

**Machine Standards Linked
Progressives**

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Introduction

This standard is applicable to any gaming machine designed or adapted to be capable of being made available for use as a linked gaming machine as defined in section 244 of the Gambling Act 2005 (the Act). It is a requirement that all linked gaming machines supplied or sited within Great Britain on or after 1 September 2007 comply with this standard in full.

The purpose of the standard is to set out in detail the Commission's requirements with respect to game features, display notices and general device operation including metering. These have been developed to help ensure the Commission's three licensing objectives are met. Those objectives are to:

- prevent gambling from being a source of crime or disorder, being associated with crime or disorder or being used to support crime;
- ensure that gambling is conducted in a fair and open way; and
- protect children and other vulnerable persons from being harmed or exploited by gambling.

Operators or end users should not rely upon these standards as a measure of reliability, quality or minimal security requirements.

These standards permit equivalence between different types of technology and do not specify proprietary products or technologies. Testing regimes for these standards will permit equivalent international standards (ISO). It is not intended to limit game content and the use of new technological developments provided that the objectives of the standard are met.

Other Relevant Gaming Machine Technical Standards

- Technical Standards for Category A & B1, B2, B3 & B4, C & Complex category D Machines
- Technical Standards for Legacy Machines¹ (Categories B3, B4, C and D machine)
- Technical Standard for Downloadable Gaming Machines (All categories of machine)
- Technical Standard for Wireless Systems (All categories of machine)
- Technical Standard for Cashless Systems (All categories of machine)

¹ Essentially 'legacy machines' are Category B3, B4, C or D machines which were lawfully in use on premises in Great Britain on 31 August 2007 which comply with the regulations made under s240 of the Act and certain details of which have been notified to the Commission.

1.0 General statement

A 'linked progressive' is any configuration whereby the same jackpot prize ('a progressive jackpot'), which may be of a fixed amount or increased in proportion to credits staked, is offered on more than one gaming machine

1.1 Software requirement

Program Storage Medium Identification

Any program medium (ROMs, EPROMs, FLASH ROMs, DVD and CD-ROM) used in a gaming machine incorporating a linked progressive (referred to in this standard as a progressive device) must be uniquely identified by reference to:

- a. program ID number;
- b. manufacturer (machine manufacturer or brand name under which it is to be sold);
- c. version number;
- d. type and size of medium (unless located on the medium as purchased unused from the supplier); and
- e. a unique signature. For medium other than EPROM, a hashing algorithm shall be used.

The information a) to e) above must be available for inspection on the site operator's premises either on the label of the storage media, or via video or matrix display.

1.2 Progressive displays

A linked progressive display meter ('the progressive meter') must be visible to all players who are playing a gaming machine which may, deliver a progressive jackpot, if the appropriate combination or trigger event is achieved. It must be clear to the player that he is playing a progressive device.

Progressive meters must display the current total of the progressive jackpot in monetary value. It is appreciated that the polling cycle may cause some delay so that a meter does not reflect precisely the actual monies in the progressive pool at each instance, but meters should be designed to maximise the frequency at which they can be updated.

Where multiple items of information are displayed on a progressive meter, it is sufficient to have the information displayed in an alternating fashion provided that the monetary value that is available to win is clear to the player.

Where any gaming machine has a feature that performs a multiplication of a win (doubles, triples etc.) it must be made clear to the player if that does not apply to the progressive jackpot won during the feature.

1.3 Types of updating displays

The use of odometer and other 'paced' updating displays is allowed. The progressive meter must display the winning value within 30 seconds of the jackpot being recognised by the central system. In the case of the use of paced updating displays, the system jackpot meter must display the winning value after the jackpot broadcast is received from the central system.

1.4 Progressive display digital limitations

Once a progressive meter has reached its maximum display amount, the meter must freeze and remain at the maximum value until awarded to a player. Where a progressive jackpot is awarded by a trigger amount then this must always be less than the maximum displayable value.

1.5 Progressive controller definition

A progressive controller is all of the hardware and software that:

- controls all communications between progressive jackpots;
- that calculates the value of the progressive prizes;
- that displays the value of those prizes appropriately;
- together with associated progressive meters.

1.6 Setting the jackpot amount

The method by which system jackpot parameter values are modified or entered must be secure. The progressive system must be capable of displaying the following information for each progressive jackpot offered:

- a. current value: current prize amount;
- b. overflow: amount exceeding limit;
- c. hits: number of times this prize was won;
- d. wins: total value of wins for this prize or a history of the last hits;
- e. base: starting value;
- f. limit: progressive jackpot limit value (if the jackpot is capped at a maximum limit, it is not necessary to add the overflow amounts to the next starting value);
- g. increment: percentage increment rate;
- h. secondary increment: percentage increment rate after limit is reached;
- i. hidden increment: percentage increment rate for the reserve pool (the next base amount must be computed or posted to advise the player of this contribution);
- j. reset value: the amount the progressive jackpot meter resets to after the progressive jackpot is won; and
- k. the participating gaming machines.

1.7 Progressive controller program interruption

After a program interruption (e.g. power down), the software must be able to recover to the state it was in immediately prior to the interruption occurring.

1.8 Progressive resumption

On program resumption, the following procedures must be performed as a minimum requirement:

- a. any communications to an external device must not begin until the program resumption routine, including self-tests, is completed successfully;
- b. progressive system control programs must test themselves for possible corruption due to failure of the program storage media. The authentication may use the checksum; however, it is preferred that the Cyclic Redundancy Check (CRC) calculations are used as a minimum (at least 16 bit). Other test methodologies are acceptable if they deliver a comparable level of integrity; and
- c. the integrity of all critical memory must be checked.

1.9 Communication requirements for signalling of a jackpot

There must be a secure, two-way communication protocol between the progressive controller and any gaming machine that is able to participate in the link. This must be used for signalling a jackpot hit between the machine and controller and for transferring a progressive win from the controller to the gaming machine.

1.10 Monitoring of credits staked

During 'Normal Mode' the progressive controller must continuously monitor each machine on the link for credits staked and multiply the same by the rate of progression and denomination in order to determine the correct amounts to apply to the progressive jackpot.

1.11 Access to the progressive controller

Every progressive controller must be housed in a secure environment allowing only authorised accessibility.

1.12 Progressive controller required meters

Every progressive controller or other progressive system component must keep the following information in non-volatile memory, which must be capable of being displayed:

- a. the number of progressive jackpots won on each progressive level if the progressive display has more than one winning amount;
- b. the cumulative amounts paid on each progressive level if the progressive display has more than one winning amount;
- c. the maximum amount of the progressive payout for each level displayed;
- d. the minimum amount of the progressive payout for each level displayed; and
- e. the rate of progression for each level displayed.

1.13 Controller and display functions during progressive jackpot win

When a progressive jackpot win is recorded on a gaming machine which is linked to the progressive controller, the progressive controller must allow for the following to occur on the progressive display and/or each gaming machine in the link:

- a. display of the winning amount;
- b. display of the electronic gaming machine identification that caused the progressive meter to activate;
- c. the progressive controller may automatically reset to the reset amount and continue normal play; and
- d. display the new progressive values.

1.14 Progressive controller error conditions

When a progressive controller error occurs the system must display an appropriate error message that is visible to all players. The site system must also alert the casino to the error condition. All game(s) in progress must be disabled, and an error message clearly displayed to all players who might participate in a game linked to the progressive prize, whenever any of the following event(s) occur:

- a. during a communication failure;
- b. when there have been multiple communication errors;
- c. a controller checksum or signature has failed;
- d. a controller's RAM or PSD (program storage device) mismatch or failure;
- e. the current amount is larger than the limit, (see also 'Jackpot Limits');
- f. the jackpot configuration is lost or is not set;
- g. an unfeasible number or value of credits appears to have been staked (as defined by the parameters of the progressive set-up based on the ratio of number of machines to the amount staked ratio); or
- h. a gaming machine's and the progressive controller's meters do not reconcile.

1.15 Transferring of progressive jackpot

The progressive controller must have a secure means of transferring a progressive jackpot win to the appropriate gaming machine and the process must be clear to the player.

1.16 Jackpot limits

Where there are any upper or lower limits imposed on the progressive jackpot via configuration settings this must be made clear to the players prior to play.

1.17 Time limits

A progressive controller may have the ability to limit the time during which a progressive jackpot is available. Where this is the case the rules applying to such time limits must be made clear to the players prior to play.

1.18 Swapping progressive levels

When a winning combination may be evaluated as more than one of the available pay table combinations, the players must be paid the highest possible progressive value.

1.19 Gaming device requirements when any progressive is awarded

When a progressive jackpot prize has been awarded, a linked gaming machine must perform the following:

- a. an appropriate message must be displayed;
- b. the prize must be transferred to the gaming machine and the game shall lock up until the award has been paid; and
- c. all linked progressive related meters must be updated.

These requirements were notified in draft to the European Commission in accordance with Directive 98/34/EC, as amended by Directive 98/48/EC

Gambling Commission June 2007

The Gambling Commission regulates gambling in the public interest. It does so by keeping crime out of gambling, by ensuring that gambling is conducted fairly and openly, and by protecting children and vulnerable people from being harmed or exploited by gambling. The Commission also provides independent advice to government on gambling in Britain.

For further information or to register your interest in the Commission please visit our website at: www.gamblingcommission.gov.uk

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