haco3puter cheat sheet v0.0.1

BASIC

```
function _init() --one time
end

function _update() --loop
end

function _draw() --loop
end
```

ARRAY

```
array ={0,1,2}
X = array[n]
```

MATH

```
band(x,y)
bnot(x)
bor(x,y)
bxor(x,y)
shl(x,n)
shr(x,n)

cos(x)
sin(x)
atan2(dx,dy)

flr(x)
ceil(x)
abs(x)
sgn(x)

max(x,y)
mid(x,y,z)
min(x,y)
```

PIXELS

```
pget(x,y)
pset(x,y,c)
```

TEXT PRINT

```
print("v",x,y)
win(1,x,y,row,col,n,"t")
```

OPERATORS

```
x=x+1
x=x%2
```

FUNCTIONS

```
function add()
 return a+e
end
```

OPERATORS

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x=x+1
x=x%2
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FUNCTIONS

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function add()
 return a+e
end
```

MODE

```
0 RUN_MODE
1 EDIT_MODE
2 WIFI_MODE
3 SOUNDEDIT_MODE
```

REBOOT

```
appmode("path", modeNo)
appmode(appinfo(0), modeNo)
go2("appname",v)
```

INFO

```
appinfo(0)
```

FPS

```
fps(x)
```

MUSIC

```
music(no,vol,tempo)
```

IF STATEMENT

```
if x==33 then
 print("well done")
elseif x>33 then
 print("please try again")
 else break
end
```

LOOP

```
for i=1,1--count up
 print(i)
end

for a=10,-200--count down
 print(a)
end
```

MAP

```
mget(x,y)
mset(2,y,v)
map(x,y, mx my, mw,mh, "path.png")
```

WORLD (256*256MAP)

```
rmap("path.bin",mx,my)
```

3D

```
creobj2()
rendr2(camx,comy,cam2,camangle,sw,camzoom)
```

FAKE 3D

```
drawbox(x,y, tx,ty,tz, col)
drawboxp(x,y,z)
```

SHAPES

```
fillrect(x,y,w,h,c)
drawrect(x,y,w,h,c)
fillcirc(x,y,r)
drawcirc(x,y,r)
ovalfill(x,y,w,h,c)
oval(x,y,w,h,c)
filltri(x0,y0,x1,y1,x2,y2,c1,c2,c3,cmode)
line(x0,y0,x1,y1,x2,y2,c)
```

COLOR

```
cls(c)
color(c)
fillp(c1,c2,c3,c4)
pal(palNo)
```

SPRITES

```
spr8(n,x,y)
sget(x,y)
sset(x,y,c)
```

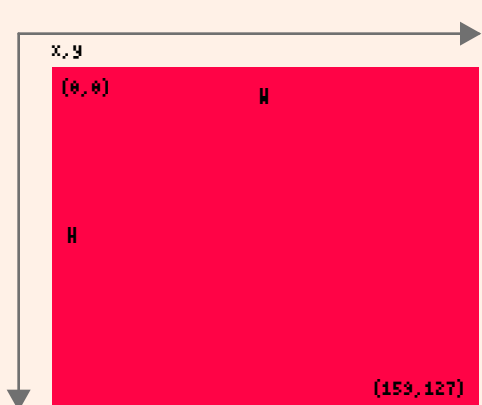## SPRITE FLAG

```
fset(sno,bno,v)
fget(v,bno)
```

VARIABLES AND TYPES

```
a=nil
x=23
local x ="text"
```

PLANETARIUM

```
creobj()
drawstars( camanglex, camangley, camzoom, 0)
```

TFT


```
x,y
(0,0)        W

H

(159,127)
```

BUTTONS

```
if btn(1) >= 1 then
end

if btnp(1) then
end
```

OPERATION

```
Aa + 0 : HOME
Aa + 3 : EDIT
```

EDITOR MODE SW

```
fn : shift ORAGE BUTTONS
Aa : shift BLUE BUTTONS
```
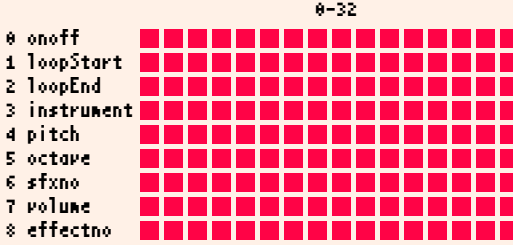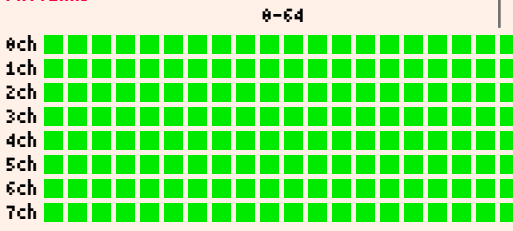
COLOR

PITCH


```
C CH D DH E F FH G GH A AH B
0  1 2 3  4 5 6  7 8  9 10 11
ど  れ  み ふぁ そ  ら し
```

TONES

```
       0-32
0 onoff
1 loopStart
2 loopEnd
3 instrument
4 pitch
5 octave
6 sfxno
7 volume
8 effectno
```


PATTERNS

```
       0-64
0ch
1ch
2ch
3ch
4ch
5ch
6ch
7ch
```


DEFAULT SPRITES

PlatformIO File Constructions

```
|--data
|  |
|  |--app
|  |   |- game.json
|  |   |- main.lua
|  |
|  |--init
|  |   |- game.json -->for HOME app
|  |   |- main.lua  -->for HOME app
|  |   |- initspr.png -->default sprites file
|  |
|  |--map
|  |   |- 0.png -->for function map()
|  |   |- 1.png
|  |
|  |--param
|  |   |--map
|  |   |   |- w.bin -->for function rmap()
|  |   |
|  |   |--pal
|  |   |   |- 0.txt -->color pallets for function pal()
|  |   |
|  |   |- editor.txt -->for editor
|  |   |- mapsprnos.txt -->for rmap()
|  |   |- openconfig.txt -->boot config file
|  |   |- sprbits.txt -->for functions fget(),
|  |
|  |--sound
|      |--pattern
|      |   |- 0.csv -->0~32 tones  for function snd()
|      |
|      |- patterns.csv -->8ch 0~64 music patterns for function snd()
|
|--src
|  |- Channel.cpp
|  |- Channel.hpp
|  |- Editor.cpp
|  |- Editor.h
|  |- Tunes.cpp
|  |- Tunes.h
|  |- baseGame.h
|  |- main.cpp
|  |- runLuaGame.cpp
|  |- runLuaGame.h
|
|--lib
|  |--M5Unified
|  |--M5Cardputer
|  |--M5GFX_DentaroUI
|  |--lua-5.3
|
|- platformio.ini
```