



**TECHNICAL STANDARDS
FOR
TOURNAMENT GAMING MACHINES
(SINGAPORE)**

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Technical Standards for Tournament Gaming Machines (Singapore)

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PREFACE

The purpose of this document is to establish the requirements for the design and operation of tournament gaming machines within the Singapore jurisdiction and to guide certification and testing bodies on the areas for technical compliance on such equipment.

A tournament gaming machine is a device used solely for playing slots tournaments and shall not be entitled for payout or cash. Electronic gaming machine deployed for live gaming may, however, be adapted for tournaments on the premise that the technical requirements stipulated herein are satisfied.

The intent of this document is to ensure that gaming on tournament gaming machines occur in a manner that is:-

- a. Honest;
- b. Secure;
- c. Reliable; and
- d. Auditable.

It is not the intent of this document to:-

- a. Mandate a single solution or method to realise an objective;
- b. Limit technology application to gaming equipment;
- c. Limit creativity and variety of choice;
- d. Limit any supplier or manufacturer of equipment; and
- e. Preclude research and development into new technologies or innovative ideas.

As far as possible, this document stipulates what the minimum technical requirements for tournament gaming machines are instead of how these standards should be met, and does not mandate a particular solution or method as the means to realise these standards.

The Casino Regulatory Authority of Singapore (the “Authority”) is the regulatory authority that supervises and regulates the activities of casinos in Singapore. Casino operators are required to be licensed by law and the gaming equipment deployed on the casino floor must comply with these technical standards as part of their licensing requirements.

Where applicable, the provisions in the Casino Control Act (Cap. 33A) and its subsidiary legislations shall take precedence over these technical standards.

This document would be reviewed on an ongoing basis to take into account the evolution of technologies utilised in tournament gaming machines and the development of other casino related technologies that may require technical regulation.

Comments on this document can be forwarded to:-

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1. INTRODUCTION

1.1 Purpose

1.1.1 The purpose of this document is to:-

- a. Create a set of technical standards that would ensure that the operation of tournament gaming machines in casinos in Singapore is secure, reliable, auditable and operated appropriately;
- b. Establish the minimum integrity standards for tournament gaming machines;
- c. Construct a set of technical standards that is technology neutral wherever feasible; and
- d. Construct a set of technical standards that does not specify or approve any particular method or algorithm. The intent being to allow a wide range of methods to be used to conform to these standards as long as the methods are secure, reliable and consistent with the best practices of the day for the relevant technologies.

1.2 Scope

1.2.1 The scope of this set of technical standards covers the minimum standards required in the operation of any tournament gaming machine and tournament server so that security, reliability and integrity of the gaming machine and tournament server is achieved.

1.2.2 The scope of this set of technical standards does not cover requirements that are not related to gaming (such as health and safety).

1.3 Terminology

1.3.1 The following terminologies used in this document are to be interpreted as follow:-

- a. Shall: The guideline defined is a mandatory requirement, and therefore must be complied with;
- b. Should: The guideline defined is a recommended requirement. Non-compliance shall be documented and approved by the management. Where appropriate, compensating controls shall be implemented; and
- c. May: The guideline defined is an optional requirement. The implementation of this guideline is determined by the operator's environmental requirements.

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1.4 Definition of Terms

Authority	The Casino Regulatory Authority of Singapore
Tournament	A contest or competition among participants for a prize, whether or not any entry fee or other consideration is required to be paid by the participants to take part in the contest or competition.
Tournament Mode	The operating mode where a gaming machine runs as a machine used in a tournament.
Live Gaming Mode	The operating mode where a gaming machine runs as a machine used in standard gaming.
Tournament Server	A server or controller which communicates with gaming machines for the following: a. Setting up and scheduling of tournaments; b. Recording of tournament events, participants and results; and/or c. Hosting of tournament games as a Client-Server system.
Tournament session	A series of tournament games being played towards the accumulation of a tournament score and/or ranking until the assigned time and/or credits of the participants have been exhausted.

1.5 Testing

1.5.1 Testing of tournament gaming machines by Approved Test Service Providers (ATSPs) shall be aimed at determining compliance with the technical requirements provided in this document. Areas of non-compliance shall be reported in the test/certification report. Where, in the opinion of the ATSP, the technical requirements spelt out in this document are insufficient, inappropriate or not pertinent to the design of the subject gaming machine, the ATSP shall seek direction and further clarification from the Authority before proceeding to testing/certification.

1.5.2 In addition to this set of technical standards, ATSPs shall ensure that all tournament gaming machines and tournament servers are tested against relevant requirements specified in the latest versions of the following, where applicable:-

- a. Technical Standards for Electronic Gaming Machines (Singapore);
- b. Technical Standards for Electronic Gaming Machines – Electronic Table Games Appendix (Singapore);
- c. Intentionally left blank;
- d. Technical Standards for Client-Server Systems (Singapore); and
- e. Any other such specifications as dictated by the Authority.

Any requirements that are found to be inapplicable for tournament gaming machines or tournament servers shall be highlighted in the test/certification reports.

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1.6 Consistency of Interpretation

- 1.6.1 The Authority recognises that the technical standards may be subject to different interpretations by gaming machine manufacturers, casino operators and testing/certification laboratories. As such, any feedback where different interpretations may be applied to the technical standards provided in this document should be directed to the Authority for clarification when it arises.

2. TECHNICAL REQUIREMENTS

2.1 Entering Tournament Mode

- 2.1.1 Software that offers tournament mode must provide a secure means to enable switching between tournament mode and live gaming mode. Software that permits tournament games and requires swapping of chips (for example, EPROM chips and CF cards) to implement tournament game play is not permitted.
- 2.1.2 The switching between tournament mode and live gaming mode shall be tracked. At the minimum, the following information shall be logged on the gaming machine:-
- a. Time of the switch from live gaming mode to tournament mode;
 - b. Start time of the tournament;
 - c. End time of the tournament; and
 - d. Time of switch from tournament mode back to live gaming mode.
- 2.1.3 The gaming machine shall complete any game, funds transfer or other transactions (e.g. bill, coin, cashless, ticketing etc.) prior to entering the tournament mode. If the gaming machine is in a tilt or handpay condition, it shall wait until the condition is reset to enter tournament mode.
- 2.1.4 The gaming machine shall not enter tournament mode while credits exist on the gaming machine.
- 2.1.5 The gaming machines shall be able to switch between tournament mode and live gaming mode without corruption to installed software and critical memory.

2.2 During Tournament Mode

- 2.2.1 All coin and banknote acceptor devices or equivalent shall be disabled when the gaming machine is placed in tournament mode. Cards (or other devices) used for cashless gaming shall not be able to be used to facilitate the transfer of credits to or from a gaming machine in tournament mode.
- 2.2.2 The cash out button or equivalent shall be disabled (except for the purpose stated in clause 2.2.10) while the gaming machine is in tournament mode.
- 2.2.3 Tournament credits shall have no cash value and shall be used solely to establish player rankings at the end of a tournament session.
- 2.2.4 All accounting meters and history data, except those intended solely for tournament mode tracking, shall be preserved upon entering the tournament mode and must be restored upon exiting the tournament mode.

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- 2.2.5 Intentionally left blank.
- 2.2.6 Intentionally left blank.
- 2.2.7 A message indicating that the machine is in tournament mode must be clearly displayed on the machine.
- 2.2.8 Linked progressives and standalone progressives shall not form any part of tournament play.
- 2.2.9 All gaming machines designed for the same tournament game play shall be able to run identical software on the same hardware electronics and be configured with the same machine settings including reel speed settings, hit rates, max bet limits and bonus games.
- 2.2.10 Tickets may only be generated by the gaming machine while in tournament mode to serve as a documentation of tournament score or ranking. Any ticket printed during tournament mode shall not have credit or monetary value.

3. OPERATIONAL REQUIREMENTS

- 3.1 The following operational requirement shall be adhered to, by the respective casino operator during deployment of tournament:
 - 3.1.1 All gaming machines participating in the same tournament shall be configured with the same reel speed settings, hit rates, maximum bet limits and bonus games

4. TOURNAMENT SERVER LOGGING

- 4.1.1 In event that a tournament server is used, all information relating to any automated tournament functions shall be logged in the tournament server. Information logged shall minimally allow the tracking of each participant in a tournament for the following:-
 - a. His/her scorings/rankings (individual sessions and final);
 - b. His/her tournament sessions schedule;
 - c. Game title and mode (time only, credit only, or both) he/she played for each tournament session; and
 - d. Machine played on during each tournament session.

All logged information shall be held and be able to be accessed or retrieved (from back-up) for a period of five (5) years.

- 4.1.2 The timestamps of all logged events must be within an accuracy of 60 seconds with the connected machines.