# Progressive Baccarat

## for 7 and 9 Position Tables



# User Manual with Mathematical Analysis

**February 2, 2010**  www.shufflemaster.com

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# About This Manual

This manual describes the basic procedures to deal and play the PROGRESSIVE BACCARAT table game and assumes Dealers are familiar with standard baccarat rules.

This manual is intended for casino operators and employees, regulatory agencies, and independent governing bodies. **Operator policy and internal control procedures for processing and paying jackpots take precedence over the procedures in this manual.**

SMI recommendations, such as hand motions, are to ensure clarity in game play and betting requirements. However, management **may alter** the procedures to suit in-house policies.

## Establishing Limits on Bets and Aggregate Payouts

Casino management may choose to adhere to the following:

- Define and post separate **minimum and maximum wagering limits** for both the base game and side bet.

- Define and post (for side bet wagers only) an **aggregate limit for payouts** (maximum allowed total payout to winning Players wagering on the side bet, during a single round of play). Posting an aggregate limit protects your establishment from excessive liability in any one round of play, while allowing the Player a wider range of betting options, subject to posted aggregate limits.

## Reference Documentation

Product Information for all SMI products is available at:

https://www.shufflemaster.com

## Contact Information

Contact SMI Customer Service if you have questions or comments about this document or any other SMI product.

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# Chapter 1 - Game Basics

## Overview

### Base Game

PROGRESSIVE BACCARAT is a casino table game based on the standard Baccarat card game played with eight standard 52-card decks. This manual explains the rules for a standard seven or nine player Baccarat game and the optional progressive side bet and payout. Figure 1.1 shows a nine player table layout.

The object of the game is to assemble a hand of two or three cards with a point value as close to nine as possible. Each game is dealt only two hands which are referred to as the "Player" and "Banker" hands. Prior to the deal, Players wager on one of the two hands. In addition to betting on the "Player" or "Banker" hands, a wager may be placed on a "Tie" which will win if both hands have the same point value.

The Dealer deals two cards to the "Player" and "Banker" positions. Depending on the value of the initial two card hands, a third card may be dealt to either one of the hands. Ultimately, the winning hand will be the one closest to nine.

The perfect hand is one that totals nine in its first two cards. A two-card eight is the second-best hand and, along with the two-card nine, constitutes a "natural" hand. The only hand that will beat a "natural" eight is a "natural" nine. If any "Player" or "Banker" hand has a "natural" eight or nine, no additional cards are drawn and the hand is over. In a tie, bets are paid according to casino house rules.

### Side Bet

Each player position on the table has a coin spot that allows each Player to make an optional wager on the progressive jackpot. A progressive jackpot is paid when any of the initial four cards dealt in a game contain a nine or combination of nines. The optional side bet wager pays against a posted paytable and is paid regardless of the outcome of the base game.

Figure 1.1    PROGRESSIVE BACCARAT table (nine player positions)

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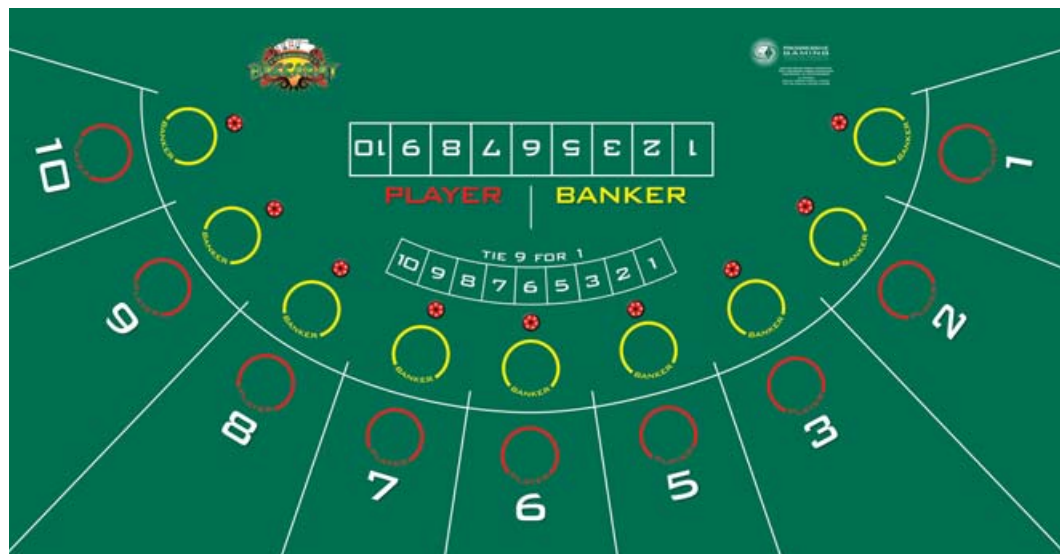
# Table System Configuration

PROGRESSIVE BACCARAT operates in three possible configurations—two linked and one standalone.

## Game Manager/Aquarius Controller System

In this linked configuration, a computer with Game Manager software acts as the master that communicates with up to 120 slave table games (30 per port), via the Aquarius Controller installed in each table. The Dealer uses the Dealer console at a table to communicate game activities to the Game Manager computer, which records game activity, collects game data, and issues directives to each slave table to display jackpot information and messages on the table signs. A Game Manager computer can support up to 120 PROGRESSIVE BACCARAT tables, whether the tables all contribute to one progressive jackpot or different ones.

Using Game Manager, casinos can configure such parameters as a game's jackpot seed amount and the currency amount for the progressive jackpot wager. Configuration information entered into Game Manager takes precedence over any Aquarius Controller settings.

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# Table Components

PROGRESSIVE BACCARAT is a progressive table game consisting of the following components:

- Seven or nine player positions, each containing:
  - Locations to place wagers on "Banker", "Player" and "Tie"
  - A coin acceptor to make an additional side bet wager on the progressive
- One Dealer position
- A progressive jackpot sign that displays current progressive values and game messages

Table 1.1    Coin Acceptor LED Patterns

| LED Activity | Description |
|---|---|
| All Lights Off | No Coin Present: No coin is present (when a coin drop has been completed). |
| Unison Flashing | Coin Placed: A coin has been placed and acknowledged and is ready to be dropped for a progressive bet. All LEDs flash in unison. |
| All Lights Steady | On Successful Drop: A coin was present, successfully dropped, and added to the progressive meter. |
| Chasing Pattern | Idle Sequence: The coin acceptor is ready for coins to be inserted. Two LEDs light at once and follow one another around the slot. |
| Two Corner LEDs Constant On | Coin Jam: A coin jam has occurred. |
| Two Center LEDs Steady On | Coin Not Registered: A coin is present but not counted when dropped. |
| Two Alternate Patterns Occur | Jackpot Mode: Two alternate lighting patterns occur when a jackpot is processed (one for JPH and one for JPL). The patterns are a way to draw attention to the table and add excitement to the game. They do not have any other significance. |

# Table Security

All PROGRESSIVE BACCARAT tables have a built-in Dealer console in the chip tray that has a key lock. The key lock comes with two keys and requires the correct key to make either a high or low jackpot award.

- High jackpot key (009) is used to pay a high jackpot
- Low jackpot key (008) is used to pay a low jackpot

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# Progressive Jackpot Wager

Each Player has the option of wagering on the progressive jackpot. At each Player position is a coin acceptor where the Player may wager on the progressive jackpot for the upcoming hand. The progressive wager does not affect the Dealer's hand. Refer to "Chapter 2 - Recommended Game Procedures" for more information.

The following rules apply to the progressive jackpot wager.

1.  A Player choosing to play the progressive jackpot is responsible for noting that the coin acceptor LEDs are on, as posted on the table sign.

2.  A Player wishing to wager on the progressive jackpot must first have placed a Baccarat wager for that round.

3.  The amount required to make a wager on the progressive jackpot shall be displayed on a sign at the table.

4.  Only one chip may be wagered per coin acceptor per hand. The coin acceptor will acknowledge only one chip per play. A Player may not wager another chip until the beginning of the next hand (GAME OVER pressed).

5.  A Player choosing to play the progressive jackpot shall be responsible for ensuring that their wager has been accepted.

6.  All LEDs on the coin acceptor will light (along with the corresponding Player position LED on the Dealer console) to indicate valid progressive jackpot wagers. A hand that qualifies for the progressive jackpot will be honored only if the appropriate LEDs are on. A Player position on a PROGRESSIVE BACCARAT table with defective LEDs will be closed.

7.  All progressive jackpot wagers must be placed before the Dealer delivers the cards. Before any cards are delivered, the Dealer will press COIN IN to prevent the Player from wagering after the first card is delivered.

8.  When a hand that qualifies for a jackpot prize has been dealt, a Player who has placed a wager on the progressive jackpot shall win and be paid regardless of whether their Baccarat base game wager wins or loses.

9.  Wagers on the progressive jackpot shall form part of one or more jackpot prize pools, as approved by the Authority.

10. The Authority shall approve the rate of increment to the prize pool(s) and may grant approval for a portion of each wager on the progressive jackpot being retained by the casino operator.

11. The following hands dealt to the Baccarat initial deal (first four cards dealt) shall qualify for a progressive jackpot payout:

    - 4 suited nines (PBAC-2a & PBAC-2b)

    - 4 red or 4 black nines

    - 4 other nines

    - 3 suited nines out of 4 cards

    - 3 unsuited nines out of 4 cards

    - 2 suited nines out of 4 cards

    - 2 unsuited nines out of 4 cards

    - 1 nine out of 4 cards (PBAC-1a & PBAC-2a)

12. Any progressive jackpot payout made to a Player shall be in addition to any payment made for a Baccarat base game wager by the Player on that round of play.

13. After a (priority) progressive jackpot of 4 suited nines (PBAC-2a & PBAC-2b) or 4 red or 4 black nines has been determined, it will be left exposed on the layout. The appropriate casino personnel will be notified regarding the possible Jackpot payoff. Any additional winning progressive jackpot hands will also be left exposed on the layout in the same fashion.

14. Before each hand is dealt, the Dealer will inform the Player that the progressive jackpot is closed by saying "No more Bets."

15. The variation of the base game has no impact on the progressive jackpot portion of the game. All variations can be used as the base game, including the following:

    - Traditional games - 4-5% commission on all "Banker" wins

    - Even Money games - no commission paid on "Banker" wins but "Banker" wins with a point total of six or greater are paid at 1 to 2

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# Chapter 2 - Recommended Game Procedures

## Overview

The object of the game is to assemble a hand of two or three cards with a point value as close to nine as possible. The Dealer deals two cards to both the "Player" and "Banker" positions. Depending on the value of the initial two card hands, a third card may be dealt to either one, both, or neither of the hands. Ultimately, the winning hand will be the one closest to nine.

The perfect hand is one that totals nine in its first two cards. A two-card eight is the second-best hand and, along with a two-card nine, constitutes a "natural" hand. The only hand that will beat a "natural" eight is a "natural" nine. If any "Player" or "Banker" hand has a "natural" eight or nine, no additional cards are drawn and the hand is over.

Aces count as one, picture cards as 10 and the others their face value. If a hand total is in double figures, then the first figure is ignored. So, a hand totaling eighteen would count as eight.

## Step 1: Initial Wagers

Players begin by placing wagers on the following positions:

- **Required**
  - "Banker" or "Player"
- **Optional**
  - "Tie"
  - Progressive side bet

Figure 2.1    PROGRESSIVE BACCARAT table wager positions



"Tie" wagering positions

Coin spot for side bet wager

Wagering position for "Banker" hand

Wagering position for "Player" hand

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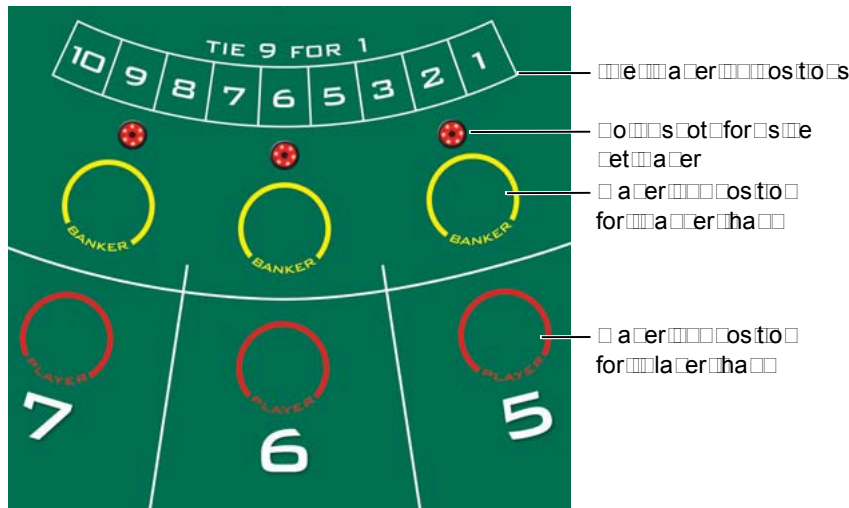
The following are the rules for placing a progressive jackpot wager:

1. All Players must place an initial wager to participate in the optional progressive jackpot wager.

2. The progressive wager is always treated as a side wager. Its payout is dependent only on the outcome of the first four cards dealt.

3. Only one chip may be wagered per coin acceptor per hand. The coin acceptor will acknowledge only one chip per play. A Player may not wager another chip until the beginning of the next hand.

4. All LEDs on the coin acceptor will light (along with the corresponding player position LED on the Dealer console) to indicate valid progressive jackpot wagers. A hand qualifying for the progressive jackpot will be honored only if the appropriate LEDs are on. A player position on a table with defective LEDs will be closed.

5. A Player choosing to play for the progressive jackpot is responsible for noting that the coin acceptor LEDs are on.

6. A Player must make the progressive jackpot wager before the Dealer delivers the cards.



Players may lose the base game wager and still collect on the side bet.

# Step 2: Dealing the Hands

Progressive Baccarat is played with eight complete decks of cards. The cards are shuffled by the Dealer and placed in the "shoe". Seven or nine position tables may provide a "squeeze" game where the shoe rotates around the table and the Players can handle the cards or a "face-up" game where the Dealer is the only one who can touch the cards.

The Dealer or Player deals four cards: two to the "Player" hand and two to the "Banker" hand. According to Baccarat drawing rules, a third card may be dealt to one, both, or neither of the hands. The third card rules are listed in Table 2.1 and Table 2.2.

# Step 3: Game Play

After the cards are dealt, the game follows standard casino Baccarat play rules; however, house policy and procedures take precedence.

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A third card is dealt to one, both, or neither of the hands based on the following Baccarat drawing rules:

Table 2.1     Third card rules for "Player'" hand

| Player hand total | Third card rule |
|---|---|
| 0, 1, 2, 3, 4, 5 | Always draws a third card |
| 6 or 7 | Always stands |
| 8 or 9 | "Natural hand"; no further draws |

The "Banker" draws a third card according to the following rules:

Table 2.2     Third card rules for the "Banker" hand

| Banker hand total | Third card rule |
|---|---|
| 0, 1, 2 | Always draws a third card |
| 3 | Draws if Player's third card is 1-2-3-4-5-6-7-9-0 (not 8) |
| 4 | Draws if Player's third card is 2-3-4-5-6-7 |
| 5 | Draws if Player's third card is 4-5-6-7 |
| 6 | Draws if Player's third card is of 6-7 |
| 7 | Always stands |
| 8 or 9 | "Natural hand"; no further draws |

# Step 4: Settling the Hands

The Dealer compares "Player" and "Banker" hand values, collects lost bets and pays winning hand wagers.

The highest total any baccarat hand can have is nine. A two-card total of nine is called a "natural" and cannot lose. A two-card total of eight is the second best hand and is also called a "natural". If both "Player" and "Banker" are dealt identical hands, it is a standoff and neither "Banker" nor "Player" wins or losses.

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# Step 5: Take and Pay

The Dealer compares hands, collects losses and pays Players. Players are paid from right to left or according to standard casino house rules.

- If the "Banker" hand is the winning hand, pay all Players according to their initial game wager. Winning "Banker" hands pay 1 to 1 minus 5% (or 4%) bank commission or as posted for Even Money games.

- If the "Player" hand is the winning hand, pay all Players according to their initial game wager. Winning "Player" hands pay 1 to 1.

- If the hand results in a "Tie", bets are paid according to posted paytables, as determined by casino house rules.

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# Summary

- Players start by placing a wager on the "Banker" or "Player" position. In addition, players have the option of betting on a Tie and/or the progressive side bet.

- The Dealer deals a two card hand to both the "Player" and "Banker" positions.

- No further cards are drawn if either the "Player" or the "Banker" has a total of 8 or 9 on the first two cards. The resulting hand is called a "natural" and the hand is over.

- A third card may be dealt to either or both the "Player" and the "Banker" based on the following three-card rules:

    - "Player" draws a third card:

        – If the "Player" hand is less than or equal to 5, the "Player" hand draws a third card.

        – If the "Player" hand does not draw a third card, then the "Banker" hand stands on 6 or more and takes a third card on a total of 5 or less.

        – If the "Player" hand does take a third card then the "Banker" third-card rules will determine if the Bank takes a third card.

    - "Banker" draws a third card:

        – If the "Banker" hand is 2 or less then "Banker" draws a card, regardless of what the "Player" hand third card is.

        – If the "Banker" hand is 3 then the Banker draws a third card unless the "Player" hand third card was an 8.

        – If the "Banker" hand is 4 then the Banker draws a third card unless the "Player" hand third card was a 0,1,8, or 9.

        – If the "Banker" hand is 5 then the Banker draws a third card if the "Player" hand third card was 4,5,6, or 7.

        – If the "Banker" hand is 6 then the Banker draws a third card if the "Player" hand third card was a 6 or 7.

        – If the "Banker" hand is 7 then the "Banker" stands.

- The hand with the highest point value closest to nine wins. Dealer collects all losing wagers and pays all winning bets.

- If the initial four cards dealt contain a combination of nines, either suited or unsuited, the Players who placed an optional progressive jackpot wager shall be paid all or part of the jackpot, according to the set progressive paytable.

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# Chapter 3 - Progressive Jackpot Payout

## Progressive Payout Structure

Table 3.1 through Table 3.3 list the paytables available for PROGRESSIVE BACCARAT. Refer to the following sections for procedures to record and pay progressive jackpots:

- "Using the Dealer Console to Record and Pay Jackpots" on page 15
- "Handling Multiple Progressive Jackpots at One Table and One Deal" on page 18
- "Handling Simultaneous High Progressive Jackpot Hands on Multiple Tables" on page 21
- "Reconciling Progressive Meter and Coin-In Amounts" on page 23

NOTE

For all Progressive Baccarat paytables, the 100% prize (and any 10% prize) is to be shared equally amongst all winning progressive jackpot players and the remaining payouts are paid individually.

Table 3.1      PBAC-1a PROGRESSIVE BACCARAT Pay Schedule ($1 Wager)

| Progressive Hand | Jackpot Amount |
|---|---|
| 4 Red or 4 Black Nines | 100% (from the meter) |
| 4 Other Nines | $2,000 (from the meter) |
| 3 Suited Nines | $500 (from the meter) |
| 3 Unsuited Nines | $100 (from the meter) |
| 2 Suited Nines | $10 (from the meter) |
| 2 Unsuited Nines | $5 (from the meter) |
| 1 Nine | $1(not from the meter) |

Table 3.2      PBAC-1b PROGRESSIVE BACCARAT Pay Schedule ($1 Wager)

| Progressive Hand | Jackpot Amount |
|---|---|
| 4 Red or 4 Black Nines | 100% (from the meter) |
| 4 Other Nines | $2,000 (from the meter) |
| 3 Suited Nines | $500 (from the meter) |
| 3 Unsuited Nines | $100 (from the meter) |
| 2 Suited Nines | $15 (from the meter) |
| 2 Unsuited Nines | $10 (not from the meter) |

Table 3.3    PBAC-2a PROGRESSIVE BACCARAT Pay Schedule ($1 Wager)

| Progressive Hand | Jackpot Amount |
|---|---|
| 4 Suited Nines | 100% (from the meter) |
| 4 Red or 4 Black Nines | 10% (from the meter) |
| 4 Other Nines | $2,000 (from the meter) |
| 3 Suited Nines | $500 (from the meter) |
| 3 Unsuited Nines | $100 (from the meter) |
| 2 Suited Nines | $10 (from the meter) |
| 2 Unsuited Nines | $5 (from the meter) |
| 1 Nine | $1 (not from the meter) |

Table 3.4    PBAC-2b PROGRESSIVE BACCARAT Pay Schedule ($1 Wager)

| Progressive Hand | Jackpot Amount |
|---|---|
| 4 Suited Nines | 100% (from the meter) |
| 4 Red or 4 Black Nines | 10% (from the meter) |
| 4 Other Nines | $2000 (from the meter) |
| 3 Suited Nines | $500 (from the meter) |
| 3 Unsuited Nines | $100 (from the meter) |
| 2 Suited Nines | $15 (from the meter) |
| 2 Unsuited Nines | $10 (not from the meter) |

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# Using the Dealer Console to Record and Pay Jackpots

The Dealer will announce when a winning jackpot hand has been dealt and notify the appropriate casino management to perform several steps to record and handle the transaction correctly. This section outlines Dealer procedures for paying a progressive jackpot. However, casino policy may require management personnel perform some of these actions.

Casino policy and internal control procedures take precedence over these procedures for paying any jackpot.

When a progressive jackpot occurs, the Dealer enters the information into Game Manager using the Dealer console keypad. After the win is verified and the Player paid, the Aquarius Controller reduces the meter to account for the jackpot win and Game Manager records the information in its database.

There are three progressive jackpot types—High, Low, and No Key. The following subsections detail how to perform payouts for each type of jackpot.



The Dealer pays progressive jackpot winners from right to left, in order of Player position, after taking or paying all initial wagers.

## High Jackpot Payout Procedure

Refer to the appropriate paytable in "Progressive Payout Structure" on page 13. To make a high jackpot payout, the Dealer performs the following steps:

1. Verify that the Dealer console is in COIN IN mode. The game must be in this mode to pay jackpots.

2. Press the Dealer console button that corresponds to the winning hand. The button's red LED will light to indicate a pending jackpot.

3. Notify the appropriate casino personnel, who will:

   a. Verify the hand(s).



If the hand is not verifiable (is not a winner), press the keypad button pressed in step 2 to cancel the jackpot payout process for that hand.

   b. Ensure the coin acceptor LEDs are on.

4. Double-check all security measures before validating the jackpot:

   • Verify that the shuffle was performed according to procedures, that qualifying progressive wagers were placed before the hand was hands were dealt, and that cards were dealt in the correct sequence and were not manipulated in order to compose the winning hand.

   • Check the winning meter amount against the last meter reading and the last jackpot payout to determine if the winning meter amount is correct.

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- Pull and check the card deck (save the deck for further inspection).

- Replace the card deck.

5. Count down the remaining cards, sort them into proper order, and check them. Count down the complete deck after any progressive jackpot payout.

6. After the hand is verified, process the win by performing the following steps:

   a. If the Player(s) wishes to be paid by check, the Player(s) must request this prior to the cash payoff being completed. If it is permissible, find out from the Player(s) how the transaction is to be carried out before completing the payout slip(s).

   b. Insert the 009 key and turn it from the R (Run) position to the JPH (Jackpot High) position. The J-POT button LED flashes to signify that the console is in Process Jackpot mode.

   c. Press the flashing J-POT button to pay the pending jackpot. The controller deducts the corresponding payout amount from the progressive jackpot meter. A jackpot message scrolls across the table meter indicating a winner, the type of win, the jackpot amount, and at what table. A jackpot paid message displays on the Game Manager Activity Log.

7. Pay the amount of the jackpot to the winning Player(s).

> NOTE
>
> All percentage based progressive jackpot payouts will reduce the progressive meter by the amount posted on the paytable. That amount is then **equally divided** by the number of Players who placed a valid progressive side bet wager.
>
> For example, the meter is at $100,000 and four players bet on the progressive side bet wager. A winning hand is dealt with an award of 10% of the meter. Each player receives $2,500.
>
> **($100,000 x 0.10) / 4 = $2,500**

8. After all jackpot payouts are made, turn the key back to the R (Run) position and remove the key.

9. Press GAME OVER after all payouts are processed.

10. Clear the jackpot in Game Manager. (Percentage jackpots cause the Process Jackpot button on the main menu to blink. When the system has finished processing a jackpot, it prints a jackpot receipt. Add this receipt to paperwork completed at the table.)

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## Low Jackpots

Low jackpots are fixed amounts, which the Dealer pays from the chip tray. Low jackpots also reduce the jackpot meter amount. To pay a low jackpot, follow the procedures in "High Jackpot Payout Procedure" on page 15 but use the 008 key in the Dealer console and turn it from the R (Run) position to the JPL (Jackpot Low) position.

> When a fixed amount progressive jackpot winning hand is dealt, each Player who placed a valid progressive side bet wager will receive the amount posted on the paytable.
>
> For example, a winning hand of 3 unsuited nines is dealt with an award of $100. Each player who has placed a progressive side bet wager on the hand will receive $100.

## No Key Jackpot Payout Procedure

No Key jackpots are fixed amounts that the Dealer pays from the chip tray. These jackpots do not require a key to pay and some No Key jackpots reduce the jackpot meter amount. To make a No Key jackpot payment, perform the following:

1. Verify that the Dealer console is in COIN IN mode. The game must be in this mode to pay jackpots.

2. Press the Dealer console button that corresponds to the winning hand. The button's red LED will light to indicate a pending jackpot.

3. Pay the winning Player(s) the amount of the jackpot from the chip tray.

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# Handling Multiple Progressive Jackpots at One Table and One Deal

 As this game shares community cards and all progressive jackpot winning hands are shared by all eligible bettors, any percentage (%) based payouts will be divided equally between all eligible bettors.

For any fixed amount progressive jackpot (JPL) wins on one table with multiple eligible bettors, the Dealer performs the following steps:

1. Determine the amount of the progressive payout.

2. Verify that the Dealer console is in COIN IN mode. The game must be in this mode to pay jackpots.

3. Press the Dealer console button that corresponds to the winning hand. The button's red LED lights to indicate a jackpot is pending.

4. Notify the appropriate casino personnel, who will:

   a. Verify the hand.

    If the hand is not verifiable (is not a winner), press the keypad button pressed in step 3 to cancel the jackpot payout process for that hand.

   b. Ensure the coin acceptor LEDs are on.

5. After the hand is verified, process the win by performing the following steps:

   a. Insert the key and turn it from the R (Run) position to the JPL (Jackpot Low) position. The J-POT button LED flashes to signify that the console is in Process Jackpot mode.

   b. Press the flashing J-POT button to pay a pending jackpot. The controller deducts the corresponding payout amount from the progressive jackpot meter. A jackpot message scrolls across the table meter indicating a winner, the type of win, the jackpot amount, and at what table. A jackpot paid message displays on the Game Manager Activity Log.

6. Pay the amount of the jackpot to all eligible bettors, from right to left.

7. After all jackpot payouts have been made, turn the key to the R (Run) position and remove the key.

8. Press GAME OVER after all payouts are processed.

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For any percentage-based progressive jackpot (JPH) wins on one table with multiple eligible bettors, the Dealer performs the following steps:

1. Determine the amount of the progressive payout.

2. Verify that the Dealer console is in COIN IN mode. The game must be in this mode to pay jackpots.

3. Press the Dealer console button that corresponds to the winning hand. The button's red LED lights to indicate a jackpot is pending.

4. Notify the appropriate casino personnel, who will:

    a. Verify the hand.

    > **NOTE** If the hand is not verifiable (is not a winner), press the keypad button pressed in step 3 to cancel the jackpot payout process for that hand.

    b. Ensure the coin acceptor LEDs are on.

    c. **For a high jackpot only:** Double-check all security measures before validating the jackpot.

    - Verify that the shuffle was performed according to procedures, that qualifying progressive wagers were placed before the hands were dealt, and that cards were dealt in the correct sequence and were not manipulated in order to compose the winning hand.

    - Check the winning meter amount against the last meter reading and the last jackpot payout to determine if the winning meter amount is correct.

    - Pull and check the card deck (save the deck for further inspection).

    - Replace the card deck.

5. Count down the remaining cards, sort them into proper order, and check them. Count down the complete deck after any progressive jackpot payout.

6. After the hand is verified, process the win by performing the following steps:

    a. For high jackpot only: If the player(s) wish to be paid by check, the Player must request this prior to the cash payoff being completed. If it is permissible, find out from the Player(s) how the transaction is to be carried out before completing the payout slip.

    b. Insert the key and turn it from the R (Run) position to the JPH (Jackpot High) position. The J-POT button LED flashes to signify that the console is in Process Jackpot mode.

    c. Press the flashing J-POT button to pay a pending jackpot. The controller deducts the corresponding payout amount from the progressive jackpot meter. A jackpot message scrolls across the table meter indicating a winner, the type of win, the jackpot amount, and at what table. A jackpot paid message displays on the Game Manager Activity Log.

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7.  Verify the number of Players (1 to 9) who placed an eligible progressive jackpot wager.

8.  Divide the total jackpot amount equally by the number of Players.

9.  Pay the amount to the Player(s) according to Player position (from right to left).

10. After all jackpot payouts have been made, turn the key to the R (Run) position and remove the key.

11. Press GAME OVER after all payouts are processed.

12. Clear the jackpot in Game Manager. (Priority jackpots cause the Process Jackpot button on the main menu to blink. When the system has finished processing a jackpot, it prints a jackpot receipt. Add this receipt to paperwork completed at the table.)

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# Handling Simultaneous High Progressive Jackpot Hands on Multiple Tables

> **NOTE**
>
> SMI recommends casinos pay simultaneous winning high progressive jackpot hands at multiple tables according to which table won first—as shown on surveillance tapes.

Situations can occur in which multiple 100% or 10% jackpots hit at different tables virtually simultaneously. Although it is statistically rare to have such an occurrence, it could happen. When there is more than one table linked to the same progressive, surveillance must determine which table got the winning hand first. Winning a progressive jackpot second (and so on) means that the table wins a smaller amount after the first jackpot reduces the meter.

In a situation where one table wants to be paid ahead of another or insists they won the progressive jackpot first, surveillance must be called to settle the dispute with surveillance tape evidence. The house awards the first high jackpot to the table who won the hand first, even if by a few seconds difference.

When multiple tables win a high progressive jackpot simultaneously on different tables, the Dealer performs the following steps:

1. As soon as a dispute arises, notify the appropriate casino personnel, who will perform the following steps:

    a. Verify that the Dealer console on all tables is in COIN IN mode. The game must be in this mode to pay jackpots.

    b. Verify the hands.

    c. Ensure the coin acceptor LEDs are on.

    d. Double-check all security measures before validating the jackpot:

       • Verify that the shuffle was performed according to procedures, that qualifying progressive wagers were placed before the hand was dealt, and that cards were dealt in the correct sequence and were not manipulated in order to compose the winning hand.

       • Check the winning meter amount against the last meter reading and the last jackpot payout to determine if the winning meter amount is correct.

       • Pull and check the card deck (save the deck for further inspection).

       • Replace the card deck.

2. Count down the remaining cards, sort them into proper order, and check them. Count down the complete deck after any progressive jackpot payout.

3. After both hands are verified, perform the following steps:

    a. At the first winning table, press the Dealer console button that corresponds to the winning hand. The button's red LED lights to indicate a pending jackpot.

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b. If the Player wishes to be paid by check, the Player must request this prior to the cash payoff being completed. If it is permissible, find out from the Player how the transaction is to be carried out before completing the payout slip.

c. Insert the key and turn it from the R (Run) position to the JPH (Jackpot High) position. The J-POT button LED flashes to signify that the console is in Process Jackpot mode.

d. Press the flashing J-POT button to pay a pending jackpot. The controller deducts the corresponding payout amount from the progressive jackpot meter. A jackpot message scrolls across the table meter indicating a winner, the type of win, the jackpot amount, and at what table. A jackpot paid message displays on the Game Manager Activity Log.

4. Pay the first winning table the full sum of the winning hand's payout.

5. Turn the key to the R (Run) position and remove the key.

6. Press GAME OVER after the first table payout is processed.

7. Clear the jackpot in Game Manager. (Priority jackpots cause the Process Jackpot button on the main menu to blink. When the system has finished processing a jackpot, it prints a jackpot receipt. Add this receipt to paperwork completed at the table.)

8. After the first jackpot payout is made, repeat the above process to pay the second jackpot winning table. The second high jackpot winner will receive the new jackpot amount (the original jackpot amount less the first winner's payout) and any applicable re-seed amount.

# Reconciling Progressive Meter and Coin-In Amounts

The End of Shift form on the next page is an optional tool for casinos. The main purpose of this form is to check and balance the progressive jackpot meter and coin-in amounts against Game Manager. Make copies of the original form and complete one for each shift. Complete and use the form as follows:

1. Fill in the date, time, shift, table #, games supervisor, and pit/shift personnel.

2. In the progressive jackpot Hard Meter section:

    a. Enter the beginning hard meter reading amount. This is the end hard meter amount from previous shift.

    b. Enter the end hard meter amount at the end of your shift. This is the beginning amount for the next shift.

    c. Subtract the end amount from the beginning amount. Enter this amount in Total Hard Meter.

    d. Multiply the Total Hard Meter amount by the progressive meter increment rate. (This rate is casino-specific.) Enter this amount in Change in progressive jackpot value.

3. Under the Current progressive jackpot Reading section:

    a. Enter the beginning amount of the progressive jackpot. This is the end progressive jackpot amount from the previous shift.

    b. Enter the end amount of the progressive jackpot from the LED screen on Dealer console. This is the beginning amount for the next shift.

    c. Subtract the end amount from the beginning amount. Enter this amount in Total Current Meter.

4. Compare the Change in progressive jackpot Value with the Total Current Meter. This figure represents the correct amount of coin that was added to the progressive jackpot.

To reconcile meter amounts, run the Game Manager Coin-In, Activity Log, and Progressive Jackpot Reports, and compare the total progressive jackpot hard meter and current meter amounts with the amounts on these reports.



If the variance is more than 100 coins, contact SMI Customer Service to resolve the problem (see "Contact Information" on page iii).

| SMI PROGRESSIVE TABLE GAMES<br>**END OF SHIFT FORM** | | |
|---|---|---|
| Date: | Shift: | |
| Time: | Table #: | |
| Games Supervisor: | | |
| Pit/Shift Personnel: | | |
| **Progressive Jackpot Hard Meter** | | |
| **Beginning Amount:**<br>(end amount from previous shift) | | |
| **End Amount:**<br>(beginning amount for next shift) | | |
| **Total Hard Meter:**<br>(beginning minus end) | | |
| **Change in Progressive Jackpot Value (in dollars):**<br>(Total Hard Meter times progressive increment rate) | **$** | |
| **Current Progressive Jackpot Meter** | | |
| **Beginning Amount:**<br>(end amount from previous shift) | | |
| **End Amount:**<br>(from LED screen on Dealer console) | | |
| **Total Current Meter:**<br>(beginning minus end) | | |

To reconcile meter amounts, run the Game Manager Coin-In, Activity Log, and Progressive Jackpot Reports, and compare the total progressive jackpot hard meter and current meter amounts with the amounts on these reports.

If the variance is more than 100 coins, contact SMI Customer Service to resolve the problem (see ).

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# Appendix A - Mathematical Analysis

## Progressive Side Bet Math Analysis

### Introduction

Each Player has the option of wagering on the progressive jackpot. At each player position there is a coin acceptor where the Player may wager on the progressive jackpot for the upcoming hand. Rules for making a progressive jackpot wager are:

1. A Player choosing to play the progressive jackpot is responsible for noting that the coin acceptor LEDs are on, as posted on the table sign.

2. A Player wishing to wager on the progressive jackpot must first have placed a Baccarat wager for that round.

3. The amount required to make a wager on the progressive jackpot shall be displayed on a sign at the table.

4. Only one chip may be wagered per coin acceptor per hand. The coin acceptor will acknowledge only one chip per play. A Player may not wager another chip until the beginning of the next hand (GAME OVER pressed).

5. A Player choosing to play the progressive jackpot shall be responsible for ensuring that their wager has been accepted.

6. All LEDs on the coin acceptor will light (along with the corresponding Player position LED on the Dealer console) to indicate valid progressive jackpot wagers. A hand that qualifies for the progressive jackpot will be honored only if the appropriate LEDs are on. A player position on a PROGRESSIVE BACCARAT table with defective LEDs will be closed.

7. All progressive jackpot wagers must be placed before the Dealer delivers the cards. Before any cards are delivered, the Dealer will press COIN IN to prevent the Player from wagering after the first card is delivered.

8. A Player who has placed a wager on the progressive jackpot and receives a hand which qualifies for a jackpot prize shall win and be paid regardless of whether their Baccarat base game wager wins or loses.

9. Wagers on the progressive jackpot shall form part of one or more jackpot prize pools, as approved by the Authority.

10. The Authority shall approve the rate of increment to the prize pool(s) and may grant approval for a portion of each wager on the progressive jackpot being retained by the casino operator.

11. The following hands dealt to the Baccarat initial deal (first four cards dealt) shall qualify for a progressive jackpot payout:

- 4 Suited Nines (PBAC-2a & PBAC-2b)

- 4 Red or 4 Black Nines

- 4 Other Nines

- 3 Suited Nines out of 4 cards

- 3 Unsuited Nines out of 4 cards

- 2 Suited Nines out of 4 cards

- 2 Unsuited Nines out of 4 cards

- 1 Nine out of 4 cards (PBAC-1a & PBAC-2a)

12. Any progressive jackpot payout made to a Player shall be in addition to any payment made for a Baccarat base game wager by the Player on that round of play.

13. After a (priority) progressive jackpot of 4 suited nines (PBAC-2a & PBAC-2b) or 4 red or 4 black nines has been determined, it will be left exposed on the layout. The appropriate casino personnel will be notified regarding the possible jackpot payoff. Any additional winning progressive jackpot hands will also be left exposed on the layout in the same fashion.

14. Before each hand is dealt, the Dealer will inform the Player that the progressive jackpot is closed by saying "No more Bets."

The side bet is independent from base game plays so the Player's participation in the side bet need not cause a Player to alter their strategy as it relates to the base game. SMI suggests paytables PBAC-1a, PBAC-1b, PBAC-2a, and PBAC-2b for the side bet of PROGRESSIVE BACCARAT.

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## Probability Distribution, Hit Frequency, and House Advantage

The payouts, probability distribution, hit frequency, and house advantage for the progressive side bet of PROGRESSIVE BACCARAT are listed in Table A.1 through Table A.4.

> **NOTE** The winning hands are based on the number/suit of Nines in the first four cards dealt from an eight deck shoe.

Table A.1　PBAC-1a for the side bet of PROGRESSIVE BACCARAT

| Bet | $1 | | | | |
|---|---|---|---|---|---|
| **Reserve Reset** | $10,000 | | | | |
| **Fraction to House** | 38% | | | | |
| **Fraction to Meter** | 59% | | | | |
| **Fraction to Reserve** | 3% | | | | |
| | | | | | |
| | **Probabilities** | **1 in ~** | **Pay (X for 1)** | **Contribution** | |
| **4 Red or 4 Black Nines** | 2.95952E-06 | 337,893.00 | 100% | | |
| **4 Other Nines** | 2.62779E-05 | 38,054.78 | $2,000 | 0.05256 | From Meter |
| **3 Suited Nines** | 6.99357E-05 | 14,298.86 | $500 | 0.03497 | From Meter |
| **3 Unsuited Nines** | 0.00147864 | 676.30 | $100 | 0.14786 | From Meter |
| **2 Suited Nines** | 0.006696339 | 149.34 | $10 | 0.06696 | From Meter |
| **2 Unsuited Nines** | 0.022958877 | 43.56 | $5 | 0.11479 | From Meter |
| **1 Nine** | 0.243619199 | 4.10 | $1 | 0.24362 | Not from Meter |
| **Hit Frequency** | **0.27485** | **3.6** | **Fixed Pays** | **0.66076** | |
| | | | Fixed Pays from Meter | 0.41715 | |
| | | | Fixed Pays not from Meter | 0.24362 | |
| | | | **House Advantage** | **10.68%** | |
| | | | **Average Reset** | **$20,136.79** | |
| | | | **Average Jackpot** | **$78,543.15** | |

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Table A.2    PBAC-1b for the side bet of PROGRESSIVE BACCARAT

| Bet | $1 | | | | |
|---|---|---|---|---|---|
| **Reserve Reset** | $10,000 | | | | |
| **Fraction to House** | 36% | | | | |
| **Fraction to Meter** | 60% | | | | |
| **Fraction to Reserve** | 4% | | | | |
| | | | | | |
| | **Probabilities** | **1 in ~** | **Pay (X for 1)** | **Contribution** | |
| **4 Red or 4 Black Nines** | 2.95952E-06 | 337,893.00 | 100% | | |
| **4 Other Nines** | 2.62779E-05 | 38,054.78 | $2,000 | 0.05256 | From Meter |
| **3 Suited Nines** | 6.99357E-05 | 14,298.86 | $500 | 0.03497 | From Meter |
| **3 Unsuited Nines** | 0.00147864 | 676.30 | $100 | 0.14786 | From Meter |
| **2 Suited Nines** | 0.006696339 | 149.34 | $15 | 0.10045 | From Meter |
| **2 Unsuited Nines** | 0.022958877 | 43.56 | $10 | 0.22959 | Not from Meter |
| | | | | | |
| **Hit Frequency** | **0.03123** | **32.0** | **Fixed Pays** | 0.56542 | |
| | | | Fixed Pays from Meter | 0.33583 | |
| | | | Fixed Pays not from Meter | 0.22959 | |
| | | | **House Advantage** | **10.08%** | |
| | | | **Average Reset** | **$23,515.72** | |
| | | | **Average Jackpot** | **$112,776.00** | |

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Table A.3    PBAC-2a for the side bet of PROGRESSIVE BACCARAT

| | | | | | |
|---|---|---|---|---|---|
| **Bet** | $1 | | | | |
| **Reserve Reset** | $10,000 | | | | |
| **Fraction to House** | 35% | | | | |
| **Fraction to Meter** | 60% | | | | |
| **Fraction to Reserve** | 5% | | | | |
| | | | | | |
| | **Probabilities** | **1 in ~** | **Pay (X for 1)** | **Contribution** | |
| **4 Suited Nines** | 2.27655E-07 | 4,392,609.00 | 100% | | |
| **4 Red or 4 Black Nines** | 2.73186E-06 | 366,050.75 | 10% | | |
| **4 Other Nines** | 2.62779E-05 | 38,054.78 | $2,000 | 0.05256 | From Meter |
| **3 Suited Nines** | 6.99357E-05 | 14,298.86 | $500 | 0.03497 | From Meter |
| **3 Unsuited Nines** | 0.00147864 | 676.30 | $100 | 0.14786 | From Meter |
| **2 Suited Nines** | 0.006696339 | 149.34 | $15 | 0.10045 | From Meter |
| **2 Unsuited Nines** | 0.022958877 | 43.56 | $10 | 0.22959 | Not from Meter |
| | | | | | |
| **Hit Frequency** | **0.03123** | **32.0** | **Fixed Pays** | 0.56542 | |
| | | | Fixed Pays from Meter | 0.33583 | |
| | | | Fixed Pays not from Meter | 0.22959 | |
| | | | **House Advantage** | **11.81%** | |
| | | | **Average Reset** | **$229,630.45** | |
| | | | **Average Jackpot** | **$631,824.61** | |

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Table A.4 PBAC-2b for the side bet of PROGRESSIVE BACCARAT

| | | | | | |
|---|---|---|---|---|---|
| **Bet** | $1 | | | | |
| **Reserve Reset** | $10,000 | | | | |
| **Fraction to House** | 35% | | | | |
| **Fraction to Meter** | 60% | | | | |
| **Fraction to Reserve** | 5% | | | | |
| | | | | | |
| | **Probabilities** | **1 in ~** | **Pay (X for 1)** | **Contribution** | |
| **4 Suited Nines** | 2.27655E-07 | 4,392,609.00 | 100% | | |
| **4 Red or 4 Black Nines** | 2.73186E-06 | 366,050.75 | 10% | | |
| **4 Other Nines** | 2.62779E-05 | 38,054.78 | $2,000 | 0.05256 | From Meter |
| **3 Suited Nines** | 6.99357E-05 | 14,298.86 | $500 | 0.03497 | From Meter |
| **3 Unsuited Nines** | 0.00147864 | 676.30 | $100 | 0.14786 | From Meter |
| **2 Suited Nines** | 0.006696339 | 149.34 | $10 | 0.06696 | From Meter |
| **2 Unsuited Nines** | 0.022958877 | 43.56 | $5 | 0.11479 | From Meter |
| **1 Nine** | 0.243619199 | 4.10 | $1 | 0.24362 | Not from Meter |
| | | | | | |
| **Hit Frequency** | **0.27485** | **3.6** | **Fixed Pays** | **0.66076** | |
| | | | Fixed Pays from Meter | 0.41715 | |
| | | | Fixed Pays not from Meter | 0.24362 | |
| | | | **House Advantage** | **10.41%** | |
| | | | **Average Reset** | **$229,630.45** | |
| | | | **Average Jackpot** | **$469,472.40** | |

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