



Song Select

Song select (can be set to "start of game" or "every ball") will only change the music, and any lighting effects that go along with it. Not the rules. When a mode starts, the music from that song will take over.

Skill Shot

Regular Skill Shot

Side loop is lit for 1x skill shot, Side ramp is lit for 2x skill shot, Side scoop lit for 3x skill shot. Making a skill shot also adds some ball save time.

Super Skill Shot

Hitting the side loop and then making a combo into the side ramp or side scoop awards super skillshot. Super skill shot scores 2x regular skillshot value and adds double the amount of ball save time.

Song Modes

Collect records to light one of the six main song modes. After enough records (shown in Mode Info Panel on the UI in the upper left), shoot the time machine to start a mode. The mode that starts is determined by which color records you collected the most of:

Tom Sawyer:
Working Man:
Orange
The Spirit of Radio:
Blue
Pink
La Villa Strangiato:
Limelight:
Cyan
Orange
Pink
Purple
Lime

After a mode is lit, you can keep collecting records to boost that mode's value, shown in the mode status panel in the upper left, with like colors remaining locked in (won't change color, but can collect them to keep boosting your mode)

When a mode starts, the records you collected of the same color will be 2x model shot multipliers.

Modes are untimed, and end when you complete them or drain the ball in play.

Qualifying or completing a mode lets the player lock in one of the album shots to lock in a rainbow album. Rainbow albums count as any album color and are a universal shot multiplier. The number of rainbow records determines the shot multiplier value, starting at 2x. Rainbow albums will go away upon draining unless held by a ramp award.

Flashing record colors are rotated by hitting the RUSH standup targets. Solid record colors are rotated by shooting the instrument lane (behind drop targets). Colors also rotate upon collecting any record.

Tom Sawyer

Three phases, shoot all shots in the current phase to move to the next phase.

- Phase 1 ("The River"): Left and right orbit
- Phase 2 ("Today's Tom Sawyer"): Side ramp and right ramp
- Phase 3 ("The world is, the world is..."): Shoot all 8 arrow shots

Complete phase 3 to complete.

Working Man

Progress through the workday starting at 9am and ending at 5pm, with various workday event awards throughout. All switches advance small amounts of time, lit arrows advance large amounts of time. Hitting an arrow shot will unlight that shot until a different shot is made. Left orbit, side ramp, side loop score more and progress more time through the workday than the other shots. Clock out at 5pm to complete the mode.

The Splitt of Radio

Starting this mode, the Spinner and the top left lane shot are lit. Throughout the mode, these shots will stay lit, with the Spinner shot always tuning the radio dial, and the dead end shot broadcasting radio for the biggest award of all the mode shots.

Shooting the spinner grows the Radio Jackpot value. Lit arrow shots on the playfield (other than the dead end) will award points and also grow the Radio Jackpot value. Shooting the dead end shot cashes out the Radio Jackpot and relights all shots. Collecting all radio shots will also replenish the shots.

Cash out the radio jackpot 5 times to complete the mode.

The Big Money

Shoot lit arrow shots to score small awards and advance towards lighting The Big Money Jackpot at the time machine. First wave takes 3 shots, then 4, then 5 before lighting the jackpot. Once the jackpot is lit, you can either collect it or shoot the same shots you made to light it again to increase the Big Money Jackpot Multiplier.

Collect the third Big Money Jackpot to complete the mode.

La Villa Stranglato

12 Shots to complete, one for each of the song sections. One shot lit at a time. Each shot leads to another shot with a short combo timer. Hitting shots during the combo timer will multiply the awards based on the length of your combo.

I. Buenas Noches, Mein Froinds!
II. To sleep, perchance to dream...
III. Strangiato Theme
IV. A Lerxst in Wonderland
Right Ramp
Right Ramp
Dead End Lane
Left Orbit or Spinner

V. Monsters! Side Ramp or Side Scoop

VI. The Ghost of Aragon Spinner
VII. Danforth and Pape Side Loop

VIII. The Waltz of the Shreves Side Loop, Side Ramp, or Side Scoop*

IX. Never turn your back on a Monster!
 X. Monsters! (Reprise)
 XI. Strangiato Theme (Reprise)
 XII. A Farewell to Things
 Time Machine Side Ramp
 Left Orbit
 Side Scoop

Limelight

Balance between being in the limelight and stepping out of the limelight. All shots start to advance your fame percentage, with 3 recommended shots that will flash faster that are worth more points and more fame progress. Completing the three recommended shots will relight all shots for an opportunity at even more points. Recommended shots come in the groups:

- Left Side Shots (Left Orbit, Left Ramp, Side Scoop),
- Center Shots (Dead End Lane, Upper Loop, Time Machine)
- Right Shots (Spinner, Right Ramp, Right Orbit)

After you hit an arrow shot, a 15 second timer will start before your 15 seconds of fame is up, you get out of the limelight and must shoot the time machine to get back into the limelight. Becomes 100% famous to light the Time Machine to Escape the Limelight once and for all and complete the mode.

^{*} for shots 8-11, the inner loop will spot the next shot.

Time Machine Multiballs

Light these multiballs by shooting the time machine when no other awards are lit. This is indicated by the green dome on top of the time machine being on as well as the TIME MACHINE insert in front of the time machine, or on a Premium / LE the time machine ramp will be **down** (unless the ramp is up because of some other award). When it has been bashed enough times (progress shown on UI in the Time Machine area in the upper right), the ramp will raise (on the Premium and LE) and you can shoot into the center of the time machine to start 1 of 3 multiballs. Which multiball is lit is determined by the pattern of the TIME MACHINE flasher (and shown on the UI display):

Red Barchetta: Normal blinkSubdivisions: Fast blinkFly by night: Slow pulse

On the Premium/LE the lit multiball is also shown on the playfield with different light patterns on the ramp runway lights:

- Red Barchetta: Red lights lit on time machine, white lights off
- Subdivisions: Lights alternate half of the lights on, half of the lights off
- Fly by night: Lights rove upward toward time machine, marching in sequence

You can change which time machine multiball is lit by shooting the Dead End shot to the left of the time machine.

Starting a time machine multiball prevents song modes (the six colored modes) from being started. Starting a song mode does not prevent progress towards time machine multiballs, and time machine multiballs can be started during song modes.

Red Barchetta Multiball

Your Red Barchetta car starts at gear one with low RPMs. Jackpots are lit at the major shots and score based on how high your RPM is. Hitting jackpots will also boost the RPM in large amounts, while all switch activity will boost RPMs by a smaller amount.

Redline your RPMs to light the **pop bumpers** for shifting to the next gear. Once pop bumpers are lit, hit enough pops to score a **super jackpot** based on the sum of your jackpots and advance to the next gear. Advancing gears bumps all point values and relights all shots.

Shift to Gear 6 to enter victory laps, where hitting a jackpot will relight all other jackpots, and you can keep scoring until the multiball ends.

Subdivisions Multiball

Starts with just the Time Machine lit for Jackpot. Hitting the jackpot "Subdivides" it to light both neighboring shots. Every time a shot is hit, it lights the nearest 2 jackpots left and right of it, looping around the playfield if needed. Once you've lit a jackpot at all of the main shots, super jackpot lights at the time machine.

Super jackpot value is the sum of all the jackpots you've hit up to that point since the last super jackpot, or since the mode was started. Shooting the Super Jackpot increases all jackpot values and the multiball starts over.

Fly By Night

Switch hits turn down the GI, shoot lit arrows for jackpots and double jackpots which will dim the game even more. Eventually, all lights go out, and super jackpot lights.

Far Cry Multiball

Locks

Qualify Far Cry locks by shooting the targets on the side of the right ramp, (then the ramp itself for later multiballs). Then the side scoop lights for lock. After one ball is locked, the second ball can be shot into either scoop to start the multiball.

1st Multiball Locks - Complete both targets for each lock.

2nd Multiball Locks - Complete Both Targets and shoot the ramp for each lock.

3rd Multiball Locks - Complete Both Targets and shoot ramp quickly (timed) for each lock. Must start multiball at side scoop.

4th Multiball Locks - Each target must be hit twice to light ramp quickly (shorter timer than before) for each lock. Must start multiball at side scoop.

5th Multiball+ Locks - Each target must be hit twice to light ramp super quickly (even shorter timer than before) for each lock. Must start multiball at side scoop.

Multiball

All main shots are lit for 1x,2x,3x,4x, or 5x timed jackpots indicated by their color (blue, green, yellow, orange, red). The higher multiplier, the quicker the jackpots will time out. Hitting any jackpot will also grow the jackpot base value and replenish two shots with random jackpots again. If all jackpots time out, your jackpot base value is reset and all shots relight.

Collect enough jackpots (shown on display in lower right corner) to light Time Machine for super jackpot.

One Little Victory Laps

Scoring the Far Cry Super Jackpot kicks out 3 additional balls into play and begins One Little Victory Laps. Side shots are lit for victory jackpots. Collect enough victory jackpots to light a roving victory super jackpot. Repeat to keep scoring jackpots and super jackpots, with each unique super jackpot shot being multiplied by the number of unique super jackpot shots you've made.

1-2-3 Combo and Albums

There are ten unique Album Combos each identified by a particular order of shots made, with 1-2-3 inserts around the playfield that indicate possible combo paths. Shooting a lit 1 insert will light 2 inserts, and shooting a 2 insert will light 3 inserts. Shooting them in a combo (within a few seconds) will award double the combo value.

Completing 1-2-3 will light the Time Machine to collect that particular combo's album and score the **Combo Jackpot**, indicated by the **yellow** bulb on top of the time machine. Collecting an album has perks associated with **The Weapon** action button, and also

permanently raises combo values in the future. You can stack multiple albums at once to be collected at the Time Machine. The value of the **Combo Jackpot** is the sum of all the combos you made leading up to it, multiplied by how many albums you collect at once.

Collecting the combo jackpot also lights the side ramp for a limited time to collect the **Combo Super Jackpot**, worth 2x the value of the combo jackpot you just collected.

Album	Shot 1	Shot 2	Shot 3	Can activate The Weapon in:
Rush	Left Orbit	Inner Loop	Side Ramp	Working Man
Fly by Night	Left Orbit	Side Ramp	Dead End	Fly By Night
Permanent Waves	Spinner Lane	Inner Loop	Side Ramp	Freewill, The Spirit of Radio
Clockwork Angels	Spinner Lane	Side Ramp	Dead End	Headlong Flight
Moving Pictures	Hemispheres Ramp	Spinner Lane	Inner Loop	Limelight, Red Barchetta, Tom Sawyer
Signals	Hemispheres Ramp	Spinner Lane	Side Ramp	Subdivisions
Snakes & Arrows	Dead End	Left Orbit	Side Loop	Far Cry
Vapor Trails	Dead End	Left Orbit	Side Ramp	One Little Victory
Power Windows	Spinner Lane	Inner Loop	Inner Loop	The Big Money
Hemispheres	Hemispheres Ramp	Right Orbit	N/A	La Villa Strangiato

Instrument Drop Targets

Collecting Instruments

Time your first shot to the drop targets to lock in an instrument: bass, guitar, or drumsticks. Complete the three targets to collect the lit instrument. You can also cycle which instrument is locked in with a shot to the instrument lane behind the drop targets prior to collecting it.

Collecting an instrument will do the following:

Bass: Increase 1-2-3 combo values. **Guitar**: Increase spinner value.

Drumsticks: Increase all pop bumper values, upgrade one pop bumper to advance minutes faster, and light Drum

Solo at the Under Flipper shot.

Activating Instruments

Shooting the instrument lane behind the drop targets will activate any instruments you have collected. Instruments stay activated on one shared instrument timer. Activating a different instrument while you have one activated will reset the timer for both instruments.

Instrument perks while active:

Bass: Combos score 2x and allow you to score combos during multiball **Guitar**: Spinner spins are doubled, meaning each spin will count as 2

Drumsticks: Drum pop hits are doubled, meaning each pop will count as 2. Drum Bonus shot awards 2x.

Freewill Multiball

Qualifying

Collect all three different instruments to light the instrument lane for Freewill Multiball. Additional multiballs require repeating this more than once.

Starting

Shooting the instrument lane when Freewill Multiball is lit will lock the ball on the premium/le and give you time to bash the ball to raise the jackpot values. Once time is up, the ball is released and an additional ball save timer will kick in.

Multiball

All shots are lit for jackpot. You have "freewill" to choose which jackpot shot you want to go for, hitting it turns it into a Super Jackpot. Collect the super jackpot and then all shots become lit again (except the one you just made) and you can choose which jackpot to go for next.

The super jackpot value is increased for every unique super jackpot shot you've made, so there is some benefit to choose different shots.

Shooting the instrument lane behind the drop targets enough times will **add a ball** (and lock physically on the premium/LE, as well as lock physically during the start of the multiball). When the ball is locked, or you add a ball on the Pro, a 20 second timer will count down during which all jackpots are 2x. Shoot the instrument lane again during this 20 seconds (or hit the ball lock on the premium/LE) to greatly increase jackpot values.

Drum Pops and Headlong Flight Multiball

Drum Pops

During single ball play, or while drumsticks are active via the instrument targets, each pop bumper advances the clock by some amount of minutes indicated by the color of the pop bumper:

- •White: 1 min/pop
- · Green: 2 mins/pop
- · Yellow: 3 mins/pop
- Red: 4 mins/pop

Advance the clock to midnight lights the right orbit for **Headlong Flight** multiball.

Collecting the Drumsticks from the instrument drop target bank, or by shooting the right orbit will advance one pop bumper by one minute. Making any shot under the upper right flipper will advance two pop bumpers by one minute. Collecting drumsticks also lights the under the flipper shot for **Drum Solo**.

Drum Solo

When Drum Solo is lit, you can increase its value with additional pop bumper hits prior to starting it.

Starting drum solo lights the pop bumpers for the drum solo value and also doubles all minutes for all pop bumpers while Drum Solo is running (timed mode). Shooting under the flipper will reset the drum solo timer, collecting more drumsticks will also add some more time.

Headlong Flight Multiball

Started at the right orbit once the clock is at midnight.

This multiball starts with the clock at midnight and it starts counting backwards, to eleven oclock, then ten oclock, etc. The hour on the clock determines the jackpot value, which are in yellow at the right ramp, upper loop and the side ramp. Combo the upper loop into the side ramp (whether or not the upper loop as been collected) for Super Jackpot worth 3x the jackpot value. Shooting the right ramp, in addition to scoring a jackpot, will relight the side loop and side ramp, and reset the clock to 12. If you hit both side loop and side ramp prior to hitting the right ramp, instead of scoring a jackpot, the right ramp will score a mega jackpot or mega ultra jackpot instead (worth the sum of the two side shot scores).

Drum Bonus

Either right inlane will light the left orbit will be lit to collect a drum bonus combo shot, indicated by the flashing drum flasher. Drum bonus is built from pop hits and is displayed in the drum clock section of the UI.

Bastille Day Hurry-Up

Complete the RUSH target bank on the right to light the glowing Rush laser-cut flasher on the right ramp to start Bastille Day Hurry-Up. This will feed the ball to the left flipper and light the RUSH targets for a value that counts down for each target, and also light the ramp to raise the value of the hurry-up. Hitting a target collects the value and raises all other target values by the amount collected. Collect all 4 to win the round, and your next Bastille Day hurry up will start at a higher value.

Outlane Ball Saves

Completing the RUSH target bank enough times will light one of the outlane ball saves, which can be changed with either flipper button.

Extra Balls

Qualifying

- Shoot enough ramps (shown as ramp count up on UI)
- Collect 5 albums
- Time Machine Upgrade award for year 2062
- Mystery award

Collecting

When Extra Ball is qualified, it will be lit at one of the game's two extra ball shots (side scoop and under flipper shot). Lit extra ball shot alternates with slingshot hits. If you light two extra balls, both inserts will be available.

Roll the Bones Mystery

Qualifying

Roll over all three "Roll the Bones" return lanes to light mystery at scoop. Use the ramp diverter or vertical up kicker on Premium/LE to help!

Collecting

Main scoop collects a random mystery award, but will always award Add a Ball during multiball, once per multiball started.

Possible Awards (awarded in this order in competition play):

- Activate Instruments
- 2.5 mil
- Add bonus X
- Bump Spinner Value
- Bump Pop Bumper Value
- Bump Combo Value
- Spot 3 Records
- Light Ball Save
- Light Far Cry Lock
- Spot 3 Ramp Shots
- 5 mil
- Advance drum clock 3 hours
- 10 mil (not available when not in competition)
- Light Extra Ball

The Weapon / Action Button

Diverter

There is a ramp diverter that can send the ball from either ramp to the left or right inlane. By default, the action button can be used to control this diverter. The lower left or lower right flasher domes will pulse to indicate which lane the ball will go to from either ramp. Quick press the action button at any time to switch which lane the diverter will go to. Some modes and shots will automatically switch the diverter for you to help make combos or mode shots.

Qualifying The Weapon

Collecting an album via the combo jackpot will make it so if you are in a song mode or multiball, and that song is on the album you've collected, you have access to The Weapon.

Using The Weapon

The action button will flash blue if you are in a planet song mode and have collected the album for that song. Hold down the action button for a second to use The Weapon Using the weapon in this case will **spot all shots on the playfield**, scoring **all mode and multiball awards** that are at those shots. The order in which it spots the shots is determined by the diverter position: if the diverter is configured for left return lane, shots will be spotted left to right. If configured for the right return lane, shots will be spotted right to left.

The action button will flash green if you are in a multiball song mode and have collected the album for that song. Using the weapon in this case will **add a ball**.

Ramp Awards

Each shot to either the side ramp or the right ramp will advance a ramp count up. At various thresholds different Hold Awards will be available, as well as an Extra Ball. Possible Hold Awards, in this order:

- Hold Spinner Value
- Hold Combos Value
- Hold Pops Value
- Hold Ramps Value
- Hold Instrument Bonus Value
- Hold Records (built up mode value %)
- Hold Bonus X

When awarded, that particular feature will not reset its value at the beginning of the next ball.

Time Machine Upgrades

At the start of the game, the time machine starts at 2012 (the release date of the most recent Rush album). One of the major goals of the game is to collect 100 years to qualify the 2112 wizard mode, and every time 10 years are collected, the time machine will light (while in single ball play) to collect an upgrade that affects gameplay either for the rest of the ball or the rest of the game. Every upgrade also makes Time Machine Multiballs easier, requiring 1 less hit per decade achieved.

Years can be collected by:

- Completing planet modes (+5 years)
- Completing planet modes with 100M+ points scored (+5 extra years on top of completing)
- Scoring super jackpots during multiball modes (+5 years, with Red Barchetta only being +2 years. Freewill will award 5 years for every 3 Super Jackpot shots made Max of 10 years per multiball)
- Scoring a side ramp jackpot, side loop jackpot, or super jackpot in Headlong Flight Multiball (+2 years, max 10)
- Completing the Bastille Day Hurry-Up (+2 years, max of 6 from this method)
- 1-2-3 Combos (+1 year, max of 14 from this method)
- Combo Super Jackpot (+1 year, shared with the max of 14 from combos)
- Collect a 6x instrument bonus (+5 years, 1 time only)

The upgrades are awarded in the following order:

- 10 years +1 ball & 10 more seconds of ball save for Time Machine multiballs
- 20 years Longer timers for the rest of the ball
- 30 years +1 ball & 10 more seconds of ball save for Far Cry Multiball
- 40 years RUSH targets easier to complete for rest of ball
 - oPlus Longer Timers for rest of ball
- 50 years Light Extra Ball
- 60 years +2 balls & 20 more seconds of ball save for Time Machine multiballs
- 70 years 2x record collection (each shot now adds 2 records) for rest of ball
 - oPlus easier rush targets and longer timers for rest of ball
- 80 years 2x Ramp Count-Up for rest of ball
 - oPlus 2x record collection, easier rush targets, and longer timers for rest of ball
- 90 years +1 ball & 10 more seconds of ball save for all multiball modes
- 100 years 2112 Wizard Mode

End of Ball Bonus

Bonus is comprised of six categories, each with two parts: a bonus based on what you've done that ball, and a permanent bonus you'll get every ball:

- Instruments
 - Number of times instrument was activated this ball
 - Number of complete instrument sets
- Drum Clock
 - Number of minutes advanced this ball
 - o25% of all Drum Solo Points Scored
- Records
 - Number of records collected this ball
 - Matching bonus based on how many colors were matching upon mode start
- Time Machine
 - ONumber of times the Time Machine was shot during single ball play
 - o 10% of total scores from all successfully completed modes
- Combos
 - ONumber of combo shots made this ball
 - Number of collected albums
- RUSH Targets
 - Number of RUSH target completions this ball
 - oNumber of times Bastille Day was completed successfully

All of this is then multiplied by your bonus multiplier.

Cygnus X-1: The Voyage

Qualify this Wizard Mode by STARTING all 6 Multiballs:

- Time Machine Multiballs
 - oRed Barchetta Multiball
 - Subdivisions Multiball
 - oFly by Night Multiball
- Far Cry Multiball
- Headlong Flight Multiball
- Freewill Multiball

After all 6 are started. This multiball can be started at the Time Machine.

Selecta Planet

There are three planets to visit during your voyage:

- Behind drop targets (Yellow planet)
- Scoops (Blue planet)
- Time Machine (Purple planet)

When you're not currently exploring a planet, shoot one of the corresponding planet shots to visit that planet. You can visit them in any order this way. Each planet has its own unique challenge based on how the planet is affecting your spacecraft. Each time you explore a new planet, or make it 50% way through a planet, you'll get an add-a-ball and additional ball saver. Drain all balls and the mission will be compromised.

Yellow Planet

Your ship has run out of power and fuel! Shoot behind the drop targets to add fuel shots. Shoot the fuel shots to fuel up your ship. Each shot behind the drops adds a new shot and raises the award value. Each shot to a lit fuel arrow adds 10% fuel. Fuel up to 100% to escape the yellow planet.

Blue Planet

Navigate your way through asteroids and other debris to escape! Shoot flashing blue arrows to navigate successfully. Watch out for red arrows! Shooting into the main scoop or side scoop will lock on your navigation and light all shots purple again. Each successful shot adds 5% progress (multiplied by how many in a row you've made without locking on), while each red shot subtracts 5%. Get to 100% to escape the blue planet.

Purple Planet

The purple planet has some strange gravity affecting time in strange ways... you must hit the correct shots which may be tricky to make out due to the gravity warping your sense of time. Luckily, you have a time machine! Hitting the time machine will temporarily normalize spacetime, add one purple shot, and allow you to see the shots you need to make. Make 10 shots to escape the purple planet.

Escaping the Black Hole

Escape all 3 planets to light the time machine for escape. Hit the time machine once, then quickly shoot a second ball into the time machine to successfully escape the black hole and win the mode. If you survive with 2 or more balls, super jackpots light until down to one ball.

Cygnus X-1 Book II: Hemispheres

Qualify this Wizard Mode by COMPLETING all 6 Core Modes:

- Tom Sawyer
- Working Man
- The Spirit of Radio
- The Big Money
- La Villa Strangiato
- Limelight

The order that the modes were completed will determine the order of the jackpot awards. Each jackpot is 10% of the mode total for the completed mode.

If a player completes Tom Sawyer, followed by The Spirit of Radio, followed by the 4 remaining modes, the player's Apollo scores will be 10% of their Tom Sawyer mode total, and the player's Dionysus scores will be 10% of their The Spirit of Radio scores, following the order of all modes being played, with the last mode completed setting the Super Jackpot value.

During each phase of Cygnus X-1 Book II: Hemispheres, the flipper rules are modified. The player has 120 seconds to complete each phase of the mode with an unlimited ball save in single-ball play. Each time the player drains, they lose 10 seconds of time. Earning a mystery award at the mystery scoop will grant the player 15 additional seconds of time for that section.

If Cygnus X-1 Book II: Hemispheres is played as a challenge mode, the player will continue to play the stages with less time on the clock and more shots needed to advance through each stage, until the player reaches the minimum time of 30 seconds per stage.

Apollo: Bringer of Wisdom

The player's left flipper button will flip all 3 flippers, and the right flipper button will move all of the shot arrows on the playfield from left to right.

Dionysus: Bringer of Love

The player's right flipper button will flip all 3 flippers, and the left flipper button will move all of the shot arrows on the playfield from right to left.

Armageddon: The Battle of Heart and Mind

The player's right flipper button controls the left flipper. The player's left flipper button controls both right flippers.

Cygnus: Bringer of Balance

Pressing the flipper buttons in will lower the flippers, and releasing the flipper buttons will raise the flippers.

The Sphere: A Kind of Dream

Pressing the left flipper button in will lower the right flippers and releasing the left flipper buttons will raise the right flippers. Pressing the right flipper button in will lower the left flipper and releasing the right flipper button will raise the left flipper.

2112

While back in time experiencing the various modes and multiball, performing well enough in them will upgrade your time machine with additional years able to be traveled. Collect enough years to reach year 2112 final wizard mode.