

# HEIST



**Mk. 2 Owner's Manual**

## **NOTE:**

Heist 2.1 is optimized for Future Pinball 1.8. It will NOT work in FP 1.7, due to broken features in that release.

# Contents

Welcome.....	4
History.....	5
GAME DESIGN.....	5
Playfield Overview.....	7
Operator Instructions.....	8
Power-on Sequence.....	8
Power-on Error Messages.....	8
Operator Menu.....	8
Additional Script Settings.....	9
High Score Entry.....	9
GUI Features.....	10
HUD Display.....	10
Auto look-at-backbox.....	10
Not at allScrolling Camera.....	10
Game Features.....	11
Ball Saver.....	11
Getaway Bumper Cluster.....	11
Top Loop Lane and Skill Shot .....	11
Top Loop Diverter and Diverter Trigger.....	11
Kickback Kickers and Diverters.....	11
Drill Targets.....	12
Vault Playfield.....	12
Bullion and Strongbox Target Banks.....	12
P-L-A-N Leaf Targets, Bonus Value Indicators and Bonus Types.....	12
T-I-M-E Rollover Targets.....	13
The Alarm System Roto Target and Alarm Rotate Leaf Targets.....	13
Extra Ball.....	14

**HEIST**  
**by Misaligned Cow, Inc. (1985)**

**Head of Production: Tim Whippett**  
**Playfield Design: Morton Lipp**  
**Graphics Design: Bert "Catgut" Aasenden**  
**Sound Design: Jorge Apiña**

**Est. Production Run: 4,000 (1,300 Mk1's, 2,700 Mk2's)**

## **Welcome**

Congratulations on purchasing this extraordinary Future Pinball recreation of one of the world's most famous pinball machines. We can guarantee you hours of fun and entertainment (as well as a bit of frustration!) playing this simple-to-learn, yet hard-to-master game.

In this document you will find the relevant parts of the original operator instructions and some additional information about the computer emulation, as well as a brief history of the game.

Sincerely,

Misaligned Cow Ventures, Inc.

April, 2008

*Note: Misaligned Cow Ventures, Inc., the makers of this computer re-creation, are in no way affiliated with the original Misaligned Cow, Inc. company.*

# History

Heist was created by Misaligned Cow, Inc. in 1985. It was the company's second solid state machine (1984's Djembe being the first).

Originally conceived as a license tie-in to the movie "Weird Science", it had to be hastily re-themed after the licensing deal fell through in a spectacular manner at a Hollywood Christmas party in December 1984: Reportedly, Misaligned's lead designer Bert "Catgut" Aasenden had a bit too much of the wet stuff and proceeded to vomit into Bill Paxton's lap, after which things went a bit pearshaped in the public relations department.



*"Catgut" Aasenden, ca. 1977*

The game was manufactured at Misaligned's main plant in Cloverdale, Indiana. An estimated 4,000 units were made, and the game is widely hailed as one of the most addictive pinballs of the era. (The exact details of the production run will sadly remain unknown because of the mysterious fire that laid waste to the entire plant in 1987.)

## GAME DESIGN

Heist uses the same "midbody" cabinet as the African-inspired Djembe machine of the year before. They also share a number of other basic features. This is particularly evident in the way the housings for the Heist kickback kickers have been unceremoniously bolted onto the standard apron used for Djembe. Designer Morton Lipp originally intended a radically different design to the whole launch mechanism, but budget and deadlines proved, as usual, to be prohibitive.

Heist is the first game to make extensive use of the Oki2 sound generator from Japanese manufacturers Kyoto Henshi. This 8-voice/8-channel wavetable synth chip was way ahead of its time in many respects, and Heist's sound designer Jorge Apiña put it to good use.

There were two versions of Heist, the Mk1 and Mk2. There were no differences to the layout or mechanics, but the MK2 had a new ROM with a complete operator menu system.

Also, Mk2 had an additional Oki2 chip for music playback.



*The Cloverdale factory, shortly before the “accident”*



# Playfield Overview



# **Operator Instructions**

## **Power-on Sequence**

- 1) Turn on the game with the mains power switch.
- 2) The ROM is checked for errors, and boot messages are shown on Player Display no. 1.
- 3) If both flipper keys are held down during the boot sequence, the table now enters the Operator Display menu. See “Operator Adjustable Features” below.
- 4) Credit Display and Credit Indicator Light is activated.
- 5) The Player Displays enter Game Over mode, showing data from last game played.
- 6) Coin receptor is enabled; The game enters attract mode and is now operational.

## **Power-on Error Messages**

If the power-on procedure ends with a "NO BALL" error, it probably means that the ball is stuck on the playfield or is in the plunger lane. Drain the ball with the power off, and then try powering on again.

## **Operator Menu**

When the operator menu is active, OP. MENU is shown on player display 1, and the main menu options on player display 2.

Any text bracketed with < > symbols is a menu item. Page through the options with the flipper keys. To select a menu option, press the Start Game key. (To exit the Operator Menu, page through the main options until you get to < EXIT >, and then press the Start Game key.)

Any text bracketed with – – symbols is a changeable value. Once again, browse through the options with the flipper keys. To set the value, press the Start Game key twice, and you will be returned to the previous menu level.



Any text not bracketed is a display-only value. Once again, press Start Game twice to return to the previous menu level.

These are all the options available:

- **STATS**
  - **T GAMES**: See the number of games played.
  - **A SCORE**: See the average score.
  - **FREE CR**: See the number of free credits awarded.
  - **RESET**: Zero all the statistics above plus the highscores.
- **BALLS**
  - **3 BALLS**: Sets game length to 3 balls.
  - **5 BALLS**: Sets game length to 5 balls.
- **MUSIC**
  - **OFF**: No music during the game.
  - **RANDOM**: At the start of a new game, selects one of the three themes at random.
  - **HEIST**: Only play the "Heist" music theme.
  - **CAIRO**: Only play the "Cairo" music theme.
  - **EXILE**: Only play the "Exile" music theme.
- **OPTIONS**
  - **VAULTCL**: Adjust initial Vault Clock setting: 5, 10, 15 or 20 seconds.
  - **GETAWAY**: Adjust Getaway Bumper divider: 6, 12, 18 or 24 hits to add one second.
  - **SKILLSH**: Adjust the Skill Shot time: 2, 3, 4 or 5 seconds from ball launch.
  - **BALLSVR**: Adjust the Ball Saver time: 3, 4, 5 or 6 seconds from ball launch.
  - **T-I-M-E**: Select whether T-I-M-E rollover lights are FIXED or MOVABLE with flippers.
  - **MATCH**: End-of-game Match Number feature ON or OFF.
  - **RESET**: Reset all options above to factory defaults, YES or NO.
- **SPECIAL**
  - **3-BALL**: Adjust the Special score for 3-ball game: 300000, 400000, 500000, or 600000.
  - **5-BALL**: Adjust the Special score for 3-ball game: 400000, 500000, 600000, or 700000.  
(Additional free credits will also be awarded at 2x, 4x, and 8x these scores.)
  - **RESET**: Reset Special scores to the factory defaults.

## Additional Script Settings

There are some additional things that can be changed using constants at the top of the script, such as the table's initial power-on state when starting the game, and whether or not to show help texts during power-up, high-score entry, and operator menu use.

## High Score Entry

When you get one of the top 4 scores recorded, you are prompted to enter your initials on the backbox display. Use the flipper keys to select a letter or symbol, and the start game key to set a letter and move on to the next one. After setting the third letter, the game resumes normal operation.

# **GUI Features**

These have nothing to do with the game itself, only how it appears on screen.

## **HUD Display**

Press the Future Pinball “Toggle HUD” key to toggle the large score display on and off.

## **Auto look-at-backbox**

Press the Future Pinball “Special 1” key repeatedly to decide whether the camera should automatically point to the backbox:

- At the end of each ball
- At the end of the game
- Not at all

## **Scrolling Camera**

Press the Future Pinball “Special 2” key repeatedly to change the camera from scrolling to fixed mode.

# **Game Features**

## **Ball Saver**

If the ball is lost down the drain within a set period of time from hitting the Plunger Lane Gate, it is immediately transported back to the plunger lane. The text "->SAVED<-" is shown in the Player Display and remains until the ball hits the Plunger Lane Gate once more.

## **Getaway Bumper Cluster**

There is a hit counter registering each hit for these three bumpers. For each n:th hit, a second is added to the Vault Clock. The divider number can be adjusted by the operator (see above).

## **Top Loop Lane and Skill Shot**

Shooting the ball through the Top Loop from left to right activates the left Kickback diverter and primes the left Kickback. Vice versa going from right to left.

While the Skillshot Arrow light is flashing, the left-to-right loop primes both Kickbacks and also lights the Skilled Driver light. While the Skilled Driver light is on, hitting bumpers in the Getaway Bumper Cluster adds seconds to the Vault Clock twice as fast as normal.

## **Top Loop Diverter and Diverter Trigger**

Going up the right Top Loop entrance, there is a diverter that acts as a "one-way valve", causing all balls on the way down to be diverted into the Getaway Bumper Cluster instead. The diverter is triggered by a wire trigger in the entrance lane, and is closed automatically again after a short time.

## **Kickback Kickers and Diverters**

Each Kickback Kicker is triggered by the wire trigger just in front of it. Shortly after being triggered, the corresponding diverter is reset, and that Kickback is inactive until it is primed by a Top Loop shot again.

## **Drill Targets**

Completing the Drill Target bank lights the two Vault Open Arrow lights, and activates the two diverters in the Top Loop, redirecting any balls there into the Vault Gobble Hole.

## **Vault Playfield**

When the ball enters the Tunnel Entrance hole, it is immediately transported to the Tunnel Exit inside the Vault Playfield. This lights the Vault Bumper and the 8 orange Vault In Progress lights at the Top Loop, enables the Vault Flippers, and starts the countdown of the Vault Clock.

When the Vault Clock reaches 0, the Vault Flippers are disabled, the Vault Bumper, Vault In Progress, and Vault Open Arrow lights are turned off. Then the Drill Targets bank is reset.

*Note 1:* The Vault is not "closed down" when the ball exits. While there are seconds left on the Vault clock, the player can re-enter the vault through the Top Loop Lane at any time.

*Note 2:* Extra Vault Clock seconds earned are only added to the Vault Clock's "startoff" value, and not to an already running clock (that is, not to the "current break-in").

## **Bullion and Strongbox Target Banks**

Each target hit adds one point to the corresponding bonus type, up to a maximum of 40 for each type.

Whenever a Bullion or Strongbox Target Bank is completed, it is reset after approximately 1 second.

## **P-L-A-N Leaf Targets, Bonus Value Indicators and Bonus Types**

Completing the P-L-A-N targets increases the Bonus Value for both bonus types. The targets are reset shortly after being completed, and performs the Bonus Value increase up to 3 times per ball (see also the Alarm System below).

For the Bullion Bonus, the bonus value level is a simple bonus multiplier. For the Strongbox Bonus, things are more sophisticated: The bonus value level decides the lowest value item that can be in a Strongbox.

When counting down the bonus, each Strongbox is "opened" in turn, and the contents revealed (while shown on the player's score display at the same time). The item value is as follows:

<i>Documents</i>	<i>2,000</i>	<i>(Boring papers)</i>
<i>Secrets</i>	<i>4,000</i>	<i>(Could be interesting, but hard to capitalize)</i>
<i>Bonds</i>	<i>7,000</i>	<i>(Difficult to trace, these are rather nice)</i>
<i>Cash</i>	<i>10,000</i>	<i>(The easiest stuff to make use of!)</i>
<i>Jewelry</i>	<i>30,000</i>	<i>(Lightweight, expensive and very fenceable!)</i>

So, having a bonus level value of 1 means each strongbox can contain any of these items; having a level value of 4 means strongboxes only contain Cash or Jewelry.

## **T-I-M-E Rollover Targets**

Completing the T-I-M-E rollover targets adds 5 seconds to the Vault Clock. The targets are reset shortly after being completed.

(*Note:* Depending on the Operator Menu setting, the state of these targets may also be “moved” by the flipper buttons.)

## **The Alarm System Roto Target and Alarm Rotate Leaf Targets**

The Alarm System is divided into 4 sectors, which must be individually switched off (Sector light changed from red to green) for the alarm to be disabled.

Each sector is switched off by the corresponding roto target type. The roto target is rotated left and right by the respective Alarm Rotate targets located on the opposite side of the Vault Exit.

When the Alarm is disabled, the following happens:

- 30 seconds are added to the Vault Clock.
- Extra Ball light starts flashing.
- The Bonus Value Level is increased. (This is the only way to get the bonus value level all the way up to maximum.)

### **Extra Ball**

When the ball drains while the Extra Ball light is flashing, bonus is added in the normal fashion, and the player is served a "fresh ball". The Player Display shows "SHOOT - AGAIN" and the Extra Ball light flashes until the Plunger Lane Gate has been hit by the new ball.







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