
Submission Guidelines and Instructions

for

New Gambling Device Submission and Modification

Montana Department of Justice – Gambling Control Division



**1/5/2018
Version 2.0**

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Revision History

Date	Version	Reason For Changes
1/5/2018	2.0	Reformatted document. Updated to reflect new requirements and submission goals
12/12/2012	1.0	Initial Release

1. Introduction

1.1 Purpose

The purpose of this document is to outline requirements for a complete submission of new gambling devices or modifications to approved gambling devices. This document covers Tier 1, Video Gambling Machine (VGM) and Live Keno/Bingo submissions for both hardware and software. An included organized checklist (Appendix B) is also attached to the end of this document to be followed and included with each relevant submission.

1.2 Intended Audience

The intended audience for this document is new and existing VGM manufacturers who wish to submit VGM or Tier 1 or Live System equipment and software for approval to operate in the State of Montana.

1.3 Overview

New gambling device and modification submissions will be accepted Monday through Friday, 8:00 a.m. to 4:00 p.m. by appointment only, excluding State holidays. All submissions must be submitted to the following address:

<u>Location:</u>	Gambling Control Division Technical Service Section 2550 Prospect Ave Helena, MT 59601	<u>Mailing Address:</u>	Gambling Control Division Technical Service Section PO Box 201424 Helena, MT 59620-1424
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All submissions must be accompanied by a manufacturer's letter requesting approval, completed submission checklist, and the required initial deposit or existing account balance. Submissions will not be accepted without the required initial deposit or the equivalent amount in an existing account. The submission must be deemed complete by the Division or it will not be accepted. Make checks payable to "Gambling Control Division."

The following is a list of fees the Division assesses for testing:

<u>Category</u>	<u>Initial Deposit/Existing Account Balance</u>	<u>Hourly Charges</u>
New Devices	\$10,000	\$105
Modifications	\$3,000	\$105

Each manufacturer is encouraged to work with our lab during the design and development of a new device, system or game platform. This verbal and white paper dialog serves to alleviate re-design and speed the testing and approval process. Our lab has created a series of tools and requirements that all submissions must meet. These tools can be found in Appendix A.

TSS Lab Contact information:

Ben Kamerzel, Lab Manager
Phone (406) 444-9133
E-Mail bkamerzel@mt.gov

Bob Burke, Electronics Engineer
Phone (406) 444-9107
E-Mail bburke@mt.gov

Greg Janysek, Electronics Engineer
Phone (406) 444-9149
E-Mail gjanysek@mt.gov

Matt Eckdahl, Electronics Engineer
Phone (406) 444-9152
E-Mail meckdahl@mt.gov

When the department finds that any VGM, VGM component, System or game title does not comply with VGM statutes and rules active at the time of approval, or its actual play differs from its intended and approved functioning, the department may require game title(s) to be disabled, suspend or revoke a permit, or revoke approval of the VGM, VGM component or System. If a deficiency is found affecting device validation, meter data, payout return or fairness to the player the manufacturer must immediately notify GCD Technical Services of all details in writing.

2. Documents

2.1 All Documents

All documentation and source materials required for submittal must be supplied in electronic format on USB media.

2.2 Cover Letters

Every submission must be supplied with a cover letter titled with the six-digit program name, if applicable. This document should serve as a high-level overview of the submission, explaining the reason for changes where necessary as well as new features implemented. If this submission is intended to replace a program in the field that should be noted by referencing the program name. This document should contain a signatures table with relevant Kobetron and SHA-1 signatures for each critical component (EPROMS, FLASH, and/or logical drive partitions). The expected response for a SAS Long Poll 21 (using seed 0000) should be listed as well.

2.3 Game Listings

Each submission should be supplied with a document that lists each game title and it's SAS Game ID for each separate Paytable tracked. An example format is listed below:

Game # (By Denomination)		Game Title
.05	.25	
1	2	Keno 1
3	N/A	Poker 1
4	5	Keno 2

2.4 Game Descriptions

Any new game titles supplied with a submission should be accompanied by a white-paper document briefly describing the features of the game. Ideally this document would identify the triggers for and possible results of any features/bonuses. Winning combinations or pays that reach the \$800 cap should be noted. A section should be devoted to each separate RNG pull and ranges for triggers and features.

2.5 Manufacturer's Access List

A current Manufacturer's Access List must be filed with the Gambling Control Division prior to the manufacturer's first submission of a new device. The Manufacturer's Access List provides names and positions of people who are authorized to discuss devices and/or modifications with the lab. The lab will communicate only with those people listed on the access list. It is the responsibility of the manufacturer to remit an updated Manufacturer's Access List when any changes occur. This document is available on our website listed in Appendix A.

2.6 Modification Document

Each modification submission must be accompanied by a Modification Document. Software submissions must be submitted separately for each unique software set. A modification is not considered approved by the Division until the manufacturer receives an approval letter from the Division and complies with any immediate conditions contained in the letter. New VGM submissions must be submitted with no more than one set of new software. This document is available on our website listed in Appendix A.

2.7 Changelist

Every software submission should include a document describing the changes in source code between this submittal and the last approved submittal. In the case of resubmissions, only changes since the last submission in the series should be documented. The changelist should describe what two versions of software are being compared. Source files changed should be included with their reason for change. This document should be split into two sections. Part 1 will include code changes

affecting the control program. Part 2 will cover changes affecting anything else in the submission. Some examples are included below:

Issue 7: The credit balance display sometimes briefly showed incorrect value when playing on lightning speed. Cosmetic problem only.
 File(s): Src/Games/Keno/Ui/EventTimer.cpp, Src/Games/Keno/ Ui/EventTimer.h
 Solution: Changed the EventTimer class to prevent any cases of timer rollover. This will prevent the racking values from showing incorrectly if the system has been running for extended time frames.

SUMMARY	DESCRIPTION	RESOLUTION DESCRIPTION	MODULES AFFECTED
Chooser - Attract mode Crash with only Poker games on VLT	When there are only poker games installed, Chooser will crash because the attract mode sequence is null. Only kenos and line games are added to the attract mode sequence.	The attract sequence will not start if there are no games in the attract list. Poker games aren't in the attract mode list.	AttractModeGameChooserState.cpp

2.8 Chain of Trust Document

Initial, and any subsequent, submissions that affect the security of the VGM must include a Chain of Trust document with an appropriate revision number, date and revision change list. This document shall contain Flowcharts and Descriptions of how control is passed from one component to the next until full bootup. Special attention should be paid to the location of secure signatures/manifests, security algorithms. All components should be listed with manufacturer and model and if they are re-writable or not. If a component is “off-the-shelf” or generic, this should be documented. For requirements on the Chain of Trust please see the Requirements Specifications for New Gambling Device REQ-VGM-SOURCE-07, REQ-VGM-SASLONGPOLL-01, and REQ-VGM-VAL-02.

2.9 Random Number Generator Document

A document should be supplied that describes the function of the RNG as well as its design including seeds and inputs. The number or frequency of RNG cycles should also be described.

2.10 Emulation Guides/Scripts

VGM submissions must be accompanied with an appropriate emulation setup that allows the TSS lab to facilitate our completion of the Test Plan. This emulation should allow us to force all draws, stops and bonus features in any game easily and repeatedly. Useful scripts should also be included that allow us to immediately end a session of Free Game play as well as to freeze/pause an auto-play game for evaluation. Each submission should include an up-to-date guide on how to set-up and use the emulation hardware/software to send scripts/commands to the VGM.

2.11 Other Documents

Wiring diagrams, schematics for all circuit boards, User Manuals and data sheets for all hardware components should be included in new submissions. Line game return verification must be sent to the TSS lab directly from an employee of the independent test lab using the MT File Transfer Service site EPASS. See Appendix A

3. Submission Types

3.1 New Submissions

Any VGM or System new to the state of Montana is considered a new submission. This requires documentation for all aspects of the device as well as extra components necessary to facilitate the TSS Lab's testing of the device. Please follow the appropriate section on the checklist document to ensure a complete submission.

3.2 Modifications

The most common type of submission is a change or changes to previously approved gambling devices. These could include new game title(s), features, components, or software sets for existing hardware. Any change to an approved VGM or System needs to get approved by the TSS Lab. Please follow the appropriate section on the checklist document to ensure a complete submission.

3.3 Retrofit Kits

A substantial hardware modification intended for field installation is considered a retrofit kit. These kits will additionally require documentation that contains: kit number, tools required, parts list with part numbers, step-by-step installation instructions and illustrations if necessary. In cases where the incorporation of the modification may affect the accounting, the installation instructions must include steps to file a "Video Gambling Machine Service Form." Please follow the appropriate section on the checklist document to ensure a complete submission.

3.4 Game Concept

It is highly recommended that questionable game concepts be submitted to the Division for preliminary approval based on a white paper document. This process should be followed when exploring new ideas or twists on existing game designs. Feedback will be given about legality of the game/feature as well as advice for proper accounting. Please submit game concepts to Ben Kamerzel at:
bkamerzel@mt.gov

Appendix A: Resources

- The TSS website: <https://dojmt.gov/gaming/vgm-tier1-testing/>
This webpage has three main sections:
 1. General Resources: Covers implementation guides, the required submittal documents and this instruction manual.
 2. Requirements Specifications: Describes the requirements for each type of gambling device and system in Montana.
 3. Test Plans: These are the test items associated with the Requirements Specifications documents. These represent the minimum testing a submission must pass before approval will be granted.

- Utilities (Contact a TSS employee to obtain one of the following):
 1. Simple GAT: A command line utility to test the performance of GAT signatures on VGMs.
 2. ASD Utility: An executable that will run a battery of tests on the files for an Audit Storage Device (ASD).

- MT State File Transfer Service (FTS): <https://app.mt.gov/epass/Authn/selectIDP.html>
This weblink will allow you to send files or packages larger than 10 MB to TSS employees. Users will need to create an EPASS account and all communications should be addressed to GCDLab@mt.gov

Appendix B: Submission Checklist

*All documents should be included in digital format. Please submit source and documents on USB media.

New VGM or Electronic Gambling Device

Yes	N/A	Description
<input type="checkbox"/>	<input type="checkbox"/>	Modification Document
<input type="checkbox"/>	<input type="checkbox"/>	Cover Letter
<input type="checkbox"/>	<input type="checkbox"/>	Change List (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	Manufactures Access List
<input type="checkbox"/>	<input type="checkbox"/>	A Chain of Trust document
<input type="checkbox"/>	<input type="checkbox"/>	Game Description Document(s) for any new games
<input type="checkbox"/>	<input type="checkbox"/>	Game Title List (SAS Game ID's)
<input type="checkbox"/>	<input type="checkbox"/>	Documentation describing source build directory structure
<input type="checkbox"/>	<input type="checkbox"/>	Documentation describing payable location in the source and how it is built and configured
<input type="checkbox"/>	<input type="checkbox"/>	Documentation of the Random Number Generator Algorithm
<input type="checkbox"/>	<input type="checkbox"/>	Documentation of how any dip switches and jumpers (logic boards, bill acceptor, printer etc.) will be configured
<input type="checkbox"/>	<input type="checkbox"/>	VGM or Electronic Gambling Device with thumb turn locks in place of keyed locks (once approved this will remain in the lab for future updates or testing required). The VGM must also have sliders or casters mounted to the bottom of the cabinet to allow for ease of moving within the lab
<input type="checkbox"/>	<input type="checkbox"/>	Schematics for all circuit boards and hardware block diagrams
<input type="checkbox"/>	<input type="checkbox"/>	User Manuals (operator, printer, touch screen, electronic coin acceptor, bill acceptor, special purpose integrated circuits)
<input type="checkbox"/>	<input type="checkbox"/>	Excel spreadsheet containing schedule of payouts, percentages and odds determinations for each game. The return % must breakout the main and bonus portion of the game (if applicable). Spreadsheets should have a unique version in the filename to identify payable changes. Each spreadsheet should include a sheet describing full game functionality with all assumptions used to model the game behavior. If simulation results are provided without a full theoretical math description, reasonable justification should be provided to demonstrate the necessity of simulations. Provide verification from a qualified independent testing service that the theoretical return for each bet increment in each Line Game does not exceed 92%; all Line Game math must be provided directly from the independent testing service.
<input type="checkbox"/>	<input type="checkbox"/>	"Master Reset" media or any tool used to clear the memory
<input type="checkbox"/>	<input type="checkbox"/>	Build PC containing the compiler and all tools to build the VGM binary from source and documentation to rebuild environment on the PC
<input type="checkbox"/>	<input type="checkbox"/>	Source code for all VGM binaries (game, OS, bios, etc ...) and documentation instructions to build on CD or DVD
<input type="checkbox"/>	<input type="checkbox"/>	Emulator/debugger hardware, software, and scripts as well as documentation describing usage
<input type="checkbox"/>	<input type="checkbox"/>	Twelve rolls/stacks of printer paper
<input type="checkbox"/>	<input type="checkbox"/>	Two complete sets of all programmable read-only memory and/or storage media for each version of machine software labeled ready for field use
<input type="checkbox"/>	<input type="checkbox"/>	\$10,000 submission fee if not already on account

Modification (Hardware or Software)

Yes	N/A	Description
<input type="checkbox"/>	<input type="checkbox"/>	Modification Document
<input type="checkbox"/>	<input type="checkbox"/>	Cover Letter
<input type="checkbox"/>	<input type="checkbox"/>	Change List
<input type="checkbox"/>	<input type="checkbox"/>	Manufactures Access List (if updated)
<input type="checkbox"/>	<input type="checkbox"/>	A Chain of Trust document (if updated)
<input type="checkbox"/>	<input type="checkbox"/>	Game Description Document(s) for any new games
<input type="checkbox"/>	<input type="checkbox"/>	Game Title List (SAS Game ID's)
<input type="checkbox"/>	<input type="checkbox"/>	New or modified hardware
<input type="checkbox"/>	<input type="checkbox"/>	New software with two complete sets of all programmable read-only memory and/or storage media for each version of machine software labeled ready for field use. Source code for all VGM binaries (game, OS, bios, etc ...) and documentation instructions to build on CD or DVD.
<input type="checkbox"/>	<input type="checkbox"/>	Any modified or updated documentation, manuals, schematics, spreadsheets, data sheets, or images
<input type="checkbox"/>	<input type="checkbox"/>	Field installation kits must include: Kit number, tools required, parts list with part numbers and step by step instructions including illustrations if necessary. In cases where installation may affect the accounting, include steps to file a VGM Machine Service Form; include steps to record before and after hard and soft meters.
<input type="checkbox"/>	<input type="checkbox"/>	Excel spreadsheet containing schedule of payouts, percentages and odds determinations for each new game. The return % must breakout the main and bonus portion of the game (if applicable). Spreadsheets should have a unique version in the filename to identify payable changes. Each spreadsheet should include a sheet describing full game functionality with all assumptions used to model the game behavior. If simulation results are provided without a full theoretical math description, reasonable justification should be provided to demonstrate the necessity of simulations. Provide verification from a qualified independent testing service that the theoretical return for each bet increment in each new Line Game does not exceed 92%; all Line Game math must be provided directly from the independent testing service.
<input type="checkbox"/>	<input type="checkbox"/>	\$3,000 submission fee if not already on account

Retrofit Kit

Yes	N/A	Description
<input type="checkbox"/>	<input type="checkbox"/>	Modification Document
<input type="checkbox"/>	<input type="checkbox"/>	Cover Letter
<input type="checkbox"/>	<input type="checkbox"/>	Change List (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	Manufactures Access List
<input type="checkbox"/>	<input type="checkbox"/>	A Chain of Trust document (if updated)
<input type="checkbox"/>	<input type="checkbox"/>	Schematics for all circuit boards and hardware block diagrams
<input type="checkbox"/>	<input type="checkbox"/>	User Manuals (operator, printer, touch screen, electronic coin acceptor, bill acceptor, special purpose integrated circuits)
<input type="checkbox"/>	<input type="checkbox"/>	Manufactures Access List (if updated)
<input type="checkbox"/>	<input type="checkbox"/>	New or modified hardware
<input type="checkbox"/>	<input type="checkbox"/>	New software with two complete sets of all programmable read-only memory and/or storage media for each version of machine software labeled ready for field use. Source code for all VGM binaries (game, OS, bios, etc ...) and documentation instructions to build on CD or DVD.

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- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Any modified or updated documentation, manuals, schematics, spreadsheets, data sheets, or images. |
| <input type="checkbox"/> | <input type="checkbox"/> | \$3,000 submission fee if not already on account. |
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Game Concept

Yes	N/A	Description
<input type="checkbox"/>	<input type="checkbox"/>	Cover Letter
<input type="checkbox"/>	<input type="checkbox"/>	Game White Paper
<input type="checkbox"/>	<input type="checkbox"/>	Manufactures Access List (if updated)
