**ORDER No. 404 dated 16 December 2020**

**on approval of the Minimum Technical Conditions for the verification of gaming equipment**

**On seeing** Approval Report No. 49017/9 September 2020 of the Directorate General for Computerization and Monitoring of Gambling of the National Gambling Office, approved by the President of the National Gambling Office on 14 December 2020 and the letters of the Legislative Council No. R 2108/9 October 2020 registered with the National Gambling Office No. 60314/20 October 2020; Ministry of Foreign Affairs No. K1/1321/28 October 2020 registered with the National Gambling Office No. 65911/2 November 2020 and the Ministry of Justice No. 2/92780/16 November 2020 registered with the National Office for Gambling No. 69297/24 November 2020;

**Having regard to:**

**-** Government Emergency Ordinance No. 20/2013 on the establishment, organisation and functioning of the National Gambling Office and amending and supplementing Government Emergency Ordinance No. 77/2009 regarding the organisation and operation of gambling, approved with amendments and completions by Law No. 227/2013 as subsequently amended and supplemented;

**-** Government Decision No. 298/2013 on the organisation and functioning of the National Gambling Office as subsequently amended and supplemented;

**-** art. 19(1) and (4) of the Government Emergency Ordinance No. 77/2009 regarding the organisation and operation of gambling, approved with amendments and completions by Law No. 246/2010 as subsequently amended and supplemented;

**-** art. 57(6) of the Government Emergency Ordinance No. 57/2019 on the Administrative Code as subsequently amended and supplemented;

**Considering that** on 22 July 2019, the Ministry of Economy, Energy and Business Environment notified, in accordance with the procedure laid down in Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 concerning the procedure for the provision of information in the field of technical regulations and of the rules on information society services, the draft*‘minimum technical conditions for the verification of the gambling means’* and this notification received No. 2019/361/RO-H10, a status quo period of 3 months was established, i.e. until 23 October 2019, extended until 23 January 2020;

**Pursuant to the provisions** of art. 1(8) of the Government Emergency Ordinance No. 20/2013 on the establishment, organisation and functioning of the National Gambling Office and for the modification and completion of the Government Emergency Ordinance No. 77/2009 on the organisation and operation of gambling, approved with amendments and completions by Law No. 227/2013 as subsequently amended and supplemented;

**The President of the National Gambling Office issues the following**

**ORDER**

**Article 1.** From the date of entry into force of this Order, the minimum technical conditions for the verification of the gaming means, according to the Annex which constitutes an integral part of this Order, shall be approved.

**Article 2.** The conformity evaluation bodies licensed by the National Office for Gambling, the Romanian Bureau of Legal Metrology and the specialised structures within the institution will comply with the provisions of this order.

**Article 3.** This Order shall be published in the Official Gazette of Romania, Part I.

**PRESIDENT**

**Constantin Cătălin Voinea-Mic**

**Annex**

**MINIMUM TECHNICAL VERIFICATION CONDITIONS**

**ON GAMING EQUIPMENT**

**CHAPTER I**

**GENERAL PROVISIONS**

**SECTION 1**

**Purpose, objectives, scope and definitions**

The minimum technical conditions for the verification of the gaming equipment establish the technical framework for the regulation of the gaming equipment regarding the conditions for carrying out the activity, the general technical requirements necessary for their legal operation, the applicable procedures for the exercise of the technical checks, as well as the minimum technical conditions for the verification of machines, installations, devices, gaming tables and other gaming equipment - for traditional games.

I. The purposes of the document are as follows:

1. to establish a set of minimum technical requirements for gaming equipment covering security, proper functioning, software and hardware integrity.

2. to ensure that players are correctly informed.

3. to monitor receipts and payments and ensure the declared win percentages and operation correspond to the win table, and ensure that the random number generator (RNG) is operating correctly.

4. to establish a set of criteria to enable the Romanian Bureau of Legal Metrology and the conformity evaluation bodies to evaluate the conformity of slot machine type gaming equipment in an uniform, traceable manner that enables an audit to be performed of the way the evaluation has been performed.

II. The objectives pursued are as follows:

1. to create an efficient and appropriate regulatory and technical checking mechanism for gambling equipment, in order to prevent abusive practices with a negative impact on players, as well as certain illegal practices;

2. to ensure the integrity of the gaming equipment and its correct operation, for all parties involved: players, organisers, authorities.

3. to ensure that players are protected against any possible physical injury.

4. to provide the conditions for an audit of the operation of the gaming equipment so that malfunctioning, attempted fraud and revenue from exploitation can be identified.

5. to prevent fraudulent use of the gaming equipment.

6. to ensure more transparency in the technical checks of gambling equipment, for a greater economic efficiency.

7. to ensure appropriate security and protect players’ interests;

8. to ensure better conditions for the proper functioning of the market for economic operators undertaking manufacturing, distribution, repair and maintenance of the gaming equipment, import, export, intra-Community acquisition, intra-Community delivery or other activities involving gaming equipment, for the purpose of marketing or use, in any form, on the territory of Romania;

9. to ensure non-discriminatory third-party access to relevant information regarding gambling equipment subject to the technical checks performed by the Romanian Bureau of Legal Metrology and the licensed conformity evaluation bodies of the National Office for Gambling;

10. to develop specific accreditation schemes (national accreditation body) based on this document;

11. to promote, stimulate and ensure competition in the gambling market, as well as the safe operation of gambling equipment on Romanian territory.

III. The scope of application is as follows:

1. This document refers to the general requirements and specific requirements imposed on the technical checks of the gaming equipment, which are covered by Article 19(1) of the Government Emergency Ordinance No. 77/2009 on the organisation and operation of gambling, approved with amendments and completions by Law No. 246/2010 as subsequently amended and supplemented.

2. The document applies to the following entities:

a) the National Gambling Office;

b) the Romanian Bureau of Legal Metrology and the licensed conformity evaluation bodies of the National Gambling Office;

c) economic operators;

d) Any legal person concerned.

IV. For the purposes of this document, the following definitions apply:

a) ‘gaming equipment’ means any set of elements, including the IT system comprising software, hardware and means of communication, which serves or permits the organization, conduct or participation in gambling, whether it independently generates the random elements underlying the gambling or whether its purpose is determined by the manufacturer;

b) ‘making available on the market’ means supplying a product for distribution, consumption or use on the market during a commercial activity, whether for a fee or free of charge;

c) ‘placing on the market’ means making a product available on the market for the first time;

d) ‘manufacturer’ means any legal person that manufactures a product or for which such a product is designed or manufactured and which markets the product concerned under its name or trademark;

e) ‘manufacturer’s representative’ means any natural or legal person who has received a written mandate from a manufacturer to act on their behalf in relation with specific tasks;

f) ‘importer’ means any legal person who places a product on the market from a third country;

g) ‘distributor’ means any legal person in the distribution chain other than the manufacturer or the importer, who makes a product available on the market;

h) ‘economic operators’ means the producer, their representative, the importer, the distributor or the holder of the gambling equipment;

i) ‘technical specification’ means a document setting out the technical requirements that a product, process or service must meet;

j) ‘accreditation’ – as defined in Article 2(10) of Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93;

k) ‘national accreditation body’ – as defined in Article 2(11) of Regulation (EC) No. 765/2008 of the European Parliament and of the Council of 9 July 2008, setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93;

l) ‘conformity evaluation’ means the process of evaluating whether it has been demonstrated that specified requirements for a product, process, service, system, person or body have been met;

m) ‘conformity evaluation body’ means a body that undertakes conformity evaluation activities, including calibration, testing, certification and inspection, including the Romanian Bureau of Legal Metrology;

**SECTION 2**

**Requirements regarding technical checks on gaming equipment**

1. General requirements regarding the performance of technical checks on gaming equipment

1.1. All gaming equipment used in the organisation of traditional gambling are subject to mandatory technical checks and are used both in games of chance organised under a licence granted by the National Gambling Office (ONJN), and in those organised by the National Company ‘Loteria Română’ S.A.

1.2. Technical checks of gaming equipment are performed by the Romanian Bureau of Legal Metrology or by conformity evaluation bodies licensed by the ONJN, through the following processes:

a) type approval;

b) initial technical check;

c) periodic technical check;

d) post-repair technical check.

1.3. For each of the types (categories) of gaming equipment, the ONJN develops specific technical verification standards, establishing the technical characteristics of the gaming equipment and the minimum technical conditions for checking the gaming equipment regarding the technical checks on gaming equipment.

2. Type approval

2.1. ‘Type approval’ means all of the operations whereby it is attested that a type (model) of gaming equipment conforms to the applicable technical standards for checks. Type approval is granted by evaluating the model of gaming equipment according to the specific technical standards for checks of that type of gaming equipment. If the evaluation of the model is positive, the Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN that performed the evaluation, issues a type approval certificate.

2.2. Type approvals are granted for a period of 10 years.

2.3. Gaming equipment in compliance with the approved model shall be marked with the type mark, which includes the type approval number and the date issue, in the format ‘text’ xxxx/yy, where ‘xxxx’ is the type approval number (numbering starts from 1 for each calendar year), ‘yy’ is the year in which the type approval was granted, and ‘text’ may be the abbreviation of the name of the conformity evaluation body that evaluated the gaming equipment.

2.4. All gaming equipment that has obtained type approval are equipped with facilities for placing inside the conformity label, on which the type mark and the authentication mark known as ‘Type mark compartment’ are affixed. The authentication mark is a self-destructive self-adhesive mark with a unique serial number. When applied to the type conformity label, it authenticates the type mark and ensures that it is possible to manage gaming equipment of a certain type introduced onto the market.

2.5. Having obtained the type approval, in all gaming equipment complying with the approved type and introduced onto the market and which is to undergo the initial check with a view to authorisation, the conformity label, type mark and authentication marks are placed in the ‘type mark compartment’.

2.6. Type approval shall be granted at the request of economic operators.

2.7. The evaluations necessary in order to grant type approvals will be performed by the Romanian Bureau of Legal Metrology or by the conformity assessment bodies licensed by the ONJN in their own laboratories. Exceptionally, in justified cases (e.g. gaming equipment of large dimensions) the evaluations may also be performed in other locations that meet the necessary technical conditions to perform the tests and within the limits of the accreditation in the case of licensed conformity evaluation bodies. The entity performing the evaluation shall be responsible for ensuring that the necessary technical conditions are met.

2.8. Once the type approval has expired, it shall be forbidden to perform initial technical checks. Gaming equipment that has previously undergone an initial technical check may continue to be subject to periodic or post-repair checks if it technically meets the conditions set out in this document.

2.9. Type approval consists in evaluation of the viability of the planned gaming equipment by examining the technical documentation, plus examination of a representative model for the production of this gaming equipment.

2.10. Type approval is granted by the Romanian Bureau of Legal Metrology or by conformity evaluation bodies licensed by the ONJN, accredited under the conditions laid down in Regulation (EC) No. 765/2008.

2.11. The economic operators defined in Chapter I, Section 1, Part IV shall submit their type approval applications to the Romanian Bureau of Legal Metrology or to a conformity assessment body licensed by the ONJN, of their choice. The application should include:

a) the name and address of the manufacturer specifying the name and address of the economic operator;

b) a written declaration according to which the same declaration has or has not been submitted to another licensed conformity evaluation body or to the Romanian Bureau of Legal Metrology; if it has been submitted, the name of the body, the date of the evaluation and the outcome of the evaluation report shall be specified;

c) a declaration regarding their rights of ownership over the IT software, the industrial designs, the brands used, etc.

d) the technical documentation;

e) the representative model(s) for manufacture of the gaming equipment.

2.12. The technical documentation enables the conformity evaluation of the gaming equipment with the requirements of the specific technical standards for checks approved by this Order for the type (category) of gaming equipment concerned and includes appropriate analysis and risk assessment(s). The technical documentation shall specify the applicable requirements and, to the extent that it is relevant to the evaluation, cover the design, manufacture and operation of the gaming equipment.

2.13. The technical documentation shall, as applicable, include a minimum of the following elements:

a) a general description of the gaming equipment;

b) the circuit diagrams and a description of all of the connectors and pinouts for every subassembly;

c) the descriptions and explanations necessary in order to understand these drawings and diagrams and the operation of the gaming equipment;

d) a list of the standards and/or other relevant technical specifications applied, totally or partially, and descriptions of the solutions adopted to meet the requirements of the specific technical standard for checks approved by this Order for the type (category) of gaming equipment concerned;

e) the results of the design calculations, examinations performed, etc.

2.14. The Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN may request additional models, if this is necessary to carry out the test programme.

2.15. The Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN shall:

2.15. 1. For the product: examine the technical documentation and additional evidence to assess the adequacy of the technical drawing of the gaming equipment;

2.15. 2. For model(s):

a) check whether the model(s) has/have been manufactured in accordance with the technical documentation;

b) perform the corresponding examinations and tests, to check whether the solutions adopted by the manufacturer meet the corresponding requirements of the specific technical standard for checks approved by this Order for the type (category) of gaming equipment concerned;

2.16. The Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN shall elaborate an evaluation report outlining the activities undertaken and the results thereof.

2.17. In the event that the type satisfies the requirements of the specific technical standard for checks approved by this Order that applies to the gaming equipment concerned, the Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN shall issue a type approval certificate for the economic operator. The certificate shall include the name and address of the manufacturer, the conclusions of the examination, the validity conditions (if there are any) for the certificate and the necessary data for identification of the approved type. The certificate may have one or more annexes attached.

2.18. The certificate and its annexes shall contain all of the relevant information for evaluation of the conformity of the manufactured gaming equipment with the examined type and for in-service checks.

2.19. In the event that the type does not satisfy the requirements of the specific technical standard for checks approved by this Order for the type (category) of gaming equipment concerned, the Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN shall refuse to issue a type approval certificate and inform the applicant accordingly, stating in detail the reasons for the refusal.

2.20. The economic operators shall inform the Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN holding the technical documentation related to the type approval certificate, of all modifications of the approved type that might affect the conformity of the gaming equipment with the requirements of the specific technical standard for checks approved by this Order for the type (category) of gaming equipment concerned or the terms of validity of the certificate. These modifications require additional approval in the form of a supplement to the original type approval certificate.

2.21. The Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN shall inform the ONJN regarding the type approval certificates and/or with any supplements thereto that have been issued or withdrawn and, periodically or on request, make available to the ONJN the list of certificates and/or any supplements thereto refused, suspended or otherwise restricted.

2.22. The Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN shall inform the other licensed conformity evaluation bodies or the Romanian Bureau of Legal Metrology regarding the type approval certificates and/or any supplements thereto that have been refused, withdrawn, suspended or otherwise restricted and, upon request, regarding the certificates and/or supplements thereto that have been issued.

2.23. The Romanian Bureau of Legal Metrology or the conformity evaluation body licensed by the ONJN shall retain a copy of the type approval certificate and its annexes and supplements, as well as the technical file including the documentation submitted by the manufacturer, until expiry of the validity of the certificate.

2.24. Economic operators shall keep an original copy of the type approval certificate and its annexes and supplements available to the ONJN, together with the technical documentation, for a period of 10 years from the introduction of the product onto the market.

2.25. Economic operators who have applied for type approval shall take all measures necessary to ensure the conformity of the products manufactured under this type approval with the approved type.

3. Technical checks

3.1. The technical check consists of a series of operations whereby it is attested that gaming equipment conforms to the approved type and to the provisions of the technical standard for checks applicable to it. If the gaming equipment passes the technical check, the applicant will be issued a technical check certificate.

3.2. The validity period of the initial technical check and the periodic technical check shall be at least 12 months but not later than the last day of the month in which the technical check expires.

3.3. The initial technical check shall be performed before commissioning the gaming equipment, once the type approval has been obtained.

3.4. The periodic technical check is performed after the initial check and attests to the continuing conformity of an item of gaming equipment with the approved type and to the provisions of the technical standard for checks applicable to it during the use of the gaming equipment.

3.5. The post-repair technical check shall be carried out before the use of the gaming equipment undergoing repair even if before the repair, the gaming equipment is within the term of validity of the previous technical check. The post-repair technical check is only performed within the validity period of a previous technical check and does not extend the previous technical check.

3.6. Applications for a post-repair technical check must be accompanied by a repair report stating who performed the repair and the licence under which the gaming equipment was repaired, what the repair consisted of (components replaced, seals broken, etc.), so that both the legality of the intervention, and the extent of the repair can be established.

3.7. Technical checks of gaming equipment shall be performed in accordance with the technical standards for checks approved by this Order for each type (category) of gaming equipment.

3.8. Gaming equipment for which, following the technical check, a technical check certificate has been issued shall be marked with self-adhesive, self-destructive check marks with a unique serial number and/or other categories of marking.

3.9. Repairs to gaming equipment shall be performed by economic operators with a Class II licence for repairing gaming equipment or by economic operators with a Class I licence for the gaming equipment that they have in operation.

4. Requirements regarding gaming equipment conformity evaluation bodies

4.1. In order to evaluate the conformity of gaming equipment and be licensed, a conformity evaluation body must cumulatively fulfil the following requirements:

1) It is a legal person, established under national law or legally constituted in a Member State of the European Union or in States signatory to the Agreement on the European Economic Area or in the Swiss Confederation;

2) It is accredited in accordance with Regulation (EC) No. 765/2008 and on the basis of harmonised standards published in the Official Journal of the European Union corresponding to the tasks of assessing the conformity of the gaming equipment that it requires;

3) to be a third-party body, independent of the organisation or the gaming equipment that it is evaluating;

4) the conformity evaluation body, its management staff and the personnel responsible for performing the conformity evaluation tasks shall not be a designer, manufacturer, supplier, installer, purchaser, owner, user or maintenance operator of the gaming equipment that they are evaluating, nor the representative of any of those parties;

5) the conformity evaluation body, its management staff and the personnel responsible for performing the conformity evaluation tasks shall not be directly involved in the design, manufacture or construction, marketing, installation, use or maintenance of the gaming equipment that they are evaluating, nor represent the parties engaged in these activities;

6) the conformity evaluation body, its management staff and the personnel responsible for performing the conformity evaluation tasks shall not be involved in activities that might affect their impartiality or integrity regarding the conformity evaluation activities for which they are licensed;

7) the conformity evaluation body shall ensure that the activities of its branches do not affect the confidentiality, objectivity or impartiality of its conformity evaluation activities;

8) the conformity evaluation body and its staff shall perform conformity evaluation activities at the highest level of professional integrity and technical competence in the respective field and must be free of any pressures and incentives, particularly financial, that might be liable to influence their assessment or the outcome of their conformity evaluation activities, especially from persons or groups of persons with an interest in the outcome of these activities;

9) the conformity evaluation body shall be capable of carrying out all conformity evaluation tasks requested of it or for which it is accredited with a view to licensing by the ONJN, regardless of whether these duties are performed by the conformity evaluation body itself or on its behalf and under its responsibility. Each time, for each conformity evaluation procedure and for each type or category of gaming equipment, the conformity evaluation body shall have access to:

a) the necessary staff with sufficient and appropriate technical knowledge and experience to perform the conformity evaluation tasks;

b) the necessary descriptions of the procedures used to perform conformity evaluations, ensuring transparency and the possibility of reproducing the procedures concerned;

c) appropriate policies and procedures that clearly distinguish between the duties carried out as a licensed body and any other activity.

10) the conformity evaluation body must have the necessary means to correctly carry out the technical and administrative duties associated with the conformity evaluation activities, as well as access to all of the necessary equipment or facilities;

11) the staff responsible for carrying out the conformity evaluation activities must possess the following:

a) sound technical and professional training covering all of the conformity evaluation activities for which the conformity evaluation body applies for or is accredited for licensing by the ONJN;

b) satisfactory knowledge of the requirements of the evaluations they perform and of the corresponding authorities for the performance of those evaluations;

c) adequate knowledge and understanding of the technical requirements regarding the gaming equipment for which it applies or is accredited for licensing and of the relevant provisions of national legislation, as well as European legislation where applicable, relevant to the field of gambling;

d) the necessary ability to draw up certificates, records and reports to demonstrate that the evaluations have been carried out.

12) the impartiality of the conformity evaluation bodies, their staff and their evaluation staff must be guaranteed.

4.2. The staff of the conformity evaluation body shall maintain professional secrecy regarding all information obtained in the course of carrying out the duties for which it has been licensed. All copyrights are reserved.

**CHAPTER II**

**MINIMUM TECHNICAL CONDITIONS FOR CHECKS ON SLOT MACHINE TYPE GAMING EQUIPMENT**

**SECTION 1**

**Design and functional requirements**

5. Functional safety requirements

5.1. All slot machine type gaming equipment (Electronic Gaming Machines or EGM) undergoing type approval testing in order to be authorised for operation on national territory must meet the requirements of the applicable legislation, bear the legal markings and be accompanied by the corresponding declaration of conformity.

5.2. Any EGM undergoing type approval testing in order to be authorised for operation on national territory shall be provided at least with the following elements:

5.2.1. One or more enclosures, as applicable, generally referred to as a ‘the gaming equipment cabinet’, must provide separation of the space in which EGM constructive subassemblies are located from players and/or staff.

5.2.2. One or more areas in which critical electronic equipment (logical zones) enabling the game to be played must provide adequate protection and have facilities for sealing. This/these area(s) will be generically referred to as the ‘CPU box’.

5.2.3. A form of protection against tempering with the index of the electromechanical meters with which the EGM is equipped in accordance with the provisions of national legislation and hereafter will be generically referred to as the‘Meter box’.

5.3. The electrical and mechanical components of electronic gambling machines must be designed in such a way that they do not cause any physical harm to the players, both electrically and mechanically.

5.4. The electromagnetic disturbances produced in the operation of the slot machine type gaming equipment must be within the limits provided in the harmonised legislation.

5.5. The Romanian Bureau of Legal Metrology or licensed conformity evaluation bodies shall accept technical check requests only for slot machine type gaming equipment bearing the conformity marks and is accompanied by the documentation required by the applicable legislation in force.

6. Information requirements accompanying any slot machine type gaming equipment

6.1. Every model of slot machine type gaming equipment (EGM) must be accompanied by relevant documentation (instruction manual) regarding its construction, commissioning, configuration, operation and servicing. This documentation may be presented in a single document (manual) or multiple documents (e.g. user’s manual – installation, configuration and use and the service manual).

6.2. The instruction manual(s) must comply with standard SR EN 82079.

6.3. In the documentation accompanying the slot machine type gaming equipment, the manufacturer must specify the climatic and mechanical environmental conditions for which proper functioning is guaranteed; and if there are any critical storage conditions that might affect their integrity, these must be specified. The operating conditions must at least fall within normal environmental conditions:

a) temperature (15 to 35)°C;

b) relative air humidity (45 to 75)%;

c) no infiltration of water, rain, solar radiation.

6.4. During the type evaluation, compliance with the requirements for the instruction manual(s) and the consistency of the information therein with the structure and operation of the electronic gambling machine shall be verified and its form shall be approved. The manufacturer shall identify the manual by codification (code, edition number, revision number) and after approval, the approval date and revision number shall be mentioned. The instruction manual must be in Romanian.

6.5. A model example of the approved manual/manuals shall be kept in the type approval file.

6.6. Every EGM marketed must be accompanied by a copy of the manual approved in accordance with the legislation in force, describing how to install, configure and use it. The service manual or the section referring to it may be delivered separately.

7. Requirements for the construction of electronic gambling machines

7.1. CABINET

7.1.1. All slot machine type gaming equipment must bear an identification plate visibly affixed.

7.1.2. The identification plate must include at least the following information:

a) the manufacturer;

b) the unique manufacturing serial number;

c) the year of manufacture;

d) the model of gaming device;

e) the supply current parameters.

7.1.3 The inscription must be visible, legible and durable. The identification plate must be fixed securely and not easily removable.

7.1.4. The identification plate shall be applied by the manufacturer. If the manufacturer of the gaming equipment has failed to fit the individual identification plate, or the plates fitted by the manufacturer are damaged so that the identification data can no longer be identified, the economic operator, before requesting the technical checks, is obliged to ensure their application in compliance with the identification data provided by the manufacturer.

7.2. Construction

7.2.1. Slot machine type gaming equipment must be manufactured to ensure the protection of their components and of the gaming interface. For a given type of slot machine type gaming equipment, the manufacturer may provide a single cabinet or multiple interconnected cabinets.

7.2.2. The cabinet, including the external doors of the cabinet, as well as the boxes protecting the critical areas, together with hinges and locks, must be of robust construction, to resist unauthorised/illegal attempts to force entry in the interior and retain obvious evidence of unauthorised entry attempts (permanent deformation, breakage of material, etc.).

7.2.3. The cabinet and any box protecting the critical areas of an EGM submitted for any kind of technical check must not show signs of tempering, deformation or have defective locks.

7.2.4. Access by authorized staff to the cabinet and critical areas must be through doors with individual locking mechanisms – locks (e.g. Padlocks, key locks and other similar lock mechanism).

7.2.5. For any slot machine type gaming equipment, all access doors to critical areas must be equipped with switches or sensors that highlight (trigger alarm signals) when they are opened. The critical areas are those housing devices that can influence the conduct of gambling in any way: affecting allocation of winnings, the winning percentage or the integrity of the electronic gambling machine.

7.2.6. Access doors in critical areas must be designed and manufactured so as to prevent the introduction of objects that may deactivate the switches or the sensors protecting them or act on the electrical/electronic equipment they protect.

7.2.7. Slot machine type gaming equipment must have its own system to monitor the status of all access doors in critical areas. Regardless of the operational status of the EGM, whether switched on or off, this monitoring system must detect and record the status of the door allowing access to the motherboard (open or closed) highlighting any movement of a door from the firmly closed position for the box. The gaming equipment must interrupt the game and display a specific error, in the event that it is switched on without electromechanical meters or if the latter are disconnected during operation.

7.2.8. The access monitoring within the electronic gambling machine must cover at least the following areas:

a) all external doors allowing access to areas housing machine components/equipment or to critical areas;

b) the CPU box (central processing unit/motherboard);

c) any compartment in which money is deposited (coins or banknotes) or equivalent (e.g. tickets with barcodes, tokens, etc.);

d) peripheral equipment.

7.2.9. Opening any of the monitored doors must stop the game, if it is in progress, trigger at least an audible alarm, display an appropriate warning message and enter an error status that locks the machine so that it cannot be credited. When closing the open door(s), slot machine type gaming equipment shall exit its error status and resume operation from the state in which it was triggered, with the exception of automatic roulette and machines requiring a procedure.

7.2.10. Slot machine type gaming equipment must be designed and manufactured so that the electrical wiring and data cabling are not accessible from the outside; the mains power cable must be located in a position that is not directly accessible to the public (players).

7.2.11. Gambling games played on slot machine type gaming equipment must be controlled by a central processing unit (CPU – logical unit) operating on one or more microprocessors. The central processing unit (CPU) may be implemented on a single printed circuit board (motherboard/gaming platform) or multiple interconnected boards, in which case the entire assembly is considered to be the ‘CPU unit’, to which all of the specific requirements apply.

7.2.12. All slot machine type gaming equipment must contain a logical zone, to protect those electronic components that have an influence on the method of operation, generically known as the ‘CPU box’. This must be designed as a separate entity, with its own closure system, located inside the cabinet. Depending on the construction solution chosen by the manufacturer, there may be multiple logical zones (CPU boxes).

7.2.13. The CPU box/boxes must be designed in such a way that:

a) a physical seal can be applied, which must be destroyed before the box can be accessed or any modifications made in the logical zone. The sealing facilities must allow the application of peel-off destructible self adhesive seals but (and/or) also sealing with wire sealing devices.

b) the alarm of the general door monitoring system of the electronic gambling machine is automatically triggered when the doors of the logical zones are opened.

c) modification of the critical parameters of the electronic gambling machine must not be possible without first opening the logical zone, respectively the CPU box, or destroying at least one protective seal.

7.2.14. The electronic components/elements of the EGM which must be protected in the logical zone/zones (CPU box/boxes) are:

a) the logical unit – the CPU and other electronic components involved in the operation and calculations necessary to the game process (e.g. electronics controlling the game process and the components on which the storage media holding the firmware or system programs is located);

b) the electronics of the access system monitoring inside the critical areas of the electronic gambling machine;

c) the electronics involved in generating the random events underlying the game process and the allocation of the outcome, with the exception of video lottery terminals, for which the random elements are generated by the RNG server;

d) the electronics involved in generating the symbols/images of the game, including the storage media involved (with the exception of passive display equipment);

e) electronic communications control circuits and the storage media for the EGM’s specific communications programs;

f) all memory devices affecting the operation of the gaming equipment and the game process;

7.2.15. The electromechanical meters must have their own boxes that can be sealed.

7.3. Electronic components (printed circuit boards and memory devices)

7.3.1. Printed circuit boards

7.3.1.1. All printed circuit boards (PCBs) that have an influence on the game process must have model identification elements consisting of a unique alphanumeric code, followed where applicable by the revision number. It is recommended that the identification number of the board model and the revision be visible without dismantling. (e.g. on the visible face of the board when opening the CPU box door or on the EGM display in a technical menu).

7.3.1.2. Any modification of the circuit paths (cutting or addition of cables), as well as any other modifications to the originally approved board, means codification with a new revision and re-evaluation.

7.3.1.3. The printed circuit boards may contain physical devices such as micro-switches and/or jumpers to configure certain properties. In this case, the following conditions must be met:

a) all micro-switches and physical jumpers must be fully documented regarding their function and effect in order to be assessed during the type evaluation.

b) all physical micro-switches and/or jumpers that modify the initial configuration of settings, the win scheme, the settings relating to the value of each credit point and the win percentage must be protected inside the logical zone protection box, the CPU box.

7.3.2. Storage media for the game program(s)

7.3.2.1. The memories on which the executable program(s) are stored (the software) that are necessary for the game process and its correctness, and from which the game programs are loaded when the machine is switched on must be non-volatile memories (even when not supplied with electricity). These are unalterable electronic components (or which may be modified by special procedures) on which are stored executable computer programs that are accessed by the processor(s) once they have been loaded into the working memory (RAM) and which constitute the basis of the gambling process or have an influence on its correctness, generically referred to as ‘Conventional ROM Memory’ – abbreviation: ‘MCROM’.

7.3.2.2. MCROM used in slot machine type gaming equipment may be of various types: EPROM, EEPROM, Compact Flash card (CF), CFast card, SSD, USB stick, hard disk, optical disc (CDROM, etc.). The list of types of MCROM that may be used in slot machine type gaming equipment may be subject to change with technological advances.

7.3.2.3. All MCROM devices and other programmable logical elements must be clearly marked with sufficient information to identify the software stored and the revision level thereof. These information may also be available during the EGM start-up procedure, as well as in the diagnostic or service menus.

7.3.2.4. MCROM and other programmable logical elements with a deletion window must be equipped with protection for the deletion window. (Application of labels or a self-adhesive seal).

7.3.2.5. A storage device of the program MCROM, must contain only the program files that operate the game and must be authenticated/checked at start-up and when the program files are loaded for the first time.

7.3.2.6. EGM must have a secure mechanism in place to authenticate/check internally that the program files and/or support files have not been corrupted or modified prior to use/upload. This mechanism should prevent the EGM from continuing to operate if unexpected data or inconsistencies are identified.

7.3.2.7. The program storage device must have the write protection system enabled.

7.3.2.8. In the event that the EGM is not intended for used in a client-server system (where programs may optionally be loaded from the system server), it must not be possible to rewrite or reprogram the MCROM program storage device unless the rewriting or reprogramming process involves accessing and destroying a protecting seal of the logical zone (CPU box).

7.3.2.9. The structure of the files stored on the MCROM must be documented in detail in order to permit the Romanian Bureau of Legal Metrology, or the conformity evaluation bodies licensed as Class II by the ONJN, to identify the critical files that will define the game program, including through the use of checksums.

7.3.2.10. In the technical documentation, the section describing the configuration of the printed circuit boards must specify the installation locations of the MCROM containing critical programs or software that affect the correct operation of the electronic gambling machines.

7.3.3. Non-volatile RAM Memory (NVRAM)

7.3.3.1. The memory on which the critical data is stored must be reliable in preserving the contents of the memory for at least 30 (thirty) days, if the main power supply of EGM shall be interrupted.

7.3.3.2. EGM must have a secure mechanism in place to check any corruption of the critical data preserved in memory locations used for important functions. These must include information relating to the game and the final result of the most recent game, of all previous games set by construction by the manufacturer, the credits available for the game and any other error states. The detection of any error that cannot be corrected must be considered a game malfunction.

7.3.3.3. The removal of NVRAM or the access to its content with the possibility of modifying it, should be done only by accessing the logical zone in which it is housed and destroying a security seal.

7.3.3.4. In the procedure for resetting the EGM settings, hereafter referred to as ‘RAM CLEAR’, the game program must execute a routine that resets every bit in NVRAM to the default state. For games allowing the partial initialisation of the NVRAM, the methodology must be very precise and check the unused portions of the NVRAM memory.

7.3.3.5. The ‘RAM CLEAR’ initialisation procedure should only be performed after unsealing a protected area, generally the logical zone and the CPU box. By way of an exception, if the manufacturer chooses a initialisation method involving a software key (e.g. a USB stick, etc.), using a port external to the CPU box, the EGM must be provided with a memory (software meter) that is not affected by the initialisation procedure (cannot be deleted by performing a ‘RAM CLEAR’), which increases each time the procedure is performed. After each technical check, the value of the meter shall be recorded in the verification documents. Modifying the value will cancel the validity of the technical check. Similarly, the respective memory shall preserve information regarding the date and time of the last 5 ‘RAM CLEAR’ events, and the identification of the operator who performed them.

7.3.3.6. The EGM configuration information that cannot be modified except by means of the ‘RAM CLEAR’ procedure is:

a) the win percentage;

b) the scale and any configuration of the electromechanical meters;

c) the value of the compulsory electronic meters (IN, OUT, BET, WIN, GAMES, EXTERNAL BONUS) and the electronic meters associated with the CASHLESS and TITO crediting systems;

d) the denomination, or set of values of thereof, except where the value is contained within the minimum and maximum range specified in the technical check when the EGM has multiple denominations;

e) the maximum and minimum value of the stake, except where the value is contained within the minimum and maximum range specified in the technical check when the EGM has multiple denominations;

f) the relevant communications settings that affect the transmission of data to the monitoring system;

g) the machine identifier;

h) any type of software upgrade or update.

7.4. Crediting, payment and printing systems

7.4.1. Cash crediting systems – Banknotes (banknote reader).

7.4.1.1. If the slot machine type gaming equipment is equipped with a banknote reader, the following requirements must be met:

a) the electronic banknote reader must accept only banknotes approved by the organiser and reject all others with a high level of precision; and it must have a mechanism enabling the software of the electronic gambling machine to interpret and act accordingly;

b) the banknote reader must be designed to protect against vandalism, abuse or other fraudulent activities;

c) all banknotes accepted must be deposited in a secure banknote deposit area inside the electronic gambling machine (banknote box – stacker). Rejected or invalid banknotes must be returned to the player;

d) the banknote reader must have mechanisms enabling the software to interpret and act by emitting an alarm signal, displaying a specific error signal and deactivating the device under the following conditions:

1. banknote box (stacker) full;

2. banknote jammed in reader;

3. banknote box removed;

4. any other applicable defect not specified above.

e) banknote readers must have a mechanism that precludes the insertion of any banknote or, alternatively, rejects any banknotes inserted when the slot machine type gaming equipment is non-operational or deactivated for any reason (error and/or alarm status);

f) the connectors, cables and wires connecting banknote reader to a slot machine type gaming equipment must be housed inside the cabinet and must not be accessible from the outside;

g) the banknote reader must perform a Power On Self Test (POST) at each start-up and must deactivate itself automatically if this POST is unsuccessful;

h) the banknote reader must be located inside the cabinet of the electronic gambling machine so that only the area through which the banknotes are inserted is accessible to the player;

i) the banknote reader must communicate with the CPU unit through a bidirectional communication protocol;

j) the types of banknote (or tickets, vouchers, etc.) accepted must be affixed near the banknote insertion slot, for the player’s information;

k) if the slot machine type gaming equipment displays credit in monetary units, for each type of banknote accepted, the credit must increase by the amount corresponding to the value of the banknote;

l) if the slot machine type gaming equipment displays credit as credit points, for each type of banknote accepted, the credit must increase by the amount corresponding to the value of the banknote multiplied by the declared value of the credit point;

m) if cashless crediting is allowed using bar-coded tickets or vouchers that can be recognised by the banknote reader, the same requirements apply as for banknotes;

n) in the event of a power failure during a banknote/ticket validation process when operation is resumed either the machine must be credited with the value corresponding to the banknote if it has been accepted and deposited, or the banknote must be returned to the player if it has not been validated. If, by design, there is a period of time during which the previous condition is not met, it may not exceed 1(one) second.

7.4.1.2. Slot machine type gaming equipment with a banknote reader must keep records of the value of at least the last 10 banknotes accepted and the time at which the events took place. In the case of bar-coded tickets, EGM must store at least the last 10 tickets accepted, together with the following information: the type and value of the ticket (e.g.: cashable, bonus or combo, whether the value includes both a cashable value and bonus money), the date and time of its acceptance and the ticket validation number.

7.4.2. Cash crediting systems – Coins (coin reader and possibly token slots).

7.4.2.1. If the slot machine type gaming equipment is equipped with a coin slot, the following requirements must be met:

a) it accepts only coins approved by the organiser;

b) it is protected against vandalism, abuse and fraudulent activities;

c) it transports accepted coins to the correct area of the slot machine type gaming equipment (coin box – Drop Box).

7.4.2.2. Coin receiver devices must be designed in such a way as to meet the following requirements:

a) capable of accepting or rejecting a coin based on its metallic composition, mass, design/shape or other applicable security elements;

b) machine control software capable of accurately indicate/record each valid coin inserted and to return all invalid coins to the player;

c) capable of protecting against known methods of tricking the device;

d) the coin receiver must be located inside the cabinet of the electronic gambling machine, so that only the area through which the coins/tokens are inserted is accessible to the player;

e) the coin/token values accepted must be affixed in the vicinity of the insertion slot, for the player’s information;

f) each coin or token accepted by the device must produce a credit increase corresponding to its value;

g) the coin/token receiver device must reject any coin/token inserted when the slot machine type gaming equipment is out of service or deactivated for any reason (error and/or alarm status);

d) the banknote reader must have mechanisms enabling the software to interpret and act by emitting an alarm signal, displaying a specific error indication and deactivating the device under the following conditions:

1. coin/token jammed in device;

2. impossible to return an unaccepted coin/token;

3. coin/token moving too fast or too slowly (according to the manufacturer’s specifications).

7.4.2.3. Slot machine type gaming equipment that is equipped with both coin receivers and a coin payment device (Hopper) must detect when the payment device is full and ensure by means of a dedicated system (Diverter) that coins are diverted to the coin box (Drop Box).

7.4.3. Cashless crediting systems without player identification (barcode or vouchers reader).

7.4.3.1. If cashless crediting with barcode tickets or vouchers is allowed, these must meet the following conditions, and be inscribed with:

a) a unique identification number for the issuing EGM;

b) the date and time of issue;

c) the value of the ticket/voucher;

d) the unique identification number of the ticket/voucher, if it is available;

e) the name of the organiser and identification of the place of issue;

f) the number of days until the voucher/ticket expires;

g) the validation (verification) number. The method used to calculate the validation number must be documented, declared and approved.

7.4.3.2. The ticket reader device must meet all the specific requirements of the banknote readers. Otherwise, banknote readers can generally be configured also to accept tickets with barcodes or vouchers.

7.4.4. Cashless crediting systems with player identification (card reader, biometric scanners, etc. integrated into the machine).

(i) Cashless crediting systems (based on ‘cashless’ cards)

The player’s funds on the operator’s system are accessed with the aid of a magnetic card, contactless card or smart card.

The player’s electronic account must preserve at least the following data:

a) an identification number of the player assigned by the server;

b) player’s funds.

(ii) Card reader: in the case of the EGM Cashless system, it must be equipped with a card reader incorporated into the slot machine device. This reads the data on the card in order to identify the player.

All monetary transactions between the EGM and the system must be secured by the player inserting their card and entering a PIN number or by another method.

All monetary transactions must be recorded on the corresponding electronic meter of the EGM.

7.4.5. Regardless of the crediting system, it must be possible to set a limit on the credit meter of the EGM so that, if the limit is reached, it refuses to accept any more coins, banknotes or cashless crediting (e.g. tickets, vouchers, tokens).

7.5. Cash payment system

A) Coins (HOPPER).

7.5.1. If a slot machine type gaming equipment is equipped with a coin/token payment device, it must meet at least the following requirements:

a) allow a payment limit to be set, so that the payment requests initiated by players beyond that limit are not paid without the intervention of a representative of the organiser (cashier, hall supervisor, etc.);

b) the coin container (hopper) shall be located inside the cabinet;

c) the coin containers must be designed to withstand attempts to open or manipulate them from the outside and shall not be affected by power failure, electrostatic discharge or other objects.

7.5.2. Slot machine type gaming equipment must be able to detect and display the corresponding messages for the following situations:

a) hopper empty;

b) hopper full;

c) hopper blocked (coin blocking exit);

d) excessive payment (e.g. one or more coins in addition to the correct payment value);

e) hopper disconnected – non-functional.

7.5.3. All coins paid from the hopper must be correctly accounted for, by the electronic gambling machine, including those paid as additional coins during a hopper malfunction.

B) Banknote distributor (DISPENSER).

7.5.4. If slot machine type gaming equipment is equipped with a banknote payment device, it must meet at least the following requirements:

a) it shall be possible to set a payment limit; payment requests initiated by players beyond that limit will not be paid without the intervention of a representative of the organiser (cashier, hall supervisor, etc.);

b) the banknote container (DISPENSER) shall be located inside the cabinet;

c) the banknote container must be designed to withstand attempts to open or manipulate it from the outside and not to be affected by power failure, electrostatic discharge or other objects.

7.5.5. Slot machine type gaming equipment must be able to detect and display messages corresponding to the following situations:

a) empty dispenser;

b) full dispenser: this status should result only in deactivation of the distributor, without displaying error messages;

c) blocked dispenser;

d) excessive payment (e.g. one or more banknotes in addition to the correct payment value);

dispenser disconnected – non-functional.

7.5.6. All banknotes paid from the dispenser must be correctly accounted for by the electronic gambling machine, including those paid as supplements during a hopper malfunction.

7.5.7. In the event that the dispenser is full, banknotes may be diverted to the banknote box, if the dispenser and the banknote reader support this function.

7.6. Printers

If slot machine type gaming equipment is equipped with a ticket printing device, this must be located inside the cabinet and display messages corresponding to the following situations:

a) no paper;

b) printer blocked (paper jam);

c) printer disconnected;

d) software and/or hardware errors;

e) communication error;

f) after eliminating the cause that has triggered the error status, the printer must restart and finish any interrupted printing operation with or without the intervention of the operator.

EGM must retain the following information for at least the last 10 tickets issued: the type and value of the ticket, the date and time of the printout and at least the last 4 digits of the validation number.

**SECTION 2**

**Additional requirements regarding immunity to electromagnetic fields and electrostatic discharges and other external influences**

8. Additional requirements

8.1. The operation of EGM shall not be affected by electromagnetic interference or radio frequencies generated by equipment such as Wi-Fi antennae, mobile telephones, Bluetooth, etc.

8.2. The operation of EGM shall not be affected by electrostatic discharges produced by the static electricity of the human body on any external surface.

8.3. In the case of an electrostatic discharge above the level produced by the static electricity of the human body, EGM may undergo a temporary stop of operation or enter into an alarm/error state but, upon restarting, it must be functional and shall not produce memory alterations, loss of data, changes in credit and electromechanical meters or software.

8.4. Normal operation or integrity of the equipment and information stored inside the cabinet shall not be influenced by the application of various liquids to the outside of the EGM.

9. Software requirements

9.1. Checking the game program

9.1.1. Identification of the critical files for the game program

1) Among the files stored on MCROM, declared by the manufacturer as the game program, and documented in detail in the technical documentation submitted to obtain type approval, those that are critical to the game process and its correct operation shall be identified. The following must be included: all files and/or the corresponding code involved in: initiating and running the game in all its sequences, all configuration menus, the win scheme, the random number generator(s) if any, outcomes allocation, prize management, display of game results, the function monitoring and self-diagnosis system, communications, and others that the evaluator considers might have an influence on the correct operation of the game.

2) The files considered to be critical shall be characterised by appropriate checksums.

9.1.2. Self-diagnosis

1. Upon start-up and before being available to run any game or configuration process, any EGM must perform a check of the integrity of the information stored in the critical memories holding executable programs (in MCROM and NVRAM); confidence must be ensured, that there are no alterations of the information transferred, throughout the entire software transfer chain from the initial memory to the processor working memory.

2. These checks shall be performed in accordance with the following conditions:

a. For EPROM type memory, a checking mechanism based on a checksum of CRC 16 or higher, shall be used.

b. For other types of memory a checking mechanism must be used that employs checksums based on the function ‘hash’ (dispersion/summary function) that produces messages of at least 128 bits.

c. If the memory can be altered, there must be mechanisms that:

i. check the integrity of the information stored and block the game process in the event that any structural or data changes are detected.

ii. keep records of the last 10 events in which data changes were detected in the critical memories. Every record must allow identification of the time on which the event took place, identification of the memory affected, the nature of the event and any other relevant information.

3. If these checks detect changes to the files or the checks are blocked, the gaming equipment must:

a) block the operation of the machine;

b) display a specific error message;

c) emit an alarm tone and/or a light signal;

d) block any crediting or payment operations;

e) record the event in the machine’s event log (the time in which the event was identified);

f) transmit the information also to the monitoring system;

g) not allow the alarm state to be removed without the intervention of an operator and without rectification of the malfunction.

4. The self-diagnosis method must ensure that 99.99 % of error cases are detected.

5. When assessing the model submitted for type approval, the self-diagnosis mechanism of the software is checked whether these conditions are met.

9.1.3. Independent software check (the game program stored on MCROM)

1) Slot machine type gaming equipment must be constructed in such a way that it is possible to perform an independent integrity check of the memories containing programs or the parts thereof that constitute the basis of the gambling process or that have an influence on its correct operation.

2) The integrity checks must use applications that will calculate the checksums characterising the critical files. These applications may be integrated in the software of the machine or may run on dedicated or generic external devices (personal computers, card readers, etc.).

3) The memory device may be accessed by removing it (mounting the memory in sockets), by running applications that are independent but integrated into the machine software in a specific menu or by using a port and/or an independent interface device.

4) If it is possible to access the memory via a port and/or interface, these must be accessible only from within the CPU box or another sealed area, so that it is necessary to break at least one seal to gain access.

5) EGM must be constructed in such a way that critical memory integrity checks can be performed on-site at the premises of operation.

6) In order to ensure a sufficiently high level of trust regarding the integrity of the critical programs stored in the EGM (MCROM) memories, these must be characterised by checksums based on ‘hash’ functions with an output message of at least 128 bits. The independent check mechanism must use calculations in accordance with public standards.

7) The method used to check the integrity of critical programs/files and the compliance with its conditions must be evaluated during type approval testing. The type approval certificate must record the checksums of the critical programs/files, the type of these programs/files, the memory devices on which they are stored, the independent checking procedure, the applications and the necessary hardware. If specific applications are necessary, these shall be offered free of charge, and if specific equipment (hardware – electronic equipment, cables, etc.) is also required this shall be made available on the request of the Romanian Bureau of Legal Metrology or the conformity evaluation bodies, by the applicant for type approval.

10. Win table

10.1. The EGM must function according to the win table declared by the manufacturer in its documentation, for each program/sub-program.

10.2. During type approval testing, all configuration options that may influence the win table for each program/sub-program must be evaluated and documented (e.g. whether there is an ‘extrabet’ option and whether or not it is active, or in the case of configurable win percentages).

10.3. The minimum and maximum stakes for each program/sub-program must correspond to the manufacturer’s documentation. The type approval documentation must record the minimum values, the lowest possible value that can be configured for the minimum stake and the highest possible value that can be configured for the maximum stake. These values shall be recorded both in credits and in monetary units. In the case of EGM with multiple denominations, the values in monetary units shall be declared for the smallest denomination.

10.4. The minimum and maximum stakes of EGM declared to conform to an approved type must be within the range specified in the type approval documents. The documents issued at the initial, periodic or post-repair technical check shall record the values of the minimum and maximum stakes as they have been configured for operation. In the case of EGMs that accept multiple denominations, the smallest stake for the smallest denomination and the largest stake for the largest denomination shall be taken into account.

10.5. For each program/sub-program, the maximum win factor (the maximum stake multiplication factor) shall be determined as ‘Maximum win / Maximum stake’ in the basic game (without bonus or special games).

11. Win percentage, values – Ratio between total winnings and total stake

11.1. The theoretical win percentage (PTC) of a game program/sub-program is the win percentage calculated on the basis of the random number generator of statistics and the rules (tables) for allocating the wins.

11.2. The actual win percentage (achieved) of a program/sub-program is calculated at any time during operation of the EGM for a program/sub-program. This may be different from the theoretical win percentage and at the limit, when the number of games tends to the infinite, must reach the value of the theoretical win percentage. The EGM manufacturer must declare the theoretical win percentage value and the minimum number of games in which the theoretical win percentage reaches this level, with a minimum confidence level of 95%. The declaration shall be made in the documentation submitted for type approval and shall provide the entity performing the statistical evaluation of the RNG, the win allocation table and the statistical calculation in the form of Excel sheets on the basis of which it has been calculated for all game programs/sub-programs.

11.3. For EGM using multi-game programs (with multiple sub-programs), the win percentage shall be declared and calculated for each sub-program. In the documents issued at type approval and technical check, the percentage for each program/sub-program (sub-program – in the case of multi-game EGM), shall be specified.

11.4. Checking of operation as declared in the previous paragraph shall be performed by running the number of games declared by the manufacturer for which the theoretical win percentage value is reached with a confidence level of 95%. Checking shall be performed for all of the game programs/subprograms installed on the EGM.

11.5. The theoretical win percentages of an EGM must not be modified without performing a hardware, software or RAM reset, changing the configuration of the EGM and breaking a security seal.

11.6. A sub-program/EGM must have at least one configuration setting that offers a minimum theoretical statistical expectation, such that the minimum theoretical win percentage of the game is greater than or equal to the value established under the legislation in force throughout the whole duration of the game process (where applicable, e.g. limited-risk electronic payout machines).

11.7. In a progressive game, whenever a progressive payment is offered as part of the EGM payment, the basic sum (the smallest possible starting value) and the guaranteed contribution/ increment, must be included in the theoretical win percentage in order to meet the minimum theoretical win percentage requirements.

11.8. The ‘Double’ and ‘Gamble’ options must have a theoretical return to the player of 100% (theoretical win percentage for this type = 100%).

11.9. If the EGM is provided with its own jackpot system, the probability of winning any published jackpot must not be smaller than 1/100.000.000 (a rate of at least 1 in 100 million games).

12. Requirements for the software type random number generator

(applicable if the gaming equipment functions using RNG type software – based on mathematical functions)

12.1. All winning or losing combinations of a game must be available for random selection before the start of each game.

12.2. The game software must not determine the game outcome (basic game or bonus game) until the player has configured it according to the available options and has given the command to start the game.

12.3. Using an RNG must result in the selection of gaming symbols or game outcomes which have been demonstrated, by applying recognised statistical tests, to be:

a) statistically independent;

b) uniformly distributed throughout the whole range of possible values;

c) unpredictable.

12.4. Between two game cycles, the RNG must continuously produce random numbers (pseudo-random).

12.5. The generation method using initialisation units (seeds) must ensure that:

a) the same string of random numbers is never used in multiple EGM at the same time;

b) the outcome of the ‘next’ game is not predictable;

c) the initialisation/reinitialisation must be determined randomly and must not be under the control of the operator;

d) the first initialisation must be performed using one or more sources of randomly chosen initialisation elements (seeds).

12.6. The range of values produced by the RNG must be adequate to provide sufficient precision and flexibility in determining event probabilities.

12.7. If a random number ranked lower than that provided by the RNG is needed for a given purpose in the context of the EGM, the redimensioning/scaling method (i.e. converting the number to a lower order), must be designed in such a way that all of the numbers in the lower order interval are equally probable (maintaining the random aspect).

12.8. If a selected random number falls outside the range of equal distribution of rescaled values, it is permitted to discard that random number and select the next number.

13. Interrupting and resuming the program

13.1. Following interruption of the program (for example a power supply interruption), the software must be able to return to the state that it was in immediately prior to the interruption.

13.2. When interrupting the program at least the following procedures must be applied:

a) the coin container (hopper) or other cash payment systems must be stopped;

b) the integrity of the critical data (the critical data in the NVRAM memory) must not be compromised by the interruption procedures;

c) if the EGM is provided with a shut down routine, this must be triggered and executed completely;

d) if an EGM is shut down while it is in an error state, the error message must be displayed and the EGM must remain locked upon restarting. This applies only if shutting down/restarting the machine and/or opening/closing the main door is not part of the error reset procedure; the EGM shall check the error state and detect whether or not the error has been eliminated.

13.3. The following procedures must be performed when the program relaunches:

a) any communications to an external device must not start until the program relaunch routine, including the self-tests, are successfully completed;

b) the self-test procedure must itself be tested in order to detect any errors that may have appeared, using a sufficiently robust and efficient mechanism. These characteristics shall be checked during the type approval evaluation;

c) the integrity of the critical memory must be checked;

d) the operation interruption process, if applicable, must be tested for correct finalisation and an appropriate message must be displayed if incorrect finalisation is detected;

e) the software must be capable of detecting any unauthorised change in the EGM’s game program since the last date on which it was activated or interrupted. If any unauthorised change is identified, the EGM must lock and display an appropriate error message until the EGM is restored to normal operation by an authorised person;

13.4. Following an accidental or intentional interruption to the power supply, the values recorded on the electromechanical meters must be unchanged upon restarting. Similarly, all of the critical values stored in non-volatile NVRAM memory must remain unchanged.

**SECTION 3**

**Conditions, requirements, error management and locked states of the EGM**

14. History of game running and operation

14.1. For information on the game history held by the EGM, the outcomes of the previous game(s) (including the game eliminating residual credit) as the player initially sees it/them, must be visible to the player. The way in which the information is provided must enable observers to clearly identify all game sequences and their outcome(s).

14.2. The following information should be visible from the game history displayed:

a) the total number of credits at the start of the analysed game;

b) the total number of credits at the end of the analysed game;

c) the total number of credits bet (total stake);

d) the betting method (credits bet in relation to the number of lines or the winning method/variant);

e) the active lines in each game;

f) the selected denomination;

g) the selected multiplier;

h) the total number of credits won associated with the analysed game or the value in RON for the progressive prizes;

i) the outcome of the bonus games, of the doubling or ‘Gamble’ games, if applicable.

14.3. Game history information must be retrievable for the number of games defined by each individual manufacturer, but not less than 10 games, whether they are basic or bonus, by inserting a key, an authorised access card, or other secure method.

15. Bonus and extended game characteristics

15.1. A bonus game or extended game function offered by an EGM that requires the player to select options within a reasonable finite period of time, must provide a clear and visible message, with real-time display of the ‘count’ of the remaining time (in seconds) in the game presentation.

15.2. A bonus game or extended game function offered by an EGM that requires player’s action within a reasonable finite period of time, must provide a distinct visual warning message for at least 120 seconds, before the EGM automatically initiates any game.

15.3. The game must not adjust the probability that a bonus is given, based on the history of prizes obtained in previous games (i.e. games must not adapt its theoretical win percentage based on previous payments).

16. Conditions for meters

16.1. All EGM must be equipped with at least two electromechanical meters with the following functions: ‘TOTAL INPUTS’ – which records the total amounts received from players and ‘TOTAL OUTPUTS’ – which records the total amounts paid to players.

16.2. The electromechanical meters must meet the following construction conditions:

a) at least six digits;

b) cannot be reset;

c) mounted in such a way that they cannot be ‘wound back’.

16.3. The electromechanical meters must be labelled so that the following information is clear:

a) the function;

b) the multiplication factor;

c) the metered units (credits, RON, etc.).

16.4. By construction of the EGM the electromechanical meters must accurately record the variation of the quantities for which they have been assigned.

16.5. The construction of the EGM must provide facilities for the application of seals to prevent disassembly.

16.6. All EGM must be equipped with software meters (e.g.: electronic storage meters) with at least 10 (ten) digits, which are capable of recording and displaying the information required in this document.

16.7. All software meters must be updated upon the appearance of the particular event that the meter is monitoring. All meters must be of cumulative type. The meters monitoring total inputs and outputs must be of the ‘add to’ type, i.e. the current value is taken from the memory, the arithmetic addition operation is performed, monitoring the variation in the units, and the result is then stored in the memory. In addition, it must be checked that the update has been performed successfully and that each logical copy has been correctly updated.

16.8. All EGM must provide the necessary means to display the information stored in NVRAM memory on the request of the authorised persons, namely:

a) the last ‘on’ event;

b) the last closure of the main door;

c) the last start-up (the last RAM clear procedure).

16.9. All software meters must explicitly display the function or a key to indicate what information is being accumulated.

16.10. The meters listed in this section must accumulate the necessary information in local currency. EGM configured for multiple denominations must display the necessary information in local currency.

16.11. Similarly, EGM must have meters in units equal to the nominal value of the current game denomination, which continuously display the following information to the player regarding the current game or monetary transaction, except in the event of an operational malfunction or locked operation:

a) the money or credit bet (the stake);

b) the money or credit won, if applicable;

c) the money or credit paid out by the hopper for a credit withdrawal or for a direct payment from a winning outcome;

d) the credits available for betting, if applicable;

16.12. Received credits must be immediately deducted from the player’s credit account.

16.13. The end of the game shall be defined as the time when all electronic meters corresponding to the game performed have been updated. The credit meter must be updated before the end of the game, provided that:

a) the critical memory is updated when the credit meter is updated;

b) only the credits held on a win meter should be wagered on a ‘Double’ or ‘Gamble’ (risk) type game (it is not possible to bet all credits transferred to the credit meter for ‘Double’ and ‘Gamble’ type games).

17. Communication requirements

17.1. All communication ports must be clearly labelled and located within the frame of the EGM in order to prevent unauthorised access to the ports or cable connectors.

17.2. The communication protocol must also ensure that erroneous data or signals will not adversely affect the operation of the EGM.

17.3. All external data communications must be based on the protocol and/or include an error detection and correction scheme to ensure their robustness and suitability for use.

17.4. The external data communication protocol must also ensure that erroneous data or signals will not adversely affect the operation of the EGM through the use of the transmission error verification mechanism. The transmission error verification mechanism used must employ at least a 16-bit Cyclic Redundancy Check (CRC) type process.

17.5. The encryption keys for communications, after the initialisation phase, must not be hardware codified and must be changed periodically.

17.6. The external data communication protocols must be of request/ response type, implemented by the manufacturer, and offer the minimum data necessary in order to generate the reports provided for in the legislation in force, as well as the meters for inputs (IN), outputs (OUT), bets (BET), wins (WIN) and number of games (GAMES).

17.7. The EGM will not accept any wireless connection through which changes can be made to the game programs or the machine’s original parameters.

18. Information display requirements

18.1. All game instructions must correspond to the way in which the active game runs and must be easily interpreted, unambiguous and sufficiently to understand all the rules of the game.

18.2. There must be sufficient game instructions to allow the player to determine the fairness of prizes awarded.

18.3. The win table applicable to the game must provide sufficient information to enable a player to establish the prizes and must be clearly visible, or the means of displaying this information must be immediately accessible to the player at any moment that the game is available to be played.

18.4. If the game instructions are only on the video screen, they must be accessible and visible without the need to insert or place credits. This requirement does not apply during the game, except in cases where specific instructions are requested in order to pass to the next stage of the game.

18.5. Game instructions presented phonetically must also be provided through visual instructions.

18.6. The game instructions must be presented in a colour that contrasts with the background colour in order to ensure that all instructions are easy to read.

18.7. The message ‘Defecţiunile anulează orice plată şi joc’ (‘Malfunction Voids All Pays and Plays’) must be clearly and permanently displayed on each EGM, with the exception of the audit and test modes.

18.8. EGM must clearly display the values accepted, close to the coin/token insertion slot or banknote reader.

18.9. The active denomination(s) must be declared by means of a clear display on the screen or front panel of the EGM. The relationship between the monetary unit and the credit granted must be displayed in the form ‘Y RON = Z Credits’.

19. EGM error and locked states management

19.1. EGM must detect and display the following conditions during waiting times or during the game. These error or status messages must be automatically eliminated by the EGM when a new game sequence is finalised and shall be also communicated to a management system where applicable:

a) power supply reset;

b) door open (including banknote reader);

c) door has just been closed;

d) incorrect coin or token if the coin/token has not been returned to the player.

19.2. EGM must be capable of detecting and displaying the following errors/conditions which must deactivate the game and must be eliminated only by an operator and similarly communicated to a monitoring system.

a) coin/token input/crediting error (e.g. jammed coin, etc.);

b) coin/token payment error (e.g. jammed coin, extra coin paid, etc.);

c) hopper empty or jammed (coin container has failed to pay out);

d) hopper jammed open;

e) jammed banknote;

f) battery back-up for discharged RAM or external battery or power supply voltage low;

g) fatal RAM error (RAM memory defective or corrupt);

h) printing error, if the EGM does not have other means of making payments, a replacement voucher must be printed once the error condition has been eliminated, with or without operator intervention;

i) paper jam in printing mechanism. Paper jams must be monitored at all times during the printing process;

j) no paper in printer;

k) program error (defective program storage media);

l) rotation error in any type of rotor (including the mechanical/electromechanical rollers). The number of specific bobbins must be identified as part of the error condition; and the bobbins controlled by microprocessors, where applicable, must be monitored to detect malfunctions such as the jammed bobbin, which does not rotate freely, or any attempt to manipulate their final rest position;

m) insufficient game program memory;

n) open door.

19.3. A description of the error or locking codes and their meanings must be applied inside the EGM, except where the codes displayed are explicit.

**CHAPTER III**

**TRANSITIONAL AND FINAL PROVISIONS**

20. Entities listed in Chapter I, Section 1, point III, paragraph 2 are required to comply with the provisions contained in the Minimum Technical Conditions for the verification of gaming equipment. Annually, or whenever necessary, the National Office for Gambling shall examine the state of measures to fulfil the objectives and all of the provisions specified in this document.

21. This Order will be supplemented subsequently with the minimum technical conditions for checks on gaming equipment for all the other traditional gaming equipment provided for under the applicable legislation.

22. Conformity evaluation bodies, which hold a valid class II license issued by the National Office for Gambling, shall obtain accreditation for the specific activity carried out, in accordance with the law.

23. In order to ensure the authorization of the slot machine type gaming equipment, the conformity evaluation bodies licensed by the ONJN shall issue initial, periodic, or post-repair technical check certificates based on the existing procedures prior to the date of issue of the order, for a maximum period of 12 months from the issue of the accreditation scheme by the national accreditation body.