

MegaLZ.bas

megaLZDepack.bas

This routine takes a block of data compressed with the [MegaLZ](#) compression algorithm at SOURCE location and decompresses it to DESTINATION location. You should probably save compressed files as direct binaries, and use asm mode incbin commands to include the binary into your project.

THIS METHOD IS NOW INCLUDED IN THE ZX BASIC EXTERNAL LIBRARY (the library folder), so can and should be included with `#include <megalz.bas>` for the latest code.

```
SUB megalZDepack (source as uInteger, dest as uInteger)
```

```
ASM
```

```
LD E,(IX+6)
```

```
LD D,(IX+7)
```

```
;Z80 depacker for megalz V4 packed files (C) fyrex^mhm
```

```
; DESCRIPTION:
```

```
;
```

```
; Depacker is fully relocatable, not self-modifying,
```

```
;it's length is 110 bytes starting from DEC40.
```

```
;Register usage: AF,AF',BC,DE,HL. Must be CALL'ed, return is done by RET.
```

```
;Provide extra stack location for store 2 bytes (1 word). Depacker does not
```

```
;disable or enable interrupts, as well as could be interrupted at any time
```

```
;(no f*cking wicked stack usage :).
```

```
; USAGE:
```

```
;
```

```
; - put depacker anywhere you want,
```

```
; - put starting address of packed block in HL,
```

```
; - put location where you want data to be depacked in DE,
```

```
; (much like LDIR command, but without BC)
```

```
; - make CALL to depacker (DEC40).
```

```
; - enjoy! ;)
```

```
; PRECAUTIONS:
```

```
;
```

```
; Be very careful if packed and depacked blocks coincide somewhere in memory.
```

```
;Here are some advices:
```

```
;
```

```
; 1. put packed block to the highest addresses possible.
```

```
; Best if last byte of packed block has address #FFFF.
```

```
;
```

```
; 2. Leave some gap between ends of packed and depacked block.
```

```
; For example, last byte of depacked block at #FF00,
```

```
; last byte of packed block at #FFFF.
```

```
;
```

```
; 3. Place nonpackable data to the end of block.
```

```
;
```

```
; 4. Always check whether depacking occurs OK and neither corrupts depacked data
```

```
; nor hangs computer.
```

```
;
```

```
;DEC40
```

```
LD A,80h
```

```
EX AF,AF'
```

```
MS: LDI
```

```
M0: LD BC,2FFh
```

```
M1: EX AF,AF'
```

```
M1X: ADD A,A
```

```
JR NZ,M2
```

```
LD A,(HL)
```

```
INC HL
```

```
RLA
```

```
M2: RL C
```

```
JR NC,M1X
```

```
EX AF,AF'
```

```
DJNZ X2
```

```
LD A,2
```

```
SRA C
```

```
JR C,N1
```

```
INC A
```

```
INC C
```

```
JR Z,N2
```

```
LD BC,33Fh
```

```
JR M1
```

```
X2: DJNZ X3
```

```
SRL C
```

```
JR C,MS
```

```
INC B
```

```

X6:      JR      M1
        ADD     A,C
N2:      LD      BC,4FFh
        JR      M1
N1:      INC     C
        JR      NZ,M4
        EX      AF,AF'
        INC     B
N5:      RR      C
        JP      C, END_DEC40
        RL      B
        ADD     A,A
        JR      NZ,N6
        LD      A,(HL)
        INC     HL
        RLA
N6:      JR      NC,N5
        EX      AF,AF'
        ADD     A,B
        LD      B,6
        JR      M1
X3:      DJNZ    X4
        LD      A,1
        JR      M3
X4:      DJNZ    X5
        INC     C
        JR      NZ,M4
        LD      BC,51Fh
        JR      M1
X5:      DJNZ    X6
        LD      B,C
M4:      LD      C,(HL)
        INC     HL
M3:      DEC     B
        PUSH    HL
        LD      L,C
        LD      H,B
        ADD     HL,DE
        LD      C,A
        LD      B,0
        LDIR
        POP     HL
        JR      M0

```

```

END_DEC40:
END ASM
END SUB

```

Usage

Example:

```
megaLZDepack (32768,16384)
```