

SMBX-38A file formats

*Developed by Chinese developer named as 5438A38A for usage in re-developed SMBX 1.4.x
(Unofficial implementation of SMBX Engine)*

All files are written as ASCII-text. Every header contains line “SMBXFile??”, where ?? is a version number of file generator standard (first version is 65, latest 66). Non-ASCII data is encoding into URI and BASE64 formats. Every line begins from a marker of element type, and parameters are going in strict order. Parameters are separating with “|” character, sub-parameters (extra parameters or array elements between one parent parameter cell) are splitting with “/” or “,” characters. Extra parameters are allowed on end of every line (extra parameters are can be added to end of every parameter chain, but replacing or appending into middle of this chain is not allowed). Entries of extra types are allowed too, but there are must not use busy markers!

Note: Red entries are introduced in updated SMBX66-38A

LVL file specification

Data type markers:

- A – Level header settings
- P1, P2 – Player spawn points
- M – Section settings
- B – blocks
- T – Background objects
- N – Non-playable characters
- Q – Liquid/Environment boxes
- W – Warp entries
- L – Layers
- E – Events
- V – Local level variables
- S – UTF-8 encoded local level scripts
- Su – ASCII-encoded local level scripts

line 1:

SMBXFile??

??=Version number

next line: level settings

A|param1|param2[|param3|param4]

[|=optional

param1=the number of stars on this level

param2=level title

param3=a filename, when player died, the player will be sent to this level.

param4=normal entrance / to warp [0-WARPMAX]

next line: player start points

P1|x1|y1

P2|x2|y2

x1=first player position x

y1=first player position y

x2=second player position x

y2=second player position y

next line: section properties

M|id|x|y|w|h|b1|b2|b3|b4|b5|b6|music|background|musicfile

id=[1-SectionMAX]

x=Left size[-left/+right]

y=Top size[-down/+up]
w=width of the section[if (w < 800) w = 800]
h=height of the section[if (h < 600) h = 600]
b1=under water?[0=false !0=true]
b2=is x-level wrap[0=false !0=true]
b3=enable off screen exit[0=false !0=true]
b4=no turn back(x)[0=no x-scrolllock 1=scrolllock left 2=scrolllock right]
b5=no turn back(y)[0=no y-scrolllock 1=scrolllock up 2=scrolllock down]
b6=is y-level wrap[0=false !0=true]
music=music number[same as smb1.3]
background=background number[same as the filename in 'background2' folder]
musicfile=custom music file[***urlencode!***]

next line: blocks

B|layer|id|x|y|contain|b1|b2|e1,e2,e3|w|h
layer=layer name["" == "Default"] [***urlencode!***]
id=block id
x=block position x
y=block position y
contain=containing npc number
[1001-1000+NPCMAX] npc-id
[1-999] coin number
[0] nothing
b1=slippery[0=false !0=true]
b2=invisible[0=false !0=true]
e1=block destory event name[***urlencode!***]
e2=block hit event name[***urlencode!***]
e3=no more object in layer event name[***urlencode!***]4
w=width
h=height

next line: backgrounds

T|layer|id|x|y
layer=layer name["" == "Default"] [***urlencode!***]
id=background id
x=background position x
y=background position y

next line: npcs

N|layer|id|x|y|b1,b2,b3,b4|sp|e1,e2,e3,e4,e5,e6,e7|a1,a2|c1[,c2,c3,c4,c5,c6,c7]|msg|
layer=layer name["" == "Default"] [***urlencode!***]
id=npc id
x=npc position x
y=npc position y
b1=[1]left [0]random [-1]right
b2=friendly npc
b3=don't move npc
b4=[1=npc91][2=npc96][3=npc283][4=npc284][5=npc300]
sp=special option
[***urlencode!***]
e1=death event
e2=talk event
e3=activate event
e4=no more object in layer event
e5=grabed event
e6=next frame event
e7=touch event
a1=layer name to attach

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        a2=variable name to send
c1=generator enable
    [if c1!=0]
        c2=generator period[1 frame]
        c3=generator effect
            c3-1[1=warp][0=projective][4=no effect]
            c3-2[0=center][1=up][2=left][3=down][4=right][9=up+left][10=left+down][11=down+right]
[12=right+up]
            if (c3-2)!=0
                c3=4*(c3-1)+(c3-2)
            else
                c3=0
        c4=generator direction[angle][when c3=0]
        c5=batch[when c3=0][MAX=32]
        c6=angle range[when c3=0]
        c7=speed[when c3=0][float]
    msg=message by this npc talkative[***urlencode!***]
next line: waters
    Q|layer|x|y|w|h|b1,b2,b3,b4,b5|event
    layer=layer name["" == "Default"][***urlencode!***]
    x=position x
    y=position y
    w=width
    h=height
    b1=liquid type
        01-Water[friction=0.5]
        02-Quicksand[friction=0.1]
        03-Custom Water
        04-Gravitational Field
        05-Event Once
        06-Event Always
        07-NPC Event Once
        08-NPC Event Always
        09-Click Event
        10-Collision Script
        11-Click Script
        12-Collision Event
        13-Air
    b2=friction
    b3=Acceleration Direction
    b4=Acceleration
    b5=Maximum Velocity
    event=touch event
next line: warps
    W|layer|x|y|ex|ey|type|enterd|exitd|sn,msg,hide|locked,noyoshi,canpick,bomb,hidex,anpc,mini,size|lik|liid|noexit|wx|wy|
le|we
    layer=layer name["" == "Default"][***urlencode!***]
    x=entrance position x
    y=entrance position y
    ex=exit position x
    ey=exit position y
    type=[1=pipe][2=door][0=instant]
    enterd=entrance direction[1=up 2=left 3=down 4=right]
    exitd=exit direction[1=up 2=left 3=down 4=right]
    sn=need stars for enter

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msg=a message when you have not enough stars
hide=hide the star number in this warp
locked=locked
noyoshi=no yoshi
canpick=allow npc
bomb=need a bomb
hide=hide the entry scene
anpc=allow npc interlevel
mini=Mini-Only
size=Warp Size(pixel)
lik=warp to level[***urlencode!***]
liid=normal entrance / to warp[0-WARPMAX]
noexit=level entrance
wx=warp to x on world map
wy=warp to y on world map
le=level exit
we=warp event[***urlencode!***]

next line: layers

L|name|status
name=layer name[***urlencode!***]
status=is hidden layer

next line: events

E|name|msg|ea|el|elm|epy|eps|eef|ecn|evc|ene
name=event name[***urlencode!***]
msg=show message after start event[***urlencode!***]
ea=val,syntax

val=[0=not auto start][1=auto start when level start][2=auto start when match all condition][3=start when
called and match all condition]

syntax=condition expression[***urlencode!***]

el=b/s1,s2...sn/h1,h2...hn/t1,t2...tn
b=no smoke[0=false !0=true]
[***urlencode!***]

s(n)=show layer
l(n)=hide layer
t(n)=toggle layer

elm=elm1/elm2...elmn

elm(n)=layername,horizontal syntax,vertical syntax,way
layername=layer name for movement[***urlencode!***]
horizontal syntax,vertical syntax[***urlencode!***][syntax]
way=[0=by speed][1=by Coordinate]

epy=b1,b2,b3,b4,b5,b6,b7,b8,b9,b10,b11,b12

b1=enable player controls
b2=drop
b3=alt run
b4=run
b5=jump
b6=alt jump
b7=up
b8=down
b9=left
b10=right
b11=start
b12=lock keyboard

eps=esection/ebackground/emusic
esection=es1:es2...esn

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ebbackground=eb1:eb2...ebn
emusic=em1:em2...emn
    es=id,x,y,w,h,auto,sx,sy
        id=section id
        x=left x coordinates for section [id][***urlencode!***][syntax]
        y=top y coordinates for section [id][***urlencode!***][syntax]
        w=width for section [id][***urlencode!***][syntax]
        h=height for section [id][***urlencode!***][syntax]
        auto=enable autoscroll controls[0=false !0=true]
        sx=move screen horizontal syntax[***urlencode!***][syntax]
        sy=move screen vertical syntax[***urlencode!***][syntax]
    eb=id,btype,backgroundid
        id=section id
        btype=[0=don't change][1=default][2=custom]
        backgroundid=[when btype=2]custom background id
    em=id,mtype,musicid,customfile
        id=section id
        mtype=[0=don't change][1=default][2=custom]
        musicid=[when mtype=2]custom music id
        customfile=[when mtype=3]custom music file name[***urlencode!***]
eef=sound/endgame/ce1/ce2...cen
    sound=play sound number
    endgame=[0=none][1=bowser defeat]
    ce(n)=id,x,y,sx,sy,grv,fsp,life
        id=effect id
        x=effect position x[***urlencode!***][syntax]
        y=effect position y[***urlencode!***][syntax]
        sx=effect horizontal speed[***urlencode!***][syntax]
        sy=effect vertical speed[***urlencode!***][syntax]
        grv=to decide whether the effects are affected by gravity[0=false !0=true]
        fsp=frame speed of effect generated
        life=effect existed over this time will be destroyed.
ecn=cn1/cn2...cnn
    cn(n)=id,x,y,sx,sy,sp
        id=npc id
        x=npc position x[***urlencode!***][syntax]
        y=npc position y[***urlencode!***][syntax]
        sx=npc horizontal speed[***urlencode!***][syntax]
        sy=npc vertical speed[***urlencode!***][syntax]
        sp=advanced settings of generated npc
evc=vc1/vc2...vcn
    vc(n)=name,newvalue
        name=variable name[***urlencode!***]
        newvalue=new value[***urlencode!***][syntax]
ene=nextevent/timer/apievent/scriptname
    nextevent=name,delay
        name=trigger event name[***urlencode!***]
        delay=trigger delay[1 frame]
    timer=enable,count,interval,type,show
        enable=enable the game timer controlling[0=false !0=true]
        count=set the time left of the game timer
        interval=set the time count interval of the game timer
        type=to choose the way timer counts[0=counting down][1=counting up]
        show=to choose whether the game timer is showed in hud[0=false !0=true]
    apievent=the id of apievent

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scriptname=script name[***urlencode!***]

next line: variables

V|name|value

name=variable name[***urlencode!***]

value=initial value of the variable

next line: scripts

S|name|script

Su|name|scriptu

name=name of script[***urlencode!***]

script=script[***base64encode!***][utf-8]

scriptu=script[***base64encode!***][**ASCII**]

WLD file description

Data type markers:

ws1 – World settings header
ws2 – Credits
ws3 – List of additional strings
ws4 – Saving locker setup
T – Terrain tiles
S – Sceneries
P – Paths
M – Areas – Music boxes, viewports, etc.
L – Level entrances
WL – Layers
WE – Events

line 1:

SMBXFile??

??=Version number

next line: world settings

ws1|wn|bp1,bp2,bp3,bp4,bp5|asn|dtp,nwm,rsd,dcp,sc,sm,asg,smb3|sn,mis|acm|sc

ws2|credits

ws3|list

ws4|se|msg

wn=episode name[***urlencode!***]

bp(n)=don't use player(n) as player's character

asn=auto start level file name[***urlencode!***]

dtp=disable two player[0=false !0=true]

nwm=no world map[0=false !0=true]

rsd=restart last level on player's character death[0=false !0=true]

dcp=disable change player[0=false !0=true]

sc=save machine code to sav file[0=false !0=true]

sm=save mode

-1=Restart at auto start level

0=Restart at the world map where we saved last time

1=Restart at the level where we saved last time

asg=auto save game[0=false !0=true]

smb3=smb3 style world map[0=false !0=true]

sn=star number

mis=max item number in world inventory

acm=anti cheat mode[0=don't allow in list !0=allow in list]

sc=enable save locker[0=false !0=true]

credits=[1]

#DEFT#xxxxxx[***base64encode!***]

xxxxxx=name1 /n name2 /n ...

[2]

#CUST#xxxxxx[***base64encode!***]

xxxxxx=any string

list=xxxxxx[***base64encode!***]

xxxxxx=string1,string2...stringn

se=save locker syntax[***urlencode!***][syntax]

msg=message when save was locked[***urlencode!***]

next line: tiles

T|id|x|y|layer

id=tile id

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x=tile position x
y=tile position y
layer=layer name["" == "Default"]***urlencode!***]
next line: scenery
S|id|x|y|layer
id=scenery id
x=scenery position x
y=scenery position y
layer=layer name["" == "Default"]***urlencode!***]
next line: paths
P|id|x|y|layer
id=path id
x=path position x
y=path position y
layer=layer name["" == "Default"]***urlencode!***]
next line: Areas
M|id|x|y|name|layer|w|h|flag|te,eflag|ie1,ie2,ie3
id=music id
x=Area position x
y=Area position y
name=custom music name***urlencode!***]
layer=layer name["" == "Default"]***urlencode!***]
w=width
h=height
flag=area settings***Bitwise operation***]
    0=False !0=True
    b1=(flag & 1) World Music
    b2=(flag & 2) Set Viewport
    b3=(flag & 4) Ship Route
    b4=(flag & 8) Forced Walking
    b5=(flag & 16) Item-triggered events
te:Touch Event***urlencode!***]
    eflag:0=Triggered every time entering
        1=Triggered on entrance and level completion
        2=Triggered only once
ie1=Hammer Event***urlencode!***]
ie2=Warp Whistle Event***urlencode!***]
ie3=Anchor Event***urlencode!***]
next line: levels
L|id|x|y|fn|n|eu|el|ed|er|wx|wy|wlz|bg,pb,av,ls,f,nsc,otl,li,lcm|s|Layer|Lmt
id=level id
x=level position x
y=level position y
fn=level file name***urlencode!***]
n=level name***urlencode!***]
eu,el,ed,er=e[up,left,down,right]
    e=c1,c2,c3,c4
    c1,c2,c3=level exit type
    c4=condidtion expression***urlencode!***][syntax]
    exit = (c1 || c2 || c3) && c4
wx=go to world map position x
wy=go to world map position y
wlz=number of doors to warp
bg=big background
pb=path background

```


av=always visible
ls=is game start point
f=forced
nsc=no star coin count
otl=destory after clear
li=level ID
lcm=Affected by Music Box
s=entrance syntax
 s=ds1/ds2...dsn
 ds=ds1,ds2[***urlencode!***][syntax]
 ds1=condidtion expression
 ds2=index

layer=layer name["" == "Default"][***urlencode!***]

Lmt=Level Movement Command

 lmt=NodeInfo\PathInfo
 NodeInfo=Node1:Node2:...:NodeN
 Node=x,y,chance
 PathInfo=Path1:Path2:...:PathN
 Path=NodeID1,NodeID2

next line: layers

 WL|name|status
 name=layer name[***urlencode!***]
 status=is hidden layer

next line: events

 WE|name|layer|layerm|world|other
 name=event name[***urlencode!***]
 layer=way/hidelist/showlist/toggelist
 list=name1,name2,name3...namen
 name[***urlencode!***]
 if (way % 10 == 1) nosmoke = true;
 if (way > 10) object_state = true; else layer_state = true;
 layerm=movementcommand1\movementcommand2\...\movementcommandn
 movementcommand=way,layer,hp,vp,ap
 way:0=speed,1=coordinate,2=moveto,4=spin
 layer=layer name[***urlencode!***]
 hp=Horizontal Parameter[***urlencode!***]
 vp=Vertical Parameter[***urlencode!***]
 ap=Additional Parameter[***urlencode!***]
 world=aw/cs,le,inpc,msgc,syntax,msg
 aw=AutoStart Settings
 0=Not Auto Start
 1=Triggered on loading the world the first time.
 2=Triggered every time loading the world.
 3=Triggered on level exit.
 cs=Start when match all condition[0=false !0=true]
 le:0=This is a Normal Event.
 1=This is a Level Enter/Exit Event.
 inpc=Interrupt the process if 'false' returned
 msgc=Show a message if 'false' returned
 syntax=Condition expression[***urlencode!***]
 msg=message[***urlencode!***]
 other=sd/ld/event,delay/script/msg/www,lockl
 sd=play sound number
 ld=lock keyboard (frames)
 event=trigger event name[***urlencode!***]

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delay=trigger delay[1 frame]
script=script name[***urlencode!***]
msg=show message after start event[***urlencode!***]
wwx=Warp Whistle: Map Warp Location x
wwy=Warp Whistle: Map Warp Location y
    if (wwx == -1 && wwy == -1) [means not moving]
lockl=[Level ID]Affected by Anchor
```

WLS file description(world settings)

Data type markers:

- G – Global variables
- GS – Global script UTF-8 Encoded
- GSu – Global script ASCII-encoded
- CW – Custom sounds entires (alternate implementation of sounds.ini from PGE and LunaLUA)

line 1:

SMBXFile??

??=Version number

next line: global variables

G|name|value

name=variable name[***urlencode!***]

value=initial value of the variable

next line: global scripts

GS|name|script

GSu|name|scriptu

name=name of script[***urlencode!***]

script=script[***base64encode!***][utf-8]

scriptu=script[***base64encode!***][**ASCII**]

next line: custom sounds

CW|cdata1|cdata2|...|cdatan

cdata=sound-id,sound-filename

sound-filename:[***urlencode!***]