DOC21/148040

# New South Wales Appendix to the

# Australian/New Zealand

# Gaming Machine National Standard 2021

Version 11, 27 August 2021

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# 1 NSW Appendix to the National Standard 2016

## 1.1 General

### Introduction

1.1.1 This New South Wales (NSW) Appendix to the Australian/New Zealand Gaming Machine National Standard 2021 lists the technical requirements which are either:

a) In addition to those which are defined in the Gaming Machine National Standard;

b) Are different to those which are defined in the Gaming Machine National Standard;

c) Are not required.

The Gaming Machine National Standard 2021 is referred to as the "NS2021".

### Legislation

1.1.2 The requirements specified in this document are supplementary to and do not take the place of any of the requirements of the *Gaming Machines Act* 2001 (referred to as "the Act") and its supporting Regulations.

### The Regulator

1.1.3 Liquor and Gaming NSW, under delegation from the Independent Liquor and Gaming Authority has the responsibility of approving gaming equipment and technical standards for gaming equipment used in club & hotel venues in NSW.

### NSW Technical Standards

1.1.4 The following technical standards are used in NSW (see the Liquor and Gaming NSW website for the latest revisions):

a) NSW Appendix to the NS2021;

b) NSW Gaming Machine Communications Protocol;

c) NSW Jackpot Technical Standard; and

d) Ticket In–Ticket Out (TITO) technical standard.

### Purpose

1.1.5 This document contains the technical requirements against which gaming machines will be evaluated prior to being submitted for approval for operation in club & hotel venues.

1.1.6 Gaming machines and Subsidiary Equipment (as defined in the Act) together are referred to as "gaming equipment".

### Communication Requirements

1.1.7 A Central Monitoring System 'CMS' Compliance Test (CCT) Plan, which details the minimum requirements for verifying the ability of a gaming machine to communicate adequately with the CMS, is available to be utilised by gaming machine developers prior to the equipment being submitted for approval.

**Responsible Gambling Considerations**

1.1.8 The Act at section 62a contains a number of statements regarding responsibilities associated with harm minimisation when approving gaming equipment and technical standards. The NSW Gaming Machines Prohibited Features Register located on Liquor and Gaming NSW website contains a list of harm minimisation issues that game designers should note.

**Dispensations**

1.1.9 In cases where new gaming equipment does not meet the technical standards due to new or advanced technology, there may be reason to seek a dispensation. The manufacturer is advised to seek approval for any dispensation early in the development cycle.

Bug-fix submissions may comply with the technical standard against which the equipment was originally approved (or a later technical standard as authorised).

**Parameters**

1.1.10 The following are definitions of parameters/limits that are established for gaming machine operation; see chapter 11 in the NS2021 for the relevant NSW parameters/limits values:

| | |
|---|---|
| [**BKNTLIM**] | The maximum credit balance which may exist on a gaming machine or account beyond which a note acceptor must be disabled due to a high credit balance condition. |
| [**CRECANLIM**] | Maximum number of credits payable from the hopper for non-tokenised gaming machines before a cancel credit or ticket pay must be used. |
| [**GAMBWIN**] | The maximum win that can be obtained from each single gamble attempt. |
| [**LARGEWIN**] | Substantial win amount - wins greater than or equal to this value must generate a gaming machine event. |
| [**MAXHOPPER**] | Maximum amount of money payable from the hopper for tokenised gaming machines before a cancel credit or ticket pay must be used. |
| [**MAXNPWIN**] | Maximum non-progressive win permitted in any game element (any individual primary or feature or gamble or bonus element).<br>(Except those listed in section 2.1.4a of the Jackpot Standard) |
| [**MAXPWIN**] | Maximum progressive win permitted in a gaming machine game.<br>(See sections 2.1.4 & 2.1.4a in the Jackpot Standard) |
| [**MAXRTP**] | Maximum theoretical acceptable RTP. |
| [**MAXWAGER**] | Maximum wager permitted in a gaming machine game. |
| [**MINRTP**] | Minimum acceptable RTP. |
| [**PSAVACT**] | The period of time a gaming machine must be in “Idle Mode” before activating power save. |

# 2 NSW Gaming Machine Requirements

## 2.1 Game Types and Statistical Variations

2.1.1 In games which involve a player strategy that can influence the Return to Play (RTP), an automatic hold feature or strategy advice must be incorporated into the game program and be displayed to the player; and the recommended hold strategy must be the default bet when the player activates the game. MTGM 'table' games are exempt.

2.1.2 Multi-Terminal Gaming Machines 'MTGMs' are a special category of gaming machines approved to operate at different bet and win limits. They also have intrinsically different operating requirements and are therefore considered to be exempt from the following technical standards requirements:

i) NSW Communications Protocol '2-way Communication'
ii) 'RTP Tolerance' (NS2021 4.17)
iii) 'Game Screen Meters' (NS2021 6.35)
iv) NSW Appendix 'Variation Return Percentage Spread' (see below)

**Multi-Game Gaming Machines**

2.1.3 A gaming machine where a player may choose to play a selection of games will be identified as a Multi-Game Gaming Machine (MGGM).

A selection of games incorporated in an MGGM will be identified as a game set.

A game set may contain up to 16 games and each of these 16 games may have up to 8 different return to player variations. The theoretical RTP for each game variation must be 85% or above. In a multi-game concept, each of those variations is referred to as a Game Variation and the corresponding theoretical RTP is identified as a Variation Return Percentage (VRP).

Game variations within an MGGM are grouped into Multi-Game Combinations (MGC). A Combination Return Percentage (CRP) nominated by the licensed dealer is associated with each combination and is displayed in the Audit Mode.

An MGGM may have up to 8 MGCs. The configuration of the MGC in the field by a technician (in Setup Mode) should be such that once the technician selects the MGC to be configured and initiates the installation, all relevant game parameters should be automatically selected – and should not be able to be changed during the installation.

Each MGC may contain up to 16 game variations, not necessarily one of each game.

For a given MGC, each VRP must be within a range specified below:

$$CRP - 2.0\% < VRP < CRP + 2.0\%$$

Information on base credit value for each game in an MGGM must be available to the player at any time.

If all variations of a particular MGC do not have the same base credit value, the following must be satisfied:

A "confirmation" screen indicating change in base credit value has to be presented each time the change is to take place, with a possibility to cancel the change.

Note: The theoretical RTP of each variation within the same component game must be unique.

**Statistical Variations Permitted**

2.1.4 A maximum of eight (8) statistical variations per game are permitted.

**Player Information Displays**

2.1.5 Referencing NS2021 4.1 (h) Player Information Display (PID requirements), there are no specific requirements in NSW.

## 2.2 Hardware

**Compliance Plate**

2.2.1 A compliance plate must be attached to the cabinet of each gaming machine.

The compliance plate must remain with the gaming machine until it is de-licensed.

At the time of de-licensing, the plate must be disposed of in the manner specified.

Note that "rebuilt" machines are subject to evaluation and approval.

Compliance Plate Contents

2.2.2 Contents of the plate are as follows:

a) Serial Number;
b) Date of Manufacture;
c) Dealers Name; and
d) Dealers Licence Number.

The serial number will consist of three alpha characters plus a six-digit numeric string. The first alpha character will be "X" followed by a two-character dealer code, "DD". The dealer code is allocated by Liquor and Gaming NSW. The serial number will therefore appear as: "XDDnnnnnn", where nnnnnn is a unique number allocated by the dealer. "nnnnnn" must always have six digits including leading zeros if required.

*Note that it is acceptable to replace the 1st number with an alpha character "nnnnnn".*

Compliance Plate Dimensions

2.2.3 Dimensions: The compliance plate must be made of metal of a thickness not less than 0.2 millimetre. The width of the compliance plate must not be less than 80 millimetres and the height not less than 40 millimetres. The compliance plate must be securely fixed at the corners to the gaming machine.

**Security Cage and Seal**

2.2.4 The security cage should be in a form of a cage/box totally enclosing any circuit boards, connectors and components located within.

A transparent acrylic padlock type of seal with “barbed” end is specified.

The seal is to be stamped with a unique sequence number as well as a license number or, in the case of a licensed dealer, a registered company logo.

**Security Lock and Key**

2.2.5 The type of key-lock use for logic areas, cash storage and main door of the gaming machine must be of a “secure” type of key and suitable for use in gaming environment.

The logic area's lock is to be keyed separately. Other areas such as the main door, cashbox, banknote storage area and attendant/cancel credit switches etc. may be keyed alike (but this is optional).

Note: Gaming machine logic area locks within a venue may be keyed alike – the key must be under the control of the venue manager.

**Power for Subsidiary Equipment**

2.2.6 The gaming machine must provide a facility for subsidiary equipment interfaces installed within the gaming machine to derive power for their operation. Provision must be made for at least six subsidiary equipment interfaces to derive power.

The exact implementation will be of each manufacturer's design. However a minimum requirement is that each connection must supply 12V DC +/-10% @ 0.5 AMP. Each connection must be protected by an appropriate fuse or equivalent.

Power supply for each subsidiary equipment interface must be maintained within defined specifications at all times during gaming machine operation and must not be affected by any power conditions on the other subsidiary equipment outputs.

For example, a configuration with six independent transformers, each providing its own isolated output, would be a suitable implementation.

The gaming machine manufacturer must make available details of the provision made to derive power for the interfaces.

The method of deriving power for subsidiary equipment located within the gaming machine must conform to relevant safety standards.

**Power to Subsidiary Equipment Interface**

2.2.7 Subsidiary equipment installed within the gaming machine must derive its power by using the facility as described above or some other acceptable method. The subsidiary equipment manufacturer must ensure that no interference is caused to other interfaces connected to the facility.

The subsidiary equipment manufacturer must further ensure that the interface does not draw more than the maximum permissible current from the power supply or interfere with the gaming machine power supply in the event of a malfunction or otherwise. In a practical sense, the minimum requirement would be a suitable fuse (or equivalent) on the interface board.

Upon request from a subsidiary equipment manufacturer, the gaming machine manufacturer must provide details of the facilities available for accessing power.

**CCCE Interface Enclosure**

2.2.8 CCCE interfaces must be mounted in a secure sealed enclosure that prevents access to the interface. Access to any components (including any connections) can only be obtained by breaking the seal and opening the enclosure.

**Port Management**

2.2.9 Only approved subsidiary equipment may be connected to a port. The equipment connected must correspond to the designated port usage. The ports must be clearly identified, by non-removable signs displaying "Port1 or P1" etc on the logic board.

Only one generic type or class of approved subsidiary equipment is permitted per port. The allocations are:

P1 - A port for equipment using CCCE Command Class(es)

P2 - Central Monitoring System (CMS)

P3 and P4 – Gaming machines with printers, and Data Gathering equipment and promotional equipment

These ports are intended for general use. Where data gathering subsidiary equipment provides player tracking functions these are not to be performed by the gaming machine and are not part of this specification.

P5 and P6 - Linked jackpot equipment.

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Note: When the CCCE monetary transfer functionality is disabled from the communication port P1, the port must not send any CCCE monetary transfer packet or respond to any received, except the: Time & Date, GM Lockup, Message Display and Meal Voucher command class (packets).

For CCCE to be enabled, a machine should be connected to a valid CCCE system.

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## 2.3 Software

### CCCE Transfer Limit

2.3.1 This is a CCCE limit and is permanently stored with the game program. A gaming machine must not accept any inward transfer of money, if the transfer amount when added to the accumulated credit, exceeds $5,000.

In the case of outward money transfer, when the accumulated credit is greater than $10,000, the transfer must be accomplished by means of an attendant pay (cancel credit).

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Notes:

A player-account-based Electronic Payment Gaming System (EPGS) must ensure that an amount of money, which does not exceed $5,000 (or other transfer limit approved for the EPGS), can be transferred to a gaming machine.

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### Audit Mode

Audit Mode – Machine Identification

2.3.2 This consists of the following information:

Machine Number (GMID)
Data Block Version Number(s)
Manufacturer Identification (two character code)
Firmware Identification(s)
Base Credit Value
Progressive Levels Supported
CCCE Transfer Limit ("OFF $0.00" or "ON $####.##")
Hopper Limit
Multigame Identification Number
Theoretical RTP

### Soft Meters (Electronic Meters)

2.3.3 Meters to be provided as “soft” (electronic meters) include:

1. Turnover
2. Total Wins
3. Cashbox

4. Cancelled Credits
5. Money In
6. Money Out
7. Cash In
8. Cash Out
9. Miscellaneous Accrual (if required)
10. Credit
11. Occurrence meter 1 (if required)
12. Occurrence meter 2 (if required)
13. Occurrence meter 3 (if required)
14. Occurrence meter 4 (if required)
15. Power up
16. Games played since last power up (stroke since last power up)
17. Games played since last door open (stroke since last door open)
18. Games Played (Stroke)
19. Amount Won (on screen meter only)
20. Amount Bet "
21. Credit Paid Out "
22. Excess Credit Paid Out "

For the above twenty-two soft meters, the first eighteen meters must be displayed during audit mode in the order listed above. If some of the above meters do not apply, they must still be listed with some form of indication other than a numeric character string e.g., NA.

Required soft meters are to increment in units of one cent ($0.01). The meters are to be labelled or displayed in a manner that clearly shows the meter name and the units being used.

Other meters may be specifically required for a game.

It should be noted that in multi-game machines, these meters are to represent the cumulative totals for all games i.e. they represent "global" metering. Additional soft meters for Turnover and Total Wins are required for each game. These additional meters are to be displayed in the audit mode.

**Definition of Soft Meters**

2.3.4 Amount Won

This meter represents the cumulative total of credits won for a game. The meter is reset to zero at the beginning of a new game play. When implementing this meter, care should be taken to avoid any confusion or dispute that may arise as a result of information displayed on this meter and any credit (money) already transferred to the credit meter or owed to the player.

This meter is continuously displayed to the player in all modes except audit, configuration and test modes.

The number of digits used for display purposes must be sufficient to avoid any potential problems or ambiguities that could arise as a result of insufficient display capacity e.g. display size of four digits with a maximum possible win of 40,000 credits.

2.3.5 Amount Bet

This meter indicates the most recent credit amount bet (staked). It is set to the amount bet at the beginning of each game play.

This meter is continuously displayed to the player in all modes except audit, configuration and test modes.

The number of digits used for display purposes must be sufficient to avoid any potential problems or ambiguities that could arise as a result of insufficient display capacity.

2.3.6 Credits Paid Out

This meter indicates the credits paid either by a cancel credit, ticket issue or a CCCE decrement transaction or by a hopper payout.

This meter is displayed at the time a credit payout takes place. It is reset to zero and may be removed from the display at the commencement of the next valid new game play following the credit payout. Additional display messages (like Cancel Credit, CCCE Transfer Out or Hopper Pay Out) will indicate the type of payout.

The number of digits used for display purposes must be sufficient to avoid any potential problems or ambiguities that could arise as a result of insufficient display capacity. The units used may be base credit value or one cent ($0.01). The display must indicate the unit used.

2.3.7 Excess Credit Paid Out

This meter indicates any excess credit paid out during a hopper payout. The gaming machine should lockup after the first excess credit payout is detected; however the gaming machine must keep monitoring the coin output and update this meter even in the lockup condition.

This meter is displayed only in the event of an error condition (e.g., coin output error). It is reset to zero when the error condition is cleared.

The number of digits used for display purposes must be sufficient to avoid any potential problems or ambiguities that could arise as a result of insufficient display capacity. The units used may be base credit value or one cent ($0.01). The display must indicate the unit used.

**Update of Meters Relating to Hopper Pay-out**

2.3.8 Each coin that is paid from the hopper must be registered on the Cash Out and Credits Paid Out meters and decremented from the player's credit and hopper level meters (if implemented).

Any excess paid out during a coin output error condition shall be registered on the Excess Credit Paid Out meter.

**Ticket Printer Integrated Into Approved Gaming Machine**

2.3.9 There is no limit to the amount of credit that can be redeemed from an approved gaming machine by means of a "dual copy" ticket printer implemented in an "integrated" manner. However for amounts of credit in excess of $10,000, attendant intervention will be required prior to a ticket being printed. This will typically take the form of a "key off" procedure or similar that is designed to be available only to authorised persons.

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Note: Gaming machines equipped with "single copy" ticket printers: For tickets of a value greater than $5,000, the GM must 'lock-up' before the ticket is printed, and an attendant must clear the lock-up condition at the machine in order for the ticket to be issued.

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**Gaming Machine On-Screen Clock**

2.3.10 The time must be able to be set via the Audit mode, and using the CCCE 'time and date' command class 4 as detailed in the TITO technical standard.

**Games with Characters and/or Messages in other Languages**

2.3.11 For games with characters in other languages, appropriate translation to English must generally be provided in game rules.

**Reel-based and Pattern Game Bets**

2.3.12 If it is possible to bet on reels, patterns or ways (as compared to line-based games), the player must be made aware via the artwork how many possible winning patterns they are betting. I.e. betting '1 reel' = 3 ways, betting 'all reels' = 243 ways.

These games are exempt from NS2021 5.60 to indicate payline number wins, however other clear methods to indicate wins must be in place.

## 2.4 Multi-Terminal Gaming Machines (MTGMs)

**Metering**

Individual Station Metering

2.4.1 Each station of an MTGM must conform with the metering requirements as specified for standalone gaming machines.

Global Metering

2.4.2 The MTGM must possess a set of central meters that record the sum of the following meters for each terminal: Turnover, Total Wins, Cash Box, Cancelled Credit, Money In, Money Out, Cash In and Cash Out.

**Auditing**

2.4.3 Each station is to comply with the auditing requirement as specified for standalone gaming machines.

**Data Communications**

Individual Station

2.4.4 Each station of an MTGM must conform with the requirements of the "Data Interface Specifications" for standalone gaming machines. It should be noted that each station will be identified by a unique GMID and a unique serial number. The procedure for setting of the GMID must conform with the requirements that are stipulated for standalone approved gaming machines.

Manufacturer Specific "port"

2.4.5 It will be permissible for manufacturer specific ports to be supplied for the purpose of providing video and/or audio information associated with the MTGM game(s). If supplied such ports are to meet the following requirements:

1. A port must not be capable of potentially affecting the integrity or security of the gaming machine. For this reason "one-way" communication ports are to be used where only communication of data out from the gaming machine is possible.
2. The ports are to be located in an area that is available only to authorised persons but does not require access to any security cage which contains sensitive components. For example, the ports may be located inside an area of the MTGM, which is not accessible to the public but which can be accessed by a technician through the use of a key to open a "main door" or some other method that can be shown to effectively restrict access.

## 2.5 Gaming Submission / Gaming Application Requirements

### Application Package

2.5.1 Refer to the NSW 'Application Package' for the NSW submission requirements that are either different to, or in addition to the NS2021 submission requirements.

2.5.2 Disclosure of game messages as per section NS2021 9.53 is required for each game submitted for evaluation, except sounds that do not contain any spoken words.

### Security Reports

2.5.3 Over the lifespan of a gaming machine, manufacturers often submit a machine to multiple testers for evaluation. In NSW, a security report follows a machine from tester to tester to ensure each new tester knows the level of security that the machine is expected to meet.

At the time a new machine is first approved, a security report is formulated by the evaluating tester that details the platform's robustness from a software security viewpoint. This includes the bootup process, memory management, suseptability to nefarious activity and the configuration of all USB ports.

The report will clarify the operation of intellectual property protection schemes, the use of closed-source operating systems - and the method used by testers to ensure that software submitted for evaluation is the same that is used to create the executable software, which is ultimately approved and installed in the field.

The report also details how Inspectorate validate that the software installed in the machine in the field is the same which is listed in an approval document.

--The END of Appendix--