**Classic Game Designer (C.G.D) instructions.**

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CGD is a utility that runs on the 48k Spectrum and above to create games with that ‘old school’ feel.

Hopefully most of the instructions are within the utility, unless otherwise told key ‘E’ exits. Apologies in advance for liberal use of the term ‘baddy’.

**1-Design sprites.**

Here you create the moving objects in the game. UDGS 0,1,2,3 are the player sprite right, left, up and down graphics respectively. UDGS 4 – 15 are the ‘baddy’ sprites, they have only one UDG each so no directional graphics for them.

The main keys are;

QAOP-Space – to create your graphic. Keys 1 & 2 to scroll through your sprites.

Key 4 scrolls through the desired effect when the sprite collides with the player. So for this reason you cannot select it for UDGs 0-3 (the player sprite).

Key 5 – scrolls through the sprite speed, 9 is the fastest, 1 is very, very slow.

Key 6 – scrolls through the control mechanism. For the player it is the type of key read, for the baddies it is the AI. It is best to change the player conditions on UDG 0.

Key ‘G’ generates a random mirrored UDG, it may on occasion look like a space invader. It overwrites the current UDG.

The others keys are hopefully self-explanatory.

**2- Design blocks**

You have 32 blocks to make you game. QAOP-Spc to make you graphics, keys 1 & 2 to scroll through the blocks.

Keys 5 & 6 scroll through the effect the block will have on the player. Keys T & Y scroll through the effect the block with have on the baddy.

There are quite a few **block effects**:

* Do nothing: passive block you can move through with no effect
* Solid block: sprite cannot move through block
* Change baddy types: changes baddy AI on collision with this block type
* Dec counter 1: counter 1 is a 16 bit counter. Collision with this block decreases it by 1 and deletes the block with block # 1.
* Inc counter 1: counter 1 is a 16 bit counter. Collision with this block increases it by 1 and deletes the block with block # 1.
* Dec counter 2: counter 2 is a 16 bit counter. Collision with this block decreases it by 1 and deletes the block with block # 2.
* Inc counter 2: counter 2 is a 16 bit counter. Collision with this block increases it by 1 and deletes the block with block # 2
* Dec counter 3: counter 3 is an 8 bit counter. Collision with this block decreases it by 1 and deletes the block with block # 3.
* Inc counter 3: counter 3 is an 8 bit counter. Collision with this block increases it by 1 and deletes the block with block # 3
* Zero counter 1: zeroes counter and deletes with block # 1
* Zero counter 2: zeroes counter and deletes with block # 1
* Zero counter 3: zeroes counter and deletes with block # 1
* Force down: forces player down one square, unable to return up
* Force up: forces player up one square, unable to return down
* Force left: forces player left one square, unable to return right
* Force right: forces player right one square, unable to return left
* Counter 1 =0, locked: if counter 1 is zero it cannot be moved through
* Counter 2 =0, locked: if counter 1 is zero it cannot be moved through
* Counter 3 =0, locked: if counter 1 is zero it cannot be moved through
* Counter1<>0, locked: if counter 1 is not zero it cannot be moved through
* Counter2<>0, locked: if counter 1 is not zero it cannot be moved through
* Counter3<>0, locked: if counter 1 is not zero it cannot be moved through
* Setflag1 ON: sets flag 1 ON, deletes with block 1
* Setflag2 ON: sets flag 2 ON, deletes with block 2
* Setflag3 ON: sets flag 3 ON, deletes with block 3
* Setflag1 OFF: sets flag1 OFF, deletes with block 1
* Setflag2 OFF: sets flag2 OFF, deletes with block 2
* Setflag3 OFF: sets flag3 OFF, deletes with block 3
* Set all flags ON: sets flags 1,2,3 ON, deletes with block 0
* Set all flags OFF: sets flags 1,2,3 OFF, deletes with block 0
* Toggle ALL flags: if a flag is ON it is turned OFF, and vice versa, for all 3 flags. Deletes with block 0
* Flag 1 ON = locked: if flag 1 is ON this block cannot be moved through
* Flag 2 ON = locked: if flag 2 is ON this block cannot be moved through
* Flag 3 ON = locked: if flag 3 is ON this block cannot be moved through
* Flag 1 OFF = locked: if flag 1 is OFF this block cannot be moved through
* Flag 2 OFF = locked: if flag 2 is OFF this block cannot be moved through
* Flag 3 OFF = locked: if flag 3 is OFF this block cannot be moved through
* Open if timer = 0: only if the timer is zero this block can be moved through
* Open if timer<>0: if timer is zero this block cannot be moved through
* Decrease timer: decreases timer by 1, block is not deleted
* Increase timer: increases timer by 1, block is not deleted
* Level skip: completes the current level and jumps to the next one
* Kill sprite: turns the sprite off, this does not work well if applied to the player but works better when applied to the baddies.
* Kill all baddies: turns off all baddies on the current screen. They are active on return to the screen.
* Kill player: player loses a life
* Extra life: increases lives by one, makes zap noise but does not interrupt game
* Gravity ON: set gravity on, pulls the player down slowly
* Gravity OFF: turns gravity off, whatever the current condition.
* Toggle gravity: if gravity currently on it turns off, and vice versa
* Pacman tablet: gives player immunity, sets the baddies to run away mode, temporary effect, border flash and tick noise
* Immunity: gives player temporary immunity, border flash and tick noise
* Slow block, sprite movement is slowed while passing through
* Next block down: when sprite passes over it changes to the next block number down
* Next block up: when sprite passes over it changes to the next block number up

**3- Font designer**

A not very sophisticated designer. QAOP-Space to make the chars, 1 & 2 to scroll through them. 'B' makes the entire font bold, 'I' makes the entire font italic. ‘R’ removes your work and replaces it with the regular Sinclair font.

So be careful, it is very easy to spoil your font with one key press.

If you want to load you own font the 768 bytes should be inserted at memory address 52224.

**4- Map designer**

Follow the instructions to edit the 9 screens available.

Not all the keys are listed in the utility:

Keys QAOP-Space to move around the map and insert blocks.

Keys 1 & 2 scroll through the block you want to insert. It moves through the entire 0-32 blocks plus the sprites. So to insert the player or a baddy you need to find them in these blocks and insert it in position.

Key X – clears the entire screen with block 0.

Key C – copies the entire screen to the clipboard

Key V – pastes the contents of the clipboard into the current screen edit

So be careful, keys X and V can ruin your work with one key press

**5- Event manager**

Sets some conditions for game events. It is possible to make a playable game using blocks only, so it is safe to leave them all as ‘do nothing’ if you want.

Key 1: scrolls through the effect that leads to the level being successfully completed. E.g. a frogger style game can be created with the ‘player at top’.

Key 2: scrolls through the effect that leads to the level failing and the player losing a life.

Keys 3 & 4: scrolls through the effect when the player or baddy meet the screen edge.

* Screen wrap: on meeting the screen edge the sprite appears at the opposite edge
* Random wrap: on meeting the screen edge the sprite appears at a random position at the opposite edge
* Next screen: makes the game a flip screen game, the next screen along or vertically is moved to.

**6- Item counters**

Sets the game counters 1,2,3 to a given number at the start of a level. Useful for collectable objects that manipulate the counters.

N – Set the counters to a fixed number at the start of each level

Use keys 1 & 2, Q & W and A & S to inc and dec counters 1,2,3 respectively.

B – sets the counters to a particular block abundance at the start of each level.

This function saves you having to count a particular block that is large in number.

At the start of a level the program counts the numbers of the selected block and sets the counter to the same number. This saves laborious counting, and allows a different number per level (unlike the fixed number choice).

For this reason you can only set all counters to a fixed number, or blocks, not a combination of the two.

**7 – Variables**

Use the keys specified to inc and dec the variables on the screen.

If timer is set to zero it is not printed on the screen during a game.

If doing a flip-screen game it is best to set level to 1.

**8-Game text**

This is the text that appears at the bottom of each level/screen.

Press the level number you want to edit, or B, G, C for bottom line, (game over message, congrats screen), then type the text. Pressing ‘ENTER’ returns.

**9-Effects**

You have two effects to include when the game is completed or the game is over. Press the keys specified to scroll through the (limited) number of effects, the on screen descriptions should be self-explanatory.

**I – Introscreen text**

This is the paragraph that appears at the bottom of the game intro screen. You have 256 character spaces for this. Press ‘ENTER’ to exit.

**C – Game colours**

Follow the on screen instructions to set the game paper and ink colours for the game introscreen, game border, game over screen and game completion screen. ‘E’ exits.

**T – Test game**

This enables you to play the game with your current settings. Key ‘Z’ skips through the levels until completion. Be careful how you have set things up in case you get stuck, for although I have not managed this in recent versions it may be possible. It still is a good idea to save a snapshot before testing.

**S – Save game**

For when you have finished editing your game. A very good time to save a snapshot.

This exits to BASIC so you can save the code to a TAP file (*or even real tape if you're hardcore*). The game code occupies memory addresses 32512 to 53512. On return to BASIC you need to type SAVE 32512,21000 & save to an inserted tape. The game entry address is 33903, so to start the game in this code you type RANDOMIZE USR 33903.

If you want to return to the game editor from BASIC you type CLEAR 26999, then RANDOMIZE USR 27000.

**Notes**

* At the start of the game all flags are set OFF
* At the game start gravity is set OFF, you can insert blocks to turn on at the game start
* The introscreen enlarged picture uses block # 31

If you want to create a flip screen game (as opposed to a ‘beat the screen’ level based game you need to: In the event manager set ‘when player meets screen edge’ to NEXT SCREEN and in Variables set the number of levels to 1 (there may be occasions you do not want to do this).