

BALLS OF STEEL

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BALLS OF STEEL

INSTALLATION INSTRUCTIONS

Windows 95 Installation

Balls of Steel is autoplay-enabled for Windows 95 (there is no WindowsNT installation). Insert the Balls of Steel CD in your CD-ROM drive and wait a few moments for the autoplay window to appear. When it does, simply follow the on screen instructions.

If the autoplay window does not appear, follow these instructions:

1. Double-click the My Computer icon.
2. Double-click the CD-ROM icon.
3. Double-click the Install icon.
4. Follow the onscreen prompts.

Balls of Steel requires DirectX v3.0 or greater be installed on your computer to run. If you are installing from the registered Balls of Steel CD-ROM, you will be prompted to install DirectX as part of the installation. Follow the onscreen prompts to complete installation. DirectX v5.0 is included, and is highly recommended, as it provides better sounds when used with Balls of Steel and is highly recommended, as it provides better soundcard performance in some cases than previous versions of DirectX.

If you do not have the registered CD-ROM, you may download DirectX from [Microsoft's DirectX Web site](#).

Uninstalling Balls of Steel

If you choose to uninstall Balls of Steel, **we strongly urge you to use the Add/Remove Programs Icon in the Windows95 Control Panel**, and not to just delete the program. Balls of Steel will be listed there, or you can use the icon that the Balls of Steel program created when you originally installed it. If you simply delete the program directory, this may cause problems should you wish to install the program (or a newer version) at a later date.

BALLS OF STEEL

SYSTEM REQUIREMENTS

CPU: Pentium 100Mhz (133 recommended)
Operating System: Microsoft Windows95 with DirectX v3.0 (or better)
Memory: 16mb RAM
Video: 1Mb VESA compatible SVGA display card
Sound: DirectX compatible sound card
CD-ROM: 2x speed drive
HD Space: Approximately 70Mb

BALLS OF STEEL MAIN MENU



Click on the region of the Balls of Steel Menu you wish to learn more about.

These buttons let you change the active table to be played.

This button lets you see the theme or story associated with this table.

This option displays the playing instructions for the currently selected table.

This option lets you view the high scores for the table you are looking at.

You can also see the worldwide high scores ranking for the currently selected table at <http://www.worldscores.com>.

This window is where the Theme, Rules, and High Scores info is displayed.

This window shows a small screen shot of the currently selected table.

Play the currently selected table.

This button will modify game [OPTIONS](#).

Display the game Credits.

This button brings up a screen with information for purchasing the full version of Balls of Steel, for those players who are only playing the Demo version.

Quit Balls of Steel and return to Windows.

These buttons let you change the Balls of Steel skill level.
You can choose from four play modes:

- Regular: Standard 5-ball play, with extra balls, end-of-game score matching, Powerball bonus mode and high score saving to disk.
- Novice: The same as Regular play except that the ball saver is active for several minutes and high scores cannot be saved to disk.
- Arcade: 3-ball play with Extra Ball awards based on score. There is no end-of-game match or Powerball. High scores can be saved to disk.
- Tournament: Tournament mode is WorldScore Enabled, allowing players to post scores on the WorldScore web site (<http://www.worldscores.com>). Random gameplay elements have been standardized, and there is no match, no Powerball and no extra balls (points are awarded instead). This is to make Tournament games as directly comparable with each other as possible. Refer to the WorldScore Internet Rankings section for more details.

This selects Novice mode. Novice play is the same as Regular except that a ballsaver is active for several minutes at the start of play.

This selects Regular mode. This is standard 5 ball play with Extra Balls, end-of-game score matching and the Powerball bonus mode.

This selects Arcade mode. This is three ball play with Extra Ball awards based on score. There is no end-of-game match.

This selects Tournament mode. Tournament mode is WorldScores Enabled, allowing players to post scores on the WorldScores web site. (<http://www.worldscores.com>). To make Tournament games as directly comparable as possible there is no Powerball, no end-of-ball match and no Extra Balls (points are awarded instead). Refer to the [WorldScores Internet Rankings section](#) for more details.

BALLS OF STEEL

HOW TO PLAY

GENERAL INFORMATION

Click PLAY on the [main menu](#) to start the currently displayed table. The table begins in its 'attract' mode which shows off the table layout and gives basic instructions on the dotpanel. To play a one-player game, press ENTER, and then ENTER again to fire the ball and start the game. For some tables you can vary the force with which the ball is kicked out by holding down the ENTER key for a short time, then releasing it to fire the ball. You can also start a 2- 3- or 4-player game by pressing the 2, 3, or 4 keys during the table's attract mode.

ADDITIONAL CONTROLS

F1 (in-game):	Key assignments.
ENTER:	Pull back the plunger and fire the ball.
SHIFT, ALT or CTRL (L and R):	Flippers (L and R)
SPACEBAR:	Nudge UP
Z:	Nudge LEFT
/:	Nudge RIGHT

Note: Too much nudging will tilt the table and void the current ball.

ESC:	Quit the game.
P:	Pause the game. Also provides a status report on jackpot levels, ramp counts, extra balls etc. Flippers skip through the individual reports and any other key resumes play. Use Pg/Up, Pg/Dn while paused to view the table.
F2:	Cycles the table view: Single Screen, Scrolling, Auto Switch (scrolling for normal play, automatically switching to single screen during multiball sequences.)
F3:	Toggle ball and flipper shadows on/off (Turning shadows off reduces the system demand for slower machines). Default is on.
F4:	Controls the speed at which the scrolling mode screen follows the ball (soft/medium/hard). Default is medium.
F5/F6:	Adjust the sound effects and voice effect volume down/up.
F7/F8:	Adjust the music volume down/up.

Note: by pressing Alt+TAB in-game you can task-switch to the Windows desktop and modify the global volume setting. Using the hardware volume setting to select the maximum volume is preferable since the quality of the hardware volume control is better than the software control. Use Alt+TAB again to return to the game.

F9:	Single screen detail (maximum speed/normal/maximum quality). This adjusts the way in which the computer draws the single screen view. Players with slower machines should choose maximum speed for better performance. Default is normal.
F10:	Dotpanel size (small/large). You can choose your preferred dotpanel size. Default is large.

- F11: Dotpanel type (hardware/software): This adjusts the method the computer uses for drawing the dotpanel. Default is Hardware because this is the fastest method; however some video cards do not support the hardware option, in which case you would need to choose Software.
- F12: Character voice effects (on/off): toggles the in-game character voices on/off. Sound effects and music are unaffected. Default is on.

In addition to the keyboard, Balls of Steel also supports the mouse and the Microsoft Sidewinder gamepad. With a standard 2-button mouse, right and left-clicks control the flippers. With a 3-button mouse, the center button fires off the ball. In addition, with the Microsoft Intellimouse, rolling the wheel acts as an up-nudge. With the Microsoft Sidewinder Gamepad (correctly installed on the system) the L+R trigger buttons are the flippers, the direction pad nudges the table and the other buttons fire off the ball. These devices are enabled automatically if they are attached and properly configured in Windows.

BALLS OF STEEL OPTIONS MENU



Click on the region of this Balls of Steel Menu you wish to learn more about.

Parental Lock:

The Parental Lock blocks some of the racier language that the game uses during play. When you turn the lock on, you will be asked to type a password. This password is required to turn the lock off again. Default is off.

Fast Dotpanel on/off:

This is normally on, giving the fastest performance, however some computers may not properly display the dotpanel on the scrolling table, in which case set this to off.

If you are looking at this, then there is a bad link in the help file. Tell Joe Siegler about it.

Large dotpanel on/off:

This option controls the size of the dotpanel in the scrolling view. Unchecking this option selects the small dotpanel which may help speed things up. Default is on.

Ball and flipper shadows:

This option controls whether the ball and flippers cast shadows. If you are having slowdown problems, turning this off can help speed things up. Default is on.

You should not be seeing this. If you are, there's a problem.
Contact Joe Siegler.

Music Volume Slider

This slider controls the volume of the game music.

Effects Volume Sidebar

This sidebar controls the volume of the game sound effects and speech.

Built in Video Drivers:

This option controls whether or not to use the game's own built in video drivers (Display Doctor). If you are having problems with the video, try turning this off. Default is on.
(you don't have to restart)

Reverse Stereo:

This controls the stereo selection. If the sound appears to be coming out of the wrong speakers in your computer, try this, it will reverse the left and right audio channels. Default is off.

Stereo on/off:

This option controls the mono/stereo sound setting. If this is turned off, you will only have MONO sound effects & music. Default is on.

16bit Sound:

This option controls the sound quality. If you turn it off, the game will use 8bit sounds. 8bit sounds are faster and should be used if you're having system slowdown problems, but the quality is not as good as 16 bit. Default is on.

This is an old category. If you see this, the help file has an error. Please contact Joe Siegler.

This button takes you to the WorldScores User Maintenance Screen, where you can create/modify your User Profile. You need a User Profile to post scores on the [WorldScores Web Site](#).

This button brings up the graphics configuration window, allowing you to modify the video options. The graphics configuration is run automatically the first time Balls of Steel is played on a new system.

This button displays the Balls of Steel help file - what you are currently looking at.

This button takes you back to the [Main Menu](#).

Master Volume Slider

This slider controls the master sound level of your computer.

This button resets all of the high scores to the default values. This does not affect the scores on the WorldScores web site.

This option launches your web browser, and automatically connects to display current high scores for the selected table on the [WorldScores Web Site](#).

Auto:

This option has the scrolling view for normal play but automatically switches to the single screen view for multiball modes. The view switches back when the mode ends.

Scrolling:

In scrolling view, only half of the table is visible at once, and the picture scrolls as the ball moves up and down.

Single Screen:

In the single screen view, all of the table is visible at once.

Max Speed:

The game goes a bit faster, at the sacrifice of some video quality.

Normal:

This is the default setting, and gives the best compromise between speed and quality for the single screen view.

Max Quality:

The graphics are a bit better than normal, at the sacrifice of some game speed.

This button takes you to the Main Menu.

BALLS OF STEEL

WORLDScores INTERNET RANKINGS

Balls of Steel is WorldScores Enabled. This allows you to post your best Tournament Mode scores over the Internet, on the WorldScores website at <http://www.worldscores.com>.

Setting up

To view the global rankings on the web from within Balls of Steel, you'll need to ensure that Windows has a default web browser installed; in most cases this will be either [Microsoft Internet Explorer](#) or [Netscape Navigator/Communicator](#).

In order to submit a score to the WorldScores Website you first have to create a User Profile. If you already have a User Profile from another WorldScores Enabled game you can use this for Balls of Steel. From the Options menu, click on WorldScores Setup to bring up the User Maintenance screen. Fill in all the fields and press Submit (after reading and agreeing to the user conditions). At this point, a dialog will remind you that it is about to connect to WorldScores. If you are already online on the Internet, click Okay, otherwise select Dial-Up Networking and choose your connection.

For further information on Dial-Up Networking, please see your Windows documentation.

Once the User Profile details have been posted, you're ready to Challenge the World!

Posting a score

After playing in Tournament mode, you will be asked if you wish to post your score to the [WorldScore website](#). If your new score beats your previous best on the WorldScore system, your ranking will be updated and you'll be one step closer to first place!

Auto Detect:

This is the default setting and should remain selected unless you are having problems with the sound. Select [Detailed Help & Troubleshooting](#) for specific problems.

Direct Sound:

This forces the game to use the Windows Direct Sound driver, if present, and is preferable to Wave Mapper for cards with DirectSound support.

Wave Mapper:

This option uses the Windows standard wave-out driver, and should be used if you are experiencing problems with DirectSound.

None:

No sounds will be played.

BALLS OF STEEL

TABLE DESCRIPTIONS

There are 5 tables that make up the complete Balls of Steel package.
Click on the table title for details on that table.

Barbarian

DARKSIDE

Firestorm

MUTATION!

DUKE NUKEM

Barbarian

TABLE DESCRIPTION

Slay enormous dragons and elemental spirits as the mighty barbarian pursues his quest to retrieve the magical gems. Brave the horrors of the wastelands, and lay waste to the evil that is spreading like a curse across the land.

Deathsavers: Both outlanes have deathsavers to rescue the ball. Deathsavers are relit by shooting both skull targets.

Gift of the Gods: Hit the target several times to activate the magnet and receive the Gift.

Combos: Shoot consecutive shots to score combos. The special Dragon Loop combo (Earth lane - Wasteland - reverse Air lane) increases your Hero Status.

Bonus Multipliers: Shoot the Wasteland to light Advance Bonus at the Mountain Pass. The current bonus multiplier is indicated on the Bonus Wheel.

Dragon Multiball: Shoot the Serpent Pit to light the Dragon lock. Lock balls at Dragon for 3-ball. Lit shots score millions until time-out.

Element Missions: Enable element missions by lighting each of the element shots: Earth lane, Fire Ramp, Water Ramp, Air lane. The left slingshot bumper cycles the lit mission; shoot the Village scoop to start mode.

- Earth: Swat the marauding ants by hitting the selected targets.
- Air: Kill each of the evil vultures (Fire Ramp, Village, Air Lane, Serpent Pit).
- Fire: Shoot the Fire ramp to steal the Dragon's fire and stop the runaway bonus score. Shoot the Earth lane, Wasteland and Water Ramp to extinguish the fires and receive the bonus score.
- Water: Shoot the tentacles to destroy the sea demon (Earth lane, Fire ramp, Mountain Pass, Air lane).

When all four element missions have been attempted, the Village is lit for the Skull Portal mode.

Skull Portal Mode: Enter Death's Gate. Hit the outer wall to rotate it, then shoot the open mouth to lock the ball. The portal then disappears and four skeletal warriors emerge from the table and the Elemental 4-ball multiball begins. Hit skeletons several times to banish them, then shoot element shots with the appropriate ball to score Super Jackpots (e.g. brown Earth ball up the Earth lane and so on). The mode ends when only one ball remains.

Citadel: Hit the key targets to spell "KEY" and score letters in CITADEL.

When CITADEL is lit, the Village scoop allows access onto the upper table. Once the ball enters the Citadel the magnetic flippers are activated and the ball is automatically kicked back into play if it falls out of the bottom scoop. The flippers fire magic axes at the guards. Each guard takes three hits before collapsing. Knock out all guards to open the Vault. You have unlimited magic axes to get the ball into the vault but if it falls out of the bottom scoop the mode will end.

Gem missions: Shoot GEM targets to light the Gem missions at the Blade of Power. The right slingshot bumper cycles the currently lit mission.

- Diamond of Death: Lit shots smash skulls to search for the diamond: Wasteland, Mountain Pass, Earth lane and the left and right Deathsaver lanes.

- Sapphire of Stealth: Shoot lit shots (both scoops and the Wasteland) to tunnel under the Citadel and recover the Sapphire from the Royal mines.
- Emerald of Iron Will: Hit the slingshot bumpers to batter down the door to the treasure room and recover the Emerald.
- Ruby of Cunning: Video Mode. The ruby is under one skull...follow it closely and select the skull by moving the cursor with the flippers, and selecting with the space bar.
- Opal of Speed: Shoot the lit shots in order to catch the zooming opal.

Blade of Power Multiball: After all gem missions have been attempted, the Blade of Power pop-up is lit for the multiball. Lit shots score jackpots.

DARKSIDE

TABLE DESCRIPTION

Monstrous aliens attack a research station in deep space, terrorizing and killing as they spread through the base. As the leader of a team of elite space commandos, you must use all the firepower at your disposal to take back the station, exterminate the invaders, and save the remaining scientists.

Kickbacks: Both outlanes have multi-stage kickbacks, which can be recharged by spelling SOS.

Bonus Multipliers: Light all three divider lights to advance the bonus multiplier. The divider lanes also increase the combo value.

Quick 2-ball: Shots to the Reactor ramp light Quick 2-ball at the left lane. Score jackpots at the Reactor Ramp and shoot scoops to increase the jackpot value.

Egg tube 3-Ball: Smack the egg target twice to gain access to the egg tube. The egg tube sucks up balls and lays them into the egg lock. Lock three balls for multiball. Shoot alternately flashing Alien ramp shots for jackpots. If no jackpots are scored and only one ball remains in play, the Shuttle Bay is lit for a multiball restart.

Crawler Attack 2-ball: Hit the Alien target to light letters in ALIEN (lit letters are rotated with the left flipper). ALIEN lights Crawler Attack at the Shuttle Bay, giving you a short time to splat alien crawlers as they scurry between the Command Post and the Weapons Locker.

Super Cannon: Upgrade your weapon four times at the Weapons Locker to light Super Cannon, and blast hatching aliens as they emerge from their eggs. Bonuses are awarded for efficiency (shooting all aliens in the fewest number of gun sweeps) and for accuracy (killing all aliens with the minimum number of shots).

Command Decision award: Lit at the Command Post by shots to the Sensor Grid ramp.

Extra Ball: Lit in the Cargo Hold by ramp counts or by a Command Decision award.

Missions: The Sensor Grid ramp counts to light Start Mode at the Command Center. The lit mission can be cycled by hits to the slingshot bumpers. Attempt all missions for the Final Assault 5-Ball.

Target Practice: Simulated weapons training. A targeting cursor cycles through values displayed on the dotpanel. Shooting any scoop (Command Center, Shuttle Bay, or Weapons Locker) scores the current value.

Rescue: The space station's research staff have to be evacuated. Ramp shots load scientists into the waiting rescue shuttle. Shoot the shuttle bay to launch the current load of people safely into space.

Bug Hunt: Attack aliens as they emerge from the hatches at the ends of the ramps. Aliens take several hits to kill. Once they have been disposed of, shoot the ramps behind them for bonus points.

Meteor Storm: The station is about to get pounded by a swarm of meteors. Use the kickbacks to activate Darkside's deflectors and destroy incoming meteors. (Hint: use the left and right nudges to bump the ball into the kickback lanes).

Guard Duty: Patrol each sector to clear out alien intruders. Sectors are: Alpha (left lane), Beta (Sensor Grid), Gamma (Alien Ramp), Delta (middle lane). Secure all sectors for bonus points.

Xenophobia: Alien warriors are attacking! Shoot the pop bumpers to return fire.

Showdown: Kill the big alien with repeated shots to the Alien ramp.

Final Assault: Attempting all missions enables the Final Assault 5-ball at the Command Post. There are two sets of jackpot arrows and scoring all of one set lights the other.

Video Modes: Ramp counts or Command Decision light Shuttle Pilot mode at the Shuttle Bay, or Shooting Range at the Weapons Locker.

Shooting Range: Blast alien targets while avoiding the scientists. Move the target cursor left and right with the flippers. Shoot with the plunger or Space Bar. Nuke all aliens to light Extra Ball in the Cargo Hold. Shooting a scientist ends the mode early and forfeits the bonus score.

Shuttle Pilot: Steer the shuttle through the asteroid field with the flipper buttons. Hitting an asteroid ends the mode early and forfeits the completion bonus.

Firestorm

TABLE DESCRIPTION

A psychotic bomber is on the loose in the city, threatening the lives of millions. The members of the bomb squad work feverishly to defuse his diabolical work, hunting the bomber across the city, with time always against them.

Skillshot: Shoot the designated hole on the Skillshot ramp. Hold the plunger to vary the kickout strength. A quick hit on the plunger bypasses the Skillshot and fires the ball immediately.

Bonus Multipliers: Light Bomb divider lights for successive multipliers.

Detonation 2-Ball: Lit at the Airport by multiple shots to the Freeway Ramp. Jackpots are lit the Airport and Power Plant, with the HQ increasing the jackpot value.

Ballsaver: Complete BOMB targets to relight Kevlar vest at outlanes.

Extra Ball: Complete BOMB targets five times in the same ball to light Extra Ball at the Power Plant.

Mystery Award: Light Sniper targets to enable Mystery Award at the Airport.

Advance Rank: Spell FUSE to light Advance Rank. Shoot the HQ to receive your promotion.

Car Chase: Defuse the car bombs! Shoot Downtown ramp repeatedly to light Car Chase multiball at the Freeway Ramp. Slam cars to safely detonate bombs and release trapped balls. Shoot lit shots for jackpots. When balls are lost, shoot Freeway ramp to add new cars.

Mad Bomber 3-Ball: Selected shots collect letters in DISARM to light the 3-ball at the Boat Dock. Shoot the bomb-disposal robot to safely detonate bombs and score jackpots.

Bomb Threats: Dial 911 to get next assignment at HQ. Slingshot bumpers cycle the lit mission. Attempting all missions enables Firestorm 5-ball at the HQ.

- **Bomb Scare:** Panic mode with flashing shots and targets scoring bonus points. The Power Plant doubles the bonus score.
- **Freeway Chaos:** Dispatch the squad to check out bomb threat calls at lit shots. Freeway increases the bonus score.
- **Subway Alert:** Shoot the Subway lanes to search the trains for bombs.
- **Airport Evacuation:** There's a bomb threat at the city's biggest airport. Shoot the Airport ramp several times to load the waiting buses, then shoot the Freeway ramp to evacuate them.
- **Waterfront Search:** There's a bomb hidden down on the waterfront. Shoot the Boat Dock to get your team on scene and to stop the runaway score. Shoot lit shots to search warehouse buildings and collect the bonus score.
- **Arson Attack:** The bomber has turned Arsonist. Shoot the burning buildings to extinguish the blazes.
- **Countdown:** Video Mode. Quickly enter the code to disarm the device. The cursor highlights pairs of digits which can be switched by pressing the space bar. Move the cursor left and right with the flippers.
- **Fire Storm 5-Ball:** Lit when all other missions have been attempted. Jackpots at Downtown and the Power Plant. The Power Plant also adds balls ball if less than 5 balls remain.



TABLE DESCRIPTION

Duke takes on the alien hordes just one more time, with all his usual restraint. 'No alien's gonna take my balls!'

Key Cards: Hit KEY and CARD to collect keys and gain access to parts of the table - Elevator (Red keycard), Teleporter (Blue keycard), Pop-up (Yellow keycard).

Kickback: When lit, the kickback saves balls falling down the left outlane. The kickback is relit by the red ramp targets.

Bonus Multipliers: Light both divider lights to advance the bonus multiplier.

Mystery Bonus: Shots to the left vent and blue ramp light Mystery at the right vent.

Upper mini-table: Ride the ball elevator up onto the second playfield and beat-up the alien to light the ball lock. Lock three balls for multiball.

3-ball Multiball: The spinner cycles the lit jackpot shot. Shots to the pop-up increases the jackpot score. If two balls are lost and no jackpots are scored, a multiball restart is lit at the right vent.

Video mode: Collect all Key Cards to light Video Mode at the left vent.

Pickups: Hitting all Pickup targets lights a randomly selected pickup on the playfield. Run over the pickup icon to collect it. Shoot the teleporter to light Select Pickup at the right vent. Choose from collected pickups to start bonus modes:

- Holoduke mode: This mode gives an additional ball which acts just like the normal ball except that it is translucent and if it is lost between the flippers it automatically reappears on the table. Use both balls to score the moving bonus shot. Holoduke mode ends if the time runs out or if the normal ball is lost from play.
- Jetpack mode: During normal play, once the jetpack has been collected it allows the ball to fly over the broken section of the blue ramp, scoring extra points. In addition, select the Jetpack for a bonus mode with both ramps scoring big points.
- Night Vision: Turn on the night vision goggles to reveal hidden messages and footprints. Boost the bonus score then follow the footprints to collect it.
- Steroids mode: Slam the super-fast steroid ball into the pop bumpers to collect the bonus score. Shooting the spinner or left vent increases the bonus value.
- SCUBA gear: Destroy mines to access bonus shots.
- Atomic Health: Awards an extra ball.

MISSIONS: Start Mode is lit at the left vent by successive shots to the red ramp. Attempt all missions for the Final Duke multiball.

- Come Get Some: Lay down some heavy fire and blow'em all away. Major shots score bonus values, hits to the Pickup targets increase the bonus score.
- Blast 'em into Space: Shoot the inner and outer loops to open the airlock and blast aliens back into the void.
- Let God Sort'em Out!: Herd aliens into teleporter by shooting ramps then shoot the teleporter to beam them into oblivion.
- Nukem 'til they Glow: Blast the floating pig aliens to score big points.
- Hail to the King, Baby: Shoot the vents or the pop-up to collect the bonus score that is displayed on

the dotpanel.

- More Guts, More Glory: Kill as many octopus aliens as you can in the time.
- Final Duke: 4-ball multiball with all jackpots lit. Jackpots are automatically relit after all have been collected. If less than four balls remain shooting the pop-up adds another ball. During normal gameplay the pop bumpers increase the Final Duke jackpot value.

MUTATION!

TABLE DESCRIPTION

A top-secret experiment in a hidden government genetics laboratory goes terribly wrong. Containment systems begin to fail, and the scientists find themselves at the bottom of the food chain. The mutations have a few 'experiments' of their own to conduct.

Skillshot: Use the flipper keys to select the Skillshot goal, either Accelerator, Atom Smasher or Air Duct. After the ball is fired you have only a limited amount of time to make the shot and collect the bonus award.

Kickback: When lit, the kickback tentacle will save any ball falling down the left outlane. Score both in-lanes to relight the kickback.

Store Room Mystery Bonus: Hit the Store Room targets then shoot the scoop for the Mystery Bonus award.

Accelerator: The Accelerator awards a bonus value and shoots the ball around the back loop. Score multiple Accelerators for big bonus points.

Bonus Multipliers: Spell DNA at the divider lanes to increase the bonus multiplier value.

Cyclotron: Shoot the Control Center to switch the ramp to the right hand side. Any shot up the Biohazard Ramp now flies into the Cyclotron. Complete loops in the Cyclotron count down to light Extra Ball at the Atom Smasher.

Toxic Spores: Various shots count up the biohazard percentage to light the Toxic Spores mode at the Waste Chute. Capture spores in scoops as they emerge from the monster. Spores automatically splat if not caught after a few seconds.

Duplicator 2-ball: Shoot the duplicator loop to power-up the ball duplicator. Shooting five loops activates the cloning process and starts the 2-ball mode. Boost the jackpot value at the Biohazard ramp and shoot the Atom smasher to collect it. The Duplicator lane scores millions.

Monster Multiball: Hit the upper playfield targets, then shoot the pop-up to open the monster gate. Any shot up either the Accelerator lane or the Monster lane will fall into the lock where the monster will grab it and munch the ball to slimy oblivion. Feed the monster three balls to start the Monster Multiball. Shoot the lit Mutate target to score jackpots. Shoot the Cyclotron to temporarily lock a ball and score bonus points.

Slime Bonus: The slime bonus is increased by shots to the Waste Chute. If the ball is lost down the right outlane, the slime bonus is awarded.

Video Mode: Clone the DNA strand. Zap mutant DNA while avoiding healthy DNA.

Mission Modes: Spell M-U-T-A-T-E to light Start Mode at the Control Center. Slingshot bumpers cycle the lit mission. When all missions have been completed, the Control Center is lit for the Outbreak 4-ball.

- **Red Alert:** The control systems have gone haywire. Every switch scores one fleeing scientist.
- **Atom Smashing:** Hit the captive ball to split the atom and stop the runaway value. Then shoot lit shots to receive this bonus value. Shooting the captive ball again increases the time remaining.
- **Mutation!:** A green mutant ball is on the loose. Follow the lit bonus shot while avoiding the toxic

- scoops. The shield remains on for the entire mission.
- High Voltage: Energize the plasma field to repel the monster. Lit shots increase the plasma field voltage. The Accelerator adds time but decreases the voltage. Once the plasma is charged, shoot the Duplicator lane to fry the beast.
 - Radiation Leak: The radiation shields have failed and need to be recharged. Loop the ball in the Cyclotron to charge the shield capacitors and stop the leak.
Feed the Beast: Shoot the pop bumpers to fill a bucket with slops. Shoot the monster lane or Accelerator once the bucket is full to feed the beast.
 - Outbreak!: When all missions have been attempted, the Control Center is lit to start the Outbreak multiball. Jackpots are lit at the Accelerator lane and the Air Duct.

Hit Print Screen while playing the game and try out some of these codes:

**WHODUNNIT, EVIL TWIN,
TRIPLETS, T-MINUS 1, BUCKET**

There's more codes where those came from (but that'd be telling!). Also be on the lookout for the occasional farmyard animal!

BALLS OF STEEL

DETAILED HELP & TROUBLESHOOTING

This page shows error messages that might pop up during game play. Click on the error message, and a solution to the problem will appear.

Problem: "UVBELib: Couldn't detect video hardware"

Problem: "UVBELib: UNIVBE.DRV file is invalid"
"UVBELib: UNIVBE.DRV file is an old version"

Problem: "UVBELib: <any other error>"

Problem: "VBE driver not found"
"VBE 2.0 or greater required"

Problem: "Video mode not available"
"Couldn't set video mode"
"Virtual scrolling not available"

Problem: "Bank switched video modes not supported"

Problem: "Couldn't determine the refresh rate of the display"

Problem: The game is running at half speed or slower (balls appear to move in slow motion).

Problem: The gameplay stutters or jerks occasionally.

Problem: The sound effects are delayed.

Problem: The sound effects are garbled, and/or the music stutters.

Problem: The sound effects are "scratchy".

Problem: Stereo sounds are coming from the wrong side, i.e. left and right are swapped.

Problem: No dotpanel visible on scrolling view.

Optimizing Performance

Although Windows 95 can run several programs at once, for improved performance try closing all other programs before running Balls of Steel. For slower machines, the following features can be turned off to reduce the system demand:

- Flipper and Ball shadows (F3)
- Choose single screen mode (F2)
- Ensure the single screen view is set to Maximum Speed (F9)
- Turn off 16 bit and stereo sound.

BALLS OF STEEL

CONTACTING TECHNICAL SUPPORT

This program is protected by United States federal and international copyright laws.

All trademarks mentioned in this manual are the property of their respective owners.

The shareware version of Balls of Steel (also known as Balls of Steel DEMO) does not have any technical support offered for it.

BALLS OF STEEL

WORLD WIDE WEB & INTERNET

WORLD WIDE WEB

Pinball Wizards has its own World Wide Web Site! Point your Web Browser to the URL <http://www.pinballwizards.com>, and you'll reach us on the Web! Pinball Wizards is a division of Apogee Software, Ltd, and Apogee can be reached at <http://www.apogee1.com>. We have all kinds of cool files and information here, so if you like Apogee or 3D Realms and you're on the Web, you need to be here! You can learn about future games, take a "virtual tour" of our headquarters, download software, all free!

WILDFIRE WEB SITE

Also visit the Wildfire Studios site at <http://www.wildfire.com.au>, which has hints, strategies, and cheats about the game, direct from the developers!

INTERNET MAILING LIST

Join our Internet mailing list! The Apogee mailing list is a list where you can receive press releases, general info, new game release notifications, and other miscellaneous items. Drop us a line at help@apogee1.com, and we'll send you more information about the list. It doesn't cost anything, and all we need is your Internet E-Mail address! Your friends are probably on the list - are you?

FTP FILE TRANSFER

Pinball Wizards has an official Anonymous FTP site for our shareware downloads:

<ftp://wuarchive.wustl.edu/systems/msdos/games/apogee/>

This is a standard Anonymous FTP site. If you're getting an error like "Anonymous Access Denied", "Cannot Access File", or something like that, you're probably just running into the limit. All Anonymous FTP sites have limits to the number of people that can access it at once. Think of it as a busy signal, and try again later. We also recommend talking to your local Internet Service provider (or the author of your FTP software) about how to properly use the Internet program you're trying to use.

BALLS OF STEEL

CREDITS

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Gameplay Programming: Joel Finch

Windows Programming: Darren Baker

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Special thanks to: George Broussard, Chris Flynn, Lance Jones

Possible Solutions

- Ensure the video card is capable of 800x600 display in 256 colors, has at least 1 Mb of video RAM, is a Super VGA and/or is VESA compatible.
- Manually set video card configuration (Options|Video Setup|Change|Manual override).

Possible Solutions

- Redetect video card (Options|Video Setup|Change|Autodetect or Manual override).

Possible Solutions

- Close all other running programs.
- Uninstall the game and reinstall it.

Possible Solutions

- Check "Use built-in display drivers" check box (Options).
- Uncheck "Disable VBE 2.0 extensions" check box (Options|Video Setup|Options).
- Uncheck "Disable linear framebuffer" check box (Options|Video Setup|Options).
- Install the VESA driver that came with your video card, if any, and uncheck "Use built-in display drivers" check box (Options).
- Install the most recent version of [Scitech Display Doctor](#).

Possible Solutions

- Ensure the video card is capable of 800x600 display in 256 colors, has at least 1 meg video ram, is a Super VGA and/or is VESA compatible.
- Manually set video card configuration (Options|Video Setup|Change|Manual override).

Possible Solutions

- Uncheck "Disable linear framebuffer" check box (Options|Video Setup|Options).
- Check "Ignore old VBE BIOS" check box (Options|Video Setup|Options).

Possible Solutions

- Redetect video card (Options|Video Setup|Change|Autodetect or Manual override).
- Check "Use built-in display drivers" check box (Options).
- Check "Ignore old VBE BIOS" check box (Options|Video Setup|Options).
- Install the VESA driver that came with your video card, if any, and uncheck "Use built-in display drivers" check box (Options).
- Install the most recent version of [Scitech Display Doctor](#).

Possible Solutions

- Turn off shadows (Options or F3 in-game).
- Set "Single screen detail" to "Maximum speed" (Options, or F9 in-game).
- Uncheck "Disable linear framebuffer" check box (Options|Video Setup|Options).
- Reduce the sound quality by unchecking "Stereo" and/or "Sixteen bit"; or disable sound altogether (Options).

Possible Solutions

This is partly due to Windows 95 and hence unavoidable, but it can be reduced:

- Close all other running programs, including those in the [System Tray](#).
- Turn off shadows (Options or F3 in-game).
- Set "Single screen detail" to "Maximum speed" (Options, or F9 in-game).

This is the System Tray.



Possible Solutions

- Set sound device to "Autodetect" or "DirectSound" (Options).
- Adjust the sound quality by changing "Stereo" and/or "Sixteen bit" check boxes (Options).

Possible Solutions

- Try setting the sound device to "DirectSound" or "Wave mapper" (Options), whichever works better.
- Adjust the sound quality by changing "Stereo" and/or "Sixteen bit" check boxes (Options).

Possible Solutions

- Try setting the sound device to "DirectSound" or "Wave mapper" (Options), whichever works better.
- Check "Sixteen bit" check box (Options).

Possible Solutions

- Check or uncheck "Reverse stereo" check box (Options).

Possible Solutions

- Press F9 in-game to switch to Software panel.

<new topic>

Keys:

This allows you to define the keys for use in the game. Click on the control you wish to change, and select the desired key from the list.

The defaults are - Flippers: LShift RShift;
Table nudge: Z / and Space;
Plunger: Enter

