mouse button, and type the new name. Clicking on the object while holding 'ALT' takes you into the actual definiton screen.

There are several various object-types, those are listed here in top-bottom order:

Collectable
The object may be collected by the player. When this happens, the player will recieve whatever ammunition or other supplies the object is defined to provide, and the object will remove itself from the map. Once so removed it will also cease to hold any doors and lifts.

Activatable
The object can be 'activated' by the player being within its activation radius and pressing the space bar. When this happens the object switches to 'active mode'. The player can switch it back, or it can 'timeout' and return to its inactive state. Whilst active the object will cease to hold any doors or lifts.

Destructable.
The object can be damaged by player bullets and explosions. Once destroyed it will cease to hold any doors or lifts, and will no longer impede the player.

Decoration
The object cannot be interacted with in any way and simply sits there playing through its animation sequence.

When entering the stats-screen these are the options:

Type Of Object
Click to cycle through the four types above.

Graphic Type
Click to cycle through:
BITMAP
Simplest type of object; uses ordinary bitmap graphics
POLYGON
An object of this type uses frames of animation from 3D objects designed using the ANIMEDITOR program.
GLARE/SMOKE
The object is drawn transparently, brightening or darkening the

graphics behind it. See HOW2-Draw_Glare_Objects for instructions.

Deactivate after..
ONLY FOR ACTIVATABLE OBJECTS
This value is the time in 50ths of a second between the player activating the object and it deactivating automatically.

Number Of Hit Points
ONLY FOR DESTRUCTABLE OBJECTS
The number of damage points the object can take before it is destroyed.

Explosive Potential
ONLY FOR DESTRUCTABLE OBJECTS
The explosive force with which the object detonates upon its destruction.

Impassable in default state
DESTRUCTABLE AND DECORATION OBJECTS ONLY
Does the object obstruct the player until destroyed? This value gives you the answer.

Define Guns/Jetpack/Shield Given
Clicking here brings a list of toggles as to what the object provides the player with when he collects or activates it.

Define Ammo/Fuel given
Clicking here gives a list of what ammo and health is given by the object when collected/activated. Hence a 'gun' object would give the player the appropriate gun, and also some of the ammo that the gun fires.

Collision cylinder radius
This is the distance a player has to be within to collect or activate the object. About 100-150 is usually about right.

Collision cylinder height
This is the height within which the player must be to collect the object. About 100 is usually ok.

Position vertically relative to:
Either the FLOOR or the CEILING can be toggled between here, and the object will be positioned next to the one selected. Thus the Vertical Offset in the animation data is important to pull the object up or down into the room.

Lock to nearest wall?
If this is enabled, then the object will 'snap' to the nearest wall when placed in the level and will face outwards into the room (vector objects only)

Activation/Collection/Destruction sound effect
Click here to set the appropriate sound effect for whatever action is appropriate to the type of object.

1.76 Set Players

```
Playes Setup
------------
This only relates to levels that'll be played by two players at the same
time, it simply decides how the other player should look when the player
looks at him/her...

NOTES:
 - The playes looks are taken from 'aliens'..
 - Remember to save the setup if you change it...
```

1.77 Set Floor Stats

```
Floor Stats
-----------
When entering this function, you'll see the first tile of the current
floor-file, you can step through them with the arrows. Floor stats is
simply a way of defining how it sounds when the player walks on the floor
and if the floor is dangerous. A dangerous floor will give damage to the
player when walking/standing on it..

NOTES:
 - The sounds availeble are the ones defined in 'SFX files'
 - Remember to save the setup if you change it...
```

1.78 Level-Music Files

```
               Level-Music
-----------
Boom - Boom - Boom, That's about the way it sounds as standard, with this
function, you can put your own music inside a level, there's a seperate
module for each level, so just pick the level and select your music, and
that's it..

See:
 -
               Creating Level Music
               NOTE:
 - Remember to save the setup if you change it...
```

1.79 Converting Wall-graphics

```
Wallgraphics was originaly converted with the '256wall' program, I've
included it in the main editor and rewritten it a little bit, so here's some
new instructions:

Drawing graphics:
-----------------
Graphics are drawn in a normal drawingprogram, and must be saved as IFF, you
can use 2->32 colours in the drawing process, but remember that the
```

converter changes the colours to match with the internal palette used by the game, so the colours might not be excatly the same as the one's you've choosen, the converter makes a match to try and find a colour that's as close as posible, but some times it misses a bit.. Several tiles can be drawn next to eachother, but don't make the screen width more that 640, the game can't handle it. Each tile should have a width of 16,32,64,128 or 256, if you use other sizes you'll get in trouble when including them, the height of the tiles is less sensitive, but should be at least 8, to make things more easy you should try to hold the values at 8,16,32,64,128,256 or 512, if you choose to use other heights make sure the height is even, or you'll proberly have something looking quite odd..

Converting:

The converter can be found in the 'Define walls' section, simply hit the function, and choose your IFF-file, unlike the 'old' converter this will try to figure out the width and height of the file, these will be the default values, so when the converter asks for 'width' and 'height' the numbers shown are the defaults and will be activated if you just press 'enter' without any number.. The converter will start out by getting the palette and then getting the drawed data, if you think that the palette-generation is taking longer than before, you're proberly rigt, I've tried to enhance the selection of colours to make it hit better, and it takes a little longer.. When saving the file simply enter the name you'd like, the converter will add '.256wad' if you don't..

Notes:

- If you're changing a wall defined in the list (converting again with the same name) and you have changed the height of the chunck you MUST reselect the file, if you don't the graphics will screw up..

1.80 Converting LevelMusics

Each Level can have an exclusive Music-file, the file is set in the 'game-setup' menu, sub point 'Set Level Music'...

Creating Music.

As this is not a guide to writing music, I'll simply say that the basic is to get hold of some music in '.mod' format, say either Soundtracker or even better, ProTracker, I'm not sure if the game supports the latest news in ProTracker, but check it out..

Converting.

Ehh, Well, converting is perhaps a little over the top to say, what is done is simply a packing of the file. So copy our music-module where you'd like it to be ('Ab3:Music/' would be the place), and select 'Pack file' in the 'Tools' menu, select your module and wait, that should be it...

1.81 How Do I ??

A small hint section with things I've discovered over time..

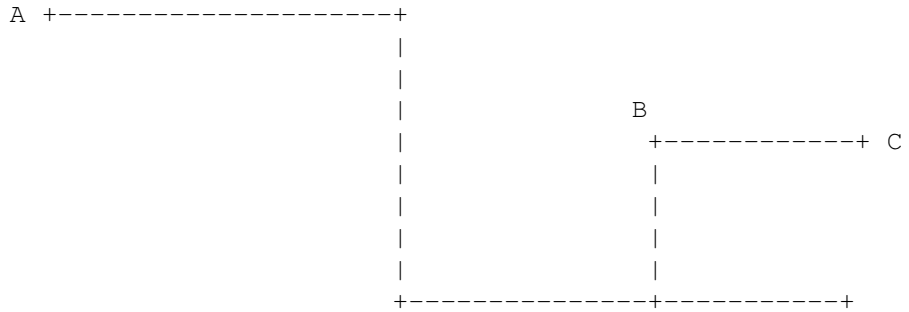
How do I...
- Put a lock on a door/lift ??
  - Locks on doors/lifts is defined along with the object that you'd like to lock the door, when the object is destroyed/picked-up then the lock will be broken, choose 'C1' (Add object) and pick the locking object select what door/lift should be held (locked) and set the rest the way you'd like (See 'add object' for more information)..

1.82 How 2 use controlpoints

Add Control Points to Levels (This is taken from the original docs)

Control points are a wonderful new invention which allows aliens to follow you all over the level without all that tedious mucking about in hyperspace. Erm.

Ok, what control points actually do is give the aliens a 'road map' of the level; sort of invisible lines on the floor for them to trundle around. Such paths have been used in other games to make aliens patrol around convincingly. The difference with AB3D is that the aliens can use this map to get to you, if they know where you are, from the other side of the level, assuming there is a path from where they are to where you are. Also, if you make a sound somewhere near to an alien which is active, it will 'hear it' and run to the control point it heard the sound coming from. If you continue shooting, therefore, it will eventually make its way all the way over to where you are! In the diagram below, for example, the player is standing near control point A. He has just fired his gun, and the alien at point C will therefore run to control point B, which is the one towards where the player is. When the alien reaches point B it will listen for the player to make more sounds, trying to see if it can track him further. If it doesn't hear anything, it will wander off looking for him.



PLACING CONTROL POINTS

Control points must be joined with straight lines and MUST NOT cross walls which the aliens cannot climb over. Therefore control points must be placed at all junctions and corners so that aliens can navigate properly. Also, if you want aliens to venture into a dead end, even if it is only a short one, you must put a control point near the end of the dead end.

1. To place control points, select the icon on the right hand end of the scrollable icon bar; it looks like the 'add point' icon only with a pink dot rather than a green one.

2. Move the cursor into the edit area and click where you want to position a control point with the mouse buttons. If you click the LEFT mouse button, the control point will be pink, indicating that it is in the LOWER part of a zone. If instead you use the RIGHT mouse button, the control point will be BLUE, indicating that it is in the upper part of the zone. Hence you can cause aliens to navigate across winding gantries without falling off.

NB YOU CAN ONLY HAVE 100 CONTROL POINTS PER LEVEL SO USE THEM WISELY!

You can also MOVE control points by clicking on the 'O->' icon, grabbing a control point by moving the cursor over it and pressing 'g', then placing it somewhere else by clicking with the left or right mouse buttons as above.

LINKING CONTROL POINTS

So that the aliens can move around, you must link the control points together. There are two ways they can be linked: PHYSICALLY or VISUALLY. Points linked PHYSICALLY describe a route for walking aliens. Points linked VISUALLY describe extra routes for flying aliens. Hence if you have a chasm with walkways on either side, the control points on each walkway would be linked visually, because flying aliens could get across but walking aliens could not. Control points which are linked PHYSICALLY are assumed to also be linked VISUALLY (but not the other way around).
PHYSICAL links may be one-directional or two-directional. ONE directional links may only be walked in one direction but are linked VISUALLY in both directions; TWO directional links may be walked in both directions.

NB: If an alien cannot physically reach you (eg an impassable chasm or an unclimbable cliff), but DOES know where you are, he may attempt to reach a position linked VISUALLY to your position so he can take pot shots at you. To take a simple example: say the player is on top of a cliff. Below him is a gorge, across which there is no bridge. There is a staircase leading up to the OTHER side of the gorge from the bottom, but not up to the side the player is on. Imagine there are several walking aliens with guns in the bottom of the gorge. The player doesn't want to jump down with them still there, so he keeps popping out and shooting, then ducking back out of harms way. The aliens cannot reach him, and nor can they see him properly from the bottom of the gorge. They will therefore climb the staircase to the other rim of the gorge where they can see the player and shoot at him!

1. Select the 'link control points' icon. This is near to the 'add control point' icon and looks like a pink dot with three black lines radiating from it.

2. Clicking on a control point (say point A) and then on another (say point B) with the LEFT mouse button toggles the PHYSICAL LINK from A to B. Clicking on them in the opposite order toggles the link from B to A. To link them two-directionally, therefore, it is necessary to click A, then B, then B again, and finally A. One-directional links are indicated by a red arrow indicating the possible direction of travel; two directional links are indicated by a blue, unarrowed line.

3. Clicking on a control point (A) and then on another (B) with the RIGHT mouse button toggles the VISUAL link between the two points. If the two points are already linked visually, the link will be removed. If they are linked physically in one or two directions, or not linked at all, the existing link (or lack of it) will be replaced by a purple line indicating a VISUAL link.

OTHER TOOLS:

Obviously it is unreasonable to expect someone to click-click-click their way through a room containing 20+ control points, so it is only (usually) necessary to define the PHYSICAL links by hand. The VISUAL links can be auto-generated by pressing RSHIFT and V together, with the cursor somewhere in the edit area. Visual links will be automatically created between any points with a line of sight between them which are not already linked physically. This takes a little while, but console yourself with the thought that it's about 250,000 times faster than you could do it by hand.

NOTE: If you have a tall pillar with a control point on either side, then the autolinker WILL link the two points, because there is no hole in the map seperating them. The ONLY time the autolinker will not link points across a zone is if that zone's roof and floor are at the same height; ie no travel across it is possible at ANY height.

ASSOCIATING CONTROL POINTS WITH ZONES:

Since you can have up to 256 zones but only 100 control points, it seems fairly obvious that not all zones can have a control point in them. Therefore the question of which control point an alien is nearest when standing in any particulat zone must be decided by you in advance.

This can be done in two ways, both of which begin by clicking on the 'associate zone with control point icon (which looks like a small triangle near to a pink dot). Next, you either

1. Select a zone with the RIGHT mouse button and click on the control point you want to associate with it with the LEFT mouse button. Make it a reasonable choice, ie don't pick a point on the other side of a solid wall. Repeat this process with each zone until you have covered the whole level.

UPPERS: This process is VERY accurate and yields the most bug-free maps.

DOWNERS: It takes AGES, and it's easy to forget to do certain bits of the map.

2. Press RSHIFT and A together with the cursor on the edit area. This will auto-associate zones and control points. Again, this takes a little while but speeds things up a lot.

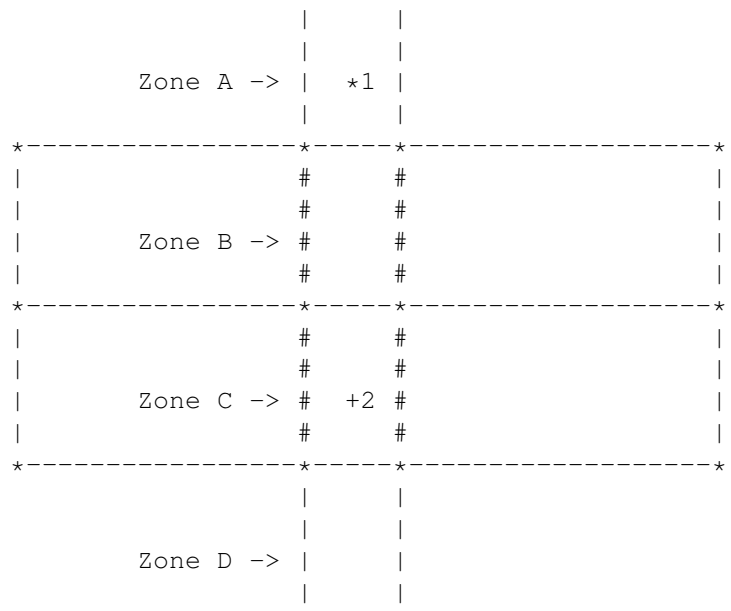
UPPERS: Takes no effort and doesn't miss anything out

DOWNERS: It can quite often make mistakes; linking zones to points not in visual sight of them.

I prefer to initially use method 2, then tidy up with method 1 if I notice any aliens stuck in corners or walking into walls.

You must also link any upper parts of zones (eg gantries) with control points, and this must be done manually because of the error-prone nature of the process. Select the 'link upper zone to control point' icon (like the other one but with a double-triangle) and associate as before.

It is perfectly OK to link a lower zone to an upper control point or an upper zone to a lower control point. See diagram for an explanation of why you might want to do this.



In the diagram point 2 (+) is a blue (upper zone control point), and point 1 (*) is a pink, lower zone control point. Zones B and C comprise a gantry above a large room, whilst zones A and D are corridors leading out onto that gantry. As you can see, given the arrangement above, the upper part of zone C and the lower part of zone D should BOTH be linked to point 2, and the lower part of zone A and the upper part of zone B should both be connected to point 1.

1.83 How 2 create challenging levels

Create Challenging Levels (This is taken from the original docs)

There are an awful lot of features in TKG, and how to use them all together may not seem obvious at first. This document tries to show how to use features to create levels which are challenging for the player by being well-designed, not simply by having lots of aliens and no health packs!

1. Layout of the level

Before putting mouse to screen, draw out your level on paper. The worst way to do this is to just draw a room, then a corridor, then another room with a couple of corridors, then another room and so on. Levels drawn like this tend to be dull and samey. Instead, try one or more of these techniques:

a) Designing to a purpose.

Think of a function the level might serve. It could be a hospital, or a training camp, or a sewage system, or perhaps two areas linked together. Once you have an idea in mind, layout ideas will usually follow. For example, the sewage system would have a lot of tunnels, with steps or lifts leading up into various buildings, perhaps.

b) Designing to fit a space

Draw an outline on you paper, a 'perimeter wall' which your level must fit into. Make it excitingly chunky and purposeful. I find this helps a lot; having to fit your level into the shape prevents it sprawling like a very old bag of potatoes.

c) Designing to suit an alien

When you design your aliens you are probably going to have one or more big, tough critters that are going to severely impede the player's progress. Such aliens should have levels custom-designed to suit their abilities.

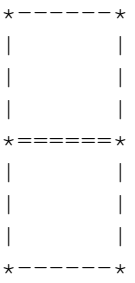
2. Useful level building blocks

a) Did I just step on something...?

A very useful thing to define is an 'invisible trigger'. This can be used to set off messages and trigger doors and lifts, preferably with lots of aliens behind/on them. Simply place the trigger somewhere the player has to go and arrange for it to dispense aliens at the most inconvenient moment possible.

b) They're appearing out of thin air! AAARGGHH!

This is a good one. When the player picks up a gun, shoots a particular alien or whatever, this can trigger several aliens to teleport from their 'homes' outside the level, into the room the unlucky player is standing in. How to do it? Well, first of all, define several alien 'houses'. An alien 'house' is a pair of zones not connected in any way to the rest of the level:



Define one zone as a lift and the other as a teleporter. Put your alien(s) on the lift, making sure that their 'permanent calculation' flag is ON. Make sure the lift starts at the TOP of its movement, and that at that height it is ABOVE the ceiling height of the teleporter (this prevents flying aliens making their way into the teleporter before the lift is triggered). Arrange the alien/gun/health pack/key or whatever so that it triggers the lift into falling to the same height as the teleporter. Place a control point in each zone and link them together. This will ensure the aliens will wander onto the teleporter as soon as they can.

c) Smithers, did you just press that big, red button?

Even more annoying to the player than tripping invisible triggers is when he voluntarily pulls a large, inviting lever only to discover that it removes the only barrier between him and an alien horde. Don't over-use this one.

d) We're going to need BIGGER guns.

The 'immensely powerful-looking gun' trick is so ludicrously annoying that it should only ever be used once, if at all. Define a really really impressive looking weapon and place it somewhere obvious but extremely difficult to reach. Only when the player, after hours of trying, finally manages to pick it up, will he discover that it does, in fact, fire ping-pong balls. For real humiliation make it trigger a horde of aliens which the player will confidently attempt to dispatch, failing miserably and probably dying in the process.

e) Neighbourhood Watch.

You've all got one; a weird neighbour who 'keeps himself to himself' and watches people through his bedroom window. These slightly disconcerting people can now be put to good use in TKG. Stick one up in an alcove, preferably near a door the player will come through. Make him part of a team, the rest of whom are waiting in a room down a side corridor. As soon as the watcher sees the player, it will trigger the others. If the watcher can shoot, too, it will usefully distract the player while the bulk of the squad come running. However, if the player is good (or has played the level before), he will pop out and shoot the watcher before he is seen, then run down and lob a grenade or seven into the room with all his mates in.

f) I'm gonna get my big brother on you *sniff*.

Fill a maze of corridors with small, useless aliens and one big, dangerous

one, making them all part of the same team. If the player is seen, all the little aliens will converge on him, reporting his position to the big guy.

1.84 Zone-rules & Regulations

RULES and REGULATIONS for zones.

Please note that these rules is sometimes broken, so that you can in fact create zones that breaks these rules. But try and avoid it, they often gives problems with the zones.. Please also note that the editor will try and catch zones breaking most of the rules, but don't be tempted..

1. Zones MUST ALWAYS be defined by selecting points in CLOCKWISE ORDER.

2. Zones can have a MAXIMUM of ten sides.

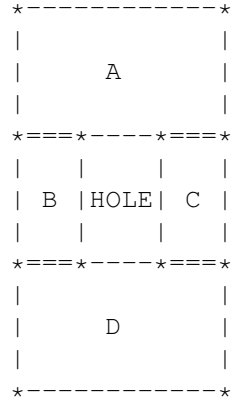
3. Zones MUST ALWAYS be convex.

   Definitions of convexity:
   a. A convex shape is one where you can walk all the way around the edge and only have to turn in ONE direction.

   b. If you draw a straight line between any two points in a convex shape, that line will always lie ENTIRELY within the shape, ie it will never cross out of the shape and back in again.

4. No zone must ever be visible on more than ONE side of a hole in the map from any other zone.

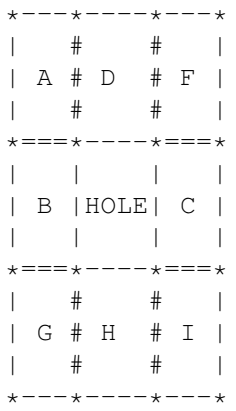
   This is a bit trickier to explain, but I'll do my best:



   The shape above consists of FOUR zones A,B,C and D; a large one at the top and at the bottom, and two smaller connecting ones on either side, with a hole inbetween. The hole DOES NOT count as a zone, even though it is completely surrounded by zones. You can tell that it is a hole and not a zone in the level editor because the walls around it are BRIGHT WHITE,

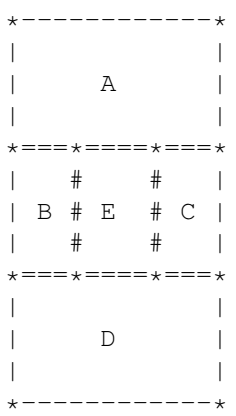
indicating impassable walls, whereas the borders between zones (shown as double lines '=' above) will be in grey. The above design is NOT ALLOWED, because zone A is visible from zone D on both sides of the hole. There are TWO ways of fixing this situation:

a. Delete zones A and D, then add points and zones to get the following:



This is legal, because no zone is visible on either side of the hole from any other zone.

b. Add one extra zone, covering the hole:



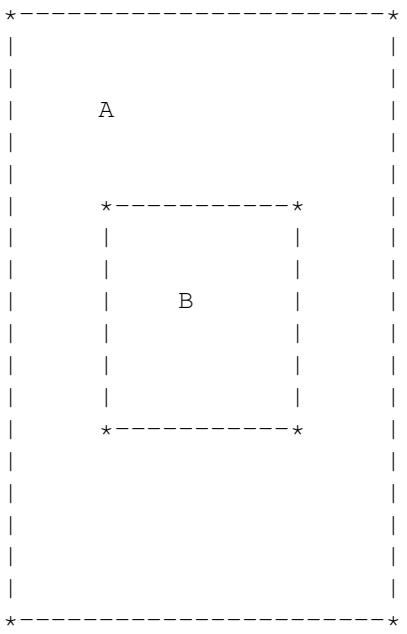
then change the floor height of zone E to be the same as its roof height, or vice versa.

Method a. is good because HOLES in the map allow the game to ignore anything on the other side. Thus, if the player stands in zone H, zone D will not be drawn because it is invisible from anywhere in zone H. However, method a. is not always feasable except in very simple or regular patterns of holes. The difficulty involved in making sure this rule is obeyed in complex rooms is prohibitive. That is why method B is often used, despite the fact that it prevents the game eliminating invisible zones; in this case, zone C would be drawn if the player was in zone B, despite the fact that zone E completely obscures it.

5. Try to avoid using sharp, pointy zones when designing the level; for various reasons the game doesn't really like them. If you find yourself about to add an excessively pointed zone, try rethinking the way you have

designed the room.

6. Zones MUST NOT contain within them any other zones, or any points be they connected or not. One of the most tempting things people try to do is to create a raised pedastle in the following manner:



This WILL NOT WORK. If you want such a pedastle you must create it in the following way: