

## Finding Aid to the Williams Pinball Playfield Design Collection, 1946-1994, 2015

### Summary Information

**Title:** Williams pinball playfield design collection

**Creator:** Williams Manufacturing Co., Williams Electronics, Inc., WMS Industries, Inc.  
(primary)

**ID:** 115.wms

**Date:** 1946-1994, 2015 (inclusive); 1946-1975 (bulk)

**Extent:** 48.25 linear feet (physical); 22.8 GB (digital)

**Language:** The materials in this collection are in English.

**Abstract:** The Williams pinball playfield design collection contains more than 200 large hand-drawn playfield sketches, as well as mechanical insert drawings and cabinet artwork. Digital images of playfields and insert drawings are also included. The materials range in date from 1946 through 2015, with the bulk of the materials from 1946-1975.

**Repository:**

Brian Sutton-Smith Library and Archives of Play at The Strong  
One Manhattan Square  
Rochester, New York 14607  
585.263.2700  
library@museumofplay.org

### Administrative Information

**Conditions Governing Use:** This collection is open for research use by staff of The Strong and by users of its library and archives. Though the donors have not transferred intellectual property rights (including, but not limited to any copyright, trademark, and associated rights therein) to The Strong, they have given permission for The Strong to make copies in all media for museum, educational, and research purposes.

**Conditions Governing Access:** The donor has requested that digital files from this collection are not to be shared widely online; digital files are to be used for personal reference, research, educational, or museum purposes only.

**Custodial History:** The Williams pinball playfield design collection was donated to The Strong in November 2015 as a gift from Williams Electronic Games, Inc. The papers were accessioned by The Strong under Object ID 115.4166 and were received from Williams Electronic Games, Inc. in two hanging vertical file cabinets and one box. Digital scans were received separately from Duncan Brown in November 2015.

**Preferred citation for publication:** Williams pinball playfield design collection, Brian Sutton-Smith Library and Archives of Play at The Strong

**Processed by:** Julia Novakovic and Dane Flansburgh, December 2015

### Controlled Access Terms

#### Personal Names

- Ahlborn, Steve
- Anghelo, Python
- Brown, Duncan
- Clark, Norm

- Horlick, Gordon
- Kordek, Steve
- Mabs, Harry
- Oursler, Barry
- Ritchie, Mark
- Williams, Harry E.

**Corporate Names**

- Williams Electronics, Inc.
- Williams Manufacturing Co.
- WMS Industries, Inc.

**Subjects**

- Electronic games
- Indoor games
- Large-scale drawing
- Pinball machines
- Pinball machines--Drawings
- Pinball machines--History
- Video arcades
- Williams Electronics, Inc.
- Williams Manufacturing Co.

**Historical Note**

Harry E. Williams (1906-1983) was an American engineer, game designer, and entrepreneur who paved the way for the coin-operated pinball industry. Williams originally worked as a pinball operator in California during the early 1930s, but he soon began to design his own pinball games. He invented the tilt mechanism to prevent cheating in games, as well as the electronic action device which “kicked” the ball across the playfield. In 1943, he founded Williams Manufacturing Company in Chicago, Illinois—the American center for pinball production. His company rose to prominence as one of the most important arcade and pinball game manufacturers in the United States after World War II.

Williams pinball designers introduced many pinball innovations, including ramps, scoring reels, drop targets, and modern 3-inch flippers. The company was acquired and incorporated several times, resulting in company name changes (becoming Williams Electronics, Inc. in 1974 and WMS Industries in 1987). In 1988, WMS purchased competitor Bally/Midway. The pinball division of WMS closed in 1999, after more than 50 years of designing and manufacturing electro-mechanical and solid-state pinball machines.

**Collection Scope and Content Note**

The Williams pinball playfield design collection contains playfield drawings, mechanical insert drawings, original cabinet artwork, and digital scans of playfield and inserts drawings. The bulk of the materials are dated between 1946 through 1975, with some additional designs dated up through 1994. (The digital files were created in 2015 by scanning original playfield and insert drawings.) Additional scope and content information can be found in the “Contents List” section of this finding aid.

The Williams pinball playfield design collection is arranged into four series. The physical materials are housed in one archival document box, 12 map case drawers, and one oversized shelf in paper storage. The digital files are located on the internal network of The Strong and can only be accessed on-site; access-copy DVDs containing the scans are located in Box 1.

**Related Materials**

The International Center for the History of Electronic Games (ICHEG) holds more than 20 Williams pinball machines.

**System of Arrangement**

Series I: Williams pinball playfield drawings, 1946-1994

Series II: Mechanical insert drawings, 1957-1994

Series III: Cabinet and playfield artwork, 1983-1993

Series IV: Digital files, 2015

## Contents List

### Series I: Williams pinball playfield drawings, 1946-1994

**Scope and Content Note:** This series contains more than 200 large-scale pinball playfield drawings created by staff of Williams Manufacturing Company (later Williams Electronics, Inc.). Designers of these playfield drawings, as denoted by signatures or initials on the pages, include Harry E. Williams (likely “H.E.W.”), Gordon Horlick (“GTH.”), Harry Mabs (“HJMabs” or “HMabs”), Steve Ahlborn, Steve Kordek, Norm Clark, Barry Oursler, Python Anghelo, and Mark Ritchie. The bulk of these playfield drawings are for Williams projects dated between 1946 and 1975, with some additional designs dated up through 1994. At some point in his tenure at Williams, Steve Kordek added permanent marker annotations to the pages to indicate project numbers and titles for pinball games; these were likely also organized in numerical order by Kordek. The Strong has retained the order of the drawings as transferred from Williams.

Many of these drawings were scanned in 2015 by Duncan Brown and are housed in Series IV.

#### *Map Case 1, Drawer 2*

- Folder 1 #2 - “Dynamite,” unidentified artist/designer, 1946
- Folder 1 #3 - “Amber,” unidentified artist/designer, n.d. [c. 1946?]
- Folder 1 #4 - “Smarty,” unidentified artist/designer, n.d. [c. 1946?]
- Folder 1 #5 - “Show Girl,” unidentified artist/designer, 1946
- Folder 1 #6 - “Tornado,” unidentified artist/designer, 1947
- Folder 2 #7 - “Cyclone,” unidentified artist/designer [“H.E.W.”?], 1947
- Folder 2 #8 - “Torchy,” unidentified artist/designer [“WMS”?], 1947
- Folder 2 #9 - “Flamingo,” unidentified artist/designer, n.d. [c. 1947?]
- Folder 2 #11 - “Ginger,” unidentified artist/designer [“GTH”?], 1947
- Folder 2 #12 - “Bonanza,” unidentified artist/designer, n.d. [c. 1947?]
- Folder 3 #14 - “Sunny,” unidentified artist/designer, n.d. [c. 1947-1948?]
- Folder 3 #15 - “Stormy,” unidentified artist/designer, n.d. [c. 1947-1948?]
- Folder 3 #17 - “Virginia,” unidentified artist/designer, n.d. [c. 1947-1948?]
- Folder 3 #18 - “Yanks,” unidentified artist/designer [“H.E.W.”?], 1948
- Folder 3 #31 - “Freshie,” unidentified artist/designer, 1949
- Folder 4 #32 - “Quarter Back,” unidentified artist/designer [“GTH”?], 1949
- Folder 4 #33 - “De-Icer,” unidentified artist/designer [“H.E.W.”?], 1949
- Folder 4 #36 - “Dreamy,” unidentified artist/designer, n.d. [c. 1949?]
- Folder 4 #38 - “Sweet Heart,” unidentified artist/designer [“H.E.W.”?], 1949
- Folder 4 #39 - “Lucky Inning,” unidentified artist/designer [“GTH”?], 1950
- Folder 5 #44 - “Nifty,” unidentified artist/designer [“H.E.W.” and “GTH”?], 1950
- Folder 5 #46 - “Shoo-Shoo,” unidentified artist/designer [“GTH”?], 1951
- Folder 5 #49 - “Control Tower,” unidentified artist/designer [“H.E.W.”?], 1951
- Folder 5 #50 - “Harvey,” unidentified artist/designer [“H.E.W.”?], 1951
- Folder 5 #52 - “Arcade,” unidentified artist/designer, n.d. [c. 1951?]
- Folder 6 #53 - “Snooks,” unidentified artist/designer [“GTH”?], 1951

- Folder 6 #54 - "SSE," unidentified artist/designer, n.d. [c. 1951?]
- Folder 6 #55 - "Hayburner," unidentified artist/designer, n.d. [c. 1951?]
- Folder 6 #56 - "Nags," unidentified artist/designer, 1951
- Folder 6 #57 - "Jalopy," unidentified artist/designer, n.d. [c. 1951?]
- Folder 7 #58 - "Spark Plug," unidentified artist/designer, n.d. [c. 1951?]
- Folder 7 #59 - "Shoot the Moon," unidentified artist/designer, n.d. [c. 1951?]
- Folder 7 #60 - "Sea Jockey," unidentified artist/designer ["H.E.W."?], 1951
- Folder 7 #61-1 - "Hoss-Feathers," unidentified artist/designer ["GTH"?], 1951
- Folder 7 #61-2 - "Hoss-Feathers," unidentified artist/designer ["H.E.W."?], n.d. [c. 1951?]
- Folder 8 #62 - "Daffy Derby," unidentified artist/designer ["H.E.W."?], 1951
- Folder 8 #65 - "Horse Feathers," unidentified artist/designer, n.d. [c. 1951?]
- Folder 8 #67 - "Sportsman," H. Mabs, 1952
- Folder 8 #69 - "Majorettes #2," H. Mabs [and "J.S."?], 1952
- Folder 8 #70 - "Slugfest," H. Mabs [and "J.S."?], 1952

***Map Case 1,  
Drawer 3***

- Folder 1 #71 - "Olympics," H. Mabs, 1952
- Folder 1 #72 - "Domino," H. Mabs [and "J.J.S."?], 1952
- Folder 1 #73 - "Handicap," H. Mabs [and "J.J.S."?], 1952
- Folder 1 #74 - "Caravan," H. Mabs [and "J.J.S."?], 1952
- Folder 1 #75 - "Longbeach," unidentified artist/designer, n.d. [c. 1952?]
- Folder 2 #81 - "Fairways," unidentified artist/designer, 1953 [also c. 1952?]
- Folder 2 #84 - "Times Square," H. Mabs, 1952
- Folder 2 #92 - "Struggle Buggies," H. Mabs [and "W.L.P."?], 1953
- Folder 2 #97 - "9 Sisters," unidentified artist/designer, n.d. [c. 1953?]
- Folder 2 #104 - "Screamo," H. Mabs [and "W.L.P."?], 1954
- Folder 3 #107 - "Skyway," unidentified artist/designer ["H.E.W."?], 1954
- Folder 3 #110 - "Daffy Derby," unidentified artist/designer ["H.E.W."?], 1954
- Folder 3 #125 - "Race the Clock," unidentified artist/designer ["J.W."?], 1955
- Folder 3 #128 - "Bandwagon," unidentified artist/designer, n.d. [c. 1955?]
- Folder 3 #131 - "Three Deuces," unidentified artist/designer ["HMabs"?], n.d. [c. 1955?]
- Folder 4 #134 - "Jolly Joker," unidentified artist/designer ["H.E.W."?], 1955
- Folder 4 #135 - "Can Can," unidentified artist/designer ["E.J.C."?], 1955
- Folder 4 #139 - "Snafu," unidentified artist/designer ["HMabs"?], n.d. [c. 1955?]
- Folder 4 #142 - "Royal Crown," unidentified artist/designer ["H.E.W."?], 1955
- Folder 4 #145 - "Piccadilly," unidentified artist/designer, n.d. [c. 1955?]
- Folder 5 #171 - "Commadore," unidentified artist/designer ["H.E.W."?], 1956
- Folder 5 #173 - "Fun House," unidentified artist/designer ["H.E.W." and "S.A."?], 1956
- Folder 5 #174-1 - "Perky," unidentified artist/designer, 1956
- Folder 5 #174-2 - "Perky," unidentified artist/designer ["H.E.W."?], 1956
- Folder 5 #177 - "Shamrock," unidentified artist/designer ["E.J.C."?], 1956
- Folder 6 #178 - "Gay Paree," unidentified artist/designer, 1957
- Folder 6 #147 - "Yukon," unidentified artist/designer ["H.E.W."?], 1957
- Folder 6 #183 - [no title] [crossed-out "Jolly Joker"; "Yukon"], unidentified artist/designer ["H.E.W."?], 1957

- Folder 6 #184-1 - "Naples," unidentified artist/designer, n.d. [c. 1957?]
- Folder 6 #184-2 - "Naples," unidentified artist/designer ["H.E.W."?], 1957
- Folder 7 #185 - "Arrowhead," unidentified artist/designer ["H.E.W."?], 1957
- Folder 7 #187 - "Kings," unidentified artist/designer ["E.J.C."?], 1957
- Folder 7 #188-1 - "Top Hat," unidentified artist/designer ["E.J.C."?], 1957
- Folder 7 #188-2 - "Top Hat," unidentified artist/designer ["H.E.W."?], 1957
- Folder 7 #190-1 - "Reno," unidentified artist/designer, n.d. [c. 1957?]
- Folder 8 #190-2 - "Reno," unidentified artist/designer ["H.E.W."?], 1957
- Folder 8 #191 - "Steeple Chase," unidentified artist/designer, 1957
- Folder 8 #193 - "Jig Saw," unidentified artist/designer, n.d. [c. 1957?]
- Folder 8 #194 - "Sea Wolf," unidentified artist/designer ["H.E.W."?], 1957
- Folder 8 #195-1 - "Kick Off," S. Ahlborn, 1958

**Map Case 1,****Drawer 4**

- Folder 1 #195-2 - "Kick Off," unidentified artist/designer ["H.E.W."?], 1957
- Folder 1 #197 - "Gusher," unidentified artist/designer, 1958 [also c. 1957?]
- Folder 1 #197 - "Gusher," unidentified artist/designer ["H.E.W."?], 1957
- Folder 1 #198 - "4 Star," unidentified artist/designer, n.d. [c. 1957?]
- Folder 1 #199 - [no title], unidentified artist/designer, n.d. [c. 1957-1958?]
- Folder 2 #199-1 - "Satellite," unidentified artist/designer, n.d. [c. 1957?]
- Folder 2 #199-2 - "Satellite," H. Mabs, 1957
- Folder 2 #201 - "Casino," H. Mabs [and "C.R." and "S.A."?], 1958
- Folder 2 #203 - "Short Stop," unidentified artist/designer ["R.B.F."?], n.d. [c. 1958?]
- Folder 2 #206 - "3D," H. Mabs [and "C.R."?], 1958
- Folder 3 #206 - "3D," unidentified artist/designer ["HMabs," "S.A.," and (illegible)?], 1958
- Folder 3 #208 - "Tic Tac Toe," unidentified artist/designer ["C.W.R." and "S. Ahlborn"?], 1958
- Folder 3 #209 - "Sea Wolf," unidentified artist/designer ["C.R.," "HMabs," and "S. Ahlborn"?], 1958
- Folder 3 #209 - "Sea Wolf," unidentified artist/designer ["H.J.M."?], 1958
- Folder 3 #211 - "Crossword," unidentified artist/designer ["C.R.," "HMabs," and "S. Ahlborn"?], 1958
- Folder 4 #214 - "Club House," unidentified artist/designer ["S. Ahlborn"?], 1959
- Folder 4 #215 - "Spot Pool," unidentified artist/designer ["C.R." and "S.A."?], 1959
- Folder 4 #219 - "Golden Bells," unidentified artist/designer ["H.E.W."?], 1958-1959
- Folder 4 #224-1 - "Rocket," unidentified artist/designer ["C.R." and "S. Ahlborn"?], 1959
- Folder 4 #224-2 - "Rocket," unidentified artist/designer ["H.E.W."?], 1959
- Folder 5 #227 - "Spelling Bee," unidentified artist/designer ["H.E.W." and "H.J.M."?], 1959
- Folder 5 #228 - "Golden Gloves," H.J. Mabs, 1959
- Folder 5 #228 - "Golden Gloves," unidentified artist/designer ["C.R.," "HJMabs," and "S.A."?], 1959
- Folder 5 #231 - "Fiesta," H.J. Mabs, 1959
- Folder 5 #231 - "Fiesta," unidentified artist/designer ["C.R." and "S. Ahlborn"?], 1959

- Folder 6 #233 - "21," unidentified artist/designer ["H.J.M." and "S. Ahlborn"?], 1959  
 Folder 6 #234 - "Nags," unidentified artist/designer ["J.J." and (illegible)?], 1959  
 Folder 6 #235 - "Serenade," unidentified artist/designer ["CHN"?, "Jack," and "S. Ahlborn"?], 1959-1960  
 Folder 6 #236 - "Darts," unidentified artist/designer ["S. Ahlborn"?], 1960  
 Folder 6 #238 - "Music Man," H. Mabs, 1959  
 Folder 7 #238 - "Music Man," unidentified artist/designer ["J.J." and "S.A."?], 1960  
 Folder 7 #239 - "Jungle," H.J. Mabs, 1959  
 Folder 7 #239 - "Jungle," unidentified artist/designer ["J.J." and "S. Ahlborn"?], 1960  
 Folder 7 #241 - "Viking," unidentified artist/designer ["J.K.S." and Steve Ahlborn?], 1960  
 Folder 7 #242 - "Black Jack," unidentified artist/designer ["J.K.S." and "S. Ahlborn"?], 1960  
 Folder 8 #242 - "Black Jack," unidentified artist/designer ["H.J.M."?], 1960  
 Folder 8 #244 - "Magic Clock," H.J. Mabs, 1960  
 Folder 8 #244 - "Magic Clock," unidentified artist/designer ["CHN"?, "S. Ahlborn"?], 1960  
 Folder 8 #245 - "Bo-Bo" [crossed-out "Tri-Score"], Steven F. Kordek, 1960  
 Folder 8 #245 - "Bo-Bo," unidentified artist/designer ["J.J." and "S. Ahlborn"?], 1960  
 Folder 9 #246 - "Caravelle," unidentified artist/designer ["HJM" and "S. Ahlborn"?], 1960  
 Folder 9 #247 - "High Ways," Steve Kordek, 1960  
 Folder 9 #247 - "High Ways," unidentified artist/designer ["J.K.S." and "S. Ahlborn"?], 1960  
 Folder 9 #248 - [no title], Steve Kordek, 1960-1961  
 Folder 9 #248 - "Hollywood," Steve Kordek [and "J.K.S." and "S. Ahlborn"?], 1961

***Map Case 1,  
 Drawer 5***

- Folder 1 #250 - "Ten Spot," Steve Kordek, 1960  
 Folder 1 #251 - "Double Barrel," Steve Kordek, 1961  
 Folder 1 #253 - "Reserve," Steve Kordek, 1961  
 Folder 1 #255 - "Metro," Steve Kordek, 1961  
 Folder 1 #256 - "Space Ship," Steve Kordek, 1961  
 Folder 2 #258 - "Kismet," unidentified, ca. 1961  
 Folder 2 #260 - "Trade Winds," Steve Kordek, 1961  
 Folder 2 #261 - "Coquette," Steve Kordek, 1961  
 Folder 2 #262 - "3 Coins," Steve Kordek, 1961  
 Folder 2 #262-2 - "3 Coins," unidentified, 1961  
 Folder 3 #263, "Skill Ball," Steve Kordek, 1961  
 Folder 3 #266, "Valiant," Steve Kordek, 1961  
 Folder 3 #270, "Jolly Jokers," Steve Kordek, 1961  
 Folder 3 #271-x - "Kingpin," unidentified artist/designer, 1961 [not built]  
 Folder 3 #271 - "Kingpin #2," Steve Kordek, 1962  
 Folder 4 #272 - "Tom-Tom," Steve Kordek, 1961  
 Folder 4 #274 - "4 Roses," Steve Kordek, 1961-1962  
 Folder 4 #276 - "Friendship 7," Steve Kordek, 1962  
 Folder 4 #277 - "Mardi Gras," Steve Kordek, 1962

- Folder 4 #278 – “Vagabond,” Steve Kordek, 1962
- Folder 5 #279 – “Big Deal,” Steve Kordek, 1962
- Folder 5 #280 – “Jumpin Jacks,” Steve Kordek, 1962
- Folder 5 #282 – “Swing Time,” Steve Kordek, 1962
- Folder 5 #283 – “Skill Pool,” Steve Kordek, 1962
- Folder 5 #284 – “El Toro,” Steve Kordek, 1962
- Folder 6 #287 – “Big Deal,” Steve Kordek, 1962-1963
- Folder 6 #288 – “Oh Boy,” Steve Kordek, 1963
- Folder 6 #291 – “Merry Widow,” Steve Kordek, 1963
- Folder 6 #292 – “Soccer,” unidentified, 1962
- Folder 6 #293 - “San Francisco,” Steve Kordek, 1963-1964
- Folder 7 #295 - “Heat Wave,” Steve Kordek, 1963-1964
- Folder 7 #297 - “Palooka,” Steve Kordek, 1963
- Folder 7 #298 - “Stop N Go,” unidentified artist/designer [D. Glank?], 1963
- Folder 7 #299 - “Riverboat,” unidentified artist/designer, 1964
- Folder 7 #300 - “Whoopee,” Steve Kordek, 1963-1964
- Folder 8 #302 - “Double Play,” unidentified artist/designer, 1965
- Folder 8 #303 - “Eager Beaver,” unidentified artist/designer [NRC?], 1964
- Folder 8 #304 - “Zig Zag,” Steve Kordek, 1964
- Folder 8 #305 - “Pretty Baby,” Steve Kordek, 1964
- Folder 8 #310 - “Alpine Club,” Steve Kordek, 1964

***Map Case 1,  
Drawer 6***

- Folder 1 #312 – “Moulin Rouge,” Norm Clark, 1964
- Folder 1 #313 – “Pot O’ Gold,” Steve Kordek, 1964
- Folder 1 #314 – “Bowl-A-Strike/Lucky Strike,” unidentified artist/designer [DG?], 1964
- Folder 1 #317 – “Eight Ball,” unidentified artist/designer [DG?], 1964
- Folder 1 #318 – “Teacher’s Pet,” Steve Kordek, 1964-1965
- Folder 2 #319 – Big Chief, Steve Kordek, 1965
- Folder 2 #320 – “Williams-A-Go-Go,” Norm Clark, 1965
- Folder 2 #320 – “A-Go-Go,” Norm Clark, 1965
- Folder 2 #321 – “Full House,” Norm Clark, 1965
- Folder 2 #322 – “Derby Day,” Steve Kordek, 1966-1967
- Folder 3 #324 – “Beat Time,” Steve Kordek, 1965-1966
- Folder 3 #325 – “Hot Line,” Steve Kordek, 1965
- Folder 3 #328 – “Casanova,” Steve Kordek, 1965
- Folder 3 #329 – “Magic City,” unidentified artist/designer, 1965
- Folder 3 #331 – “Apollo,” Norm Clark, 1965
- Folder 4 #333 – Shangri-La, Steve Kordek, 1965-1966
- Folder 4 #335 – “Touchdown,” Steve Kordek, 1966-1967
- Folder 4 #339-340, “Ding Dong” and “Smarty,” Norm Clark, 1966
- Folder 4 #341 – “Lady Luck,” Norm Clark, 1966
- Folder 4 #342 - “Pit Stop,” Norm Clark, 1966
- Folder 5 #343 – “Jolly Roger,” Norm Clark, 1966
- Folder 5 #349 – “Daffie,” unidentified artist/designer, 1968

Folder 5	#348-349 – “Doozie” and “Daffie,” Steve Kordek, 1967-1968
Folder 5	#350 – “Student Prince,” Steve Kordek, 1966-1967
Folder 5	#351 – “Olympic Hockey,” Steve Kordek, 1966
Folder 5	#351 – “Olympic Hockey,” Steve Kordek, 1970
Folder 6	#354 – “4 Aces,” Steve Kordek, 1967-1969
Folder 6	#356-357 – “Miss-O” and “Cue-T,” Norm Clark, 1966-1967
Folder 6	#359 – “Cabaret,” Steve Kordek, 1967-1968
Folder 6	#360 – “Hayburners II,” Steve Kordek, 1968
Folder 6	#361 – “Suspense,” Norm Clark, 1968
Folder 7	#363 – “Smart Set,” Norm Clark, 1967
Folder 7	#366 – “Expo,” Norm Clark, 1968
Folder 7	#367x, “Gay 90’s,” Steve Kordek, 1968-1969
Folder 7	#358/368 – “Paddock” and “Post-Time,” Norm Clark, 1966-1968
Folder 7	#369 – “Roto,” unidentified artist/designer, 1968
Folder 8	#371 – “Strike Zone,” Norm Clark, 1968
Folder 8	#372-373 – “Seven Up” and “Set Up,” Steve Kordek, 1968
Folder 8	#373 – “Set Up,” unidentified artist/designer, 1968
Folder 8	#376 – “Grid Iron,” Norm Clark, 1967
Folder 8	#377 – “Aces N Wings,” Steve Kordek, 1969

***Map Case 1,******Drawer 7***

Folder 1	#378 – “Super Star” [“Big Star” #414], Steve Kordek, 1971-1972
Folder 1	#380-381 – “Jive-Time” and “Rock N Roll,” Norm Clark, 1969
Folder 1	#385 – “Tramway,” Steve Kordek and Harry Williams, 1972
Folder 1	#385 – “Tramway” (revised), Norm Clark [and “GTH”], 1972-1973
Folder 1	#386 – “Dipsy-Doodle,” Norm Clark, 1969
Folder 2	#387 – “Art Gallery,” unidentified artist/designer, ca. 1972
Folder 2	#387 – “Fan-Tas-Tic,” Norm Clark, ca. 1972
Folder 2	#388 – “Winner,” unidentified artist/designer, 1970
Folder 2	#389 – “Straight Flush,” Norm Clark, 1969
Folder 2	#390 – “Doodle Bug,” Norm Clark, 1970
Folder 3	#391 – “Solid N Stripes,” Norm Clark, 1970
Folder 3	#394 – “Zodiac” [“Planets” NY model], Steve Kordek, 1970-1971
Folder 3	#397 – “Gold Rush” and “Jackpot,” Norm Clark, 1970
Folder 3	#458 – “Little Chief,” Steve Kordek, 1974-1975
Folder 3	#461/465 – “Valencia” and “Toledo,” Harry Williams, 1975
Folder 4	#488 – “Pokerino,” Steve Kordek, 1978
Folder 4	#519 – “Joust – A,” unidentified artist/designer, 1985
Folder 4	#519 – “Joust – B,” unidentified artist/designer, 1985
Folder 4	#519 – “Joust,” Barry Oursler, 1982
Folder 4	#521 – “Firepower II,” Mark Ritchie, 1982-1983
Folder 5	#527 – “Rat Race,” Barry Oursler, 1984
Folder 5	Unlisted project number - [no title], Mark Ritchie, 1993

***Map Case 1,  
Drawer 8***

- Folder 1 #60.020 - "Pinball Circus," Python Anghelo and Ortega, 1992-1993 [18 sheets]
- Folder 2 Playfield template drawings, unidentified artist/designer, 1966-1978 [3 sheets]

***Separated oversized drawings:***

***Room B9, Unit 41, Level 3***

- Folder 1 #519 - "Joust B," Barry Oursler, 1983
- Folder 1 #571 - "Diner," Mark Ritchie, 1989-1990
- Folder 1 #573 - "Police Force," Barry Oursler, Mark Ritchie, Python Anghelo, 1988-1989
- Folder 1 #50.002 - "The Machine," Python Anghelo, ca. 1991
- Folder 1 #50.017 - "Indiana Jones," Mark Ritchie, 1993
- Folder 1 # 50.030 - "Dirty Harry," Barry Oursler, 1994

**Series II: Mechanical insert drawings, 1946-1994**

**Scope and Content Note:** This series houses mechanical design drawings of pinball machine inserts. These were retained by Steve Kordek while at Williams.

Many of these drawings were scanned in 2015 by Duncan Brown and are housed in Series IV.

***Map Case 1,  
Drawer 9***

- Folder 1 "Insert drawings, 190s," 1957 [8 sheets]
- Folders 2-5 "Insert drawings, low 200s," 1958-1961 [38 sheets]

***Map Case 1,  
Drawer 10***

- Folders 1-4 "Insert drawings, high 200s," 1962-1964 [48 sheets]

***Map Case 1,  
Drawer 11***

- Folders 1-4 "Insert drawings, low 300s," 1963-1967 [36 sheets]
- Folders 5-6 "Insert drawings, high 300s," 1968-1970 [20 sheets]

***Map Case 1,  
Drawer 12***

- Folders 1-6 "Miscellaneous insert drawings," 1953-1994 [100 pages]

**Series III: Cabinet and playfield artwork, 1983-1993**

**Scope and Content Note:** This series holds artwork for several later Williams pinball machines. Of the four games represented, only Cyclone (1988) and Hurricane (1991) went into large-scale production. (Rat Race was never mass-produced, and only two prototype machines of Pinball Circus were made.)

*Map Case 1,*

*Drawer 13*

- Folder 1 "Cyclone," unidentified artist, c. 1988
- Folder 2 "Hurricane," unidentified artist, c. 1991
- Folder 3 "Pinball Circus," unidentified artist, c. 1993
- Folder 4 "Rat Race," unidentified artist, c. 1983

**Series IV: Digital files, 2015**

**Scope and Content Note:** Digital scans of materials in Series I and II comprise this series, which can be accessed via hard-copy DVD or The Strong's internal network. The more than 800 files in this series include grayscale scans of playfields, bitonal scans of playfields, color scans of select playfields and inserts, grayscale scans of inserts, and bitonal scans of inserts. File names of scans were kept as originally received from Duncan Brown.

**Box 1**

Object 1      Grayscale scans of playfields, Disk 1, 2015

Files include:

- gpf002\_dynamite\_01
- gpf003\_amber\_01
- gpf004\_smarty\_01
- gpf005\_showgirl\_01
- gpf006\_tornado\_01
- gpf007\_cyclone\_01
- gpf008\_torchy\_01
- gpf009\_flamingo\_01
- gpf011\_ginger\_01
- gpf012\_bonanza\_01
- gpf014\_sunny\_01
- gpf015\_stormy\_01
- gpf017\_virginia\_01
- gpf018\_yanks\_01
- gpf031\_freshie\_01
- gpf032\_quarterback\_01
- gpf033\_deicer\_01
- gpf036\_dreamy\_01
- gpf038\_sweetheart\_01
- gpf039\_lucky\_inning\_01
- gpf044\_nifty\_01
- gpf046\_shoo\_shoo\_01
- gpf049\_control\_tower\_01
- gpf050\_harvey\_01
- gpf052\_arcade\_01
- gpf053\_snooks\_01
- gpf054\_sse\_01
- gpf055\_hayburners\_01
- gpf056\_nags\_01
- gpf057\_jalopy\_01
- gpf058\_spark\_plugs\_01
- gpf059\_shoot\_the\_moon\_01
- gpf060\_sea\_jockeys\_01
- gpf061\_1\_hoss\_feathers\_01

- gpf061\_2\_hoss\_feathers\_01
- gpf062\_daffy\_derby\_01
- gpf065\_horse\_feathers\_01
- gpf067\_sportsman\_01
- gpf069\_majorettes\_no2\_01
- gpf070\_slugfest\_01
- gpf071\_olympics\_01
- gpf072\_domino\_01
- gpf073\_handicap\_01
- gpf074\_caravan\_01
- gpf075\_long\_beach\_01
- gpf081\_fairway\_02
- gpf084\_times\_square\_02
- gpf092\_struggle\_buggies\_02
- gpf097\_nine\_sisters\_02
- gpf104\_screamo\_02
- gpf107\_skyway\_02
- gpf110\_daffy\_derby\_02
- gpf125\_race\_the\_clock\_03
- gpf128\_bandwagon\_02
- gpf131\_three\_deuces\_01
- gpf134\_jolly\_joker\_01
- gpf135\_can\_can\_01
- gpf139\_snafu\_02
- gpf142\_royal\_crown\_01
- gpf145\_piccadilly\_01
- gpf147\_yukon\_01
- gpf147\_yukon\_shuffle\_board\_01
- gpf171\_commodore\_01
- gpf173\_fun\_house\_01
- gpf174\_1\_perky\_01
- gpf174\_2\_perkey\_01
- gpf177\_shamrock\_01
- gpf178\_gay\_paree\_01
- gpf184\_1\_naples\_01
- gpf184\_2\_naples\_01
- gpf185\_arrowhead\_01
- gpf187\_kings\_01
- gpf188\_1\_top\_hat\_01
- gpf188\_2\_top\_hat\_01
- gpf190\_1\_reno\_01
- gpf190\_2\_reno\_01
- gpf191\_steeple\_chase\_01
- gpf193\_jig\_saw\_02

- gpf194\_sea\_wolf\_01
- gpf195\_1\_kick\_off\_01
- gpf195\_2\_kick\_off\_01
- gpf197\_1\_gusher\_01
- gpf197\_2\_gusher\_01
- gpf198\_4\_star\_02
- gpf199\_0\_satellite\_01
- gpf199\_1\_satellite\_01
- gpf199\_2\_satellite\_01

Object 2 Grayscale scans of playfields, Disk 2, 2015

Files include:

- gpf201\_casino\_01
- gpf203\_short\_stop\_01
- gpf206\_3d\_1\_01
- gpf206\_3d\_2\_01
- gpf208\_tic\_tac\_toe\_02
- gpf209\_1\_sea\_wolf\_01
- gpf209\_2\_sea\_wolf\_01
- gpf211\_crossword\_01
- gpf214\_club\_house\_1
- gpf215\_spot\_pool\_01
- gpf219\_golden\_bells\_01
- gpf224\_1\_rocket\_01
- gpf224\_2\_rocket\_01
- gpf227\_spelling\_bee\_01
- gpf228\_1\_golden\_gloves\_01
- gpf228\_2\_golden\_gloves\_02
- gpf231\_1\_fiesta\_01
- gpf231\_2\_fiesta\_01
- gpf233\_21\_01
- gpf234\_nags\_01
- gpf234\_nags\_02
- gpf235\_serenade\_01
- gpf236\_darts\_01
- gpf238\_1\_music\_man\_01
- gpf238\_2\_music\_man\_01
- gpf239\_1\_jungle\_01
- gpf239\_2\_jungle\_01
- gpf241\_viking\_01
- gpf242\_1\_black\_jack\_01
- gpf242\_2\_black\_jack\_01
- gpf244\_1\_magic\_clock\_01
- gpf244\_2\_magic\_clock\_01

- gpf245\_1\_bo\_bo\_01
- gpf245\_2\_bo\_bo\_01
- gpf246\_caravelle\_01
- gpf247\_1\_highways\_01
- gpf247\_2\_highways\_01
- gpf248\_1\_hollywood\_01
- gpf248\_2\_hollywood\_01
- gpf250\_ten\_spot\_01
- gpf251\_double\_barrel\_01
- gpf253\_reserve\_01
- gpf255\_metro\_02
- gpf256\_space\_ship\_02
- gpf258\_kismet\_01
- gpf260\_tradewinds\_01
- gpf261\_coquette\_01
- gpf262\_1\_3\_coins\_01
- gpf262\_2\_3\_coins\_01
- gpf263\_skill\_ball\_01
- gpf266\_valiant\_01
- gpf270\_jolly\_jokers\_01
- gpf271\_king\_pin\_01
- gpf271\_x\_king\_pin\_01
- gpf272\_tom\_tom\_01
- gpf274\_4\_roses\_01
- gpf276\_friendship\_7\_01
- gpf277\_mardi\_gras\_01
- gpf278\_vagabond\_01
- gpf279\_big\_deal\_01
- gpf280\_jumpin\_jacks\_01
- gpf282\_swing\_time\_01
- gpf283\_skill\_pool\_01
- gpf284\_el\_toro\_01
- gpf287\_big\_daddy\_01
- gpf288\_oh\_boy\_01
- gpf291\_merry\_widow\_01
- gpf292\_soccer\_01
- gpf293\_san\_francisco\_01
- gpf295\_heat\_wave\_01
- gpf297\_palooka\_01
- gpf298\_stop\_n\_go\_01
- gpf299\_river\_boat
- gpf300\_whoopee\_01
- gpf302\_double\_play\_01
- gpf303\_eager\_beaver\_01

- gpf304\_zig\_zag\_01
- gpf305\_pretty\_baby\_01

Object 3 Grayscale scans of playfields, Disk 3, 2015

Files include:

- gpf310\_alpine\_club\_01
- gpf312\_moulin\_rouge\_01
- gpf313\_pot\_o\_gold\_01
- gpf314\_lucky\_strike\_01
- gpf317\_eight\_ball\_01
- gpf318\_teachers\_pet\_02
- gpf319\_big\_chief\_01
- gpf320\_1\_a\_go\_go\_01
- gpf320\_2\_a\_go\_go\_01
- gpf321\_full\_house\_01
- gpf322\_derby\_day\_01
- gpf324\_beat\_time\_01
- gpf325\_hot\_line\_01
- gpf328\_casanova\_01
- gpf329\_magic\_city\_01
- gpf331\_apollo\_01
- gpf333\_shangri\_la\_01
- gpf335\_touchdown\_02
- gpf339\_ding\_dong\_01
- gpf341\_lady\_luck\_01
- gpf342\_pit\_stop\_01
- gpf343\_jolly\_roger\_01
- gpf348\_doozie\_01
- gpf349\_daffie\_01
- gpf350\_student\_prince\_01
- gpf351\_1\_olympic\_hockey\_01
- gpf354\_4\_aces\_01
- gpf356\_miss\_o\_01
- gpf358\_paddock\_01
- gpf359\_cabaret\_01
- gpf360\_hayburners\_ii\_01
- gpf361\_suspense\_01
- gpf363\_smart\_set\_01
- gpf366\_expo\_01
- gpf367\_gay\_90s\_01
- gpf369\_roto\_01
- gpf371\_strike\_zone\_01
- gpf372\_seven\_up\_01
- gpf373\_set\_up\_01

- gpf376\_grid\_iron\_02
- gpf377\_aces\_and\_kings\_01
- gpf378\_big\_star\_01
- gpf380\_jive\_time\_02
- gpf385\_1\_tramway\_01
- gpf385\_2\_tramway\_01
- gpf386\_dipsy\_doodle\_01
- gpf387\_art\_gallery\_01
- gpf387\_fan\_tas\_tic\_01
- gpf388\_winner\_01
- gpf389\_straight\_flush\_01
- gpf390\_doodle\_bug\_01
- gpf391\_solids\_n\_stripes\_01
- gpf394\_zodiac\_01
- gpf458\_little\_chief\_02
- gpf461\_valencia\_01
- gpf488\_pokerino\_02
- gpf519\_joust\_01
- gpf519\_joust\_a\_01
- gpf519\_joust\_b\_01
- gpf519\_joust\_c\_01
- gpf521\_firepower\_ii\_01
- gpf527\_rat\_race\_01
- gpf532\_rat\_race\_ii\_01
- gpf571\_diner\_01
- gpf573\_police\_force\_01
- gpf2001\_truck\_stop\_01
- gpf50002\_machine\_01
- gpf50017\_indiana\_jones\_01
- gpf50017\_indiana\_jones\_upper\_01
- gpf50030\_dirty\_harry\_01
- gpf60020\_pinball\_circus\_1\_01
- gpf60020\_pinball\_circus\_ring2\_01
- gpf60020\_pinball\_circus\_ring3\_2\_01
- gpf60020\_pinball\_circus\_switch\_detail\_01
- gpinball\_playfield\_master\_dwg\_1\_01
- gpinball\_playfield\_template\_11r\_195\_01
- gpinball\_playfield\_template\_11r\_195\_1\_01

Object 4      Grayscale scans of insert drawings, Disk 1, 2015  
Files include:

- gins000\_bullseye\_01
- gins000\_treasure\_island\_01
- gins190\_reno\_01

- gins193\_jigsaw\_01
- gins194\_sea\_wolf\_01
- gins195\_kick\_off\_01
- gins197\_gusher\_01
- gins199\_satellite\_01
- gins201\_casino\_01
- gins203\_short\_stop\_01
- gins204\_vanguard\_01
- gins206\_3d\_01
- gins208\_tic\_tac\_toe\_01
- gins209\_sea\_wolf\_01
- gins211\_cross\_word\_01
- gins211\_cross\_word\_02
- gins214\_club\_house\_01
- gins215\_bank\_shuffle\_01
- gins216\_hercules\_01
- gins217\_pinch\_hitter\_01
- gins218\_spot\_pool\_01
- gins219\_golden\_bells\_01
- gins224\_rocket\_01
- gins225\_titan\_01
- gins227\_spelling\_bee\_01
- gins228\_golden\_gloves\_01
- gins231\_fiesta\_01
- gins232\_official\_baseball\_01
- gins233\_21\_01
- gins234\_nags\_01
- gins235\_serenade\_01
- gins236\_darts\_01
- gins238\_music\_man\_01
- gins239\_1\_jungle\_01
- gins239\_2\_jungle\_01
- gins240\_stock\_market\_01
- gins241\_viking\_01
- gins242\_black\_jack\_01
- gins243\_space\_glider\_01
- gins244\_magic\_clock\_01
- gins245\_bobo\_01
- gins246\_caravelle\_01
- gins247\_highways\_01
- gins249\_batting\_champ\_01
- gins250\_ten\_spot\_01
- gins251\_double\_barrel\_01
- gins252\_batting\_champ\_void\_01

- gins253\_reserve\_01
- gins255\_metro\_01
- gins256\_1\_spaceship\_01
- gins256\_2\_spaceship\_01
- gins260\_tradewinds\_01
- gins261\_coquette\_01
- gins262\_3\_coins\_01
- gins263\_skill\_ball\_01
- gins266\_1\_valiant\_01
- gins266\_2\_valiant\_01
- gins270\_jolly\_jokers\_01
- gins271\_king\_pin\_01
- gins272\_tom\_tom\_01
- gins273\_extra\_inning\_01
- gins273\_extra\_inning\_02
- gins274\_4\_roses\_01
- gins275\_world\_series\_01
- gins276\_friendship\_7\_01
- gins277\_mardi\_gras\_01
- gins278\_vagabond\_01
- gins279\_big\_deal\_01
- gins280\_jumpin\_jacks\_01
- gins282\_swing\_time\_01
- gins283\_skill\_pool\_01
- gins284\_el\_toro\_01
- gins285\_1963\_major\_league\_01
- gins285\_1963\_world\_series\_01
- gins286\_1963\_big\_inning\_01
- gins287\_big\_daddy\_01
- gins287\_big\_daddy\_02
- gins288\_oh\_boy\_01
- gins290\_1\_beat\_the\_clock\_01
- gins290\_2\_beat\_the\_clock\_01
- gins291\_merry\_widow\_01
- gins292\_soccer\_01
- gins293\_san\_francisco\_01
- gins294\_1964\_grand\_slam\_01
- gins295\_1\_heat\_wave\_01
- gins295\_2\_heat\_wave\_01
- gins296\_1964\_tenth\_inning\_01
- gins297\_palooka\_01
- gins298\_stop\_n\_go\_01
- gins299\_river\_boat\_01

Object 5      Grayscale scans of insert drawings, Disk 2, 2015

Files include:

- gins300\_whoopee\_01
- gins302\_1965\_baseball\_01
- gins303\_eager\_beaver\_01
- gins305\_pretty\_baby\_01
- gins306\_zig\_zag\_01
- gins308\_driving\_range\_01
- gins310\_2\_alpine\_club\_01
- gins310\_alpine\_club\_01
- gins312\_moulin\_rouge\_01
- gins313\_pot\_a\_gold\_01
- gins314\_lucky\_strike\_01
- gins317\_8\_ball\_01
- gins318\_teachers\_pet\_01
- gins319\_big\_chief\_01
- gins320\_a\_go\_go\_01
- gins321\_full\_house\_01
- gins324\_beat\_time\_01
- gins325\_hot\_line\_01
- gins328\_casanova\_01
- gins329\_magic\_city\_01
- gins331\_apollo\_01
- gins332\_1966\_pitch\_and\_bat\_01
- gins333\_shangri\_la\_01
- gins334\_1966\_big\_league\_01
- gins335\_touchdown\_01
- gins336\_big\_strike\_01
- gins337\_magic\_town\_01
- gins338\_blast\_off\_01
- gins339\_ding\_dong\_01
- gins339\_ding\_dong\_02
- gins340\_smarty\_01
- gins341\_lady\_luck\_01
- gins342\_pit\_stop\_01
- gins343\_jolly\_roger\_01
- gins344\_arctic\_gun\_01
- gins345\_base\_hit\_01
- gins347\_kickoff\_not\_used\_01
- gins348\_doozie\_01
- gins348\_dooze\_02
- gins349\_daffie\_01
- gins353\_aqua\_gun\_01
- gins358\_paddock\_01

- gins361\_suspense\_01
- gins363\_smart\_set\_01
- gins367\_gay\_90s\_01
- gins368\_post\_time\_01
- gins377\_aces\_and\_kings\_01
- gins379\_mini\_bowl\_01
- gins383\_ringer\_01
- gins385\_tramway\_01
- gins386\_dipsy\_doodle\_01
- gins387\_fan\_tas\_tic\_01
- gins389\_straight\_flush\_01
- gins390\_doodle\_bug\_01
- gins391\_solids\_and\_stripes\_01
- gins393\_travel\_time\_01
- gins397\_jack\_pot\_01
- gins399\_sniper\_01

Object 6      Color scans of select playfields and inserts, Disk 1, 2015

Files include:

- cins204\_vanguard\_01
- cins238\_music\_man\_01
- cins344\_magic\_clock\_01
- cins\_251\_double\_barrel\_01
- cins60020\_pinball\_circus\_1\_01
- cpf017\_virginia\_01
- cpf060\_sea\_jockeys\_01
- cpf081\_fairways\_02
- cpf084\_times\_square\_02
- cpf092\_struggle\_buggies\_01
- cpf097\_nine\_sisters\_02
- cpf174\_2\_perky\_01
- cpf195\_kick\_off\_01
- cpf206\_3d\_1\_01
- cpf206\_3d\_2\_01
- cpf236\_darts\_01
- cpf247\_1\_highways\_01
- cpf250\_ten\_spot\_01
- cpf251\_space\_ship\_01
- cpf260\_tradewinds\_01
- cpf261\_coquette\_01
- cpf262\_1\_3\_coins\_01
- cpf263\_skill\_ball\_01
- cpf266\_valiant\_01
- cpf271\_king\_pin\_01

- cpf276\_friendship\_7\_01
- cpf277\_mardi\_gras\_01
- cpf519\_joust\_01
- cpf527\_rat\_race\_01
- cpf527\_rat\_race\_plastics\_01
- cpf573\_police\_force\_01
- cpf2001\_truck\_stop\_01
- cpf50017\_indiana\_jones\_01
- cpf50017\_indiana\_jones\_upper\_01
- cpf60020\_pinball\_circus\_ring3\_3\_01
- cpinball\_playfield\_master\_dwg\_1\_01
- cpinball\_playfield\_template\_11r\_195\_1\_01

Object 7 Bitonal scans of playfields and inserts, Disk 1, 2015  
Files include:

- ins000\_bullseye\_01
- ins000\_treasure\_island\_01
- ins190\_reno\_01
- ins193\_jigsaw\_01
- ins194\_sea\_wolf\_01
- ins195\_kick\_off\_01
- ins197\_gusher\_01
- ins199\_satellite\_01
- ins201\_casino\_01
- ins203\_short\_stop\_01
- ins204\_vanguard\_01
- ins206\_3d\_01
- ins208\_tic\_tac\_toe\_01
- ins209\_sea\_wolf\_01
- ins211\_cross\_word\_01
- ins214\_club\_house\_01
- ins215\_bank\_shuffle\_01
- ins216\_hercules\_01
- ins217\_pinch\_hitter\_01
- ins218\_spot\_pool\_01
- ins219\_golden\_bells\_01
- ins224\_rocket\_01
- ins225\_titan\_01
- ins227\_spelling\_bee\_01
- ins228\_golden\_gloves\_01
- ins231\_fiesta\_01
- ins232\_official\_baseball\_01
- ins233\_21\_01
- ins234\_nags\_01

- ins235\_serenade\_01
- ins236\_darts\_01
- ins238\_music\_man\_01
- ins239\_1\_jungle\_01
- ins239\_2\_jungle\_01
- ins240\_stock\_market\_01
- ins241\_viking\_01
- ins242\_black\_jack\_01
- ins243\_space\_glider\_01
- ins244\_magic\_clock\_02
- ins245\_bobo\_01
- ins246\_caravelle\_01
- ins247\_highways\_01
- ins249\_batting\_champ\_01
- ins250\_ten\_spot\_01
- ins251\_double\_barrel\_01
- ins252\_batting\_champ\_void\_01
- ins253\_reserve\_01
- ins255\_metro\_01
- ins256\_1\_spaceship\_01
- ins256\_2\_spaceship\_01
- ins260\_tradewinds\_01
- ins261\_coquette\_01
- ins262\_3\_coins\_01
- ins263\_skill\_ball\_01
- ins266\_1\_valiant\_01
- ins266\_2\_valiant\_01
- ins270\_jolly\_jokers\_01
- ins271\_king\_pin\_01
- ins272\_tom\_tom\_01
- ins273\_extra\_inning\_01
- ins274\_4\_roses\_01
- ins275\_world\_series\_01
- ins276\_friendship\_7\_01
- ins277\_mardi\_gras\_01
- ins278\_vagabond\_01
- ins279\_big\_deal\_01
- ins280\_jumpin\_jacks\_01
- ins282\_swing\_time\_01
- ins283\_skill\_pool\_01
- ins284\_el\_toro\_01
- ins285\_1963\_major\_league\_01
- ins285\_1963\_world\_series\_01
- ins286\_1963\_big\_inning\_01

- ins287\_big\_daddy\_01
- ins288\_oh\_boy\_01
- ins290\_1\_beat\_the\_clock\_01
- ins290\_2\_beat\_the\_clock\_01
- ins291\_merry\_widow\_01
- ins292\_soccer\_01
- ins293\_san\_francisco\_01
- ins294\_1964\_grand\_slam\_01
- ins295\_1\_heat\_wave\_01
- ins295\_2\_heat\_wave\_01
- ins296\_1964\_tenth\_inning\_01
- ins297\_palooka\_01
- ins298\_stop\_n\_go\_01
- ins299\_river\_boat\_01
- ins300\_whoopee\_01
- ins302\_1965\_baseball\_01
- ins303\_eager\_beaver\_01
- ins305\_pretty\_baby\_01
- ins306\_zig\_zag\_01
- ins308\_driving\_range\_01
- ins310\_1\_alpine\_club\_01
- ins310\_2\_alpine\_club\_01
- ins312\_moulin\_rouge\_01
- ins313\_pot\_a\_gold\_01
- ins314\_lucky\_strike\_01
- ins317\_8\_ball\_01
- ins318\_teachers\_pet\_01
- ins319\_big\_chief\_01
- ins320\_a\_go\_go\_01
- ins321\_full\_house\_01
- ins324\_beat\_time\_01
- ins325\_hot\_line\_01
- ins328\_casanova\_01
- ins329\_magic\_city\_01
- ins331\_apollo\_01
- ins332\_1966\_pitch\_and\_bat\_01
- ins333\_shangri\_la\_01
- ins334\_1966\_big\_league\_01
- ins335\_touchdown\_01
- ins336\_big\_strike\_01
- ins337\_magic\_town\_01
- ins338\_blast\_off\_01
- ins339\_ding\_dong\_01
- ins340\_smarty\_01

- ins341\_lady\_luck\_01
- ins342\_pit\_stop\_01
- ins343\_jolly\_roger\_01
- ins344\_arctic\_gun\_01
- ins345\_base\_hit\_01
- ins347\_kickoff\_not\_used\_01
- ins348\_doozie\_01
- ins349\_daffie\_01
- ins353\_aqua\_gun\_01
- ins358\_paddock\_01
- ins361\_suspense\_01
- ins363\_smart\_set\_01
- ins367\_gay\_90s\_01
- ins368\_post\_time\_01
- ins377\_aces\_and\_kings\_01
- ins379\_mini\_bowl\_01
- ins383\_ringer\_01
- ins385\_tramway\_01
- ins386\_dipsy\_doodle\_01
- ins387\_fan\_tas\_tic\_01
- ins389\_straight\_flush\_01
- ins390\_doodle\_bug\_01
- ins391\_solids\_and\_stripes\_01
- ins393\_travel\_time\_01
- ins397\_jack\_pot\_01
- ins399\_sniper\_01
- ins60020\_pinball\_circus\_2\_01
- pf002\_dynamite\_02
- pf003\_amber\_05
- pf004\_smarty\_02
- pf005\_showgirl\_01
- pf006\_tornado\_01
- pf007\_cyclone\_01
- pf008\_torchy\_01
- pf009\_flamingo\_01
- pf011\_ginger\_01
- pf012\_bonanza\_01
- pf014\_sunny\_01
- pf015\_stormy\_01
- pf017\_virginia\_01
- pf018\_yanks\_01
- pf031\_freshie\_01
- pf032\_quarterback\_01
- pf033\_deicer\_01

- pf036\_dreamy\_01
- pf038\_sweetheart\_01
- pf039\_lucky\_inning\_01
- pf044\_nifty\_01
- pf046\_shoo\_shoo\_02
- pf049\_control\_tower\_02
- pf050\_harvey\_01
- pf052\_arcade\_01
- pf053\_snooks\_01
- pf054\_sse\_01
- pf055\_hayburners\_01
- pf056\_nags\_01
- pf057\_jalopy\_01
- pf058\_spark\_plugs\_01
- pf059\_shoot\_the\_moon\_01
- pf060\_sea\_jockeys\_01
- pf061\_1\_hoss\_feathers\_01
- pf061\_2\_hoss\_feathers\_01
- pf062\_daffy\_derby\_01
- pf065\_horse\_feathers\_01
- pf067\_sportsman\_01
- pf069\_majorettes\_no2\_01
- pf070\_slugfest\_01
- pf071\_olympics\_01
- pf072\_domino\_01
- pf073\_handicap\_01
- pf074\_caravan\_01
- pf075\_long\_beach\_01
- pf081\_fairway\_01
- pf081\_fairway\_02
- pf084\_times\_square\_02
- pf092\_struggle\_buggies\_02
- pf097\_nine\_sisters\_02
- pf104\_screamo\_01
- pf107\_skyway\_01
- pf110\_daffy\_derby\_01
- pf125\_race\_the\_clock\_01
- pf128\_bandwagon\_01
- pf131\_three\_deuces\_01
- pf134\_jolly\_joker\_01
- pf135\_can\_can\_01
- pf139\_snafu\_03
- pf142\_royal\_crown\_01
- pf145\_piccadilly\_01

- pf147\_yukon\_01
- pf147\_yukon\_shuffle\_board\_02
- pf171\_commodore\_03
- pf173\_fun\_house\_02
- pf174\_1\_perky\_01
- pf174\_2\_perky\_01
- pf177\_shamrock\_01
- pf178\_gay\_paree\_01
- pf184\_1\_naples\_01
- pf184\_2\_naples\_02
- pf185\_arrowhead\_01
- pf187\_kings\_01
- pf188\_1\_top\_hat\_01
- pf188\_2\_top\_hat\_01
- pf190\_1\_reno\_01
- pf190\_2\_reno\_01
- pf191\_steeple\_chase\_01
- pf193\_jig\_saw\_02
- pf194\_sea\_wolf\_01
- pf195\_1\_kick\_off\_01
- pf195\_2\_kick\_off\_01
- pf197\_1\_gusher\_01
- pf197\_2\_gusher\_01
- pf198\_4\_star\_02
- pf199\_0\_satellite\_01
- pf199\_1\_satellite\_01
- pf199\_2\_satellite\_01
- pf201\_casino\_01
- pf201\_casino\_02
- pf203\_short\_stop\_01
- pf206\_3d\_1\_01
- pf206\_3d\_2\_01
- pf208\_tic\_tac\_toe\_02
- pf209\_1\_sea\_wolf\_01
- pf209\_2\_sea\_wolf\_01
- pf211\_crossword\_01
- pf214\_club\_house\_1
- pf215\_spot\_pool\_01
- pf219\_golden\_bells\_01
- pf224\_1\_rocket\_01
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- pf227\_spelling\_bee\_01
- pf228\_1\_golden\_gloves\_01
- pf228\_2\_golden\_gloves\_02

- pf231\_1\_fiesta\_01
- pf231\_2\_fiesta\_01
- pf233\_21\_01
- pf234\_nags\_01
- pf234\_nags\_02
- pf235\_serenade\_01
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- pf238\_1\_music\_man\_01
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- pf239\_1\_jungle\_01
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- pf241\_viking\_01
- pf242\_1\_black\_jack\_01
- pf242\_2\_black\_jack\_01
- pf244\_1\_magic\_clock\_01
- pf244\_2\_magic\_clock\_01
- pf245\_1\_bo\_bo\_01
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- pf246\_caravelle\_01
- pf247\_1\_highways\_01
- pf247\_2\_highways\_01
- pf248\_1\_hollywood\_01
- pf248\_2\_hollywood\_01
- pf250\_ten\_spot\_01
- pf251\_double\_barrel\_01
- pf253\_reserve\_01
- pf255\_metro\_02
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- pf261\_coquette\_01
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- pf266\_valiant\_01
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- pf276\_friendship\_7\_01
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- pf279\_big\_deal\_01
- pf280\_jumpin\_jacks\_01
- pf282\_swing\_time\_01
- pf283\_skill\_pool\_01
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- pf288\_oh\_boy\_01
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- pf302\_double\_play\_01
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- pf304\_zig\_zag\_01
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- pf310\_alpine\_club\_02
- pf312\_moulin\_rouge\_01
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- pf317\_eight\_ball\_01
- pf318\_teachers\_pet\_02
- pf319\_big\_chief\_01
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- pf339\_ding\_dong\_02
- pf341\_lady\_luck\_01
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- pf343\_jolly\_roger\_01
- pf348\_doozie\_01
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- pf350\_student\_prince\_02

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- pf351\_2\_olympic\_hockey\_01
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- pf359\_cabaret\_01
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- pf361\_suspense\_01
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- pf367\_gay\_90s\_01
- pf369\_roto\_01
- pf371\_strike\_zone\_01
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- pf377\_aces\_and\_kings\_01
- pf378\_big\_star\_01
- pf380\_jive\_time\_02
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- pf385\_2\_tramway\_01
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- pf388\_winner\_01
- pf389\_straight\_flush\_01
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- pf391\_solids\_n\_stripes\_01
- pf394\_zodiac\_01
- pf458\_little\_chief\_01
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- pf488\_pokerino\_01
- pf519\_joust\_01
- pf519\_joust\_a\_01
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- pf521\_firepower\_ii\_02
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- pf571\_diner\_01
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- pf50017\_indiana\_jones\_02
- pf50017\_indiana\_jones\_upper\_01
- pf50030\_dirty\_harry\_01
- pf60020\_pinball\_circus\_1\_01
- pf60020\_pinball\_circus\_2\_0 copy
- pf60020\_pinball\_circus\_ring2\_01
- pf60020\_pinball\_circus\_ring2\_2\_01
- pf60020\_pinball\_circus\_ring\_3\_1\_02
- pf60020\_pinball\_circus\_ring3\_2\_01
- pf60020\_pinball\_circus\_ring3\_3\_01
- pf60020\_pinball\_circus\_switch\_detail\_01
- pinball\_playfield\_master\_dwg\_1\_01
- pinball\_playfield\_template\_copy
- pinball\_playfield\_template\_11r\_195\_1\_01