

PINBALL NVRAM GAME LIST

This list was created to make it easier for customers to figure out what type of NVRAM they need for each machine. Please consult the product pages at www.pinitech.com for each type of NVRAM for further information on difficulty of installation, any jumper changes necessary on your board(s), a diagram showing location of the RAM being replaced & more.

***NOTE:** This list is meant as quick reference only. On Williams WPC and Sega/Stern Whitestar games you should check the RAM currently in your machine since either a 6264 or 62256 may have been used from the factory. On Williams System 11 games you should check that the chip at U25 is 24-pin (6116). See additional diagrams & notes at http://www.pinitech.com/products/cat_memory.php for assistance in locating the RAM on your board(s).

PLUG-AND-PLAY (NO SOLDERING)

Games below already have an IC socket installed on the boards from the factory and are as easy as removing the old RAM and installing the NVRAM (then resetting scores/settings per the manual).

- **BALLY 6803 → 6116 NVRAM**
- **SEGA/STERN WHITESTAR → 6264 OR 62256 NVRAM** (check IC at U212, see website)
- **DATA EAST → 6264 NVRAM** (except Laser War)
- **CLASSIC BALLY → 5101 NVRAM**
- **CLASSIC STERN → 5101 NVRAM** (later Stern MPU-200 games use MPU-200 NVRAM)
- **ZACCARIA GENERATION 1 → 5101 NVRAM**
- **ZACCARIA GENERATION 2 → 5114 NVRAM**

****NOT** PLUG-AND-PLAY (SOLDERING REQUIRED)**

The games below did not have an IC socket installed on the boards. This means the existing RAM needs to be removed from the board & an IC socket installed.

- **WILLIAMS SYSTEM 3-7 → 5101 NVRAM**
- **WILLIAMS SYSTEM 9 → 6116 NVRAM**
- **WILLIAMS SYSTEM 11 → 6116 NVRAM** (if RAM was replaced already may be a 6264)
- **WILLIAMS WPC → 6264 OR 62256 NVRAM** (check IC at U8, see website)
- **GOTTLIEB SYSTEM 80 → 5101 NVRAM**
- **GOTTLIEB SYSTEM 1 → GOTTLIEB SYSTEM 1 NVRAM**

CAUTION: You should have proper tools and soldering experience if you are upgrading a game that is not plug-and-play or contact a professional board repair tech that can do the installation for you. PINITECH does not offer any upgrade services for boards.

Visit www.pinitech.com for our full assortment of NVRAM modules!

6116

BALLY 6803

Atlantis
Beat The Clock
Black Belt (Karate Fight)
Blackwater 100
City Slicker
Dungeons & Dragons
Eight Ball Champ
Escape From The Lost World
Hardbody
Heavy Metal Meltdown
Lady Luck
Motordome
Party Animal
Special Force
Strange Science
Truck Stop

WILLIAMS SYSTEM 9

Comet
Sorcerer
Space Shuttle

WILLIAMS SYSTEM 11

Bad Cats
Banzai Run
Big Guns
Black Knight 2000
Bugs Bunny's Birthday Ball
Cyclone
Diner
Dr. Dude And His Excellent Ray
Earthshaker
Elvira and the Party Monsters
F-14 Tomcat
Fire!
Gold Mine
Grand Lizard
High Speed
Jokerz!
Millionaire
Mousin Around!
Pin-Bot
Police Force
Pool Sharks
Radical!
Riverboat Gambler
Road Kings
Rollergames
Space Station
Swords of Fury
Taxi
The Bally Game Show
Transporter the Rescue
Whirlwind

6264 / 62256

6264 NVRAM WILL WORK IN ALL WILLIAMS WPC GAMES, BUT MAY REQUIRE JUMPER CHANGES IF A "62256" RAM IS CURRENTLY INSTALLED IN YOUR MACHINE. CHECK THE RAM CHIP AT POSITION "U8" ON THE MPU BOARD. JUMPER CHANGES ARE MENTIONED ON THE WEBSITE @ WWW.PINITECH.COM

WILLIAMS WPC

Attack From Mars

Black Rose

Bram Stoker's Dracula

Cactus Canyon

Cirque Voltaire

Congo

Corvette

Creature From The Black Lagoon

Demolition Man

Dirty Harry

Doctor Who

Fish Tales

Funhouse

Gilligan's Island

Harley Davidson

Hot Shot

Hurricane

Indiana Jones

Indy 500

Jack-Bot

Johnny Mnemonic

Judge Dredd

Junk Yard

Medieval Madness

Monster Bash

NBA Fastbreak

No Fear: Dangerous Sports

No Good Gofers

Party Zone

Popeye Saves The Earth

Red & Ted's Roadshow

Safe Cracker

Scared Stiff

Slugfest

Star Trek The Next Generation

Tales of the Arabian Nights

Terminator 2 Judgement Day

The Addams FamilyThe Champion Pub

The Flintstones

The Getaway: High Speed II

The Machine: Bride Of Pin-Bot

The Shadow

Theatre of Magic

Ticket Tac Toe

Twilight Zone

White Water

WHO Durnit

World Cup Soccer

6264

SEGA/STERN WHITESTAR

Apollo 13
Austin Powers
Elvis
Godzilla
Goldeneye
Grand Prix
Harley Davidson
High Roller Casino
Independence Day
Lost In Space
Monopoly
NASCAR
NFL
Playboy
Ripley's Believe It Or Not
Roller Coaster Tycoon
~~Sharkey's Shootout~~

*Sharkey's Shootout requires 62256 NVRAM

South Park
Space Jam
Star Wars Tilogy
Starship Troopers
Striker Xtreme
Terminator 3: Rise of the Machines
The Lord of the Rings
The Lost World Jurassic Park
The Simpsons Pinball Party
The Sopranos
The X Files
Twister
Viper Night Drivin'

DATA EAST

Adventures of Rocky & Bullwinkle
Back to the Future
Batman
Batman Forever
Baywatch
Checkpoint
Guns N Roses
Hook
Jurassic Park
~~Laser War~~

*First generation MPU requires a 6116 NVRAM

Last Action Hero
Lethal Weapon 3
Mary Shelley's Frankenstein
Maverick
Monday Night Football
Phantom of the Opera
Playboy 35th Anniversary
Robocop
Secret Service
Star Trek
Star Wars
Tales From The Crypt
Teenage Mutant Ninja Turtles
The Simpsons
The Who's Tommy Pinball Wizard
Time Machine
Torpedo Alley
WWF Royal Rumble

5101

CLASSIC BALLY

Baby Pac-Man

Black Jack

Black Pyramid

BMX

Centaur

Centaur II

Cybernaut

Dolly Parton

Eight Ball

Eight Ball Deluxe

Elektra

Embryon

Evel Knievel

Fathom

Fireball Classic

Fireball II

Flash Gordon

Freedom

Frontier

Future Spa

Gold Ball

Grand Slam

Granny And The Gators

Harlem Globetrotters

Hotdoggin'

Kings of Steel

Kiss

Lost World

Mata Hari

Medusa

Mr. & Mrs. Pac-Man

Mystic

Night Rider

Nitro Groundshaker

Paragon

Playboy

Power Play

Rapid Fire

Rolling Stones

Silverball Mania

Skateball

Space Invaders

Speakeasy

Spectrum

Spy Hunter

Star Trek

Strikes and Spares

Supersonic

The Six Million Dollar Man

Vector

Viking

Voltan Escapes Cosmic Doom

X's & O's

Xenon

5101

CLASSIC STERN

Ali *requires 2x (or use MPU-200 NVRAM)
Big Game *requires 2x (or use MPU-200 NVRAM)
Catacomb *requires 2x (or use MPU-200 NVRAM)
Cheetah *requires 2x (or use MPU-200 NVRAM)
Cosmic Princess
Dracula
Dragonfist *requires 2x (or use MPU-200 NVRAM)
Flight 2000 *requires 2x (or use MPU-200 NVRAM)
Freefall *requires 2x (or use MPU-200 NVRAM)
Galaxy *requires 2x (or use MPU-200 NVRAM)
Hot Hand
Iron Maiden *requires 2x (or use MPU-200 NVRAM)
Lectronamo
Lightning *requires 2x (or use MPU-200 NVRAM)
Magic
Memory Lane
Meteor *requires 2x (or use MPU-200 NVRAM)
ADDITIONAL NOTE:
An incompatibility issue exists on some Meteor MPU boards that causes sounds to be affected when upgrading to NVRAM. May not work properly in this game.
Nine Ball *requires 2x (or use MPU-200 NVRAM)
Nugent
Orbitor 1 *requires 2x (or use MPU-200 NVRAM)
Pinball
Quicksilver *requires 2x (or use MPU-200 NVRAM)
Seawitch *requires 2x (or use MPU-200 NVRAM)
Split Second *requires 2x (or use MPU-200 NVRAM)
Star Gazer *requires 2x (or use MPU-200 NVRAM)
Stars
Stingray
Trident
Viper *requires 2x (or use MPU-200 NVRAM)
Wild Fyre

WILLIAMS SYSTEM 3-7

Barracora
Black Knight
Blackout
Contact
Cosmic Gunfight
Defender
Disco Fever
Firepower
Firepower II
Flash
Gorgar
Hot Tip
Hyperball
Joust
Jungle Lord
Laser Cue
Lazer Ball
Lucky Seven
Pharaoh
Phoenix
Pokerino
Scorpion
Solar Fire
Star Light
Stellar Wars
Time Fantasy
Time Warp
Tri Zone
Varkon
Warlok
World Cup

5101

GOTTLIEB SYSTEM 80

Alien Star
Amazon Hunt
Arena
Bad Girls
Big House
Black Hole
Bone Busters Inc.
Bounty Hunter
Caveman
Chicago Cubs Triple Play
Circus
Counterforce
Devil's Dare
Diamond Lady
Eclipse
El Dorado City of Gold
Excalibur
Force II
Genesis
Gold Wings
Haunted House
Hollywood Heat
Hot Shots
Ice Fever
Jacks To Open
James Bond
Krull
Mars God of War
Monte Carlo
Night Moves
Panthera
Pink Panther
Punk!

Q*Bert's Quest
Rack 'Em Up
Raven
Ready Aim Fire!
Robo-War
Rock
Rock Encore
Rocky
Royal Flush Deluxe
Spirit
Spring Break
Star Race
Striker
Super Orbit
Tag Team Pinball
The Amazing Spider-Man
The Games
Time Line
Touchdown
TX Sector
Victory
Volcano

ZACCARIA GENERATION 1

Earth Wind Fire
Fire Mountain
Future World
Hot Wheels
House of Diamonds
Locomotion
Shooting The Rapids
Space Shuttle
Star God
Winter Sports

5114

ZACCARIA GENERATION 2

Blackbelt
Clown
Devil Riders
Farfalla
Magic Castle
Mexico '86
Mystic Star
Pinball Champ
Pool Champion
Robot
Soccer Kings
Spooky
Star's Phoenix
Thunder Man
Time Machine
Zankor

PINITECH.COM

GOTTLIEB

SYSTEM 1 NVRAM

GOTTLIEB SYSTEM 1

Asteroid Annie and the Aliens
Buck Rogers
Charlie's Angels
Cleopatra
Close Encounters of the Third Kind
Count-Down
Dragon
Genie
Joker Poker
Pinball Pool
Roller Disco
Sinbad
Solar Ride
The Incredible Hulk
Torch
Totem

PINITECH.COM

GAME NAME	MFG	BOARDSET	NVRAM TYPE	PLUG-AND-PLAY?
24	Stern	SAM	*not available	
AC/DC	Stern	SAM	*not available	
Adventures of Rocky & Bullwinkle	Data East	system3	6264 NVRAM	Plug-And-Play
Algar	Williams	system6a	5101 NVRAM	Soldering Required
Ali	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Alien Poker	Williams	system6a	5101 NVRAM	Soldering Required
Alien Star	Gottlieb	system80a	5101 NVRAM	Soldering Required
Amazon Hunt	Gottlieb	system80a	5101 NVRAM	Soldering Required
Apollo 13	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Arena	Gottlieb	system80b	5101 NVRAM	Soldering Required
Asteroid Annie	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Atlantis	Bally	6803	6116 NVRAM	Plug-And-Play
Attack From Mars	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Austin Powers	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Avatar	Stern	SAM	*not available	
Avengers	Stern	SAM	*not available	
Baby Pac-Man	Bally	dash133	5101 NVRAM	Plug-And-Play
Back to the Future	Data East	system3	6264 NVRAM	Plug-And-Play
Bad Cats	Williams	system11b	6116 NVRAM	Soldering Required
Bad Girls	Gottlieb	system80b	5101 NVRAM	Soldering Required
Banzai Run	Williams	system11b	6116 NVRAM	Soldering Required
Barb Wire	Gottlieb	system3	*not available	
Barracora	Williams	system7	5101 NVRAM	Soldering Required
Batman	Data East	system3	6264 NVRAM	Plug-And-Play
Batman	Stern	SAM	*not available	
Batman Forever	Data East	system3b	6264 NVRAM	Plug-And-Play
Baywatch	Data East	system3b	6264 NVRAM	Plug-And-Play
Beat The Clock	Bally	6803	6116 NVRAM	Plug-And-Play
Big Buck Hunter Pro	Stern	SAM	*not available	
Big Game	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Big Guns	Williams	system11b	6116 NVRAM	Soldering Required
Big House	Gottlieb	system80b	5101 NVRAM	Soldering Required
Big Hurt	Gottlieb	system3	*not available	
Black Belt (Karate Fight)	Bally	6803	6116 NVRAM	Plug-And-Play
Black Hole	Gottlieb	system80	5101 NVRAM	Soldering Required
Black Jack	Bally	dash17	5101 NVRAM	Plug-And-Play
Black Knight	Williams	system7	5101 NVRAM	Soldering Required
Black Knight 2000	Williams	system11b	6116 NVRAM	Soldering Required
Black Pyramid	Bally	dash35	5101 NVRAM	Plug-And-Play
Black Rose	Williams	w pc-flip2	6264 NVRAM *check U8, may be 62256	Soldering Required
Blackbelt	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Blackout	Williams	system6	5101 NVRAM	Soldering Required
Blackwater 100	Bally	6803	6116 NVRAM	Plug-And-Play
BMX	Bally	dash35	5101 NVRAM	Plug-And-Play
Bone Busters Inc.	Gottlieb	system80b	5101 NVRAM	Soldering Required
Bounty Hunter	Gottlieb	system80b	5101 NVRAM	Soldering Required
Bram Stoker's Dracula	Williams	w pc-flip2	6264 NVRAM *check U8, may be 62256	Soldering Required
Buck Rogers	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Bugs Bunny's Birthday Ball	Williams	system11c	6116 NVRAM	Soldering Required
Cactus Canyon	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Cactus Jack's	Gottlieb	system3	*not available	
Car Hop	Gottlieb	system3	*not available	
Catacomb	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Caveman	Gottlieb	system80a	5101 NVRAM	Soldering Required
Centaur	Bally	dash35	5101 NVRAM	Plug-And-Play
Centaur II	Bally	dash35	5101 NVRAM	Plug-And-Play
Charlie's Angels	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Checkpoint	Data East	system3	6264 NVRAM	Plug-And-Play
Cheetah	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play

GAME NAME	MFG	BOARDSET	NVRAM TYPE	PLUG-AND-PLAY?
Chicago Cubs Triple Play	Gottlieb	system80b	5101 NVRAM	Soldering Required
Circus	Gottlieb	system80	5101 NVRAM	Soldering Required
Cirque Voltaire	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
City Slicker	Bally	6803	6116 NVRAM	Plug-And-Play
Class of 1812	Gottlieb	system3	*not available	
Cleopatra	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Close Encounters	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Clown	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Comet	Williams	system9	6116 NVRAM	Soldering Required
Congo	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Contact	Williams	system3	5101 NVRAM	Soldering Required
Corvette	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
Cosmic Gunfight	Williams	system7	5101 NVRAM	Soldering Required
Cosmic Princess	Stern	mpu100	5101 NVRAM	Plug-And-Play
Count-Down	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Counterforce	Gottlieb	system80	5101 NVRAM	Soldering Required
Creature From The Black Lagoon	Williams	w pc-flip2	6264 NVRAM *check U8, may be 62256	Soldering Required
CSI: Crime Scene Investigation	Stern	SAM	*not available	
Cue Ball Wizard	Gottlieb	system3	*not available	
Cybernaut	Bally	dash35	5101 NVRAM	Plug-And-Play
Cyclone	Williams	system11b	6116 NVRAM	Soldering Required
Deadly Weapon	Gottlieb	system3	*not available	
Defender	Williams	system7	5101 NVRAM	Soldering Required
Demolition Man	Williams	w pc-dcs	6264 NVRAM *check U8, may be 62256	Soldering Required
Devil Riders	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Devil's Dare	Gottlieb	system80a	5101 NVRAM	Soldering Required
Diamond Lady	Gottlieb	system80b	5101 NVRAM	Soldering Required
Diner	Williams	system11c	6116 NVRAM	Soldering Required
Dirty Harry	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
Disco Fever	Williams	system3	5101 NVRAM	Soldering Required
Doctor Who	Williams	w pc-flip2	6264 NVRAM *check U8, may be 62256	Soldering Required
Dolly Parton	Bally	dash35	5101 NVRAM	Plug-And-Play
Dr. Dude And His Excellent Ray	Williams	system11c	6116 NVRAM	Soldering Required
Dracula	Stern	mpu100	5101 NVRAM	Plug-And-Play
Dragon	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Dragonfist	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Dungeons & Dragons	Bally	6803	6116 NVRAM	Plug-And-Play
Earth Wind Fire	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Earthshaker	Williams	system11b	6116 NVRAM	Soldering Required
Eclipse	Gottlieb	system80	5101 NVRAM	Soldering Required
Eight Ball	Bally	dash17	5101 NVRAM	Plug-And-Play
Eight Ball Champ	Bally	6803	6116 NVRAM	Plug-And-Play
Eight Ball Deluxe	Bally	dash35	5101 NVRAM	Plug-And-Play
El Dorado City of Gold	Gottlieb	system80a	5101 NVRAM	Soldering Required
Elektra	Bally	dash35	5101 NVRAM	Plug-And-Play
Elvira and the Party Monsters	Williams	system11b	6116 NVRAM	Soldering Required
Elvis	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Embryon	Bally	dash35	5101 NVRAM	Plug-And-Play
Escape From The Lost World	Bally	6803	6116 NVRAM	Plug-And-Play
Evel Knievel	Bally	dash17	5101 NVRAM	Plug-And-Play
Excalibur	Gottlieb	system80b	5101 NVRAM	Soldering Required
F-14 Tomcat	Williams	system11a	6116 NVRAM	Soldering Required
Family Guy	Stern	SAM	*not available	
Farfalla	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Fathom	Bally	dash35	5101 NVRAM	Plug-And-Play
Fire Mountain	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Fire!	Williams	system11a	6116 NVRAM	Soldering Required
Fireball Classic	Bally	dash35	5101 NVRAM	Plug-And-Play
Fireball II	Bally	dash35	5101 NVRAM	Plug-And-Play

GAME NAME	MFG	BOARDSET	NVRAM TYPE	PLUG-AND-PLAY?
Firepow er	Williams	system6	5101 NVRAM	Soldering Required
Firepow er II	Williams	system7	5101 NVRAM	Soldering Required
Fish Tales	Williams	w pc-flip2	6264 NVRAM *check U8, may be 62256	Soldering Required
Flash	Williams	system4	5101 NVRAM	Soldering Required
Flash Gordon	Bally	dash35	5101 NVRAM	Plug-And-Play
Flight 2000	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Force II	Gottlieb	system80	5101 NVRAM	Soldering Required
Freddy A Nightmare on Elm Street	Gottlieb	system3	*not available	
Freedom	Bally	dash17	5101 NVRAM	Plug-And-Play
Freefall	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Frontier	Bally	dash35	5101 NVRAM	Plug-And-Play
Funhouse	Williams	w pc-alpha	6264 NVRAM *check U8, may be 62256	Soldering Required
Future Spa	Bally	dash35	5101 NVRAM	Plug-And-Play
Future World	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Galaxy	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Genesis	Gottlieb	system80b	5101 NVRAM	Soldering Required
Genie	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Gilligan's Island	Williams	w pc-dotmatrix	6264 NVRAM *check U8, may be 62256	Soldering Required
Gladiators	Gottlieb	system3	*not available	
Godzilla	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Gold Ball	Bally	dash133	5101 NVRAM	Plug-And-Play
Gold Mine	Williams	system11b	6116 NVRAM	Soldering Required
Gold Wings	Gottlieb	system80b	5101 NVRAM	Soldering Required
Goldeneye	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Gorgar	Williams	system6	5101 NVRAM	Soldering Required
Grand Lizard	Williams	system11	6116 NVRAM	Soldering Required
Grand Prix	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Grand Slam	Bally	dash35	5101 NVRAM	Plug-And-Play
Granny And The Gators	Bally	dash133	5101 NVRAM	Plug-And-Play
Guns N Roses	Data East	system3	6264 NVRAM	Plug-And-Play
Hardbody	Bally	6803	6116 NVRAM	Plug-And-Play
Harlem Globetrotters	Bally	dash35	5101 NVRAM	Plug-And-Play
Harley Davidson	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Harley Davidson	Williams	w pc-alpha	6264 NVRAM *check U8, may be 62256	Soldering Required
Haunted House	Gottlieb	system80	5101 NVRAM	Soldering Required
Heavy Metal Meltdown	Bally	6803	6116 NVRAM	Plug-And-Play
High Roller Casino	Stern	Whitestar	6264 NVRAM	Plug-And-Play
High Speed	Williams	system11	6116 NVRAM	Soldering Required
Hollyw ood Heat	Gottlieb	system80b	5101 NVRAM	Soldering Required
Hook	Data East	system3	6264 NVRAM	Plug-And-Play
Hoops	Gottlieb	system3	*not available	
Hot Hand	Stern	mpu100	5101 NVRAM	Plug-And-Play
Hot Shot	Williams	w pc-dotmatrix	6264 NVRAM *check U8, may be 62256	Soldering Required
Hot Shots	Gottlieb	system80b	5101 NVRAM	Soldering Required
Hot Tip	Williams	system3	5101 NVRAM	Soldering Required
Hot Wheels	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Hotdoggin'	Bally	dash35	5101 NVRAM	Plug-And-Play
House of Diamonds	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Hurricane	Williams	w pc-dotmatrix	6264 NVRAM *check U8, may be 62256	Soldering Required
Hyperball	Williams	system7	5101 NVRAM	Soldering Required
Ice Fever	Gottlieb	system80a	5101 NVRAM	Soldering Required
Independence Day	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Indiana Jones	Williams	w pc-dcs	6264 NVRAM *check U8, may be 62256	Soldering Required
Indiana Jones 4	Stern	SAM	*not available	
Indy 500	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
Iron Maiden	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Iron Man	Stern	SAM	*not available	
Jack-Bot	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
Jacks To Open	Gottlieb	system80a	5101 NVRAM	Soldering Required

GAME NAME	MFG	BOARDSET	NVRAM TYPE	PLUG-AND-PLAY?
James Bond	Gottlieb	system80	5101 NVRAM	Soldering Required
Johnny Mnemonic	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
Joker Poker	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Jokerz!	Williams	system11b	6116 NVRAM	Soldering Required
Joust	Williams	system7	5101 NVRAM	Soldering Required
Judge Dredd	Williams	w pc-dcs	6264 NVRAM *check U8, may be 62256	Soldering Required
Jungle Lord	Williams	system7	5101 NVRAM	Soldering Required
Junk Yard	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Jurassic Park	Data East	system3	6264 NVRAM	Plug-And-Play
Kings of Steel	Bally	dash35	5101 NVRAM	Plug-And-Play
Kiss	Bally	dash35	5101 NVRAM	Plug-And-Play
Krull	Gottlieb	system80a	5101 NVRAM	Soldering Required
Lady Luck	Bally	6803	6116 NVRAM	Plug-And-Play
Laser Cue	Williams	system7	5101 NVRAM	Soldering Required
Laser War	Data East	system1	Gottlieb System 1 NVRAM	Soldering Required
Last Action Hero	Data East	system3	6264 NVRAM	Plug-And-Play
Lazer Ball	Williams	system6	5101 NVRAM	Soldering Required
Lectronamo	Stern	mpu100	5101 NVRAM	Plug-And-Play
Lethal Weapon 3	Data East	system3	6264 NVRAM	Plug-And-Play
Lightning	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Lights...Camera...Action!	Gottlieb	system3	*not available	
Locomotion	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Lost In Space	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Lost World	Bally	dash35	5101 NVRAM	Plug-And-Play
Lucky Seven	Williams	system3	5101 NVRAM	Soldering Required
Magic	Stern	mpu100	5101 NVRAM	Plug-And-Play
Magic Castle	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Mario Andretti	Gottlieb	system3	*not available	
Mars God of War	Gottlieb	system80	5101 NVRAM	Soldering Required
Mary Shelley's Frankenstein	Data East	system3b	6264 NVRAM	Plug-And-Play
Mata Hari	Bally	dash17	5101 NVRAM	Plug-And-Play
Maverick	Data East	system3b	6264 NVRAM	Plug-And-Play
Medieval Madness	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Medusa	Bally	dash35	5101 NVRAM	Plug-And-Play
Memory Lane	Stern	mpu100	5101 NVRAM	Plug-And-Play
Metallica	Stern	SAM	*not available	
Meteor	Stern	mpu200	MPU-200 NVRAM *incompatibility issue	Plug-And-Play
Mexico '86	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Millionaire	Williams	system11a	6116 NVRAM	Soldering Required
Monday Night Football	Data East	system2	6264 NVRAM	Plug-And-Play
Monopoly	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Monster Bash	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Monte Carlo	Gottlieb	system80b	5101 NVRAM	Soldering Required
Motordome	Bally	6803	6116 NVRAM	Plug-And-Play
Mousin Around!	Williams	system11b	6116 NVRAM	Soldering Required
Mr. & Mrs. Pac-Man	Bally	dash35	5101 NVRAM	Plug-And-Play
Mustang	Stern	SAM	*not available	
Mystic	Bally	dash35	5101 NVRAM	Plug-And-Play
Mystic Star	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
NASCAR	Stern	Whitestar	6264 NVRAM	Plug-And-Play
NBA	Stern	SAM	*not available	
NBA Fastbreak	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
NFL	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Night Moves	Gottlieb	system80b	5101 NVRAM	Soldering Required
Night Rider	Bally	dash17	5101 NVRAM	Plug-And-Play
Nine Ball	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Nitro Groundshaker	Bally	dash35	5101 NVRAM	Plug-And-Play
No Fear: Dangerous Sports	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
No Good Gofers	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required

GAME NAME	MFG	BOARDSET	NVRAM TYPE	PLUG-AND-PLAY?
Nugent	Stern	mpu100	5101 NVRAM	Plug-And-Play
Operation Thunder	Gottlieb	system3	*not available	
Orbitor 1	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Panthera	Gottlieb	system80	5101 NVRAM	Soldering Required
Paragon	Bally	dash35	5101 NVRAM	Plug-And-Play
Party Animal	Bally	6803	6116 NVRAM	Plug-And-Play
Party Zone	Williams	w pc-dotmatrix	6264 NVRAM *check U8, may be 62256	Soldering Required
Phantom of the Opera	Data East	system2	6264 NVRAM	Plug-And-Play
Pharaoh	Williams	system7	5101 NVRAM	Soldering Required
Phoenix	Williams	system4	5101 NVRAM	Soldering Required
Pin-Bot	Williams	system11a	6116 NVRAM	Soldering Required
Pinball	Stern	mpu100	5101 NVRAM	Plug-And-Play
Pinball Champ	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Pinball Pool	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Pink Panther	Gottlieb	system80	5101 NVRAM	Soldering Required
Pirates of the Caribbean	Stern	SAM	*not available	
Playboy	Bally	dash35	5101 NVRAM	Plug-And-Play
Playboy	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Playboy 35th Anniversary	Data East	system2	6264 NVRAM	Plug-And-Play
Pokerino	Williams	system4	5101 NVRAM	Soldering Required
Police Force	Williams	system11b	6116 NVRAM	Soldering Required
Pool Champion	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Pool Sharks	Williams	system11c	6116 NVRAM	Soldering Required
Popeye Saves The Earth	Williams	w pc-dcs	6264 NVRAM *check U8, may be 62256	Soldering Required
Power Play	Bally	dash17	5101 NVRAM	Plug-And-Play
Punk!	Gottlieb	system80a	5101 NVRAM	Soldering Required
Q*Bert's Quest	Gottlieb	system80a	5101 NVRAM	Soldering Required
Quicksilver	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Rack 'Em Up	Gottlieb	system80a	5101 NVRAM	Soldering Required
Radical!	Williams	system11c	6116 NVRAM	Soldering Required
Rapid Fire	Bally	dash35	5101 NVRAM	Plug-And-Play
Raven	Gottlieb	system80b	5101 NVRAM	Soldering Required
Ready Aim Fire!	Gottlieb	system80a	5101 NVRAM	Soldering Required
Red & Ted's Roadshow	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
Rescue 911	Gottlieb	system3	*not available	
Ripley's Believe It Or Not	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Riverboat Gambler	Williams	system11c	6116 NVRAM	Soldering Required
Road Kings	Williams	system11	6116 NVRAM	Soldering Required
Robo-War	Gottlieb	system80b	5101 NVRAM	Soldering Required
Robocop	Data East	system2	6264 NVRAM	Plug-And-Play
Robot	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Rock	Gottlieb	system80b	5101 NVRAM	Soldering Required
Rock Encore	Gottlieb	system80b	5101 NVRAM	Soldering Required
Rocky	Gottlieb	system80a	5101 NVRAM	Soldering Required
Roller Coaster Tycoon	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Roller Disco	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Rollergames	Williams	system11c	6116 NVRAM	Soldering Required
Rolling Stones	Bally	dash35	5101 NVRAM	Plug-And-Play
Royal Flush Deluxe	Gottlieb	system80a	5101 NVRAM	Soldering Required
Safe Cracker	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Scared Stiff	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Scorpion	Williams	system6	5101 NVRAM	Soldering Required
Seawitch	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Secret Service	Data East	system2	6264 NVRAM	Plug-And-Play
Shaq Attaq	Gottlieb	system3	*not available	
Sharkey's Shootout	Stern	Whitestar	62256 NVRAM (must be 62256!!)	Plug-And-Play
Shooting The Rapids	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Shrek	Stern	SAM	*not available	
Silver Slugger	Gottlieb	system3	*not available	

GAME NAME	MFG	BOARDSET	NVRAM TYPE	PLUG-AND-PLAY?
Silverball Mania	Bally	dash35	5101 NVRAM	Plug-And-Play
Sinbad	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Skateball	Bally	dash35	5101 NVRAM	Plug-And-Play
Slugfest	Williams	w pc-dotmatrix	6264 NVRAM *check U8, may be 62256	Soldering Required
Soccer Kings	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Solar Fire	Williams	system7	5101 NVRAM	Soldering Required
Solar Ride	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Sorcerer	Williams	system9	6116 NVRAM	Soldering Required
South Park	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Space Invaders	Bally	dash35	5101 NVRAM	Plug-And-Play
Space Jam	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Space Shuttle	Williams	system9	6116 NVRAM	Soldering Required
Space Shuttle	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Space Station	Williams	system11b	6116 NVRAM	Soldering Required
Speakeasy	Bally	dash35	5101 NVRAM	Plug-And-Play
Special Force	Bally	6803	6116 NVRAM	Plug-And-Play
Spectrum	Bally	dash35	5101 NVRAM	Plug-And-Play
Spider Man	Stern	SAM	*not available	
Spirit	Gottlieb	system80a	5101 NVRAM	Soldering Required
Split Second	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Spooky	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Spring Break	Gottlieb	system80b	5101 NVRAM	Soldering Required
Spy Hunter	Bally	dash35	5101 NVRAM	Plug-And-Play
Star Gazer	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Star God	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Star Light	Williams	system7	5101 NVRAM	Soldering Required
Star Race	Gottlieb	system80	5101 NVRAM	Soldering Required
Star Trek	Bally	dash35	5101 NVRAM	Plug-And-Play
Star Trek	Data East	system3	6264 NVRAM	Plug-And-Play
Star Trek	Stern	SAM	*not available	
Star Trek The Next Generation	Williams	w pc-dcs	6264 NVRAM *check U8, may be 62256	Soldering Required
Star Wars	Data East	system3	6264 NVRAM	Plug-And-Play
Star Wars Tilogy	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Star's Phoenix	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Stargate	Gottlieb	system3	*not available	
Stars	Stern	mpu100	5101 NVRAM	Plug-And-Play
Starship Troopers	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Stellar Wars	Williams	system4	5101 NVRAM	Soldering Required
Stingray	Stern	mpu100	5101 NVRAM	Plug-And-Play
Strange Science	Bally	6803	6116 NVRAM	Plug-And-Play
Street Fighter II	Gottlieb	system3	*not available	
Striker	Gottlieb	system80a	5101 NVRAM	Soldering Required
Striker Xtreme	Stern	Whitestar	6264 NVRAM	Plug-And-Play
Strikes and Spares	Bally	dash17	5101 NVRAM	Plug-And-Play
Super Mario Bros Mushroom World	Gottlieb	system3	*not available	
Super Mario Bros.	Gottlieb	system3	*not available	
Super Orbit	Gottlieb	system80a	5101 NVRAM	Soldering Required
Supersonic	Bally	dash35	5101 NVRAM	Plug-And-Play
Surf'n Safari	Gottlieb	system3	*not available	
Sw ords of Fury	Williams	system11b	6116 NVRAM	Soldering Required
Tag Team Pinball	Gottlieb	system80b	5101 NVRAM	Soldering Required
Tales From The Crypt	Data East	system3	6264 NVRAM	Plug-And-Play
Tales of the Arabian Nights	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Taxi	Williams	system11b	6116 NVRAM	Soldering Required
Tee'd Off	Gottlieb	system3	*not available	
Teenage Mutant Ninja Turtles	Data East	system3	6264 NVRAM	Plug-And-Play
Terminator 2 Judgement Day	Williams	w pc-dotmatrix	6264 NVRAM *check U8, may be 62256	Soldering Required
Terminator 3: Rise of the Machines	Stern	Whitestar	6264 NVRAM	Plug-And-Play
The Addams Family	Williams	w pc-flip1	6264 NVRAM *check U8, may be 62256	Soldering Required

GAME NAME	MFG	BOARDSET	NVRAM TYPE	PLUG-AND-PLAY?
The Amazing Spider-Man	Gottlieb	system80	5101 NVRAM	Soldering Required
The Bally Game Show	Williams	system11c	6116 NVRAM	Soldering Required
The Champion Pub	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
The Flintstones	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
The Games	Gottlieb	system80a	5101 NVRAM	Soldering Required
The Getaway: High Speed II	Williams	w pc-flip2	6264 NVRAM *check U8, may be 62256	Soldering Required
The Incredible Hulk	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
The Lord of the Rings	Stern	Whitestar	6264 NVRAM	Plug-And-Play
The Lost World Jurassic Park	Sega	Whitestar	6264 NVRAM	Plug-And-Play
The Machine: Bride Of Pin-Bot	Williams	w pc-alpha	6264 NVRAM *check U8, may be 62256	Soldering Required
The Rolling Stones	Stern	SAM	*not available	
The Shadow	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
The Simpsons	Data East	system3	6264 NVRAM	Plug-And-Play
The Simpsons Pinball Party	Stern	Whitestar	6264 NVRAM	Plug-And-Play
The Six Million Dollar Man	Bally	dash35	5101 NVRAM	Plug-And-Play
The Sopranos	Stern	Whitestar	6264 NVRAM	Plug-And-Play
The Walking Dead	Stern	SAM	*not available	
The Who's Tommy Pinball Wizard	Data East	system3	6264 NVRAM	Plug-And-Play
The X Files	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Theatre of Magic	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
Thunder Man	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Ticket Tac Toe	Williams	w pc-95	6264 NVRAM *check U8, may be 62256	Soldering Required
Time Fantasy	Williams	system7	5101 NVRAM	Soldering Required
Time Line	Gottlieb	system80	5101 NVRAM	Soldering Required
Time Machine	Data East	system2	6264 NVRAM	Plug-And-Play
Time Machine	Zaccaria	generation2	5114 NVRAM	Plug-And-Play
Time Warp	Williams	system6	5101 NVRAM	Soldering Required
Title Fight	Gottlieb	system3	*not available	
Torch	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Torpedo Alley	Data East	system2	6264 NVRAM	Plug-And-Play
Totem	Gottlieb	system1	Gottlieb System 1 NVRAM	Soldering Required
Touchdown	Gottlieb	system80a	5101 NVRAM	Soldering Required
Transformers	Stern	SAM	*not available	
Transporter the Rescue	Williams	system11b	6116 NVRAM	Soldering Required
Tri Zone	Williams	system6	5101 NVRAM	Soldering Required
Trident	Stern	mpu100	5101 NVRAM	Plug-And-Play
Tron	Stern	SAM	*not available	
Truck Stop	Bally	6803	6116 NVRAM	Plug-And-Play
Twilight Zone	Williams	w pc-flip2	6264 NVRAM *check U8, may be 62256	Soldering Required
Twister	Sega	Whitestar	6264 NVRAM	Plug-And-Play
TX Sector	Gottlieb	system80b	5101 NVRAM	Soldering Required
Varkon	Williams	system7	5101 NVRAM	Soldering Required
Vector	Bally	dash35	5101 NVRAM	Plug-And-Play
Vegas	Gottlieb	system3	*not available	
Victory	Gottlieb	system80b	5101 NVRAM	Soldering Required
Viking	Bally	dash35	5101 NVRAM	Plug-And-Play
Viper	Stern	mpu200	MPU-200 NVRAM	Plug-And-Play
Viper Night Drivin'	Sega	Whitestar	6264 NVRAM	Plug-And-Play
Volcano	Gottlieb	system80	5101 NVRAM	Soldering Required
Voltan Escapes Cosmic Doom	Bally	dash35	5101 NVRAM	Plug-And-Play
Warlok	Williams	system7	5101 NVRAM	Soldering Required
Wheel of Fortune	Stern	SAM	*not available	
Whirlwind	Williams	system11b	6116 NVRAM	Soldering Required
White Water	Williams	w pc-flip2	6264 NVRAM *check U8, may be 62256	Soldering Required
WHO Dunit	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
Wild Fyre	Stern	mpu100	5101 NVRAM	Plug-And-Play
Winter Sports	Zaccaria	generation1	5101 NVRAM	Plug-And-Play
Wipe Out	Gottlieb	system3	*not available	
World Challenge Soccer	Gottlieb	system3	*not available	

GAME NAME	MFG	BOARDSET	NVRAM TYPE	PLUG-AND-PLAY?
World Cup	Williams	system3	5101 NVRAM	Soldering Required
World Cup Soccer	Williams	w pc-s	6264 NVRAM *check U8, may be 62256	Soldering Required
World Poker Tour	Stern	SAM	*not available	
WWF Royal Rumble	Data East	system3	6264 NVRAM	Plug-And-Play
X-Men	Stern	SAM	*not available	
X's & O's	Bally	dash35	5101 NVRAM	Plug-And-Play
Xenon	Bally	dash35	5101 NVRAM	Plug-And-Play
Zankor	Zaccaria	generation2	5114 NVRAM	Plug-And-Play

Game list above is not 100% complete as there are a few solid state manufacturers (Atari, Gameplan, etc) not listed. But this list covers the major US manufacturers for games made from 1977 thru 2005.

DMD games from 2006 onward typically used surface mount RAM soldered directly to the board and cannot be upgraded to NVRAM and are not listed here (with the exception of Stern S.A.M. games). Some games being built today may now have NVRAM incorporated on the boards.

Need Help Locating Your RAM Chip?

Visit www.pinitech.com/products/cat_memory.php and select the type of NVRAM that your game requires (utilizing this document). Scroll down to the Compatibility Chart that lists the various pinball manufacturers & there will be a link to a diagram highlighting the location of the RAM chip on your board.

Additionally the Compatibility Chart will help you determine the difficulty of installation if the nvram is marked "Soldering Required" above.

Questions? Comments? Did we get something wrong?

Use the contact info at the link below if you have any further questions or need further help figuring out the NVRAM you need.

- If you're unsure of whether your WPC game has a 6264 or 62256 RAM in it currently, take a picture of the RAM at U8 and/or send what markings are on the top of the RAM chip via email.

<http://www.pinitech.com/contact.php>

Your assistance and/or suggestions are appreciated! If you find any errors in this document please let us know!

WWW.PINITECH.COM