

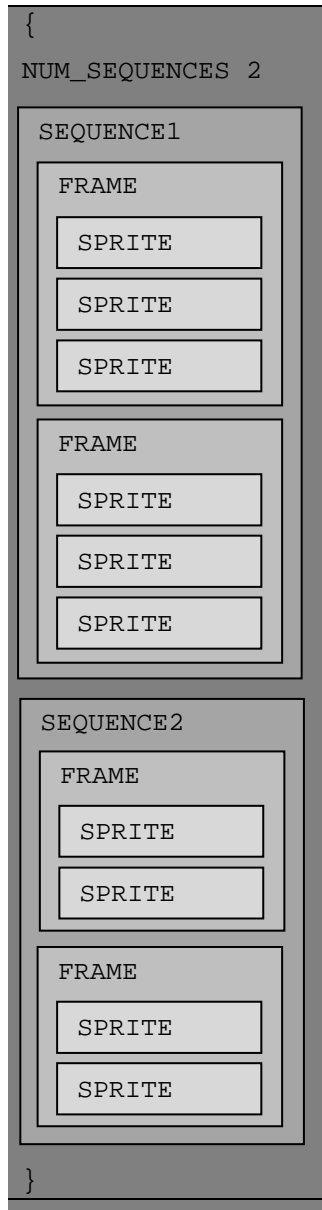
## Commandos - Behind Enemy Lines

# FILE TYPES

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Defines the animations of soldiers, vehicles, explosions and other objects.



ANM Overview

An animation file ANM consists of several sequences.

There are three kinds of sequences:

**SEQUENCE** sequence is looped  
**NLSEQUENCE** sequence is played once  
**CHAINSEQUENCE** sequence is followed by another one

Every sequence has a name, a frame length and an animation speed. Additionally there can be hotspots.

A frame has several sprites (and hotspots).

There are two kinds of sprites:

**SPRITE** standard sprite  
**SIZESPRITE** part of a sprite

Every sprite has a name, a horizontal offset, a vertical offset and a flag. A **SIZESPRITE** has horizontal and vertical border information.

Sprite flags:

- 0 standard (no effect)
- 1 mirrored
- 2 unknown effect
- 3 mirrored and unknown effect

A hotspot is a special position on the sprite. Another animation (e.g. the gunfire of a rifle) is placed at this position. A hotspot has a horizontal and a vertical offset and a flag.

Videos like the intro or the tutorials.

## BMP

DATOS\BRIEFING  
DATOS\RECURSOS\BMPS\SYSTEMMISC  
DATOS\RECURSOS\BMPS\SYSTEMRED

Microsoft bitmap (256 colors).

## BMP

WAD files

Special 256 colors bitmap without transparent pixels.

The BMP's found in the WAD archives have the following structure:

HEADER
PIXEL DATA
COLOR PALETTE ID

### HEADER

Name	32 bytes	null terminating
Pixel Data Size	8 bytes	= Height * ( Width + 2 ) + 1
unknown	4 bytes	default: 00 00 00 00
unknown	4 bytes	default: 00 00 00 00
Image height	4 bytes	
Image width	4 bytes	
color depth	2 bytes	default: 08 00
unknown	2 bytes	default: 00 00
unknown	2 bytes	default: 00 00
unknown	2 bytes	default: 00 00

### PIXEL DATA

Every byte in this block represents one pixel (the colors are defined in the color palette).  
After each line (number of bytes = image width) the first two bytes of this line are repeated.  
After the last line the 3rd byte of the very first line occurs again.

### COLOR PALETTE ID

4 byte long identifier for the color palette (id for the first palette is 0, for the last: number of palettes-1).  
00 00 00 02 indicates that the third color palette of the WAD file is used for this bitmap.

## CFG

OUTPUT

Game configurations like player name, sound volume, server address.

The following changes can be made to `Comando.cfg`:

.MORALINA 0	blood enabled
.DEVELOP 1	debug mode
.CURSORSOFT 0	use old cursors

## DAT

### DATOSMISIONES

There are only two files:

MISIONES.DAT	Defines the order of the missions
START.DAT	Defines the intro

## DIR

This archive contains directories and files which are described in this document.

I would recommend to extract **WARGAME.DIR** and then just delete it.

There are several extraction tools, like *JJ Soft's DIRExtractor*.

## FNT

### DATOSIFONTS

Font file

**COMANDO.FNT** is the font used for the briefing notes and the quickinfo.

The FNT file starts with a two byte long info. I haven't found out the meaning of these bytes yet.

Maybe it's the number of colors.

A character block has the following structure (incl. a hexa-decimal example):

Width	4 bytes	03 00 00 00	width of 3 pixels
Height	4 bytes	0A 00 00 00	height of 10 pixels
Hor. offset	4 bytes	FF FF FF FF	horizontal offset of -1
Space	4 bytes	00 00 00 00	no space behind the character
Vert. offset	4 bytes	03 00 00 00	vertical offset of 3 pixels
Key code	4 bytes	49 33 48 00	keycode 49 represents the character <b>I</b>
Char. Data	n bytes	01 04 03	3 * 10 = 30 bytes
n = Width * Height		04 0F 0E	
		04 0F 0F	
		04 0F 0F	
		04 0F 0F	
		04 0F 0F	
		04 0F 0F	
		04 0F 0F	
		04 0F 0F	
		04 0F 0D	

Range of the offset (horizontal/vertical) and the space after a character:

00 00 00 00 - 80 00 00 00	positive
FF FF FF FF - 7F FF FF FF	negative

Each pixel has a brightness between 1 and 15 (01 is light, 0F is dark).

If the pixel is transparent it has the value 128 (80 in hex).

There is no color information.

Standard brightness palette:

80	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F

white = transparent

## MAC

### DATOSMISIONES

Macros are used by MIS files.

Variables start with their type (a single letter followed by the variable name), e.g:

**.VARIABLES [ GGráfico.ALEMAN ]**

The default value (**ALEMAN**) is defined behind the point ( . ) after the variable (**GGráfico**).

The following variable types exist:

<b>A</b>	Accion Concreta		
<b>C</b>	Caracteres (cadena normal)		
<b>G</b>	Grafico	animation file (ANM)	
<b>N</b>			NReactividades, NColorBurbujas
<b>P</b>	Punto		
<b>T</b>	Token		
<b>V</b>		either 0 or 1	VDestruyeGranada, VLadrador
<b>X</b>	Accion elegible		XAccionSecundaria

Inside the macro the variables are called by a \$ followed by their name (without the type letter), e.g:

**.GRAPH [ .ANIM \$Grafico ]**

## MIS

### DATOSMISIONES

Mission file

I'm sure you will find a lot of information and several tutorials about modifying MIS files in the Internet.

## PCX

### DATOSICREDITOS

ZSoft image file

## POL

### DATOSMISIONES

Defines a quick info area on the map. Each entry starts with the number of points, followed by a name for the polygon, the number 1 (unknown) and the quick info identifier. Then the points are defined (each XY pair in one line). E.g:

```
4 POLY1 1 0CAS
0 500
0 750
250 1000
250 1250
```

If the mouse cursor is inside the polygon (the 4 points) then the quick info **HOUSE** (associated with **0CAS** in the file **GLOBAL.STR**) will be displayed.

## RLE

DATOS\RECURSOS\BMPS\SYSTEM\LIBRETAS  
DATOS\RECURSOS\BMPS\SYSTEM\MISC  
DATOS\RECURSOS\BMPS\SYSTEM\RED

Encoded 256 colors bitmap. Transparent pixels are compressed.

## RLE

WAD files

Special 256 colors bitmap with opaque, transparent (compressed) and semi-transparent pixels.

The RLE's in the WAD archives have the following structure:

HEADER
PIXEL DATA
LINE OFFSETS
COLOR PALETTE ID

### HEADER

Name	32 bytes	null terminating
Pixel Data Size	8 bytes	
unknown	4 bytes	default: 03 00 00 00
unknown	4 bytes	default: FF FF FF FF
Image height	4 bytes	
Image width	4 bytes	
color depth	2 bytes	default: 08 00
unknown	2 bytes	default: 00 00
unknown	2 bytes	default: 04 00
unknown	2 bytes	default: 00 00

### PIXEL DATA

This data block contains the information about the pixels of the image.

Let's have a look at the following byte sequence:

**FF** 05 **FE** 04 AA AB AD CB 02 7A 69 **FF** 04

This hex code sequence describes a bitmap with

5 transparent pixels

4 semi-transparent pixels (entries 170, 171, 173, 203 from the color palette)

2 opaque pixels (entries 122, 105 from the color palette)

4 transparent pixels

Please note that sequences with more than 253 opaque pixels or  
255 transparent pixels or  
255 semi-transparent pixels

must be split into multiple entries.

As you can see, transparent pixels are encoded with the byte **FF** followed by their count.

Semi-transparent pixels start with **FE** followed by the number of pixels and finally the palette entry id's.

Opaque pixels don't have an identifier. They just start with their count followed by the position in the color palette (00 to **FF**).

## LINE OFFSETS

Size	4 bytes	size of the following data block
Name	4 bytes	first for letters of the RLE name (lower case)
Width	4 bytes	same as above (HEADER)
Height	4 bytes	same as above (HEADER)

Now the offset of every line of the image is defined. The number of entries is equal to the image height. Each entry has a length of 4 bytes, the first entry is 00 00 00 00 (=first byte of the pixel data).

## COLOR PALETTE ID

4 byte long identifier for the color palette (id for the first palette is 0, for the last: number of palettes-1).  
00 00 00 02 indicates that the third color palette of the WAD file is used for this bitmap.

## SAV

### OUTPUT

There are up to ten saved games (0000000.sav to 0000009.sav) and one quick save/load slot (QLOAD.sav). The names of the saved games can be found in the file SAVE0000.sav, which is the only file that is not compressed.

## SCR

### DATOSMISIONES

Briefing configuration for each mission. Normally a briefing starts with a video, followed by multiple pictures background music and speech files. The next part defines the detailed briefing showing the map (includes zooming, moving to a position, staying at a position, playing wave files).

COMMAND	PARAMETERS	ADD.PARAM.	END COMMAND
0 VIDEO	#0		
0 BREAK			
0 STARTVIDEO	#NAME.AVI		WAITVIDEO
0 STARTBLENDFADE	#NAME.BMP	\$0	WAITFADE
0 STARTFADEOUT			WAITFADE
0 STARTWAVEM	#NAME.WAV		WAITWAVEM
0 STARTWAVE	#NAME.WAV	%comment	WAITWAVE
0 SETZOOM	#0		
0 SETPOS	#[ 0 0]		
0 STARTZOOM	#0	L/M/N/R, \$0	WAITZOOM
0 STARTGOTO	#[ 0 0]	\$0	WAITGOTO
0 STARTGOTO	#B NAME	\$0	WAITGOTO
*** COMMENT ***			

There are 39 other commands, but they were never used in the briefings. Here's the complete list:

BREAK, MM, SETPOS, SETWAVELEVEL, SETWAVELEVEL1, SETWAVELEVEL2, SETWAVELEVEL3, SETWAVELEVELM, SETZOOM, STARTBLENDFADE, STARTBLENDFADESTOP, STARTBMP, STARTBMP1, STARTBMP2, STARTBMP3, STARTBMP4, STARTFADEOUT, STARTFOCO, STARTGOTO, STARTMM, STARTMM1, STARTMM2, STARTMM3, STARTMM4, STARTVIDEO, STARTWAVE, STARTWAVE1, STARTWAVE2, STARTWAVE3, STARTWAVELEVEL, STARTWAVELEVEL1, STARTWAVELEVEL2, STARTWAVELEVEL3, STARTWAVELEVELM, STARTWAVEM, STARTZOOM, STOPWAVE, STOPWAVE1, STOPWAVE2, STOPWAVE3, STOPWAVEM, VIDEO, WAITFADE, WAITGOTO, WAITVIDEO, WAITWAVE, WAITWAVE1, WAITWAVE2, WAITWAVE3, WAITWAVELEVEL, WAITWAVELEVEL1, WAITWAVELEVEL2, WAITWAVELEVELM, WAITWAVEM, WAITZOOM

These files define the sectors for a map.

SEC files have the following structure:

Example:

Number of vertices	4
Vertices	800 800
...	0 800
...	0 0
Vertices	800 0
Number of sectors	1
#Points kx ky bz Type Height Offset Flags	4 0 0 0 0 0 0 384
Point	0
...	1
...	2
Point	3
Number of "bridge" sectors	0
Number of areas	1
#Sectors Name	0 CAMP
SectorType Sector	
Number of connected sectors	0
Sector Sector	

### Vertices

XY coordinates on the map, e.g:

**415.685 625.946**

**kx, ky, bz** <sup>[1]</sup>

from the plane equation  $z = kx \cdot x + ky \cdot y + bz$

### Type

0	LAND	land (default)
1	WATER	shallow water
2	SNOW	snow or sand
3	DEEPWATER	deep water
4	CONVEYOR	mover
5	DESCONOCIDO	not defined
6	LASTTYPE	?unknown?

### Height

Height of the sector.

### Offset

Final height of a stair or a ramp.

### Flags

There are nine flags. To use several flags just add the values.



flag	espanol	meaning
1	inclinado	isStair (or Ramp)
2	unknown	used by Bridge Sectors
4	notrasitable	Is <b>Not</b> Enterable
8	?	
16	oclusor	isInvisible
32	never used	
64	?	
128		
256		
		128 + 256 = normal

### Bridge sector

This special sector leads over the normal sectors, you can walk on and under them. They have the same structure like ordinary sectors.

### Area

Areas are used for the enemy AI. When the same soldier reacts in another way after he spotted you (for example inside or outside a base), this happens due to the different areas. How the enemy reacts is actually defined in the mission file MIS.

SectorType

0 = regular sector

1 = bridge sector

### Connected sectors

This information is used to tell the Green Beret which walls he can climb (nearly all walls already are defined in the sector information – the huge wall to the east in the mission 'Blind Justice' has been declared this way.

### Differences between BEL and BCD files:

SEC files in BCD have a different file format but they contain nearly the same information. It looks like BCD can read both formats, BEL can't read the BCD format.

Additional information of the SEC files from BCD:

#Points ? ? ? Type Height Offset Flags **TokenLength** **Token**

Most sectors don't have a Token so the TokenLength is 0. If the TokenLength is not zero, there will be an entry in MIS file with the Token.

The other difference are the entries at the end of the file which start with "TW1". I haven't figured out their meaning yet.

## STR

### DATOSMISIONES

This file type contains multiple strings.

GLOBAL.STR	Global string file
MAPA00???.STR	Messages when you failed the mission
MB???.STR	Briefing notes for the mission

## TIP

### DATOSMISIONES

Quick info on the map.

Defined by the horizontal and vertical position on the map, the width, the height and the string identifier (from **GLOBAL.STR**).

130 186 544 422 1HEA
----------------------

creates a box at position 130,186 with a height of 544 and a width of 422 and shows you the quick info **ENEMY HEADQUARTERS** when the mouse enters this area.

## VOL

### DATOSMISIONES

Map file.

There are two types of VOL files:

MAPA???.VOL	creates all static objects on a map
CHOQ???.VOL	small obstacles which don't come with the SEC file

**VOL structure:**

```
{
;*****
;* MAPA DE VOLUMENES ESTATICOS
;*****

MAPDIMXY 1828,1490
MAPTABPOLYS
{
    . . .
}
}
```

Map width

Map height

Polygons:

There are 3 types of polygons:

POLY	standard polygon
POLYRAMPA	polygon is a stair or a ramp
POLYZOOM	creates the illusion of height (used in MAPA0006,MAPA0020)

```
POLY "BASE",915,1102,-14,5,4,725      ;Nombre,CentroX,CentroY,CentroZ,...
POINT      914,-1119                    ;Coord. X, Coord. Y
POINT      913,1199                      ;Coord. X, Coord. Y
POINT      -916,1199                      ;Coord. X, Coord. Y
POINT      -914,-1119                     ;Coord. X, Coord. Y
EXTRAINFO  0,0,0,0,0,0,0,0,0             ;Extra Info Bytes
TILE       1394, -1, 60, 4, 0, 0, 0,"TERRENO.BMP"," "
TILE       1318, -1, 76, 7, 40, 1, 0,"TERRENO.BMP"," "
TILE       488, -1, 36, 14, 0, 37, 0,"BN2-2.BMP","X "
.
.
```

**Nombre,CentroX,CentroY,CentroZ,Altura,#vertices,#Tiles**  
= name,centerX,centerY,centerZ,height,number of points, number of tiles

**POLYRAMPA** and **POLYZOOM** each have one additional parameter:

**Nombre,CentroX,CentroY,CentroZ,Altura,AlturaOff,#vertices,#Tiles**  
**Nombre,CentroX,CentroY,CentroZ,Zoom,Altura,#vertices,#Tiles**

### Name

Some polygons need to have a certain name.

Trees have the name ARBOL?? (?? = 00,01,...,99), shadows of trees have the name ARBOL??S.

Buildings have the name CASA?? or CASA??A, CASA??B, CASA??... if the buildings consists of more than one polygon.

Polygons with the name \*.EXP1 are explosions.

Other common names are BASE and AGUA (water).

### Coord. X, Coord. Y

= X/Y position on the map

### Extra Info Bytes

= I have no idea

**TILE**            1318, -1, 76, 7, 40, 1, 0, "TERRENO.BMP", " "

x, y, width, height, hor. offset, vert. offset, brightness, sprite, transformation

### x/y:

position on the map

### width/height:

no comment

### horizontal/vertical offset:

is used to draw only a part of the sprite

### sprite:

Filename of the sprite (stored in a WAD file), a minus in front of the name makes the sprite invisible (e.g. "-RUINA07.RLE")

### brightness:

0     standard  
20    white  
-20   black

### transformation:

"X "        = mirror sprite (x-axis)  
" Y "        = flip sprite (y-axis)  
" L"        = tile is explosion or light  
combinations like "X L" are possible

## WAD

DATOS\FONTS  
DATOS\RECURSOS\BMPS\MAP  
DATOS\RECURSOS\BMPS\SPRITES  
DATOS\RECURSOS\BMPS\SYSTEM\CARAS  
DATOS\RECURSOS\BMPS\SYSTEM\GLOBAL  
DATOS\RECURSOS\BMPS\SYSTEM\OPCIONES

Archive which contains image files (BMP's and RLE's).

WAD structure:

HEADER	400 bytes
#COLOR PAL.	4 bytes
COLOR PAL.	524 bytes
#IMAGES	4 bytes
IMAGES	

### HEADER

unknown	4 bytes
unknown	4 bytes
unknown	392 bytes

Can be filled with 00 or FF (or anything else, it doesn't care).

### #COLOR PAL.

The number of color palettes used in this archive.

### COLOR PAL.

Each color palette has 256 2-byte-colors.

256 colors	512 bytes
00	1 byte
unknown	12 bytes

The last 12 bytes look like some kind of comment.

Each color is defined by 2 bytes (16 bits):

BYTE1      BYTE2  
21043210 43210543

### #IMAGES

The number of images in the archive.

### IMAGES

The images are bitmaps either with (RLE) or without transparency information (BMP).

## WAV

DATOS\BRIEFING\WAVE  
DATOS\MUSICA  
DATOS\RECURSOS\SONIDO\WAVE\  
DATOS\RECURSOS\SONIDO\WAVE\ESA

Wave audio file.

If you replace/edit a file, make sure that the new file has the following format:

PCM signed 16 bit, stereo	file from DATOS\MUSICA
PCM unsigned 8 bit, mono	all other files

Every file indicated by **.WAV** in a **MIS** or **MAC** file can be replaced by any other of the following list:

<b>AGUAPRES.WAV</b>	<b>PRES</b>
<b>ALTO.WAV</b>	<b>ALTO</b>
<b>ALTO.WAV</b>	<b>ATAK</b>
<b>AMETRALL.WAV</b>	<b>MET1</b>
<b>APAGELEC.WAV</b>	<b>APEL</b>
<b>AUTOGIRO.WAV</b>	<b>AUG2</b>
<b>AVION.WAV</b>	<b>AVIO</b>
<b>BARRIL.WAV</b>	<b>SBAR</b>
<b>BOCIBARC.WAV</b>	<b>CLBA</b>
<b>BOCINA.WAV</b>	<b>CLXN</b>
<b>BOCITREN.WAV</b>	<b>CLTR</b>
<b>BUZO.WAV</b>	<b>BUCE</b>
<b>CAMION.WAV</b>	<b>CAMN</b>
<b>CARGAFUSI.WAV</b>	<b>CAFU</b>
<b>CHORRO.WAV</b>	<b>CHOR</b>
<b>CUCHI.WAV</b>	<b>CUCH</b>
<b>DERRUMBE.WAV</b>	<b>XCA1</b>
<b>DETENIDO.WAV</b>	<b>DETE</b>
<b>DISPARO1.WAV</b>	<b>DIS1</b>
<b>ELECSHOK.WAV</b>	<b>ELSH</b>
<b>ELECTRO.WAV</b>	<b>ELEC</b>
<b>ESCLUSA.WAV</b>	<b>ESCL</b>
<b>ESFUERZO.WAV</b>	<b>CBAR</b>
<b>ESPIA.WAV</b>	<b>ESPI</b>
<b>EXPLOSI.WAV</b>	<b>TNKS</b>
<b>EXPLOSI.WAV</b>	<b>XGRA</b>
<b>EXPLOSI.WAV</b>	<b>XPLO</b>
<b>FRANCO.WAV</b>	<b>MIRI</b>
<b>FRENADA.WAV</b>	<b>FTRN</b>
<b>FUSIL.WAV</b>	<b>FUSL</b>
<b>GRILLOS.WAV</b>	<b>GRIL</b>
<b>HANGAR.WAV</b>	<b>HANG</b>
<b>HERIDO.WAV</b>	<b>HERI</b>
<b>LADRIDO.WAV</b>	<b>LADR</b>
<b>LLAMAS.WAV</b>	<b>YAMA</b>
<b>MEGAEXPL.WAV</b>	<b>MXPL</b>
<b>MEGAEXPL.WAV</b>	<b>XCA2</b>
<b>METRALL0.WAV</b>	<b>MET0</b>
<b>METRLANC.WAV</b>	<b>METL</b>
<b>MUERTE.WAV</b>	<b>ARGH</b>
<b>MUERTO.WAV</b>	<b>MUER</b>
<b>MUERTO.WAV</b>	<b>VMUE</b>
<b>OLEAJE.WAV</b>	<b>XCA0</b>
<b>PAJARO0.WAV</b>	<b>BIRD</b>
<b>PAJARO1.WAV</b>	<b>MBIR</b>
<b>PASOS.WAV</b>	<b>PASO</b>
<b>PASOSAGU.WAV</b>	<b>PASW</b>
<b>PISTOLA.WAV</b>	<b>PIPA</b>
<b>QUIENVA.WAV</b>	<b>QIEN</b>
<b>REMADA.WAV</b>	<b>REMA</b>
<b>SEGNUELO.WAV</b>	<b>DCOY</b>
<b>SIRENA01.WAV</b>	<b>SIRN</b>
<b>SOLDAT.WAV</b>	<b>SOLD</b>
<b>SPLASH.WAV</b>	<b>SBAL</b>
<b>SUBMISIL.WAV</b>	<b>SMIS</b>
<b>SWITCH.WAV</b>	<b>SWCH</b>
<b>TANQMETR.WAV</b>	<b>METT</b>
<b>TELEFONO.WAV</b>	<b>TELF</b>
<b>TICTAC.WAV</b>	<b>TKTK</b>

<b>ALRM</b>	<b>VOZALARM.WAV</b>
<b>ALTO</b>	<b>ALTO.WAV</b>
<b>APEL</b>	<b>APAGELEC.WAV</b>
<b>ARGH</b>	<b>MUERTE.WAV</b>
<b>ATAK</b>	<b>ALTO.WAV</b>
<b>AUG2</b>	<b>AUTOGIRO.WAV</b>
<b>AVIO</b>	<b>AVION.WAV</b>
<b>BIRD</b>	<b>PAJARO0.WAV</b>
<b>BUCE</b>	<b>BUZO.WAV</b>
<b>CAFU</b>	<b>CARGAFUSI.WAV</b>
<b>CAMN</b>	<b>CAMION.WAV</b>
<b>CBAR</b>	<b>ESFUERZO.WAV</b>
<b>CHOR</b>	<b>CHORRO.WAV</b>
<b>CLBA</b>	<b>BOCIBARC.WAV</b>
<b>CLTR</b>	<b>BOCITREN.WAV</b>
<b>CLXN</b>	<b>BOCINA.WAV</b>
<b>CUCH</b>	<b>CUCHI.WAV</b>
<b>DCOY</b>	<b>SEGNUELO.WAV</b>
<b>DETE</b>	<b>DETENIDO.WAV</b>
<b>DIS1</b>	<b>DISPARO1.WAV</b>
<b>ELEC</b>	<b>ELECTRO.WAV</b>
<b>ELSH</b>	<b>ELECSHOK.WAV</b>
<b>ESCL</b>	<b>ESCLUSA.WAV</b>
<b>ESPI</b>	<b>ESPIA.WAV</b>
<b>FTRN</b>	<b>FRENADA.WAV</b>
<b>FUSL</b>	<b>FUSIL.WAV</b>
<b>GRIL</b>	<b>GRILLOS.WAV</b>
<b>HANG</b>	<b>HANGAR.WAV</b>
<b>HERI</b>	<b>HERIDO.WAV</b>
<b>LADR</b>	<b>LADRIDO.WAV</b>
<b>MBIR</b>	<b>PAJARO1.WAV</b>
<b>MET0</b>	<b>METRALL0.WAV</b>
<b>MET1</b>	<b>AMETRALL.WAV</b>
<b>METL</b>	<b>METRLANC.WAV</b>
<b>METT</b>	<b>TANQMETR.WAV</b>
<b>MIRI</b>	<b>FRANCO.WAV</b>
<b>MUER</b>	<b>MUERTO.WAV</b>
<b>MXPL</b>	<b>MEGAEXPL.WAV</b>
<b>PASO</b>	<b>PASOS.WAV</b>
<b>PASW</b>	<b>PASOSAGU.WAV</b>
<b>PIPA</b>	<b>PISTOLA.WAV</b>
<b>PRES</b>	<b>AGUAPRES.WAV</b>
<b>QIEN</b>	<b>QUIENVA.WAV</b>
<b>REMA</b>	<b>REMADA.WAV</b>
<b>SBAL</b>	<b>SPLASH.WAV</b>
<b>SBAR</b>	<b>BARRIL.WAV</b>
<b>SIRN</b>	<b>SIRENA01.WAV</b>
<b>SMIS</b>	<b>SUBMISIL.WAV</b>
<b>SOLD</b>	<b>SOLDAT.WAV</b>
<b>SWCH</b>	<b>SWITCH.WAV</b>
<b>TELF</b>	<b>TELEFONO.WAV</b>
<b>TKTK</b>	<b>TICTAC.WAV</b>
<b>TNKS</b>	<b>EXPLOSI.WAV</b>
<b>TREN</b>	<b>TREN.WAV</b>
<b>VMUE</b>	<b>MUERTO.WAV</b>
<b>WIND</b>	<b>VIENTO.WAV</b>
<b>XCA0</b>	<b>OLEAJE.WAV</b>
<b>XCA1</b>	<b>DERRUMBE.WAV</b>
<b>XCA2</b>	<b>MEGAEXPL.WAV</b>

<b>TREN .WAV</b>	TREN
<b>VIENTO .WAV</b>	WIND
<b>VOZALARM .WAV</b>	ALRM

sorted by filename

<b>XGRA</b>	EXPLOSI .WAV
<b>XPLO</b>	EXPLOSI .WAV
<b>YAMA</b>	LLAMAS .WAV

sorted by id

## APPENDIX

Please inform me about any errors, suggestions and new findings. Thank you.

### Recommended tools <sup>[2]</sup>

DirExtractor  
Rle<>BmpConverter  
WadExtractor/Creator

### Recommended programs

Text files      Notepad++  
Image files    The Gimp  
Other files    HxD Hexeditor

### Contact

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### Reference

- [1] <http://files.cnblogs.com/Rex/CommDevToolkitSrc.rar>      Src\Doc\Comm2\_SEC.en.htm  
big thanks to F.R.C. (and of course invoX)
- [2] <http://sites.google.com/site/commandosmod/downloads>  
my homepage