

CopyLockDecoder

COLLABORATORS

	<i>TITLE :</i> CopyLockDecoder		
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WRITTEN BY		January 18, 2023	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

CopyLockDecoder

1.1 CopyLockDecoder.guide

```
=====
CopyLockDecoder v1.33
=====
```

```
Introduction
Requirements
Installation
Copylock usage
Program history
Greetings
From Author
```

1.2 CopyLockDecoder.guide/Introduction

Purpose of CopyLockDecoder is how was coded copylocks which have protected by many commercial games.

My util isn't exactly decoder, but patcher. Why ? It simply patch decode procedures and get decoded data.

This util can only decode only Rob Northen Copylock NEW type. Why not OLD ? Because OLD type works good only on Motorola 68000. Anyway OLD type have problems with stack frame format. So, games protected by that copylocks cann't run on 68020+ processors if copylock isn't removed.

CopyLockDecoder is FREEWARE. Program and documentation must be spread in

unchanged form (archive). Any modifications are forbidden.

1.3 CopyLockDecoder.guide/Requirements

CopyLockDecoder requires any Amiga with processor 68020 or higher.

1.4 CopyLockDecoder.guide/Installation

Copy CopyLockDecoder, it's icon and documentation to any directory.

1.5 CopyLockDecoder.guide/Copylock usage

Copylock usage:

Input values

Calculate ID

Output values

1.6 CopyLockDecoder.guide/Input values

1.7 CopyLockDecoder.guide/Calculate ID

Perhaps you was think how Copylock calculate ID value?
Yes? Ok, I show you how this is easy can be done by hand.

First, you must read data from disk track 1 by RawDIC with SYNC \$8914.
After sync must be \$44A9 word (for first type of New Copylock). I show
how it's done in game Photon Storm

```
lea data,a0
and.w  #$5555,$12(a0)
moveq  #$14,d0
move.l d0,d1
lsr.l  #2,d1
moveq  #0,d0
.loop
sub.l  (a0)+,d0
subq.l #1,d1
bne.b .loop
rts

sync  dc.w  $8914
data  dc.w  $44A9
```

```
dc.w $5155,$5292,$A925,$1252,$5129,$4929,$4A94,$9115
dc.w $2AAA
```

In D0 register you will have value \$7C3369C9 and it's correct ID.

Some copylocks used another instruction to calculate ID value instead sub.l (a0)+,d0 eg.:

```
add.l (a0)+,d0 ; game Cyberball
```

How it's done in second type of New Copylocks ? You must read data via RawDIC from track 1 with sync \$8914. I show you how it's done in game Cool Spot.

```
lea data,a0
moveq #0,d0
moveq #7,d1
.loop
sub.l (a0)+,d0
dbf dl,.loop
cmp.l #$A573632C,d0
bne.b .error

lea data,a0
moveq #11,d1
moveq #0,d6
.loop2
add.l d6,d6
sub.l (a0)+,d6
dbf dl,.loop2
.error
rts

sync dc.w $8914
data dc.l $AA949124,$945514A4,$A4AA9254,$94551524,$9512944A
dc.l $94911454,$A4AA92A5,$14551451,$152AAAA4,$AA92AA49
dc.l $29252495,$12554955
```

Procedure return value \$1C781F8D in D6 register as ID.

Many copylocks (second type) used different instructions to calc ID instead of add.l d6,d6 ; sub.l (a0)+,d6 eg.:

```
add.l (a0)+,d6 ; game Advanced Ski Simulator
```

```
add.l (a0)+,d6
swap d6 ; game Arcade Trivia Quiz
```

```
add.l d6,d6
sub.l (a0)+,d6
dbf dl,.loop2
eor.l #$71895A65,d6
move.l d6,$60.w ; game Archer Maclean Pool
```

```
sub.l (a0)+,d6 ; game Battle Command
```

```
add.l d6,d6
add.l (a0)+,d6 ; game Big Run

add.l d6,d6
sub.l (a0)+,d6
dbf d1,.loop2
add.l d6,$80.w ; game Curse Of Enchantia

add.l d6,d6
sub.l (a0)+,d6
dbf d1,.loop2
move.l d6,$80.w
not.l $80.w ; game Krusty's Super Fun House

add.l d6,d6
sub.l (a0)+,d6
dbf d1,.loop2
move.l d6,$100.w ; game Lethal Weapon

add.l d6,d6
add.l (a0)+,d6
dbf d1,.loop2
move.b #$FF,$100.w ; game Putty
```

1.8 CopyLockDecoder.guide/Output values

1.9 CopyLockDecoder.guide/Program history

Version 1.32 (29.03.99) - first official public release

1.10 CopyLockDecoder.guide/From author

CopyLockDecoder is written in assembly language using Devpac v3.14. It was tested on Amiga 1200 + Blizzard IV 50 MHz + 16 MB Fast Ram + 2.5 GB Caviar HDD + CD Rom * 4.

If you have any ideas or you have found any bugs, write to me on address:

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1.11 CopyLockDecoder.guide/Greetings

Special greetings from me go to:
