



**Gaming and Wagering Commission
of Western Australia**

GAMING AND WAGERING COMMISSION OF WESTERN AUSTRALIA

VIDEO LOTTERY TERMINAL (VLT) SPECIFICATIONS AND STANDARDS VERSION 3.0

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1 INTRODUCTION

- (a) The following common abbreviations will be used throughout this document:
 - i. **VLT** means a Video Lottery Terminal
 - ii. **VLT Standards** means this document, the 'Video Lottery Terminal Specifications and Standards'.
 - iii. **Regulation 18AA** means Regulation 18AA of the Gaming and Wagering Commission Regulations 1988.
 - iv. **Commission** means the Gaming and Wagering Commission of Western Australia.
 - v. **Supplier** means a person licensed by the Commission to sell and/or supply VLTs to permit holders.
- (b) Only VLTs, and any associated hardware or software, which has been approved by the Commission as suitable for use in this jurisdiction, shall be considered for installation and operation at approved sites.
- (c) Approval of VLTs by the Commission first requires evaluation by an Accredited Testing Facility (ATF). A supplier must lodge a full submission, complying with these VLT Standards, with their nominated ATF for inspection and testing (see **Appendix E** for information on finding and selecting an ATF). The supplier must notify the Commission of the submission, and of the evaluating ATF.
- (d) Evaluation fees shall be paid to the nominated ATF by the supplier.
- (e) When evaluating new hardware, an ATF may request that the supplier arrange for an engineer technician to give an overview of the hardware in terms of design specifications and/or service requirements.
- (f) When evaluating new software, an ATF may request the supplier arrange for an engineer programmer to give an overview of the source code and structure.
- (g) VLTs and/or associated equipment delivered to an ATF for inspection and testing must have the most recently approved hardware and software installed, unless otherwise authorised by the Commission.
- (h) The VLT Standards should be read in conjunction with Regulation 18AA (reflected in full in section 2.2 below). Suppliers may wish to also familiarise themselves with the Australian/New Zealand Gaming Machine National Standards, Revision 12.1, dated May 2025, from which some sections of the VLT Standards have been drawn.

2 VIDEO LOTTERY TERMINALS

2.1 Summary of Approved Specifications

- (a) A VLT is a device which displays electronically on a video screen a depiction of a card displaying symbols, by reference to which prizes in the game played may be won (Regulation 18AA).
- (b) Graphics must not display a spinning reel and must be a simple reveal action.
- (c) A VLT game must have a maximum of four (4) concurrent series. A new series cannot be activated until one series has been completely exhausted.
- (d) Each series must contain no more than 5,000 tickets.
- (e) Breakdown of Turnover for a given VLT:
 - i. Return to player must be 70% of the turnover;
 - ii. Duties payable to the Commission will be 3.25% of the turnover;
 - iii. The beneficiary organisation must receive 10% of the turnover; and
 - iv. The balance of 16.75% may be divided between the beneficiary organisation, the supplier and the host venue.
- (f) Tickets for playing a VLT will be available in denominations of 20c, 50c or \$1.
- (g) The maximum prize per series is not fixed, subject to 70% return to player.
- (h) The maximum credit, and maximum payment, must not exceed \$20.
- (i) A VLT may only accept cash payments (coins and notes).
- (j) Winnings cannot be dispensed as a direct cash payout.
- (k) Winnings can be accumulated on the win meter and printed as a single ticket.
- (l) Winnings cannot be used as credits and must be collected in the form of a voucher which can be redeemed for cash.

2.2 Gaming and Wagering Commission Regulations 1988

- Part 4: Permitted Gaming
- Division 4: Gaming machines and other equipment
- Regulation 18AA: Video lottery terminals, possession etc. of
 - (a) In these regulations, **video lottery terminal** means a device which displays electronically on a video screen a depiction of a card displaying symbols, by reference to which prizes in the game played may be won.
 - (b) The possession or use of a video lottery terminal is unlawful unless the conditions in paragraphs (c), (d), (e), (f), (g), (h) and (i) are met.

- (c) A video lottery terminal must not —
 - i. provide a means of direct cash payout; or
 - ii. allow more than 4 different kinds (**series**) of the same type of game to be played at any one time.
- (d) A video lottery terminal shall not be constructed or adapted so as to be playable by means of the insertion of any cash, other than of the amount determined from time to time by the Commission.
- (e) A video lottery terminal shall not dispense to the person playing the device anything other than, where the card displayed electronically by the device constitutes a winning score, a prize docket evidencing the amount of the win.
- (f) A prize docket evidencing a win on a video lottery terminal shall be exchangeable with a person authorised by the permit holder for cash equal to the amount displayed on that docket.
- (g) A video lottery terminal shall be located in the premises approved by the Commission and specified in a permit issued in respect of that device, and not elsewhere.
- (h) The total value of the prize dockets a video lottery terminal is designed to distribute shall comprise 70% of the total cash received by the device.
- (i) Of the total amount of cash received by a video lottery terminal 3.25% shall be paid to the Commission, to be distributed in the manner set out in section 104G(2) of the *Gaming and Wagering Commission Act 1987*.

3 CONSUMER PROTECTION

3.1 General

- (a) VLTs and associated games are to be designed to ensure fairness, security, integrity and auditability.
- (b) Games should not present to players features that may be considered harmful in that a feature or features could expose players to potential harmful gambling behaviours.

3.2 Specific Measures to Minimise Harm

- (a) Games must:
 - i. not give the player a false expectation of odds;
 - ii. accurately display the result of a game outcome;
 - iii. provide clear game rules and instructions;
 - iv. not provide false information;
 - v. not be misleading, illusory or deceptive;
 - vi. provide sufficient information to facilitate informed choice;
 - vii. not alter or modify the presentation of mapped symbols or artwork, except in cases of animation during a play or as a part of the game rules, otherwise this constitutes a different game;
 - viii. not allow continuous play for players, except for purposes of testing; and
 - ix. not have pseudo-metamorphic game characteristics.
- (b) VLTs must:
 - i. Only trigger audible congratulatory sounds, or congratulatory messages, animations or visual effects, where the accumulated prize value for the game is more than the bet amount. Any audible sound played where the accumulated prize value for the game is less than or equal to the bet amount is limited to a maximum of 1 second.
 - ii. Not display to the player any historical result of play, except for the most recent play.

3.2.1 Time Display

- (a) The current local time must be clearly and accurately displayed on the game screen in 12-hour format (hh:mm AM/PM).

4 HARDWARE, SOFTWARE AND GAME SUBMISSIONS

- (a) Any submission must conform with these VLT Standards.
- (b) The requirements contained in these VLT Standards are minimum requirements only. That is, any aspect of a submission which exceeds a particular requirement in a manner as deemed acceptable to the Commission is judged to conform with the requirement.
- (c) If previously approved submissions that do not fully conform to these VLT Standards are resubmitted, suppliers can also expect to ensure that the resubmission conforms with these VLT Standards.
- (d) Final approval/rejection of any submission is at the discretion of the Commission.
- (e) Submissions may be made for the following:
 - i. Full Hardware: Any new machine type submitted.
 - ii. Full Software: Any new software shell submitted.
 - iii. Game Specific: Any new game submitted.
 - iv. Update or change: Any hardware or software submitted.
- (f) An ATF evaluation report on compliance against the VLT Standards, as well as the Certification and Indemnity Form (**Appendix A**), must be submitted with any submission referred to in (e).

4.1 In-House Security

- (a) Explain the security procedures in force to:
 - i. store,
 - ii. handle, and
 - iii. transport programmable storage devices (PSDs).
- (b) Indicate protections adopted for copying, and prevention of substitution of game storage media.
- (c) Explain the security procedures and systems utilised by the Software Development House for the development and storage of game program software.
- (d) Provide details of systems for maintaining the latest version of game software and hardware so as to ensure that prior versions are not submitted for evaluation.
- (e) Provide details for ensuring that current versions of hardware and software are delivered to sites.

4.2 Hardware

4.2.1 General

- (a) Supply a complete new VLT for evaluation.
- (b) Supply VLT model name.
- (c) Supply VLT model number.
- (d) Supply year and month of first manufacture of submitted model.
- (e) Provide any appropriate test equipment to assist in the evaluation process.
Provide appropriate operation manuals.
- (f) Where available, supply current operational, installation and service manuals which are relevant only to the Western Australian market. These may be supplied once the hardware is acceptable.
- (g) Supply the recommended preventative maintenance schedule and instructions.

4.2.2 Cabinet

- (a) Provide the cabinet style name.
- (b) Provide technical drawings of the VLT.
- (c) Supply the outside dimensions of each VLT (length x width x height).
- (d) Provide the minimum spacing from surrounding walls/other equipment required by each VLT.
- (e) Provide the weight of each VLT, excluding the console, and the corresponding model number.
- (f) Detail the materials and attach construction drawings for:
 - i. VLT main cabinet;
 - ii. top-box cabinet; and
 - iii. internal processor compartments.
- (g) Indicate the source of supply and manufacturer of the cabinets.
- (h) Describe the location and mounts for all the major sub-systems (modular components) within the VLT.
- (i) Supply the following information regarding all secure areas:
 - i. Description of the secure area;
 - ii. how the secure area is housed;
 - iii. what kind of tamper detection, (if any) is provided;
 - iv. means of protecting the tamper detect device from tampering;
 - v. when the tamper device is enabled and disabled; and

- vi. the procedures for accessing the secure area, including details regarding:
 - main door
 - console door
 - main processor door
 - i/o boards
 - any other boards that have access to control lines or buses.

4.2.3 Doors

- (a) For each door on the VLT give the following details:
 - i. internal or external;
 - ii. lockable or not;
 - iii. sealable or not;
 - iv. type of door-open detection; and
 - v. indications, alarms and recordings made when the door is opened.
- (b) The submitted VLT must be supplied with locks and cams.

4.2.4 Power Supply, Wiring and Safety

- (a) Describe the areas of the VLT cabinet where high voltages are routed.
- (b) Provide a Letter of Acceptance issued by the electricity board, Electricity Commission or equivalent Approvals Test Laboratory in other jurisdictions which indicates that electrical wiring of the model of the VLT submitted complies with any applicable Electricity Act and Australian standards. (e.g. AS/NZS 3100:2022 in conjunction with AS/NZS 60335.2.82, or equivalent)
- (c) If there is a convenience light in the VLT, state:
 - i. the socket type;
 - ii. wattage; and
 - iii. the method of connection with respect to the mains and the main power switch.
- (d) If a general-purpose power outlet (Australian 3 pin GPO) is incorporated into the VLT, state its voltage, frequency, and method of connection with respect to the mains and the main power switch.
- (e) Provide evidence that the gaming device complies with AS/NZS CISPR 32:2015 or equivalent for radiated and conducted electromagnetic emissions.

- (f) Give details of testing criteria (i.e. cite standards) and results for:
 - i. electromagnetic, radio frequency interference;
 - ii. single and continuous static discharge to = 15,000 volts (ESD);
 - iii. mains power fluctuations;
 - iv. mains transients;
 - v. signals superimposed on mains supply;
 - vi. spikes and notches;
 - vii. extreme temperature variation (refer AS 60068 series);
 - viii. extreme humidity variation (refer AS 60068 series);
 - ix. effect from deposits of suspended particles, e.g., dust, cigarette smoke (refer to AS 60068 series); and
 - x. the effect of liquid spills.
- (g) For each of the following, provide the MTBF for each of the following cables and plugs, and state any preventative measures (e.g. strain relief) taken:
 - i. coin comparator;
 - ii. note comparator;
 - iii. button switches; and
 - iv. any other component that may be removed during fault clearances, preventative maintenance, etc.
- (h) Extension cables for door photo-optic detectors and any other hardware should be provided so that the VLT may be tested with doors opened.
- (i) Where a processor board is oriented in a VLT, such that it would be difficult to install a plug and cable from an emulator, extension cables should be provided to allow the board to be re-located. It is expected that the extensions will not be of significant length and may be shielded (noise and capacitive coupling should be considerations).

4.2.5 Coin Validation

- (a) Indicate the manufacturer, supplier, and model number of the coin validator components.
- (b) Detail any modifications made to the coin validator
- (c) Supply all data sheets and manuals associated with all validator components.
- (d) Where validator components differ in material particular from one denomination to the next, details of variations must be provided.
- (e) Provide the method/definition of detecting 'yo-yo' operation.
- (f) Provide the method/definition of detecting coin stuck events.

- (g) For all coin validator components give the following details:
 - i. the part number for each component for all permissible denominations.
 - ii. permissible Australian coin denominations.
 - iii. the input and output states for all valid conditions for each component, e.g. valid coin, coin jam, coin 'yo-yo', etc, and how they are interfaced.
 - iv. how the failure or disconnection of each component is detected, reported and corrected.

4.2.6 Coin Chutes and Diverters

- (a) Indicate the manufacturer, source of supply and part number of the coin chutes, diverter and diverter solenoid.
- (b) Supply details of diverter solenoid life, operating tolerances (voltages and temperature, etc).
- (c) List details (including part numbers) and provide any hardware (coin paths, etc.) required for different denominations and details of any adjustments necessary (including jams).
- (d) Detail the operation of the diverter, indicating:
 - i. how the position of the diverter is determined;
 - ii. how coins are detected travelling to the cash box and hopper;
 - iii. how diverter failure and cash box tilts are detected; and
 - iv. what happens if any of these devices fail.
- (e) Provide the recommended method of clearing jams.

4.2.7 Note Validation

- (a) Indicate the manufacturer, supplier, and model number of the note validator components.
- (b) Detail any modifications made to the note validator
- (c) Supply all data sheets and manuals associated with all validator components.
- (d) Where validator components differ in material particular from one denomination to the next, details of variations must be provided.
- (e) Provide the method/definition of detecting "yo-yo" operation.
- (f) Provide the method/definition of detecting note stuck events.

- (g) For all note validator components give the following details:
 - i. the part number for each component for all permissible denominations.
 - ii. permissible Australian note denominations.
 - iii. the input and output states for all valid conditions for each component, e.g. valid note, note jam, note yo-yo, etc, and how they are interfaced.
 - iv. how the failure or disconnection of each component is detected, reported and corrected.

4.2.8 Note Acceptors and Stackers

- (a) Indicate the manufacturer, source of supply and part number of each component (mechanical, electronic or electromagnetic) involved in the accepting, sorting and stacking of notes.
- (b) Supply details of the expected life of electronic and electromagnetic components, operating tolerances (voltages and temperature, etc).
- (c) List details (including part numbers) and provide any hardware (note paths, etc.) required for different denominations and details of any adjustments necessary (including jams).
- (d) Detail the operation of the note acceptor and stacker.
- (e) Provide the recommended method of clearing jams.

4.2.9 Electronic Components

- (a) Provide hardware block diagrams of the system as a whole and all sub-systems.
- (b) Provide complete schematic diagrams of all sub-systems.
- (c) Provide wiring loom/harness connection diagrams.
- (d) Describe the function and use of any laboratory test equipment provided to facilitate evaluation of the VLT.
- (e) Describe the components, function and use of any in-house test kits. A test kit shall be provided for VLT testing.
- (f) Detail the nature and use of any test, control or other external communication ports (including monitoring systems ports), providing:
 - i. communication method;
 - ii. data sheets on control Integrated Circuits (ICs);
 - iii. line isolation methodology; and
 - iv. protocol used (if the port is for connection to a monitoring system, detail the system and version).
- (g) Provide details on how the volume is adjusted on any audio facilities and where the appropriate adjustment switch is located.

- (h) For all circuit boards, including very large scale integrated (VLSI), special purpose, custom integrated, and Original Equipment Manufacturer (OEM):
 - i. list type and manufacturer;
 - ii. part number;
 - iii. provide any data sheets and programming manuals; and
 - iv. describe the item's functions within the VLT.
- (i) For the game program storage media used in the machine, list:
 - i. model;
 - ii. type;
 - iii. size;
 - iv. access time; and
 - v. required pin voltages.
- (j) Indicate the manufacturer, supplier and part number of the following:
 - i. main central processing unit (CPU) board,
 - ii. Input/Output boards (if used); and/or
 - iii. other printed circuit boards (if used).
- (k) Provide a component overlay for each board, showing a clear cross reference between the circuit diagram and component location and part number.
- (l) For all components with backup power give the following details:
 - i. the type and designation of component backed-up;
 - ii. type of battery or other back-up;
 - iii. expected operational lifetime of the power storage device (i.e., normal power up/down cycles);
 - iv. expected retention period for VLT without power; and
 - v. presence or not of low voltage indication capabilities.
- (m) State the 'endurance' (i.e. write cycles before failures) of PSDs utilised within the VLT, if applicable.

4.2.10 Monitors

- (a) Indicate the manufacturer and supplier.
- (b) Provide part number.
- (c) Provide details on how adjustments are made to the screen settings, including location of adjusters.

4.2.11 Touch Screens

- (a) Indicate the manufacturer, supplier and part number of the touch screen, if different to the monitor.
- (b) Provide any data sheets.
- (c) Describe the method of calibration.
- (d) Detail how often calibration is required.
- (e) Describe how the screen detects touch, eg. resistive film, pressure, etc.
- (f) Provide details of the touch screen, and how it is interfaced to the VLT.
- (g) Provide details on the method used to seal the touch screen to protect the internals of the VLT from liquid spills on the face of the monitor.

4.2.12 Other Hardware Devices

- (a) Provide the following details on any printers used in the machine:
 - i. supplier and manufacturer;
 - ii. part number;
 - iii. any data sheets and manuals;
 - iv. the paper type (provide a roll);
 - v. connection methods (e.g. protocols);
 - vi. flow control;
 - vii. paper low and paper out sensors;
 - viii. description of all ticket formats that are to be printed; and
 - ix. security methods used to prevent forgery of cash receipt tickets.
- (b) Provide the following details on any other hardware device fitted:
 - i. the purpose of the device;
 - ii. supplier and manufacturer;
 - iii. part number;
 - iv. any data sheets and manuals;
 - v. the connection methods (i.e. protocols); and
 - vi. error checking.

4.3 Software

4.3.1 Source Code

- (a) Supply a general overview of the system, describing how software and hardware are integrated.
- (b) Supply program block diagrams and flow cards for the game program.
- (c) The designation and/or naming conventions adopted for all source code files, modules, versions, configurations, options, and pay table variants of the gaming software.
- (d) Provide the following information:
 - i. the value of all unused bits in the PSD;
 - ii. whether the PSD is protected by a CRC checksum or other method approved by the regulatory authority; and
 - iii. how does the software detect any change in PSD and what happens.
- (e) For all microprocessors involved in control of gaming functions:
 - i. provide an assembler, linker, formatter or other computing utilities as is necessary to generate the installed gaming software from the source code supplied;
 - ii. user/programmer guides and/or manuals for the utility software requested above; and
 - iii. DO NOT provide unauthorised copies of software/manuals.
- (f) All components and software (cross compilers, cross assemblers, etc.) used in the development of the device or system must be commercially available. List sources of all software tools used in the software development process.
- (g) It is the responsibility of the supplier to provide the necessary development environment, or access to that environment where software development facilities differ from those available to the ATF.
- (h) If the software is to be compiled on a PC, the computer and software should be able to be installed and run from a hard disk. Provide any installation procedures.
- (i) If a non-IBM DOS compatible development system is supplied to the ATF for software compilation, the system must have provision to transfer software easily to IBM DOS compatible computer or diskettes, or the software to be supplied on IBM DOS compatible diskettes.

- (j) Any software supplied on IBM DOS compatible diskettes from a non-DOS environment must contain the following:
 - i. all source files;
 - ii. any make or batch files;
 - iii. Game hexadecimal source files (HEX files) as compiled; and
 - iv. Game map file.
- (k) If a non-IBM DOS compatible computer is supplied a cyclic redundancy check (CRC) must be implemented on both the manufacturer's Operating System and the ATF systems so that the ATF may ensure the integrity of the source code. This CRC program, for both operating systems is to be provided by the manufacturer. Source code of the CRC program, and instructions for generating an executable file from the source must also be provided. The CRC must be initiated with a random seed value (to be manually input by officers of the ATF).

4.3.2 Miscellaneous Functions

- (a) Indicate how test mode is entered.
- (b) Describe all tests provided by the game for testing specific functions and/or event sequences.

4.3.3 Fault Conditions

- (a) For each fault condition (including those specified for communications) provide the following detail:
 - i. the condition name and how it is displayed;
 - ii. type of machine alarm (e.g. bell, message on screen, tower light);
 - iii. how software "defines" the alarm;
 - iv. whether or not the machine locks up on the alarm temporarily or indefinitely;
 - v. how the machine is reset from alarm conditions; and
 - vi. the event code transmitted to the monitoring system.

4.3.4 Random Number Generator (RNG)

- (a) Give a full, detailed description in technical terms of random number and symbol selection/mapping.
- (b) List all text and journal references used in the design of the RNG. If convenient, these may be provided.
- (c) List all points in game play and the gaming program operation where the RNG is activated, updated, or numbers are obtained, including details of background RNG activity.

- (d) Explain the seeding process of the RNG.
- (e) Provide a detailed flow chart and software listing of the RNG process.

4.3.5 System Security and Integrity

- (a) Describe the use and function of dual inline package (DIP) switch settings, jumpers, wire wrap selectable options or other external mechanisms by which the functioning of the VLT, or game may be affected, and state the settings for normal game operation.
- (b) For VLT and game protection from nefarious activities, identify the game program storage media and/or other sensitive items which should be "sealed" to the machine by the regulatory authority.
- (c) Provide details of ALL program checks and when they are performed.

4.3.6 Data Retention

- (a) Describe the gaming program's state retention and recovery capabilities and procedures in the event of a mains power outage or RAM corruption.
- (b) Provide details of power down procedures.
- (c) Describe fully the functions and tests performed on initial start-up of the VLT, including the method of detection of corrupted backup memory.
- (d) List information stored in back-up memory.

4.3.7 Metering Systems

- (a) State the following for all main electronic meters (e.g. stroke, credits, etc):
 - i. label;
 - ii. size (bytes in memory);
 - iii. binary or binary-coded decimal (BCD); and
 - iv. how to view the meter.
- (b) State when it is possible to access meters and last game information.
- (c) State the size of all meters on screen, and whether any meters can be overwritten.
- (d) State how meters are protected from corruption and when checked.
- (e) State what happens when meters rollover.
- (f) State how meters are reset, partial or complete and provide any equipment required.
- (g) State the information stored for last and previous games.
- (h) State how the RNG, error states, critical memory pointers, etc are protected, if different to the main meters.

4.3.8 Coin Validation

- (a) Provide detailed charts for coin in sequencing.
- (b) Provide information regarding the communication from all parts of the coin validation circuitry to the main processor, i.e. the sequence of events to detect:
 - i. a valid coin;
 - ii. a coin jam;
 - iii. a diverter fault coin to cashbox tilt; and
 - iv. any other coin-in condition.

4.3.9 Note Validation

- (a) Provide detailed charts for notes in sequencing.
- (b) Provide information regarding the communication from all parts of the note validation circuitry to the main processor, i.e. the sequence of events to detect:
 - i. a valid note;
 - ii. a note jam;
 - iii. any other note-in condition.

4.4 Game Specific**4.4.1 General**

- (a) Supply game name.
- (b) Supply VLT type for which the game is suitable.
- (c) Supply game development number.
- (d) Supply any additional hardware and installation instructions required in addition to that already supplied with the hardware platform. This includes:
 - i. button panel;
 - ii. animation lights; and
 - iii. wiring looms.
- (e) If the game is an exact clone (i.e. rules, clone, payable) of another game previously submitted, supply the following details:
 - i. original game name;
 - ii. current version number of original game;
 - iii. equivalent symbols;
 - iv. listing of the clone game's symbol distribution; and
 - v. photocopy of the clone game's artwork.

4.4.2 Game Details

- (a) Provide a complete Game Profile sheet, (**Appendix B**)
- (b) Provide a description of each game in simple terms.

4.4.3 Mathematics

- (a) For each game, provide:
 - i. a schedule of all prizes' payout amounts in tabular form;
 - ii. a summary of the symbols' frequency, in tabular form;
 - iii. a summary of the total hits for each prize type, in tabular form; and
 - iv. a legend to cross reference each symbol type against the abbreviation, if abbreviations are used.
- (b) For each game submitted give a formal mathematical treatise of the derivation of the theoretical return to the player: List:
 - i. all assumptions;
 - ii. formulae derived from first principles;
 - iii. descriptions of such derivations from first principles;
 - iv. all steps in the simplification of such formulae derived from first principles;
 - v. the intermediate and final results of all calculations; and
 - vi. calculations pertaining to a winning combination should be suitably grouped.
- (c) Where different player options (e.g. number of credits bet) varies the payable, a separate calculation for each option is required.
- (d) Mathematical treatises of games must address all calculations in scientific manner, and it must be possible to verify the accuracy of such calculation scientifically or empirically in a reasonable time span.
- (e) For each game submitted calculate the standard deviation from the calculated theoretical return to the player. List:
 - i. all assumptions;
 - ii. formulae derived from first principle;
 - iii. descriptions of such derivations from first principle;
 - iv. all steps in the simplification of such formulae derived from first principle; and
 - v. the intermediate and final results of all calculations.
- (f) Provide, if available, actual game return statistics from development laboratories or field trials of the game in other jurisdictions.

5 HARDWARE AND SOFTWARE UPDATES

5.1 Hardware Submissions

- (a) Identify the individual items being submitted (including part number).
- (b) State the date of the submission.
- (c) Supply a complete response to all applicable sections of these VLT Standards for the new or updated items, including schematics, diagrams, data sheets.
- (d) Provide the updated or new VLT, a description, the method of connection, and details of reasons for the update.
- (e) Provide a Certification and Indemnity Form (**Appendix A**) for this update.

5.2 Software Submissions

- (a) Each program version should be submitted individually for evaluation.
- (b) Supply software name.
- (c) Supply game development and version numbers.
- (d) Supply VLT type model number for which the software is suitable for, specifying individual hardware requirements (i.e., button panels, light panels, etc).
- (e) Supply date of submission.
- (f) For all software included in the submission:
 - i. provide all software source code files, make or batch files, map files and PSD image files (if software is compiled on a machine other than an IBM PC);
 - ii. provide a complete set of PSDs holding the program submitted, and any other PSDs (colour, font, etc.) required by the game;
 - iii. ensure that the software is tested to ensure that it will compile correctly and produce HEX code identical to that supplied; and
 - iv. detail the testing performed on this software prior to submission.
- (g) DO NOT provide printed listings of the code.
- (h) There is not to be, in any manner or form, software present on media that is not VLT related. Particular reference is made to viruses or other nefarious software.
- (i) Provide a memory map of all external and internal random-access memory (RAM) (the MAP file created by the compiler/linker is sufficient).
- (j) If the software is a resubmission of previously supplied software, describe any changes between the two versions. If any details of the previous response to the base standards have changed or do not conform to the latest Requirements, these details must also be resubmitted.
- (k) Provide a Certification and Indemnity Form (**Appendix A**) for this game.

6 HARDWARE STANDARDS

6.1 Cabinet

6.1.1 Cabinet Identification

- (a) A VLT must have an identification badge permanently affixed to its cabinet by the manufacturer, and this badge must include the following information:
 - i. the manufacturer;
 - ii. a unique serial number;
 - iii. the VLT model identification number; and
 - iv. the date of manufacture.
- (b) The ID badge is to be fixed on the interior of the VLT in a position that allows it to be easily read.
- (c) The cabinet model identification number and revision level of the VLT (at the time of installation) must reflect the model and revision level that has been approved by the relevant gaming authority for that jurisdiction.
- (d) Each item of gaming equipment supplied by a manufacturer, of any one hardware revision level shall be identical (e.g. a video lottery terminal of one hardware revision level shall not have different internal wiring, components, firmware, circuit boards, circuit board track cuts or circuit board patch wires from another VLT of the same model and revision level).
- (e) All external key-switches of the VLT cabinet, switches and player buttons must be labelled according to their function or the series of events that are initiated by their action. If a key-lock initiates some kind of user activity other than simply unlocking a door, then its function should be labelled (e.g. if a key-lock turns one way to enter audit mode and turns the other way to enter cancel credit mode, then the directions should be labelled).

6.1.2 Cabinet Artwork

- (a) The game instructions shall be clearly visible, or the means of displaying such instructions must always be readily available on the VLT.
- (b) The manufacturer indemnifies an Authority against any breach of copyright, trademark, or registered name or design which may adorn the VLT.
- (c) Artwork is not to be indecent, suggestive, offensive or misleading.

6.1.3 Cabinet Construction

- (a) The cabinet shall be of rugged construction and it shall be capable of resisting vandalism, attack and unauthorised entry.
- (b) Areas of a cabinet which are generally accessible to patrons and staff shall be constructed and finished so as not to have the potential to inflict injury.

- (c) All protuberances (e.g. buttons, handles, etc) on a cabinet which are accessible to the general public, and attachments to a cabinet (e.g. labels and identification plates), must be sufficiently robust to avoid unauthorised removal.

6.1.4 Doors

- (a) All doors shall close and lock in an easily executed and satisfactory manner.
- (b) Doors shall be manufactured of materials which are suitable for allowing only legitimate access to the inside of the cabinet.
- (c) Door hinges must be of solid construction to prevent sagging of the door and thus creating any door sensor alignment problems.
- (d) Doors are to be front opening only.
- (e) The seal between the cabinet and the door of a locked area shall have no gaps.
- (f) The seal between the cabinet and the door of a locked area must be designed to resist the entry of objects.

6.1.5 Liquid Spills

- (a) Liquid spills applied to the outside of the video lottery terminal must not compromise the integrity of the material or information stored inside the cabinet (or affect the safety of the patrons operating the equipment).

6.1.6 Cabinet Security

- (a) The entirety of a VLT's equipment which does not form part of the player's input interface (e.g., buttons, etc.) must be stored within one or more locked areas of the VLT, and these locked areas must be equipped with tamper detection devices (with the exception of areas with lighting only).

6.1.7 Locked Areas

- (a) Keys and locks to the logic area and the hard meter should be similar on all machines but different to key and lock in (b) and (c).
- (b) Key and lock to the cash compartment shall be different to the key and lock in (a) and (c).
- (c) Key and lock to the audit shall be different to the key lock in (a) and (b).
- (d) The Commission shall be provided with a master key to (a) and (c).
- (e) Access to a locked area 'A', must not be possible from another locked area 'B' without the use of a key for locked area 'A'.
- (f) Where holes or slots exist in the exterior of a locked area, there must be sufficient protection to ensure that the insertion of foreign objects will not compromise the security or safety of that locked area.
- (g) A locked area must resist forced entry and must retain evidence of the entry.

6.1.8 Tamper Detection Devices

- (a) A sensor used in a tamper detector system must provide a method to enable software to interpret the access of a locked area via its valid entry point.
- (b) A tamper detection system must be designed such that it is not possible to activate a door open condition without actually opening the door.
- (c) If a tamper detection system is disconnected, the VLT must interpret this action as the door being opened.
- (d) The sensor system must register a door as being open as soon as the door is moved from its fully closed and locked position.
- (e) The tamper detection system must be secure against attempts to disable it or interfere with its normal mode of operation.

6.1.9 Logic Area

- (a) The logic area is a locked cabinet area that houses electronic components that have the potential to significantly influence the operation of the VLT.
- (b) Items of electronic componentry that are required to be housed in one or more logic areas are:
 - i. CPUs and other electronic components involved in the operation;
 - ii. calculation of game play (e.g. game controller electronics; components housing the game or system firmware program storage media);
 - iii. electronics involved in the operation and calculation of game result determination;
 - iv. electronics involved in the calculation of game display (and components housing display program storage media);
 - v. communication controller electronics, and components housing the communication program storage media; and
 - vi. interfaces and drivers for metering systems.
- (c) Communication, input/output (I/O) and display interfaces which do not significantly influence the VLT's behaviour may in certain circumstances be excluded from a logic area.
- (d) Logic areas shall be fitted with tamper detection systems.
- (e) A logic area must be located inside another locked area of the VLT.
- (f) Provision must be made for a physical seal on the logic area door.

6.1.10 Cabinet Electrical

- (a) The VLT (and any associated equipment) must be fully compliant with the Australian standard AS/NZS 60335.2.82, or equivalent.
- (b) The VLT shall be designed and manufactured so as to ensure that an operator will not be subjected to any electrical, electromagnetic or mechanical hazards.
- (c) The VLT shall be designed so that power and data cables into and out of the video lottery terminal can be routed so that they are not accessible to the general public.
- (d) Wires and cables that are routed into a logic area must not be able to be removed without accessing the logic area in an approved manner.
- (e) Data cables are to be routed away from possible sources of high-level internal noise and power cables.

6.1.11 Cabinet Environment

- (a) The VLT should not be adversely affected by the following:
 - i. a temperature variation of 10 degrees to 35 degrees Celsius (AS/NZS 60068 series, or equivalent);
 - ii. a humidity variation of 15% to 85% (to AS/NZS 60068 series, or equivalent); and
 - iii. dust and smoke particles (to AS/NZS 60068 series, or equivalent).

6.1.12 Cabinet Interference - Electromagnetic

- (a) The VLT shall meet the Australian requirements for radio emissions (AS/NZS CISPR 32:2015 Class A or B), or equivalent (e.g. FCC requirements, Part15, Sub-part J).

Rationale: These requirements ensure that VLT's do not create excessive electronic noise which affects the operation of neighbouring equipment.

6.1.13 Cabinet Interference - Electrostatic

- (a) Protection against static discharges requires that the conductive cabinets be earthed in such a way that static discharge energy shall not damage, or inhibit the normal operation of electronics or other components within the VLT.
- (b) VLT must exhibit total immunity to human body electrostatic discharges on all player exposed areas.

Rationale: This test ensures that static discharges from an operator will not affect the normal operation of VLTs.

6.1.14 Temporary Disruption Test

- (a) VLTs may exhibit temporary disruption when subjected to a significant electrostatic discharge greater than human body discharge but they must exhibit a capacity to recover and complete any interrupted play without loss or corruption of any control or data information associated with the VLT.

Rationale: This test ensures that a gas sparker ignition device will not adversely affect the performance of a VLT.

6.1.15 Radio Frequency Interference

- (a) VLTs must not divert from normal operation by the application of radio frequency interference (RFI). The test set up and procedure will be in accordance with AS/NZS IEC 61000.4.3, or equivalent. The frequency range tested will be from 27 to 1000 MHz with a field strength of 3 volts per meter.

Rationale: This requirement ensures that a high-powered mobile phone will not interfere with the VLT's normal operation.

6.1.16 Magnetic Interference

- (a) VLTs shall not have their operational properties changed by the application of a magnetic interference level that produces a maximum of 10 Gauss at a distance of 5 cm from the surface of the VLT (the test procedure will be in accordance with MIL 461C RS 01, or equivalent).

Rationale: This requirement ensures that a high-powered magnet will not interfere with the VLT's normal operation.

7 COMPUTER AND PERIPHERAL HARDWARE

7.1 Memory Requirements

7.1.1 Random Access Memory (RAM)

- (a) Sufficient RAM must be installed in the VLT to allow the recording and logging of all information required by the relevant software standard.
- (b) RAM data storage must be capable of reliably preserving its memory contents for at least 30 days with the mains power switched off, and its backup power source (if any) must have the ability to recharge itself to its full potential in a minimum of 8 hours.
- (c) RAM that uses a backup power source to retain its contents when the mains power is switched off, shall have a detection system which will provide a method for software to interpret and act upon a low power condition.
- (d) Memory clears must be able to only be undertaken by accessing the logic area in which it is housed.

7.1.2 Programmable Storage Devices (PSDs)

- (a) All read only memory devices (and programmable logic elements) must be clearly marked with sufficient information to identify the software version and revision level of the information stored in the devices.

7.1.3 Hard Meters

- (a) Electromechanical meters must not have the ability to be decremented or reset, and in the event of either occurring they must show evidence of tampering.
- (b) Electromechanical meters must be located in a locked area (but they must be able to be easily read and must be appropriately labelled).
- (c) Each meter must be capable of displaying up to at least 6 digits.
- (d) The cable construction between a hard meter and the logic area must not contain any joins or connectors and the cable to the meter may only be disconnected from the Video Lottery Terminal from inside the logic area.
- (e) Electromechanical meters shall have detection devices which provide a method to enable software to interpret and act upon the condition whereby the cable between the meter and the logic area has been disconnected.

7.2 Circuit Boards

7.2.1 Printed Circuit Board (PCB) Identification

- (a) All PCBs must display a name- or number-based identifier, and revision level.
- (b) The top assembly revision level of the PCB must be identifiable.

- (c) Both identifications are to be permanently displayed on the board.
- (d) Manufacturers must ensure that circuit board assemblies used in their VLTs conform exactly with the documentation and the approved versions of those PCB's that were evaluated and certified by the ATF.

7.2.2 PCB Construction and Modification

- (a) PCB materials are to be of a sound quality suitable for their application.
- (b) PCB manufacturing techniques are to be of industry standard quality (e.g. Top and bottom solder masks, and top side screen overlay).
- (c) PCB connectors are to be of a sound quality, being capable of multiple insertions without exhibiting signs of unreliability.
- (d) Where tracks cuts and modifications exist, they must be consistent across all boards with the same revision level.
- (e) Patch wires must be robust and reliable in nature, and there must be fewer than 5 patch wires or track cut per PCB.
- (f) All patch wires and track cuts must be documented in the service manual in an appropriate manner.

7.2.3 Switches and Jumpers

- (a) Switches and jumpers that have the potential to affect the communications or operational characteristics of the VLT must be fully documented for evaluation by the ATF.
- (b) Switches or jumpers that have the potential to affect the security or integrity of the VLT are not permitted.

7.2.4 Power Supply

- (a) The equipment must be able to operate from a 240 Volt, 50 Hz main power source.
- (b) All ratings of fuses must be clearly stated on or about the fuse holder, and switches on the power supply must show on/off positions.
- (c) The VLT is to employ sufficient power supply filtering to prevent disruption to the device by any of the following:
 - i. mains power fluctuations (brownouts);
 - ii. mains power surges;
 - iii. signals superimposed on the mains supply;
 - iv. repeated switching on and off of the mains power; and
 - v. jiggling the AC power cord connection at the wall outlet.

7.3 Information Display

7.3.1 Video Monitors

- (a) Monitors shall be constructed of toughened material to withstand patron abuse, and safe access must be provided for the adjustment of manual controls.

7.3.2 Touch Screens

- (a) Touch screens must be resistant to scratching from conditions likely to occur during normal use.
- (b) Touch screens must be accurate, and once calibrated must maintain that accuracy for at least the manufacturers recommended maintenance period.
- (c) A touch screen must be able to be recalibrated by venue staff without access to the VLT cabinet.

7.3.3 Printers

- (a) If a VLT is equipped with a printer, it must be located in a locked area other than the logic area or the cash box area of the VLT.
- (b) A printer must have mechanisms to allow software to interpret and act upon the following conditions:
 - i. a paper out condition;
 - ii. a printer disconnection;
 - iii. a printer power fail condition; and
 - iv. industry standard printer fault conditions.

7.4 Audible Alarm

- (a) A suitable audible alarm in the VLT must be provided for effectively signalling any of the error, or security, features required by the relevant the software standard.
- (b) A technique should be provided so that authorised personnel can adjust the volume level.

8 CASH INPUT SYSTEMS

8.1 Note and Coin Input Systems

- (a) The note and coin input systems must be constructed in such a manner that they protect the VLT against vandalism, abuse or fraudulent activity. As a guide, the note and coin input systems should have the following capabilities:
 - i. the ability not to have the note or coin paths easily altered from the exterior of the VLT without leaving evidence of physical modification;
 - ii. the ability to resist liquid spills;
 - iii. the ability to deliver the note or coin to the correct area of the gaming equipment with minimal failures; and
 - iv. the ability to accurately detect and account for all valid inserted notes and coins (and it should effectively detect and reject invalid notes and coins).
- (b) The note and coin input systems must provide means through which software (or hardware) may detect and/or logically deduce when potential cheating is in progress.

8.1.1 Note and Coin Validators

- (a) The note and coin acceptor device/s must be electronically based and be so designed as to ensure that they accept notes and coins of appropriate legal tender or approved tokens. They must credit the customer's credit balance by the appropriate amount for each accepted note or coin.
- (b) Under conditions where the accept/reject mechanism fails to prevent entry of an invalid note or coin due to malfunction or tampering, the system must be designed to give credit only for those valid notes and coins that have been accepted by the VLT.
- (c) The note and coin validators should be easily removed from their mounting brackets for inspection, and the removal should not require the use of any tools.

8.1.2 Programmable Note and Coin Validators

- (a) In the case of note and coin validators which are electronically programmable to recognise notes and coins, the validator must be pre-programmed at the factory and it must not be able to be reprogrammed in the field.

8.1.3 Coin Diverter Chutes

- (a) The coin chute and diverter mechanism shall be constructed to ensure that coins inserted into the VLT are deposited into the cash box, or the coin tray without jams occurring or without spillage of coins onto the internal floor of the VLT.

8.1.4 Note Chutes

- (a) The note chute mechanism shall be constructed to ensure that the notes inserted into the VLT are deposited into the cash box or hopper, without jams occurring or without spillage of notes onto the internal floor of the VLT.

8.1.5 Note Acceptance Security

- (a) The note storage area (e.g. receptacle) is to be attached to the VLT in such a manner so that it cannot be easily removed by physical force. It must be internally located within the VLT (i.e. not attached to the outside). The relevant Jurisdiction may grant dispensation to this requirement if it can be demonstrated that an externally attached note acceptor demonstrates at least the same degree of security as one located inside the VLT. Areas of security that will be examined when considering such a dispensation are:
 - i. physical strength of the attached note acceptor device;
 - ii. position of screws, nuts and bolts; and
 - iii. ability to withstand exposure to burning materials such as lighters, matches, ash etc.
- (b) A note acceptor device must be implemented with a means to enable or disable particular value notes. The procedure for setting acceptable note values must be via a command from the central monitoring and control system (CMCS) or access to a secure area of the VLT. If permanent artwork is used to display the acceptable denominations, the latter method which requires attending each VLT is preferred.
- (c) Note acceptors are to be factory set only; it must not be possible to access or conduct maintenance or adjustments in the field, other than:
 - i. the selection of notes and limits as defined in (b); or
 - ii. changing of approved PSDs or downloading of approved software.
- (d) The adjustment of the tolerance level for accepting notes of varying quality, or the alteration of any of the possible checking procedures is prohibited in the field. If a reader has multiple tolerance levels then the ability to switch to lower levels is to be disabled.

8.1.6 Signature Requirements on Distributed Processing

- (a) There must be some means whereby software associated with the note acceptor is able to be verified by a secure signature checking method.

8.1.7 Note Acceptor Self-Test

- (a) If the signature requirement is to be met by the self-checking method, evidence is to be provided by the note acceptor supplier that the self-check is performed and details of checks performed.
- (b) The note acceptor device must perform a self-test at each power up. In the event of a self-test failure, the note acceptor must automatically disable itself (i.e. enter note reject state) until the error state has been cleared.

9 CASH OUTPUT SYSTEMS

9.1 Cash Box

- (a) Cash boxes must be of sufficient capacity to store notes and coins for at least a 24-hour trading period.
- (b) The cash boxes must be isolated in a locked area (equipped with an electronic tamper detection device) separate from the other locked areas of the VLT.

10 ARTWORK STANDARDS

10.1 General

10.1.1 Instructions

- (a) All game instructions on the artwork must be easily interpreted, clearly visible, not ambiguous, and sufficient to explain all game rules. Common sense rules apply.
- (b) In western culture, the assumed direction of instructions is from left to right and from top to bottom. It is preferred that these directions are used as much as possible.
- (c) Considerable breach of this common rule will make the artwork unsuitable.

10.1.2 Messages

- (a) All game instructions shall be in Australian English and both grammatically and syntactically sound. Exceptions may be acceptable on a case-by-case basis.

10.1.3 Logos

- (a) Manufacturer's logos or copyright messages may be visible, but in a discrete manner.

10.1.4 Denomination

- (a) The denomination of the machine must be clearly visible at all times, preferably near the note and coin slot.

10.1.5 Cut-outs

- (a) If different versions of the artwork require a cut-out or a window, (e.g. card reader), each modification must be approved separately.

10.1.6 Stickers

- (a) Customised artwork which makes use of stickers (e.g. double up instructions) must use stickers that will not shrink or peel with time or heat.
- (b) All stickers should be applied on the bank of the artwork to avoid intentional removal.

10.1.7 Buttons

- (a) The functions of all buttons (in normal game mode) must be clearly indicated preferably on the button.

10.1.8 Images

- (a) Artwork graphics shall not be in any manner or form indecent or offensive.

10.2 Prizes Layout

10.2.1 Symbol-prize relationship

- (a) The prizes for the winning combinations of each symbol must be placed in an area that visually belongs to the symbol. This can be achieved with appropriate boxing.
- (b) If possible, it is preferred that the symbol is placed on the left-hand side of the prize scale.

10.2.2 Groups of symbols

- (a) If some symbols share the same pay scale, then they must be placed in an area that visually belongs to the pay scale. This can be achieved with appropriate framing or boxing.
- (b) The group of symbols must be associated with its prize and must not invade the area that visually belongs to some other group of symbols if this could cause ambiguities.

10.2.3 Cash prizes

- (a) The nature of all prizes must be clearly indicated.

10.3 Positioning, Size, Colour and Shape

10.3.1 Global instructions

- (a) Game instructions that refer to all symbols/prizes must read "ALL" or equivalent. If some symbols/prizes are excluded from these instructions, this must be indicated with wording such as "EXCEPT" or equivalent.

10.3.2 Messages - colour

- (a) Game instructions must be printed in a colour that contrasts with the background colour. For example, black print on dark purple background is not acceptable.

10.3.3 Symbols - Shape

- (a) Symbols that are not characters or numbers must maintain the same shape throughout all artwork.

10.3.4 Symbols - reference

- (a) If game instructions refer to a particular symbol it is preferred that the actual symbol is used rather than a symbol's description. For example, game instructions such as:

'WHEN A PAIR OF SUNGLASSES OCCURS ...' should read "WHEN <sunglasses symbol> OCCUR...".

10.4 Winning Patterns

10.4.1 Combinations

- (a) All winning combinations relevant to the particular point in time of a game, must be clearly displayed or accessible. All non-defined combinations are assumed non-winning.

10.4.2 Pictorial Winning Patterns

- (a) If generic winning patterns are only represented graphically (without the aid of a verbatim explanation) then they must be supplemented with numbers to indicate how many correct symbols each pattern corresponds to.

11 AUDIT REPORTING

11.1 Current Series Reporting

- (a) A facility should exist that enables the audit reporting of the status of each series that is currently being played in each VLT.
- (b) The audit report should indicate for each series:
 - i. the series number;
 - ii. number of unused tickets;
 - iii. value of tickets played;
 - iv. value of payouts; and
 - v. bank figure (optional).
- (c) Additionally, the report should indicate:
 - i. the gross take;
 - ii. the gross payout;
 - iii. the gross bank (optional);
 - iv. permit holder's figure (optional);
 - v. government charge (optional);
 - vi. total credits issued; and
 - vii. total tickets left.
- (d) Two audit reports should be printed, one for attachment to the financial return and one for operator retention.
- (e) Explain the reporting period for each report. (Is the information reset once it has been printed?)
- (f) Current Series Reporting should be similar to **Appendix C**.

11.2 Completed Series Reporting

- (a) A facility should exist that enables the audit reporting of all completed series that have occurred on a VLT at a particular location.
- (b) The audit report should indicate for each completed series:
 - i. completed series number;
 - ii. gross take;
 - iii. gross payout;
 - iv. total government charge (optional); and
 - v. total charity value (optional).
- (c) Completed series information should be attached to the monthly return.
- (d) Completed Series Reports should be similar to **Appendix C**.

12 VALIDATION PROCEDURES

12.1 Pre Validation

- (a) A supplier shall provide, for each different type of game, information required by the VLT Standards.
- (b) If a game is in any way different to a game which has previously been submitted and approved, e.g.: different prize structure etc, it must be submitted for approval.
- (c) Each version of VLT software, including the source code, will be vetted by the Commission.
- (d) Each type of VLT will be fully tested to ensure it meets the Hardware requirements of the VLT Standards, as specified by the Commission.
- (e) If the Hardware and Software specifications, including the source code, meets the requirements of these VLT Standards, Commission approval may be provided, whereupon manufacture of the machine may commence.

12.2 Post Validation

- (a) When a fully manufactured VLT/s is ready to be sited, the supplier shall ensure that:
 - i. a VLT registration number has been issued by the Commission;
 - ii. a permit has been issued for that VLT;
 - iii. the VLT is available for testing and sealing; and
 - iv. the Commission is contacted and an appointment is made for the VLTs to be tested and sealed.
- (b) The Commission shall ensure that:
 - i. the VLTs are fully tested and meet Commission requirements;
 - ii. the game software board is sealed with a Commission seal; and
 - iii. provide approval for the machine to be sited on the premises specified on the permit.

NOTE: All costs for the validation of the source code shall be paid by the supplier.

APPENDIX A – Certification and Indemnity form**CERTIFICATION AND INDEMNITY FORM**

I (full name)

being (position held)

for and on behalf of.....

..... (Supplier)

hereby certify that:-

- (a) the statements contained in the attached documents are to the best of my knowledge and belief true and correct in every detail and are a complete disclosure of the information requested;
- (b) the Gaming and Wagering Commission of Western Australia, and all other officers and officially appointed agents of the above mentioned body, acting within the scope of their duties and responsibilities, shall be indemnified and held harmless from and against all claims, suits, demands, damages and costs, expense, losses and/or actions of any kind in consequence of any official action taken in respect to this application and any patent, trademark or copyright claim relating thereto; and
- (c) the items submitted are to be compliant with the Video Lottery Terminal Specifications and Standards – Version 3.0.

signed at.....

This..... day of 20.....

.....
(signature of Supplier)

in the presence of.....

.....
(signature of Witness)

Name and Address of Witness.....

.....

.....

APPENDIX B – Game Profile**GAME PROFILE**

Manufacturer	
Game Name	
Video/Stepper	
Game Theme	
Approved Machine Types Suitable	
Game Development Numbers	
Graphic PROM Numbers	
Game Type	
Pay Direction	
Game Clone (Name)	
Game Return	
Standard Deviation	
Hit Rate	
Features	
Feature Game Hit Rate	
Other Features	
Substitute Symbol(s) & Rules	
Scatter Symbol(s) & Rules	
Denominations Available	
Tokenisation Available	
Number of Pay lines	
Recommended Denomination.	
Recommended Site Type	
Other	

APPENDIX C – Video Lottery Terminals

VIDEO LOTTERY TERMINALS

**** WINNER **** \$200 TWO HUNDRED DOLLARS
PERMIT No LCL 0006754 MACHINE No. 653288 DATE: 22AUG95 TIME: 14:50 TICKET NUMBER ASFD34348 FUNDRAISING FOR WAIKIKI SPORTS CLUB XYZ GAMING

AUDIT	
MACHINE No. MA5572	
FREMANTLE LIFESAVING CLUB	
PERMIT No. LCL 0045621	
SUPPLIER No. GMS 9532	
50C SERIES 5000	
DATE. 28NOV95:: TIME 16:00	
SERIES COMPLETED 000	
BANK SERIES 002 BS1-001	
4976 LEFT	
TAKE	\$11.00
PAYOUT	\$5.00
BANK SERIES 002 BS1-002	
4976 LEFT	
TAKE	\$12.00
PAYOUT	\$2.00
BANK SERIES 002 BS1-003	
4984 LEFT	
TAKE	\$8.00
PAYOUT	\$3.00
BANK SERIES 004 BS1-004	
4982 LEFT	
TAKE	\$9.00
PAYOUT	\$4.00
GROSS TAKE	\$40.00
GROSS PAYOUT	\$14.00
PERMIT HOLDER 10% (optional)	\$4.00
GOVERNMENT CHARGE 3.25% (optional)	\$1.30
TOTAL CREDITS	80
TICKETS LEFT	19920

COMPLETED SERIES REPORT	
MACHINE No. MA5572	
FREMANTLE ITALIAN CLUB	
PERMIT No. LCL 0045644	
SUPPLIER No. GMS 9532	
50C SERIES 5000	
DATE: 12 DEC95 TIME: 16:32:11	
SERIES COMPLETED 007	
SERIES 001 BS1-001	
Take	\$7,500
Payout	\$4,750
Government Charge (optional)	\$243.75
Charity (optional)	\$750
SERIES 001 BS1-001	
Take	\$2,500
Payout	\$1,750
Government Charge (optional)	\$81.25
Charity (optional)	\$250
SERIES 001 BS1-001	
Take	\$5,000
Payout	\$3,500
Government Charge (optional)	\$162.50
Charity (optional)	\$500
SERIES 001 BS1-001	
Take	\$2,500
Payout	\$1,750
Government Charge (optional)	\$81.25
Charity (optional)	\$250

APPENDIX D – Glossary

GLOSSARY

AC	Alternating Current.
AS	Australian standard
Authority	The state body responsible for the enforcement of the gaming laws of that jurisdiction.
Backed Up RAM	Random Access Memory with a battery (or other power source), enabling the retention of its contents even if power is lost to the machine. (Usually referred to as BBU RAM - battery backed up RAM).
Brownout	A condition where the mains power source drops below its minimum specified level for a relatively short period of time.
Circuit Board	See PCB.
Clearing PSD	A PSD containing a program which completely erases each and every bit in RAM.
Clone	A game which is identical to another in every respect except name and graphics.
Coin	Australian legal tender coin
Coin Validator	The term "coin validator" refers to coin comparator photo-optic sensors (internal or external to, the comparator) and any additional devices used to validate a coin.
CPU	Central Processing Unit.
Critical memory	Memory locations storing information including, but not limited to: - a RNG outcome - b Security event buffer - c Electronic meters - d Last game information - e Current game information - f Critical game state flags and memory variables
CRC	Cyclic Redundancy Check
DIP	Dual Inline Package
Electrostatic Interference	The physical property of being able to create electronic interference to a device by either discharging static electricity onto the surface of the unit (such as from a user), or via a mains power or communication cable (from lightning for example).
EMI	Electromagnetic Interference - the physical characteristic of an electronic device to emit electronic noise either into free air, onto the mains power lines, or communication cables.
ESD	See <i>Electrostatic interference</i> .

FCC	An American government organisation in charge of regulating the US communications industry.
Firmware	The program memory of a computer.
Game	A game is a sequence of actions and outputs initiated through player interaction with the device on which the game is played. Major constituents of a game are: Rules, Artwork (virtual or static and inclusive of symbols and payable), Winning Combinations and Symbol Distribution. A game must follow a constant set of rules and must at no time deviate from those rules. A rule change constitutes a different game. Modifications in payable are acceptable provided they are in accordance with all current minimum requirements. Winning combinations may vary for different numbers of credits bet for games presenting reels in greater than one logical dimension (e.g. a N x N array), otherwise a change constitutes a different game. Symbol distributions which vary between plays within a game, as a consequence of the amount of credit wagered, may be acceptable. However, games must maintain the same symbol distribution during any option of a play
Hard meter	An electromechanical meter.
Hardware	The electronic components making up the computing device, which in this case is an electronic continuing lottery ticket machine
HEX	Hexadecimal
Hopper	A coin hopper.
IC	Integrated Circuit - an electronic device that has multiple transistors imbedded into a silicon substrate which is packaged so that its external connections can be inserted into a PCB.
IEC	An international standards organisation.
ISO	An international standards organisation.
I/O	Input/Output
Jurisdiction	The area in which a Gaming Authority has legal control over continuing lottery ticket machines.
Magnetic Interference	The physical property of being able to influence the operation of an electronic device by means of a magnetic field
MAP	Memory Locations File
Memory	An area of a computing device used to store data and instructions

MTBF	Mean Time Between Failure. This does not have to be the full mathematical derivation of the MTBF – results from the field are sufficient, or estimates, if field results are not available.
Noise	Radiated electromagnetic energy from a source that can induce stray electronic currents in nearby wiring or components.
Note	A banknote in Australian legal tender
Note Validator	The term "note validator" refers to note comparator photo-optic sensors (internal or external to the comparator) and any additional devices used to validate a note
OEM	Original Equipment Manufacturer
PCB	Printed Circuit Board - the piece of board used to connect together electronic components in a certain manner using tracks and holes to route the signals
Percentage return to player (RTP)	The ratio of total win to the total turnover.
Play	A play is a sequence of actions and outputs initiated through a bet and terminated when a new bet is required to continue the game. Games that trigger a free game feature and any subsequent free games are to be considered as one play, especially for the purposes of last game information. Credits won for this play are the sum of the credits won in the free games plus the credits won in the trigger game
PLD	Programmable Logic Device - an electronically configurable IC usually used for hardware control purposes.
Printer	A device used to convey information from a computer onto paper
Processor Board	The circuit board which contains the game PSD and CPU.
PSD	Programmable Storage Device – a storage area which may be filled with data and information, which once written is not modifiable, and which is retained even if there is no power applied to the machine.
QA	Quality Assurance - The methods an organisation puts in place to ensure reliable quality control.
RAM	Random Access memory - a specific type of memory which is usually either disk memory or SRAM memory.
RFI	Radio Frequency Interference - the ability to influence an electronic device by means of using radio waves
RNG	Random Number Generator
PSD	Read Only memory - a specific type of memory which is usually the PSD type
Software	The set of instructions and data used by computer hardware in order to play, in this case, an electronic continuing lottery ticket machine (usually in PSD).

Software Shell	The base software of which the majority is common to a number of games.
SRAM	Static Random Access memory - a volatile IC RAM type of memory that loses its contents if its power source is disconnected
Static Artwork	That artwork which is physically printed on glass, plastic, etc., and displayed on the machine
Testing Authority	An authorised VLT test centre
Tokenisation	Multiple credits per coin inserted and collected.
Tokenization	Conversion of an inserted coin into some number of credits
Top Assembly	The term given to a PCB that is populated with electronic components.
Touch Screen	A video monitor with a special surface screen that can activate the VLT by touching the screen's surface.
Video Monitor	A type of television screen display.
VLT	Video Lottery Terminal
VLSI	Very Large Scale Integrated

APPENDIX E – Accredited Testing Facilities (ATFs)

The *National Association of Testing Authorities, Australia* (**NATA**) is a national body that provides accreditation for a range of testing organisations, including those organisations which specialise in the inspection and testing of gaming equipment and associated hardware and software.

Please note that the Commission has no role in the approval or accreditation of testing organisations. Accordingly, no ATFs are listed here.

Suppliers may search for ATFs, for the purpose of evaluation of VLT hardware and software, via NATA's search facility (<https://nata.com.au/find-organisation/>). Users of the NATA search facility may search by several different criteria, including business name, standard or service type.

Note that each testing laboratory, including multiple laboratories operated by the same organisation, are accredited separately. Each laboratory's contact details are listed against their accreditation.

APPENDIX F – Conditions

F.1 Conditions attached to a Video Lottery Terminal permit

Definitions (see also Introduction, Appendix D, Appendix F.2 and Appendix F.3)

- **"operator"** means a person on whose premises the machine is located.
- **"permit holder"** means the person to whom a permit to install a video lottery terminal, is issued.
- **"technician"** means a person licensed by the Commission to service and maintain machines.
- **"authorised officer"** means a person appointed under the provisions of the *Gaming and Wagering Commission Act 1987*.

NOTE: These conditions reflect core conditions applying to a VLT Permit. Permit-holders should familiarise themselves with any more detailed conditions in their permit.

NOTE: The prescribed penalty for any breach of these Conditions is \$10,000, pursuant to Section 45(4) of the *Gaming and Wagering Commission Act 1987*.

F.1.1 Money to be paid

- (a) A video lottery terminal shall return a minimum of 10 per cent of gross proceeds to the beneficiary organisation.

F.1.2 Supply of machines

- (a) A video lottery terminal must be obtained from a person/organisation licensed by the Commission to supply such machines.

F.1.3 Term of machine licence

- (a) A permit shall remain in force for the period stated on the permit.
- (b) A copy of the permit shall be retained by the licensee/approved manager of the premises on which the video lottery terminal is located.

F.1.4 Conditions of machine licence

- (a) A permit is subject to such conditions as the Commission may impose from time to time in the public interest or for the proper conduct of gaming.
- (b) A person who fails to comply with any condition imposed commits an offence.
(Penalty \$10,000.)

F.1.5 Payments in connection with machines

- (a) The operator must, on presentation of a valid winning ticket by a player, pay the amount stipulated on the winning ticket.
 - i. the payment must be in the form of cash or a cheque.
 - ii. payment shall not be in the form of machine credits.

F.1.6 Certain persons only to have access to machines

- (a) A person must not, in relation to a machine on licensed premises:
 - i. open the machine, or
 - ii. remove any cash or tokens
- (b) A person is exempted from the prohibition in (a) above only if the person is:
 - i. the licensee or approved manager of the licensed premises for the purpose of:
 - emptying the cash box
 - changing the audit roll
 - changing the ticket roll
 - ii. the supplier of the machine or an approved employee of the supplier for the purpose of repair or maintenance
 - iii. an authorised officer of the Commission.

F.1.7 Protection of sensitive areas of machine

- (a) A person who is not authorised shall not:
 - i. break the Commission seal protecting the integrity of the machine
 - ii. remove, replace or in any way affect or interfere with the operation of the machine cabinet or anything within the machine cabinet
 - iii. remove or interfere with any security device
 - iv. interfere with the information stored by a machine
 - v. remove, alter or interfere with an identification label affixed to a machine.

F.1.8 Accounting procedures

- (a) All accounting records shall be maintained for a period not less than **seven (7)** years.

F.1.9 Advertising

- (a) No advertisement shall be permitted other than on the premises on which the machine is located.

F.1.10 General

- (a) No person under the age of 18 years shall be permitted to play a video lottery terminal.
- (b) A person who is an operator shall not play machines installed on premises of which that person is licensee or manager.
- (c) A person who is a permit holder shall not play machines of which that person is permit holder

F.2 Conditions attached to a supplier's certificate as to the sale and supply of a Video Lottery Terminal

Definitions (see also Introduction, Appendix D, Appendix F.1 and Appendix F.3)

- **"operator"** means a person on whose premises the machine is located.
- **"permit holder"** means the person to whom a permit to install a video lottery terminal, is issued.
- **"technician"** means a person licensed by the Commission to service and repair machines.
- **"authorised officer"** means a person appointed under the provisions of the *Gaming and Wagering Commission Act 1987*.

NOTE: These conditions reflect core conditions applying to a supplier's certificate. Suppliers should familiarise themselves with any more detailed conditions in their certificate.

NOTE: The prescribed penalty for any breach of these Conditions is \$100,000, pursuant to Section 88(3) of the *Gaming and Wagering Commission Act 1987*.

F.2.1 Money to be paid

- (a) A VLT shall return a minimum of 10 percent of gross proceeds to the beneficiary organisation.

F.2.2 Installation and use of machine

- (a) A machine shall have affixed to the front door panel of the machine a Gaming and Wagering Commission Registration plate.
- (b) The supplier shall notify the Commission in writing if the Registration plate is removed or defaced.
- (c) A machine cannot be supplied to a beneficiary without there being a current permit issued to the beneficiary.
- (d) A machine must be installed and located in the area of the premises nominated on the permit.

F.2.3 Machine Entry Log

- (a) Each machine shall have a logbook which shall be retained inside the cabinet of the machine.
- (b) A person authorised to open the machine (other than the cash box compartment) must legibly enter all details in the logbook as determined by the Commission
- (c) If a machine is taken out of operation, the logbook must:
 - i. clearly identify the reason for removal;
 - ii. where the machine is stored; and
 - iii. the time, date and name of authorised officer advised.
- (d) If a machine is returned to operation, the logbook must record:
 - i. the date and time; and
 - ii. name of authorised officer advised

F.2.4 Possession of machines by certified suppliers

- (a) A certificated supplier is authorised to:
 - i. obtain and be in possession of machines.
 - ii. sell or supply, on written order, machines to a person who is:
 - the holder of a permit issued by the Commission
 - a Certified Supplier.

F.2.5 Movement of machines

- (a) A certificated supplier of machines and/or the permit holder shall advise the Commission in writing, before any machines which are sited can be moved.
- (b) The advice from the supplier must include:
 - i. the number of machines.
 - ii. the serial number of each machine.
 - iii. the Gaming and Wagering Commission Machine registration number.
 - iv. the permit number issued to the machine.
 - v. the origin and destination of the machines.
- (c) The machine may not be removed until written approval has been received from the Commission.

F.2.6 Money clearances

- (a) The supplier shall take an audit reading by the 7th day of each month.
- (b) The audit tape shall be retained by the supplier to enable the financial return to be completed

F.2.7 Records to be maintained

- (a) The supplier shall maintain such accounting records prescribed by the Commission from time to time.

F.2.8 Reports to be submitted

- (a) The supplier shall lodge with the Commission, by the 15th day of each month, a financial return for the preceding month along with the original of the audit reading and 3.25% of the gross proceeds of each video lottery terminal:
 - i. a copy of the financial return must be forwarded to the permit holder along with 10% of the gross proceeds of the video lottery terminal
 - ii. a copy to be retained by the supplier for audit purposes.

F.2.9 Records to be kept for 7 years

- (a) All accounting records shall be maintained for a period not less than 7 years.

F.2.10 Maintenance of machine

- (a) The supplier shall:
 - i. ensure the machine is maintained in a good working order
 - ii. not allow any lewd or obscene advertising to be placed on the machine
 - iii. not allow any advertising of VLT other than on the premises on which the machine is located
 - iv. not permit any unauthorised person to repair or maintain the machine.

F.2.11 General

- (a) A person who is a supplier shall not play machines, on any premises, which are supplied by them.
- (b) A person who is a service agent shall not play machines, on any premises, which are serviced or repaired by them.

F.3 Conditions attached to a supplier's certificate as to the repair and maintenance of Video Lottery Terminals

Definitions (see also Introduction, Appendix D, Appendix F.1 and Appendix F.2)

- **"operator"** means a person on whose premises the machine is located.
- **"permit holder"** means the person to whom a permit to install a video lottery terminal, is issued.
- **"technician"** means a person licensed by the Commission to service and maintain machines.
- **"authorised officer"** means a person appointed under the provisions of the *Gaming and Wagering Commission Act 1987*.

NOTE: These conditions reflect core conditions applying to a supplier's certificate. Suppliers should familiarise themselves with any more detailed conditions in their certificate.

NOTE: The prescribed penalty for any breach of these Conditions is \$100,000, pursuant to Section 89(2) of the *Gaming and Wagering Commission Act 1987*.

- (a) A person may not service or repair a machine unless they are the holder of a current certificate issued by the Commission.

Penalty \$100,000

- (b) The logbook located in the machine must be completed by the technician whenever they open the machine.
- (c) The following details must be recorded:
 - i. Technician's name
 - ii. Technician's certificate number
 - iii. Date and Time
 - iv. Seal number on the logic area of the machine
 - v. Reasons for entering machine
 - vi. Permit number of the machine.
- (d) The technician must notify and receive approval from an authorised officer if they wish to enter the sealed logic area of the machine.
- (e) Prior to entering the sealed logic area of the machine, the technician must:
 - i. Notify an authorised officer of the seal number on the machine
 - ii. Print an audit status report
 - iii. Break seal
 - iv. Complete section "A" of the "Change of Seal Number form".
- (f) Upon resealing the machine, the technician must:
 - i. Print Status Audit Report
 - ii. Complete section "B" of the "Change of Seal Number form"
 - iii. Complete the log as detailed in Condition 3
 - iv. Send old seal, both audit status reports of the machine and the original of "Change of Seal Number form" to the Commission.
- (g) A technician shall not service or repair a machine located on licensed premises which does not have a current permit issued by the Commission authorising the location of the machine.