APPROVED POKER MACHINES

GTA

TICKET PRINTER

SPECIFICATIONS

V4.20

TABLE OF CONTENTS

1. Introduction

This document describes the command classes required to support the "Ticket In & Ticket Out" (TITO) functionality for gaming machines using New South Wales X protocol to communicate to the host. Three additional classes 70H, 71H & 72H are introduced to support the "Ticket In" functionality. Additionally a new command class 40H is introduced to implement time synchronization of the gaming machine by the host. The current peripheral MDB is incremented from 1.03 (for MDB version 3) to 1.04 and is updated to include meters associated with the "Ticket In" operation. No new MDB packets are introduced. The gaming machine will accept tickets printed according to the specifications given in this document. The specifications given in this document applies only to gaming machines installed with thermal printers.

Two additional broadcast classes 60H & 62H are added to support transmission of combined broadcast pool values. It is envisaged that these command classes will be added to the NSW communication protocol when it is updated next time.

This document provides specifications for implementing TITO in NSW gaming machines through X protocol changes. Other methods of implementing TITO in NSW may be considered by the Casino Liquor and Gaming Control Authority (CLGCA) and the OLGR on a case by case basis.

2. "Ticket Out" Operations

The basic operation of a gaming machine with a ticket printer machine installed is that the machines will print a ticket in response to a "collect cash" request by the player. The information on the ticket including the "unique ticket identifier" is sent across to the host system for future verification. The player can either insert this ticket in a gaming machine capable of accepting tickets for wagering, redeem it through redemption terminals or can present it to the cashier for redemption, which then will be validated by the host system using the previously received information. The validation process will be made easier with a bar code being printed on the ticket.

2.1 Hardware Connectivity (Operating with a System)

Gaming machines are permitted to operate with ticket printer function only if they communicate with an approved computer system which stores information on the printed ticket. The gaming machine will be connected to host system using port P1 and P3 for supporting the TITO functionality.

If the communication to the system has failed on gaming machines that are connected to a host system, a mechanism must be activated for gaming machines to maintain the integrity of the printed tickets. All ticket redemption attempts on machines accepting printed tickets, whilst the host is disconnected will be disabled.

This then requires the machine to be informed when the communication to the system has failed. The gaming machine will assume that it has lost communication to the host when the SEF signal to port P3 is asserted (SDB Byte 84, Bit 2 becomes 0). It is proposed that in printer machines, when the machine is in the printer "mode" of operation, the port P3 SEF signal is used to indicate a "Communication Failure" (ie. system down) signal back to the machine. When this signal is asserted, the machine will not print tickets immediately in response to a collect button press, but zero the credits after an attendant's intervention to "key off" a lockup. It is recommended that the standard "Cancel Credit" procedure, as currently used in the field be utilized under these circumstances.

For gaming machines that support ticket printer function, neither the subsidiary equipment play suspended status bit will be set to one nor will the subsidiary equipment play suspended status condition be entered when any failed SEF signal is detected on port P3. The gaming machine must not issue any ticket under this situation (including cases where the host system is off-line) except a ticket that has started printing prior to the condition occurring, which is allowed to be completed. This operation is identical to the operation of the current gaming machines that support ticket printing capability only.

The gaming machine will immediately reject any tickets inserted while it is not communicating to the host. The tickets rejected by the gaming machine while it is not communicating to the host will not be accounted against “Tickets Rejected” count.

Under the current NSW Technical Standards gaming machine installed with “single copy” ticket printers, up to $2,000 can be paid out on a ticket without attendant intervention.

It is proposed that the TITO system will permit acceptance of cash tickets up to a value of $2,000 from the gaming machine. The host is expected to authorize acceptance of cash tickets only up to a value of $2,000. The gaming machine must reject tickets having values exceeding $2,000 in the ticket acceptance packet (71H/72H). Additionally the host system must have a capability to set an acceptance limit below this value.

The host will use the port P1 SEF signal to disable the gaming machine. Hence in the configuration proposed the following options are possible.

2.1.1 Normal Mode (SEF 3 inactive and all other SEF signals inactive)

This is the “default” mode of operation when the communication to the printer is available and there are no requests for a “shutdown” of the machine from the host system.

In this mode, if a player presses the “Collect” button whilst there are credits in the credit meter, a ticket will be printed and the host will be informed of the printed ticket. The credits will be zeroed automatically.

If a printed ticket were to be inserted to a ticket acceptance device (Bank Note Acceptor), the machine will attempt to verify the validity of the ticket and if successful award the credits as appropriate.

2.1.2 Host Failure Mode (SEF 3 active and all other SEF signals inactive)

This is the mode where the communication between the machine and the host system has failed. The failure is at any point in between the “X-port” (P3) on the machine to the host system. This includes the machine communication interface, the host system itself and any other “nodes” (ie. communication paths) in between.

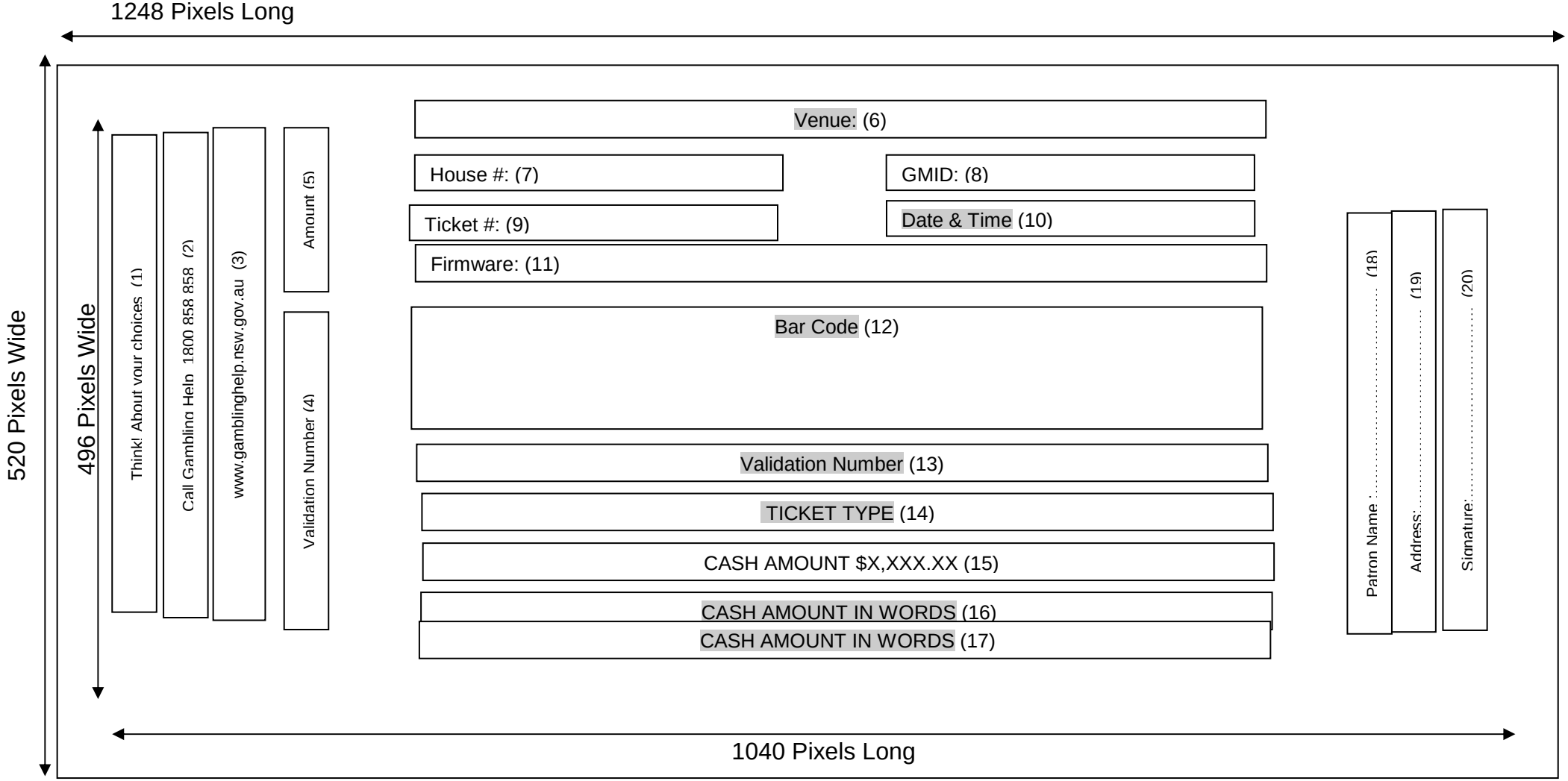
In this mode, if a player presses the “Collect” button whilst there are credits in the credit meter, the machine will “lock up” with a “call attendant” message. The attendant would “key-off” credits and issue a cancel credit note as per the current “cancel credit” procedure in the field. The machine will not print a ticket. The player will then provide the cancel credit ticket to the cashier to redeem the cash. No tickets can be inserted for credit redemption under this condition.

2.1.3 Shutdown mode (SEF 3 inactive and P1 SEF signals active)

This is the mode where the machine will be disabled as per the current guidelines for the functionality for the SEF signal assertion. Any one of the designated SEF signals, apart from SEF 3 in port 3 can initiate this operation. In the proposed TITO setup, this is implemented using asserting port P1 SEF signal.

Credit redemption under this condition is available via methods prescribed in the current technical standards. No tickets can be inserted for credit redemption under this condition.

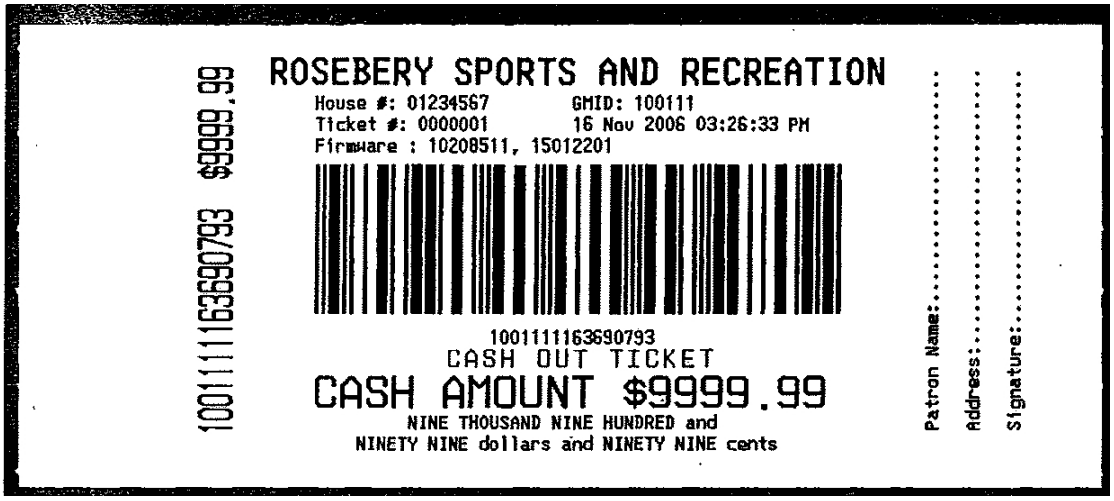
2.1.4 Ticket Layout



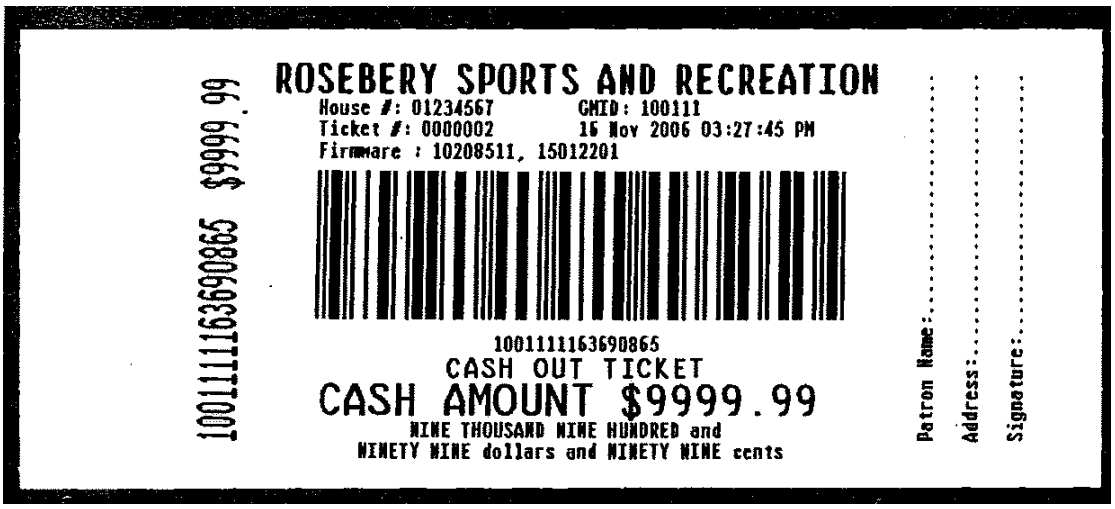
2.1.5 Sample Ticket

2.1.5.1 Ticket Printed Using Gen2 Printer

2.1.5.2 Ticket Printed Using Ithaca 850



2.1.5.2 Ticket Printed Using Ithaca 950



2.1.6 X, Y Coordinates

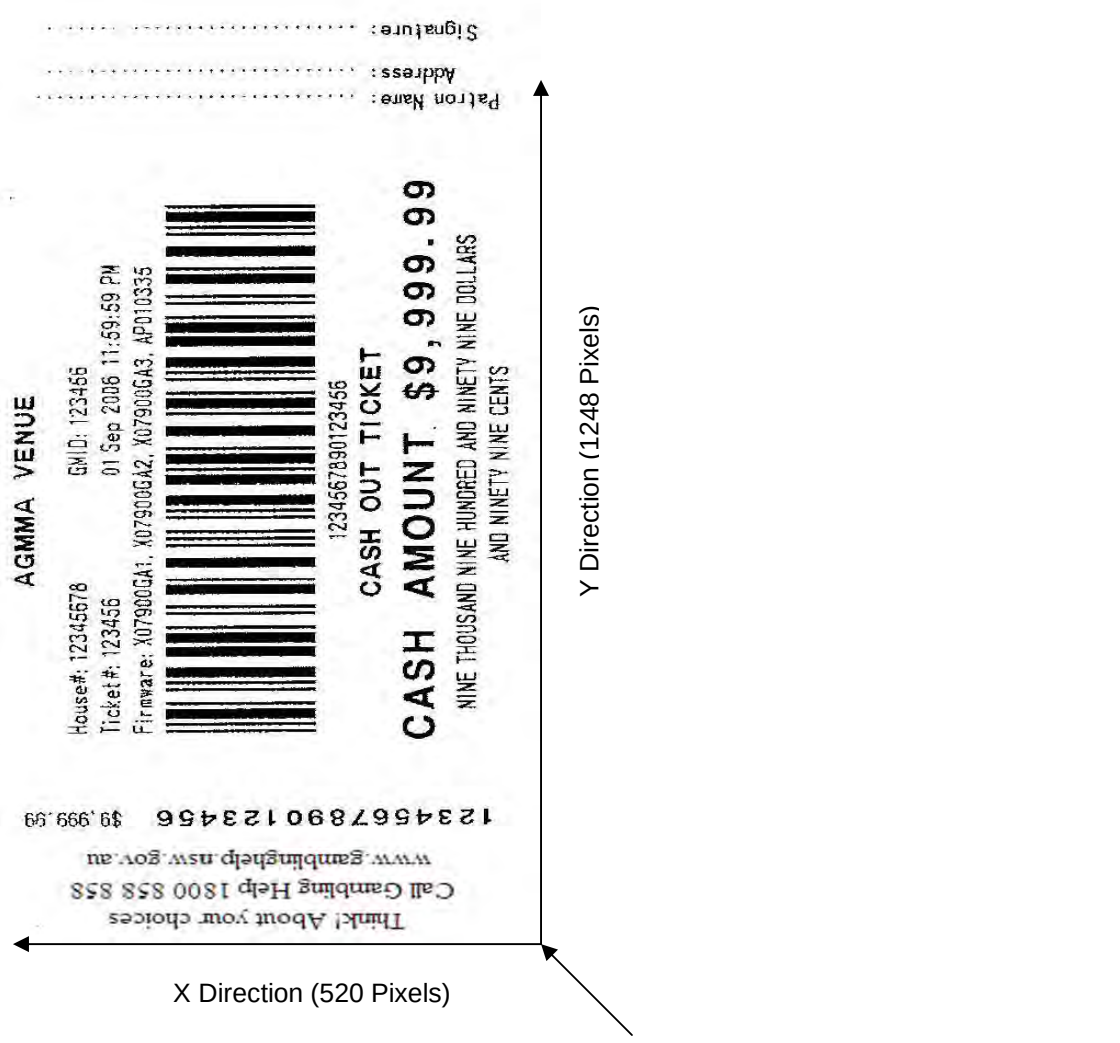


Figure 2
X & Y Coordinates

2.2 Field Definitions for Cashout Ticket

Information to be included in a single copy thermal ticket and their relative positions are given below.

2.2.1 Ticket Size

The ticket must be printed in the landscape print format so that tickets are standardized and are accepted by the BNA. The size of the thermal ticket is 65mm x 156mm (+/- 1mm). Units of measure given in this document are in pixels, where 1 millimeter equals 8 pixels. The total area of the typical thermal ticket is 520 x 1248 pixels. The minimum printable area for the various ticket printers used in NSW gaming machines is 496 x 1040 pixels.

2.2.2 Printing Guidelines

The description shown in shaded box in the ticket layout template is not printed on the ticket. Only the relevant contents in these fields are only printed. The X axis runs along the width of the ticket and the Y axis runs on the length of the ticket. The point of origin (X=0, Y=0) is at the bottom left corner of the ticket as shown in Figure 2.

All field coordinates specified in (X, Y) are in pixels. Field coordinates denote the origin of the field bounding box and this will be the lower left corner of the field bounding box.

If the printable area on the ticket printer is more than 496 pixels, the additional space must be equally divided between the top & bottom sections of the ticket with respect to the X co-ordinate.

The G Line information (Fields 1 to 3) will be pre-printed in the location specified in the paper used for ticket printing.

2.2.3 Problem Gambling Notice (Field 1)

Field 1 is a centre justified static field used to print “Think! About your choices” This field will be pre-printed on the paper used for ticket printing. The field “X” and ‘”Y” start location is (32, 122) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (425, 30) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description). This field is expected to be pre-printed in the stationary used for ticket printing.

2.2.4 Problem Gambling Notice (Field 2)

Field 2 is a centre justified static field used to print “Call Gambling Help 1 800 858 858”. This field will be pre-printed on the paper used for ticket printing. The field “X” and ‘”Y” start location is (32, 146) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (425, 30) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description). This field is expected to be pre-printed in the stationary used for ticket printing.

2.2.5 Problem Gambling Notice (Field 3)

Field 3 is a centre justified static field used to print “www.gamblinghelp.nsw.gov.au”. This field will be pre-printed on the paper used for ticket printing. The field “X” and ‘”Y” start location is (32, 170) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (425, 30) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description). This field is expected to be pre-printed in the stationary used for ticket printing.

2.2.6 Validation Number (Field 4)

Field 4 is a centre justified dynamic field used to print “The Validation Number” The String must be

printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (32, 234) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (370, 30) pixels.
For printers that support printing in bold, a font size of 2 is used for this text string printing (see Font Description Table for detailed description) and this field will be printed in bold.
If the printer does not support printing in bold a font size of 3 is used for this text printing (see Font Description Table for detailed description). Also it will be printed in double height.

The validation number must be able to uniquely identify a printed ticket from any machine in the state of NSW. This requirement is achieved by using a combination of GMID and time as described below.

The validation number is a sixteen digit number represented by a 10 byte twenty digit number. The most significant four digits are always set to zero. The validation number is constructed with the following information.

- The GMID (3 bytes, 6 digits in BCD).
- The current date and time, calculated from January 1, 1970.

The GMID is a 3 byte, 6-digit BCD number ranging from 1 to 999999. This information is entered in the audit mode of the gaming machine.

The Time and date is represented by the total number of seconds to the printed date & time on this ticket from 01/01/1970. This is well within the CLGCA requirement for storage of information up to 3yrs.

The number above is then transmitted via the MDB to the host, structured in the following manner. (G is a GMID digit and T is a Time digit from the number of seconds.)

G_{Hi}	G	G	G	G	G_{Low}	T_{Hi}	T	T	T	T	T	T	T	T	T_{Low}

2.2.7 Amount (Field 5)

Field 5 is a centre justified dynamic field used to print “The amount in dollars & cents”. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (370, 234) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (90, 30) pixels.
For ticket printers that support printing in bold, a font size of 1 is used for this text string printing (see Font Description Table for detailed description) and the field will be printed in bold,
If the printer does not support printing in bold a font size of 3 is used for this text printing (see Font Description Table for detailed description). Also it will be printed in double height.

This field represents the monetary value of the ticket in digits.

2.2.8 Venue Name (Field 6)

Field 6 is a centre justified dynamic text string used to print the “venue name”. The maximum length of this field is 30 characters. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (448 284) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (30, 640) pixels.
For ticket printers that support printing in bold, a font size of 2 is used for this text string printing (see Font Description Table for detailed description) and the field will be printed in bold,

If the printer does not support printing in bold a font size of 1 is used for this text printing (see Font Description Table for detailed description). Also it will be printed in double height & double width.

This is a 30-character field that will print the name of the venue where the ticket is printed. It will be entered in the Audit mode of the machine via the use of the player interface. This is required by Clause 109 of Gaming Machine Regulation 2010.

2.2.9 House Number (Field 7)

Field 7 is a left justified dynamic text string used to print the “House #”. The minimum length of this field is 8 characters. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (420, 336) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (30, 280) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description). The manufacturer must ensure that there is sufficient gap between this field and the adjacent GMID field.

This is an 8 character alphanumeric field that will print the location of the gaming machine within the venue. It will be entered in the Audit mode of the machine via the use of the player interface.

2.2.10 GMID (Field 8)

Field 8 is a left justified dynamic text string used to print the “GMID”. The maximum length of this field is 6 characters. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (420, 636) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (30, 350) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

This is a 6 digit number between 1 and 999999 (decimal), set in the machine prior to its initial commissioning. This will be a unique machine number within the state. It must be noted however, that the use of a unique “house number” is prevalent and the system suppliers are encouraged to provide a cross reference facility within their system product for the GMID and the “house number” of each individual machine.

2.2.11 Sequential Ticket Number (Field 9)

Field 9 is a left justified dynamic text string used to print the “Ticket #”. The maximum length of this field is 7 characters. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (396, 336) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (30, 280) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

The sequential ticket number is generated automatically by the machine. This will be a decimal 7 digit number that starts on 1 and rolls over to 1. Zero will indicate that a ticket has never been printed. A normal ticket number would be 1234567. (Note: This number will be zero prefixed for numbers less than 1000000). The Peripheral MDB represents this field using five bytes. The three most significant digits in this filed are always set to zero and will not be printed against the sequential ticket number on the ticket.

2.2.12 Date & Time (Field 10)

Field 10 is a left justified dynamic text string used to print the “Date & Time”. The date and time is printed as “dd mmm yyyy hh mm ss” AM/PM where all fields except mmm are in numerals. The field mmm will be printed using three alphabets (see Month Table for representation of months). As an example 30th September 2006, 17:15:24 will be printed as 30 Sep 2006 05:15:24 PM. The maximum length of this field is 23 characters. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (396, 636) pixels at the lower left-hand corner of the field. The maximum field length in “X” and ‘”Y” direction is (30, 350) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

The date & time is printed on a completed ticket must comply with the applicable Australian/New Zealand Gaming Machine National Standard. The gaming machine is expected to synchronize its clock with up to a maximum of 5 seconds discrepancy with the system clock.

The availability of a real time clock will be compulsory for machines with ticket printers.

2.2.13 Firmware Identification (Field 11)

Field 11 is a left justified dynamic text string used to print the "Firmware:" The String must be printed in the direction shown in the ticket layout template. The field "X" and '"Y" start location is (372, 336) pixels at the lower left-hand corner of the field. The maximum field length in "X" and '"Y" direction is (30, 550) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

This field will print the data transmitted in SDB bytes 88 to 95 (Program Identification 1), 96 to 103 (Program Identification 2), 104 to 111 (Program Identification 3) and 112 to 119 (Program Identification 4) in their respective order. Only fields containing valid information will be printed. The four firmware identification numbers will be separated by commas. The maximum length of this field is 50 characters.

2.2.14 Bar Code (Field 12)

Field 12 is a centre justified dynamic field used to print "Bar Code". The bar code must be printed in the direction shown in the ticket layout template. The field "X" and "Y" start location is (192, 336) pixels at the lower left-hand corner of the field. The field length in "X" and "Y" direction is (168, 608) pixels. The bar code will have a total height of 168 pixels. The bar code will be printed according to the specifications given in the Bar Code Attribute Table (See Bar Code Attribute Table for detailed description of bar code printing).

Barcodes or other form of machine readable markings on a ticket must have enough redundancy and error checking and must comply with the applicable sections of the relevant Barcodes, Australia/New Zealand Gaming Machine National Standards & NSW technical Standards.
The bar code contains the validation number of the ticket. The industry standard "Interleave 2 of 5" type of bar code will be printed.
(This information has been copied from The "Barcode Software Center" web page at www.mecsw.com)

2.2.15 Validation Number (Field 13)

Field 13 is a centre justified dynamic field used to print "The Validation Number". The String must be printed in the direction shown in the ticket layout template. The field "X" and '"Y" start location is (156,336) pixels at the lower left-hand corner of the field. The field length in "X" and '"Y" direction is (30, 608) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

The details for printing validation number are given in field 4.

2.2.16 Ticket Identifier (Field 14)

Field 14 is a centre justified static field used to print "CASH OUT TICKET". The String must be printed in the direction shown in the ticket layout template. The field "X" and '"Y" start location is (132, 336) pixels at the lower left-hand corner of the field. The field length in "X" and '"Y" direction is (40, 608) pixels. A font size of 2 is used for this text string printing (see Font Description Table for detailed description).

Tickets printed under "Normal Operating" conditions are labeled "CASH OUT TICKET" and are printed in response to a "Collect" button press, if there is no communication failure currently prevalent. This includes tickets printed after attendant intervention due to the amount of credits being above the "Cancel Credit" limit or $2,000. The information about these tickets is transmitted to the host system via the "Peripheral MDB".

2.2.17 Amount in Dollars & Cents (Field 15)

Field 15 is a centre justified dynamic field used to print "Cash amount in dollars & cents". The field will

be printed as “CASH AMOUNT $ x,xxx.xx”. No leading zeros will be printed. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (84, 336) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (40, 680) pixels. A font size of 4 is used for this text string printing (see Font Description Table for detailed description).

This field represents the monetary value of the ticket in digits. This is required by Clause 107 of Gaming Machine Regulation 2010.

2.2.18 Amount in Words (Field 16)

Field 16 is a centre justified dynamic field used to print “Cash Amount in Words”. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (60, 336) pixels at the lower left-hand corner of the field. The maximum field length in “X” and ‘”Y” direction is (30, 608) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

This field represents the monitory value of the ticket in words.

2.2.19 Amount in Words (Field 17)

Field 17 is a centre justified dynamic field used to print the second line of the “Cash Amount in Words”. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (36, 336) pixels at the lower left-hand corner of the field. The maximum field length in “X” and ‘”Y” direction is (30, 608) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

This field represents the monetary value of the ticket in words.

2.2.20 Patron Name (Field 18)

Field 18 is a left justified field used to print “Patron Name”. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (60, 1070) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (425, 30) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

2.2.21 Patron Address (Field 19)

Field 19 is a left justified field used to print “Address”. The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (60, 1118) pixels at the lower left-hand corner of the field. The maximum field length in “X” and ‘”Y” direction is (425, 30) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

2.2.22 Patron Signature (Field 20)

Field 20 is a left justified field used to print “Signature” The String must be printed in the direction shown in the ticket layout template. The field “X” and ‘”Y” start location is (60, 1166) pixels at the lower left-hand corner of the field. The field length in “X” and ‘”Y” direction is (425, 30) pixels. A font size of 1 is used for this text string printing (see Font Description Table for detailed description).

2.3 Font Description

Font Size	Pitch (Char Per Inch) - Range
1	16.0 to 20.5

2	8.3 to 10.3
3	12.0 to 13.0
4	7.3 to 7.5

Font Description Table

2.4 Bar Code Description

Attribute	Details
Encoding	Uniform Symbology Specification – Interleaved 2 of 5, document Reference NSI/AIM BC2-1995.
Narrow bar width	Minimum = 0.5mm Maximum = 0.6mm
W:N Ratio	3:1
Print Contrast Signal Value	Minimum = 0.9
Symbol Contrast (SC)	Better than 0.7
Imaging	Imaging to be used in printing shall be of quality which absorbs visible light of 600~700nm. Black shall be used.
Quality of Printing	The bar code print quality shall conform to the Guideline for Bar Code Print Quality, document reference ANSI INCITS

Bar Code Attributes Table

2.5 Month Description Table

Month	Abbreviation
January	Jan
February	Feb
March	Mar
April	Apr
May	May
June	Jun
July	Jul
August	Aug
September	Sep
October	Oct
November	Nov
December	Dec

2.6 Ticket Out Messages

The gaming machine must display the following messages while printing a ticket.

Condition	Message to be Displayed
Cancel Credit Request Initiated (While Printing)	Printing Cash Out Ticket - Please Wait
After Completion of Ticket Printed (Before Player Collecting Cash ticket)	Please Collect Your Cash Ticket
After Completion of Ticket Printed	Ticket Pay $<Amount>

2.7 Ticket Out Transmission Characteristics

1. Bytes 67 to 93 always contain information on the last ticket printed. None of these fields are updated when the gaming machine is processing a “Ticket In”.

2. Once a ticket print has been completed with a single press of the “*Collect*” button, the peripheral MDB will be modified to include the relevant information for the last ticket, the “*Valid Ticket Information*” flag will be set and the peripheral MDB will be transmitted.

3. The “*Valid Ticket Information*” flag will be reset (ie. Set to 0) immediately after commissioning the machine for the first time in its “life”, until the first ticket print is completed. It will be set (ie. Set to 1) once a valid ticket has completed printing. It will be reset once the next ticket has started printing, and if there was an interruption to the ticket print. It will only be set once a valid ticket has completed printing.

4. There after the peripheral MDB will continue to transmit with the same ticket information except the printer status flags, which will be set according to the conditions of the printer and the machine.

5. The machine will disable the Coin acceptance and note acceptance and CCCE mode (ie: all machine money transfer) for the duration of the ticket print. This is to allow a short period of “credit meter inactivity” for the peripheral MDB ticket information to be captured by the machine communication interface and to maintain the integrity of the information transmitted in the peripheral MDB. The coin entry and note entry will be disabled for the duration of the ticket print to enable accurate transfer of peripheral MDB information in regard to the ticket printer information. Note that the “*Cancel Credit Error*” flag as required by the approved NSW Gaming Machine Communication Protocol Technical Standard will be set when an un-recoverable printer error, such as a printer fault that requires a machine lockup, occurs.

6. The information on the current ticket will not be transmitted through the peripheral MDB until a valid ticket print has been completed.

2.8 Ticket Out Implementation Notes

1. The gaming machine will treat successful printing of the validation number and amount (fields 4 & 5) as completion of printing of a valid ticket. This will mean that the credits from the gaming machine will be removed as soon as printing of amount (field 5) is completed. The gaming machine will implement a suitable technique to confirm successful printing of this field before removing the credits. This method eliminates possibility of producing two tickets containing almost full information for one cancel credit operation.

2. All the fields will be printed within a relative tolerance of ±8 pixels with reference to the printable area given in figure 2. However, it must be noted that the intend of this requirement is only to ensure that ticket printed from different gaming machines look similar in

appearance and is not to validate the accuracy of the tolerances on the printing of the various fields.

3. After completion of a valid ticket printing but before the player has collected the ticket, the gaming machine will present an overlay box on the spinning reels with an adequate size (a size of around 200mm x 150 mm is recommended) prominently displaying the message “Please Collect Your Cash Ticket”. This visual indication will remain on the gaming machine screen till the player collects the ticket. The purpose of this is to reduce the possibility of any player walk away without collecting a valid cash ticket.

4. The gaming machine will not have any facility to reprint tickets. If a ticket printing could not be completed due to any hardware failure after it has printed the field 5, a manual payment for the ticket will be made against the validation number and amount recorded within the ticket log history of the gaming machine.

5. The top face of the ticket will contain only the information specified against fields 1 to 20. However, the reverse side of the ticket may contain some additional information.

2.9 Total Printer Pay out

When the collect button is pressed, subject to cashout requirements, any amount on the credit meter will be issued on a printed ticket. However, attendant intervention is required to print tickets above a value of $2,000.

Where a residual credit feature is used, an option for the player to gamble the residual credit, print ticket or play off credit may be available.

3. Date & Time Synchronization

3.1 CCCE Command Class 4: Time and Date Synchronization

This command class is a "global" broadcast to all devices and no echo is required from the gaming machine. The gaming machine must update, if required, its internal clock within 2 seconds of receiving the command sequence. The time broadcast packet will be transmitted by the host approximately every 60 minutes.

When a gaming machine is configured to support TITO, it is necessary that it cannot commence ticket in operation till it receives a Time Synchronization command 40H from a host. If the gaming machine is allowed to operate in a “Ticket Out” configuration only till it receives the time synchronization packet, it may be treated as operation in an unapproved configuration.

In order to support seamless TITO capability, the TITO host must transmit Time Synchronization command 40H as soon as communication between the gaming machine and the host is lost and restored.

With the requirement to display the time on the gaming machine, it is necessary to identify if the time indicated on the screen is based on the time set within the gaming machine or through time synchronization packet received from a host. To support this feature, the gaming machine must include a facility to view the date, the time and the host ID of the last packet received in the audit mode.

Note: The gaming machine may operate a clock with up to 5 seconds discrepancy with the system.

3.1.1 Time and Date Information flow

Step	Gaming machine	Ticket In Information	Host
1	Gaming machine transmits SDB	------>------	
2		------<------	Command (40H) Host ID Time and Date Checksum

The host must complete the transmission of a time and date synchronization packet to the gaming machine within 80ms from the time the last byte of a SDB is received. Transmission of Time and Date Synchronization command must be completed within 18ms. The system manufacturers are expected to implement a facility to enable/disable transmission of time broadcast packets to eliminate the gaming machine attempting to synchronize its clock from multiple hosts in instances where the gaming machine port P1 is connected to a number of systems that transmit time synchronization packets. The gaming machine is expected to log the host ID to which it has last synchronized its time in an appropriate audit menu. When the gaming machine port P1 is connected through a port sharer, the port sharer must be configured such that the default port is connected to the TITO system. It is also expected that in such a configuration the time synchronization will be handled by the TITO host.

The time synchronization packet contains the local time. The host must ensure that this packet reflects the correct real time. From this point, in order to reduce the time delays involved in the transmission of information, it is recommended that the immediate interface unit communicating to the host generates the packet just before the transmission of this packet. The gaming machine manufacturers must also be aware that the time will go back by an hour when the day light time becomes effective.

3.1.2 Time and Date Synchronization Packet Structure

Byte 1- FF - Start of block (unique)

Byte 2- Command Class (40H)

Byte 3- Host ID
Byte 4- "
Byte 5- "

Byte 6 – Current Date (Total of 8 Digits) (LSD and LSD+1). LSD in lower nibble.
Date as appearing on the ticket, in ddmmyyyy format, Eg: 08052006 (08/05/2006).
Byte 9 - (LSD+6 and MSD). LSD+6 in lower nibble.

Byte 10 – Current Time (Total of 6 Digits) (LSD and LSD+1). LSD in lower nibble.
Time in 24hr format. Eg: 230137 (11:01:37pm).
Byte 12 - (LSD+4 and MSD). LSD+4 in lower nibble.

Byte 13 - Checksum lower nibble (0XH)
Byte 14 - Checksum upper nibble (X0H)

The checksum is generated by applying modulo 2 addition to each of the bytes 2 to 12.

Gaming machines must display the current local time on-screen. The time is to be displayed in 12 hour format (i.e. hh:mm am/pm) at either the top right or bottom left hand corner of the machine's

main display. It must be clearly visible to the player while the gaming machine is enabled for play. Its size is to be a minimum of 7mm.

4. Ticket In operation

4.1 Modes of Operation

The gaming machine can be installed either with “Ticket In” enabled or disabled. When the gaming machine is installed with “Ticket In” disabled it will transmit Peripheral MDB according to specifications given in GTA MDB Version 2.01. In instances where the gaming machine is installed with the “Ticket In” enabled it will transmit Peripheral MDB according to specifications given in this document.

4.2 CCCE Command Class 7: “Ticket In” Communication

4.2.1 EGM Status Requirements for “Ticket In” Authorization

Gaming machine shall accept any tickets for redemption only when the gaming machine is in “idle, No lockup” or “Game Cycle, No lockup” status condition as defined below:

SDB Status byte 1
- #0 = X (Idle)
- #1 = X (Game Cycle)
- #2 = X (Power Up)
- #3 = X (Program Restart)
- #4 = X (CCCE transfer completed)
- #5 = 0
- #6 = 0
- #7 = 0

SDB Status byte 2 = 00
SDB Status byte 3 = 00
SDB Status byte 4 = 00
SDB Status byte 5 = 00

4.2.2 Information flow for sending “Ticket In” to host

Gaming machine	Ticket In Information	Host
Command (70H) Valid Ticket Information Checksum	------>------	

Gaming machine uses command type 70H to transmit the information on the ticket being validated to the immediate interface in the communication chain such as MCI, GMI, BE2 etc. The gaming machine expects to get a response (71H) from the host within 3 seconds. If the gaming machine does not receive the response from the host within this period, it will transmit this command again up to a maximum of three times.

4.2.3 Re-Try procedure for sending 70H "Ticket In" Information to host

Step	Gaming machine	Ticket In Information	Host
1	Command (70H) Valid Ticket Information Checksum	------>------	
2			No Reply from the host
3	Waits typically around 3 seconds Transmit Peripheral MDB with bit 5 of Byte 14 set to zero indicating that the gaming machine is expecting a response from host	------>------ ------>------	
4	Following the MDB with a gap of 20 ms Transmit Command (70H) Valid Ticket Information Checksum.	------>------	

The gaming machine will repeat steps 3 and 4 up to a maximum of 3 times. If it is not successful even after the third attempt, the gaming machine will reject the ticket, display an appropriate message on the gaming machine and transmit a peripheral MDB with the "Ticket In Communication error flag (Bit 0 of Byte 15 in peripheral MDB) set and the "Valid Ticket in" flag (Bit 5 of Byte 14 in peripheral MDB) reset (Set to 1). The "Ticket In Communication error flag" (Bit 0 of Byte 15 in peripheral MDB) will be cleared when the gaming machine starts processing of the next ticket in.

The gaming machine is expected to hold the ticket in escrow till it gets the command 71H from the host or the request is timed out. The gaming machine will return the ticket to the player in all circumstances except when it is able to validate the ticket.

4.2.4 Packet Structure

Byte 1- FF - Start of block (unique)

Byte 2- Command Class (70H)

Byte 3- GMID
Byte 4- "
Byte 5- "

Byte 6 – Date of Ticket Validation Request (Total of 8 Digits) (LSD and LSD+1). LSD in lower nibble. Date in ddmmyyyy format, Eg: 08052006 (08/05/2006).
Byte 9 - (LSD+6 and MSD). LSD+6 in lower nibble.

Byte 10 - Time of Ticket Validation Request (Total of 6 Digits) (LSD and LSD+1). LSD in lower nibble. Time in 24hr format. Eg: 230137 (11:01:37pm).
Byte 12 - (LSD+4 and MSD). LSD+4 in lower nibble.

Byte 13 - Unique Identifier (Total of 20 Digits) (LSD and LSD+1). LSD in lower nibble
LSD in the lowest nibble. MSD in the high nibble of byte 22). Last 2 bytes will be zero filled.
Byte 22 - (LSD+18 and MSD). LSD+18in lower nibble.

Byte 23	-	Checksum lower nibble (0XH)
Byte 24	-	Checksum upper nibble (X0H)

The checksum is generated by applying modulo 2 addition to each of the bytes 2 to 22.

4.2.5 Information flow for Accepting "Ticket In" by host

The host must complete the transmission of command classes 71H or 72H within 80ms from the time the last byte of SDB with the status bytes as given in section 4.2.1 is received from the gaming machine.

The "Hold Ticket in Escrow" flag is used by the interface unit to inform the gaming machine that it has still not received the response from the host. Bill acceptors are expected to hold the ticket in escrow for a minimum period of ten seconds. Some bill acceptors have the capability to hold it for a longer time if it receives a command to hold the ticket in escrow. If the bill acceptors do not have this capability, it rejects the ticket when the first request times out and the ticket is returned to the player.

Bit 5 of Byte 15 in MDB1 will be used indicate that the Ticket Stacking is completed. This will be set to high (one) after RAM clear of the gaming machine. It will be set to low (zero) as soon as the 72H Phase 2 command is received by the gaming machine from the host. Host can use this bit to confirm that the gaming machine has received phase 2 of command 72H. This bit will be set high (one) again as soon as the ticket stacking is completed. The gaming machine must update all the relevant meters only after the ticket stacking is completed. If the stacking fails, this bit will remain low (zero) and will be set to high (one) as soon as the gaming machine initiates the next 70H command (when the next ticket is inserted). The host will wait for a maximum period of ten seconds to get a MDB1 packet with ticket stacking bit set to high (one) after it has received a MDB1 with ticket stacking bit set to low (zero). The host will lock the gaming machine if it did not receive the MDB1 packet with ticket stacking bit set to high (one) within this period.

The gaming machine is expected to transmit a Peripheral MDB which will increment the total number of tickets accepted count (Byte 41 to 45 of peripheral MDB) and with updated total ticket accepted meter (Byte 120 to 124 of peripheral MDB) when the ticket stacking bit is set back to one after the stacking is completed. The gaming machine will not initiate the transmission of another ticket redemption packet (70H) until it has transmitted a minimum of two peripheral MDB packets containing the information on the previous "Ticket in" redemption request. The information flow for accepting a ticket by the gaming machine is given below:

Step	Gaming machine	Ticket In Informatio	Host
1	Gaming machine transmits 70H	------>------	
2	Gaming machine transmits SDB	------>------	
3		------<------	GMID Command (71H Ph.1) Status & Error flags Valid Ticket Information Amount Checksum
4	(Echo) GMID Command (71H Ph.1) Status & Error flags Valid Ticket Information Amount Checksum	------>------	
5		------<------	GMID Command (72H Ph.2) Status & Error flags Valid Ticket Information Amount Checksum
6	Transmits MDB1 with stacking bit set to zero (Bit 5 of Byte 15). No tickets in meters are updated in this MDB1.	------>------	
7	Transmits MDB1 with stacking bit set to one (Bit 5 of Byte 15) after stacking is completed. Also the relevant tickets in meters are updated in this MDB. (During this period gaming machine will transmit SDBs & MDBs as required by the protocol specifications).	------>------	

Note: Step 1 is shown for the sake of completion

4.2.6 "Ticket In" Phase 1 Packet Structure

Byte 1- FF - Start of block (unique)

Byte 2- Command Class (71H)

Byte 3- GMID
Byte 4- "
Byte 5- "

Byte 6 - Authorization status
#0 - 1 – ticket authorized OK

#1 - 1 – Hold Ticket in Escrow (ticket information is being processed by the host)
#2 - 1 – ticket rejected
#3 - 0 – Spare
#4 - 0 – Spare
#5 - 0 – Spare
#6 - 0 – Spare

Byte 7 - Rejected reason codes
#0 - 1 – ticket not authorized (ticket not found)
#1 - 1 – ticket not authorized (ticket already paid)
#2 - 1 – ticket not authorized (ticket too old)
#3 - 1 – ticket not authorized (ticket value too large)
#4 - 1 – ticket not authorized (other reason – see operator)
#5 - 0 – Spare
#6 - 0 – Spare

Byte 8 – Date of Ticket Validation Request (Total of 8 Digits) (LSD and LSD+1). LSD in lower nibble. Date in ddmmyyyy format, Eg: 08052006 (08/05/2006). This will be same time & date as sent by the gaming machine.
Byte 11 - (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 12 - Time of Ticket Validation Request (Total of 6 Digits) (LSD and LSD+1). LSD in lower nibble. Time in 24hr format. Eg: 230137 (11:01:37pm). This will be same time & date as sent by the gaming machine.
Byte 14 - (LSD+4 and MSD). LSD+4 in lower nibble.

Byte 15 - Unique Identifier (Total of 20 Digits) (LSD and LSD+1). LSD in lower nibble
LSD in the lowest nibble. Last 2 bytes will be zero filled.
Byte 24 - (LSD+18 and MSD). LSD+18 in lower nibble.

Byte 25 – Amount (Total of 10 digits) (LSD and LSD+1). LSD in lower nibble.
Byte 29 - (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 30 – Transaction Number (Total of 10 digits) (LSD and LSD+1). LSD in lower nibble.
Byte 34 - (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 35 - Checksum lower nibble (0XH)
Byte 36 - Checksum upper nibble (X0H)

The checksum is generated by applying modulo 2 addition to each of the bytes 2 to 34.

4.2.7 “Ticket In” Phase 2 Packet Structure

Byte 1- FF - Start of block (unique)

Byte 2- Command Class (72H)

Byte 3- GMID
Byte 4- "
Byte 5- "

Byte 6 - Authorization status
#0 - 1 – ticket authorized OK
#1 - 1 – N/A
#2 - 1 – N/A
#3 - 0 – Spare

#4 - 0 – Spare
#5 - 0 – Spare
#6 - 0 – Spare

Byte 7 - Rejected reason codes
00 - Indicates that there are no errors.

Byte 8 – Date of Ticket Validation Request (Total of 8 Digits) (LSD and LSD+1). LSD in lower nibble. Date in ddmmyyyy format, Eg: 08052006 (08/05/2006). This will be same time & date as sent by the gaming machine.
Byte 11 - (LSD+6 and MSD). LSD+6 in lower nibble.

Byte 12 - Time of Ticket Validation Request (Total of 6 Digits) (LSD and LSD+1). LSD in lower nibble. Time in 24hr format. Eg: 230137 (11:01:37pm). This will be same time & date as sent by the gaming machine.
Byte 14 - (LSD+4 and MSD). LSD+4 in lower nibble.

Byte 15 - Unique Identifier (Total of 20 Digits) (LSD and LSD+1). LSD in lower nibble
LSD in the lowest nibble. Last 2 bytes will be zero filled.
Byte 24 - (LSD+18 and MSD). LSD+18 in lower nibble.

Byte 25 – Amount (Total of 10 digits) (LSD and LSD+1). LSD in lower nibble.
Byte 29 - (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 30 – Transaction Number (Total of 10 digits) (LSD and LSD+1). LSD in lower nibble.
Byte 34 - (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 35 - Checksum lower nibble (0XH)
Byte 36 - Checksum upper nibble (X0H)

The checksum is generated by applying modulo 2 addition to each of the bytes 2 to 34.

The Transaction Number included in the command packet type 71H & 72H are numbers generated by the host system. Some host systems use this number for hand-shaking while transferring packets between various nodes within the system. It is proposed that these are “global sequential numbers” generated by the host for each ticket validation request from the gaming machines. This number will be incremented by the host when it receives a ticket validation requests from any of the “Ticket In” capable gaming machines connected to the host system. The number will roll to 1 after it reaches the maximum value of (9999999999).

This number will be permanently set to zero in host systems that do not use this functionality to transport packets between various nodes within the system. The gaming machine will always validate the "Unique ID" in the 71H/72H command with that of the response received from the host for the last ticket validation request (70H) transmitted by the gaming machine. Due to what ever reasons, if the gaming machine receives a duplicate transmission of 71H/72H for one single 70H request successively, the gaming machine must be able to identify it as a duplicate. Gaming machine is not required to keep a log of all tickets accepted and search for any duplicate from the history of tickets accepted. It must be noted that if the transaction number field is zero, then the gaming machine must not use this field for checking any duplicate transactions.

The transaction number will be incremented by the host as soon as a new command type 70H is received from the gaming machine. The host will use the same transaction number till either the ticket is authorized or rejected.

4.2.8 Re-Try procedure for sending 70H "Ticket In" Information to host

Step	Gaming machine	Ticket In Informati	Host
1	Command (70H) Valid Ticket Information Checksum	------>------	
2	Gaming machine waits approximately for a period of 3 seconds. Transmits SDB during this period as required by the NSW Communications Standards	------>------	
3	Transmits peripheral MDB with bit 5 of Byte 14 set to zero indicating that the gaming machine is waiting for the validation packet from the host.	------>------	
4	Gaming Machine Re-transmits Command (70H) Valid Ticket Information Checksum	------>------	
5	Gaming machine transmits SDB	------>------	
6		------<------	GMID Command (71H Ph.1) Status & Error flags Valid Ticket Information Amount Checksum
7	(Echo) GMID Command (71H Ph.1) Status & Error flags Valid Ticket Information Amount Checksum	------>------	
8		------<------	GMID Command (72H Ph.2) Status & Error flags Valid Ticket Information Amount Checksum
9	Transmits MDB1 with stacking bit set to zero (Bit 5 of Byte 15). No tickets in meters are updated in this MDB1.	------>------	This indirectly indicates th Phase 2 is correctly receiv the gaming machine.
10	Transmits MDB1 with stacking bit set to one (Bit 5 of Byte 15) after stacking is completed. Also the relevant tickets in meters are updated in this MDB. (During this period gaming machine will transmit SDBs & MDBs as required by the protocol specifications).	------>------	

The gaming machine will repeat steps 3 and 4 up to a maximum of 3 times if it does not receive a response (71H) from the host. If it is not successful even after the third attempt, the gaming machine

will reject the ticket, display an appropriate message on the gaming machine and transmit a peripheral MDB with the “Ticket In Communication error flag (Bit 0 of Byte 15 in peripheral MDB) set and the valid ticket in flag (Bit 5 of Byte 14 in peripheral MDB) reset (Set to 1). The “Ticket In Communication error flag” (Bit 0 of Byte 15 in peripheral MDB) will be cleared when the gaming machine starts processing of the next ticket in.

4.2.9 MDB Transmission Intervals

MDB with stacking bit set (bit 5 of Byte 15) set to zero can be transmitted after the receipt of 72H phase 2 command from the host even though it may not be compliant to the to the specifications given in MDB Version 3.0 & 2.01 section 1.3.1 which states the following:

The Peripheral manufacturer data block is transmitted by the gaming machine whenever:

a) A change occurs in any of the PERIPHERAL MDB’s status bytes 12,13,14 or 15. The minimum time between two successive PERIPHERAL MDB’s will be 1.5 seconds (+/- 10%).
b) Insertion of a bill into the gaming machine or redemption of credit by printing a ticket. The minimum time between two successive PERIPHERAL MDB’s will be 1.5 seconds (+/- 10%).
c) A period of 15 seconds (+/- 3.0 seconds) has elapsed since the last transmission. The block may be transmitted at more frequent intervals if any of the conditions in a) or b) occur.
d) A change occurs in the PERIPHERAL MDB’s CCCE Class byte 96. However NSW mandatory data blocks SDB, FDB, PDB1, and PDB2 takes priority over the peripheral MDB. The minimum time between two successive PERIPHERAL MDB’s will be 1.5 seconds (+/- 10%).
e) A successful CCCE transfer occurs the gaming machine must output (if applicable) PERIPHERAL MDB by port P1 with an appropriate payment completed flag set to 1 in byte 96 within 460 ms of a legitimate last byte of the "phase 2 transfer" request.

Requirements specified in point (a) imply that MDBs cannot be transmitted more frequently than 1.5 seconds (+/- 10%). This will prevent the gaming machine from reporting the stacking bit as soon as a valid 72H phase 2 command from host is received.

Hence this requirement shall be modified to as given below:

a) A change occurs in any of the PERIPHERAL MDB’s status bytes 12,13,14 or 15 the gaming machine must transmit the MDB as soon as possible. The minimum time interval under this condition between transmissions of two successive MDB packets should be 20ms. If no change occurs in any of the PERIPHERAL MDB’s status bytes 12,13,14 or 15, the minimum transmission interval between two successive PERIPHERAL MDB’s will be 1.5 seconds (+/- 10%).
b) Insertion of a ticket into the gaming machine or redemption of credit by printing a ticket. Transmission of MDBs with an interval of less than 1.5 seconds is recommended when the player prints a ticket or inserts a ticket into the gaming machine. However, the minimum gap between transmissions of two successive MDB packets should be 20ms.
c) A period of 15 seconds (+/- 3.0 seconds) has elapsed since the last transmission. The block may be transmitted at more frequent intervals if any of the conditions in a) or b) occur.
d) A change occurs in the PERIPHERAL MDB’s CCCE Class byte 96. However NSW mandatory data blocks SDB, FDB, PDB1, and PDB2 takes priority over the peripheral MDB. The minimum time between two successive PERIPHERAL MDB’s will be 1.5 seconds (+/- 10%).
e) A successful CCCE transfer occurs the gaming machine must output (if applicable) PERIPHERAL MDB by port P1 with an appropriate payment completed flag set to 1 in byte 96 within 460 ms of a legitimate last byte of the "phase 2 transfer" request.

4.3 Ticket In Messages

The gaming machine must display the following messages while accepting/rejecting a ticket.

Condition	Message to be Displayed
Ticket Inserted	Validating – Please Wait
Ticket Accepted	Ticket In $ <Amount>
Ticket Rejected (Ticket not Found)	Ticket Rejected – See Cashier
Ticket Rejected (Already Paid)	Ticket Rejected – See Cashier
Ticket Rejected (Too Old)	Ticket Rejected – Ticket Too Old
Ticket Rejected (Too Large)	Ticket Rejected – Amount Too Large
Ticket Rejected (Any Other Reasons)	Ticket Rejected – See Cashier

4.4 Interfacing with BNAs without a Capability to hold tickets in Escrow

1. If the gaming machine has no capability to hold ticket in escrow, it will not echo the 71H command send by the host with escrow bit. The host will make three attempts and abort the transaction.

2. The gaming machine will reject the ticket, when it times out after three attempts of transmitting 70H, and it will send a MDB with byte 14 Bit 5 set to one indicating that it is no more waiting for a response from the host as well as setting the "Communication Error", Byte 15, bit 0 in this instance.

3. The host must now infer that the ticket has been rejected since the gaming machine has no capability to hold a ticket in escrow.

4. Depending upon the BNA implementation the gaming machine will either increment the Bill Reject Counter or the Total Number of Tickets Rejected counter by one.

4.5 Ticket In Implementation Notes

The gaming machine will assume a timeout has taken place if a complete phase 1 (71H) or complete phase 2 (72H) is not received within 80ms from the time the last byte of SDB or last byte of echo command was transmitted.

The gaming machine will respond to a legitimate phase 1 transfer request by completing transmission of phase 1 echo within 80 ms of receiving the last byte of the phase 1 transfer request.

In normal operation the gaming machine will set the “Printer Valid Ticket In Data, (MDB Byte 14, bits 5)” to zero when it has commenced the ticket acceptance process. The gaming machine will set this value to one when the ticket has been accepted or rejected successfully and will then transmit the Peripheral MDB with updated meter values containing information of the new ticket accepted or rejected. In normal circumstances the gaming machine may not transmit a Peripheral MDB with a zero value against “Printer Valid Ticket In Data, (MDB Byte 14, bits 5)”. As soon as the gaming machine receives a valid 72H or 71H instructing the gaming machine to reject the ticket, this bit (Printer Valid Ticket In Data, Byte 14, bit 5 will be reset (Set to 1). When the gaming machine gets a valid 72H command it will stack the ticket and then send a Peripheral MDB1 with updated meters and this peripheral MDB transmitted by the gaming machine will have this bit cleared (Set to 1).

The gaming machine will transmit Peripheral MDB with the “Printer Valid Ticket In Data, Byte 14, bit 5” set to zero only after a minimum period of approximately 3 seconds if it did not receive an echo for

the transmission of ticket in notification command (70H). This gives enough time for the host to process and send information on the ticket back to the gaming machine. The gaming machine will make three attempts at an interval of approximately three seconds to get a response from the host (71H). If it is not successful even after the third attempt, the gaming machine will return the ticket to the player, display an appropriate message on the gaming machine and transmit a peripheral MDB with the “Ticket In Communication error flag (Bit 0 of Byte 15 in peripheral MDB) set and the valid ticket in flags (Byte 14, bits 5 in peripheral MDB) reset (Set to 1). The “Ticket In Communication error flag” (Bit 0 of Byte 15 in peripheral MDB) will be cleared when the gaming machine starts processing of the next “Ticket in”. The gaming machine will also clear the “Miscellaneous/Manufacturer specific error in ticket redemption; Bit 3 of Byte 15” flag when it initiates a new “Ticket in” packet transmission (70H)

Bit 5 of Byte 15 in MDB1 will be used indicate that the Ticket Stacking is completed. This will be set to high (one) after RAM clear of the gaming machine. It will be set to low (zero) as soon as the 72H Phase 2 command is received by the gaming machine from the host. Host can use this bit to confirm that the gaming machine has received phase 2 of command 72H. This bit will be set high again as soon as the ticket stacking is completed. The gaming machine must update all the relevant meters only after the ticket stacking is completed. If the stacking fails, this bit will remain zero and will be set to one as soon as the gaming machine initiates the next 70H command (when the next ticket is inserted). The host will wait for a maximum period of ten seconds to get a MDB1 packet with ticket stacking bit set to one after it has received a MDB1 with ticket stacking bit set to zero. The host will lock the gaming machine if it did not receive the MDB1 packet with ticket stacking bit set to one within this period. Due to the nature of the transmission of the X series datablocks and their relative priority specified in the protocol, it may be possible that the EGM will not be able to transmit first a MDB with this bit set to zero when the ticket stacking commences and then transmit another MDB with this bit set to one. Hence it is recommended that the host shall also check if the other relevant Ticket in meters has been updated to confirm if the ticket has been successfully accepted by the EGM or not.

The gaming machine is expected to transmit a Peripheral MDB which will increment the total number of tickets accepted count (Byte 41 to 45 of peripheral MDB) and with updated total ticket accepted meter (Byte 120 to 124 of peripheral MDB) when the ticket stacking bit is set back to one after the stacking is completed. The gaming machine will not initiate the transmission of another ticket redemption packet (70H) until it has transmitted a minimum of two peripheral MDB packets containing the information on the previous “Ticket in” redemption request.

The gaming machine will reset its retry count to zero when it receives a 71H response from the host with byte 6 bit 1 (Hold Ticket in Escrow) flag set. This indirectly requests the bill acceptor in the gaming to hold the ticket approximately for another 9 seconds in escrow. If the bill acceptors does not have this capability, it rejects the ticket when the first request times out and the ticket is returned to the player. In this case the gaming machine must not echo this command to the host and the host must assume that the ticket has been rejected. The gaming machine must also not expect a 72H following this command in this instance.

4.5.1 Information flow for sending a Ticket Reject Information by host

The host must complete transmission of the ticket reject information within 80 ms of receiving the last byte of a SDB from the gaming machine.

Step	Gaming machine	Ticket In Information	Host
1	Gaming machine transmits SDB	------>------	
2		------<------	GMID Command (71H Ph.1) Byte 6, bit 3 set to inform gaming machine to reject the ticket Byte 7 indicates the reason for rejection Amount Bytes 25 to 29 set to zero Checksum
3	(Echo) GMID Command (71H Ph.1) Byte 6, bit 3 set to inform gaming machine to reject the ticket Byte 7 indicates the reason for rejection Amount Bytes 25 to 29 set to zero Checksum	------>------	
4	Transmits MDB1 with Updated Information.	------>------	

The host will repeat step 2 up to a maximum of three times if it did not receive the echo from the gaming machine. The gaming machine will eventually time out and reject the ticket if it did not receive a response to command type 70H regardless of if the ticket was accepted or rejected by the host.

5. General “Ticket In” interface Requirements

1. The host must be able to produce correct reconciliation of all tickets printed, tickets accepted & tickets rejected.

2. In the “Reject Ticket” packet the amount field will be set to Zero by the host.

3. The transmission of each “Ticket In” packets must be completed within 40 ms.

4. Bit 0 of Byte 15 of Peripheral MDB (“Ticket In Communication Error”) will be set if the gaming machine is not able to communicate correctly the “Ticket In” information to the host.

5. The gaming machine will ensure that it will not initiate any “Ticket In” communication when the host has initiated any other phase 1 transaction.

6. The host will ensure that it will not initiate any broadcast command in the middle of a CCCE transaction or a “Ticket In” communication.

7. The gaming machine & host will check for duplicate “Ticket In” transaction by validating the “Unique Identifier” of the ticket. If they are the same the command will be acknowledged and no duplicate entry will be created.

8. The gaming machine will generate a “Ticket In” or “Ticket Out” request only after it has received a time & date synchronisation packet from the host.

9. “Ticket In” will increment the “Cash In” meter in the SDB (Bytes 52 to 56) and “Cashbox” meter in the SDB (Bytes 27 to 31).

10. “Ticket Out” will increment the “Cancelled Credit” meter in the SDB (Bytes 32 to 36), as occurs currently.

11. The gaming machine after RAM clear can be configured either to support “Ticket In” or not. If the gaming machine does not support the CCCE extensions classes, then the gaming machine will transmit MDB datablock according to the current MDB specifications (version 2.01) to support legacy systems. If the gaming machine supports CCCE Extension classes as specified in section 6.6 of New South Wales Gaming Machine Communications Protocol Technical Standards Revision 2.2, then the gaming machine will always transmit MDB datablock according to the requirements specified in this document. However, bit 0 of byte 99 (Ticket In using Port 1 Supported) will not be set when the gaming machine is configured with “Ticket In” disabled.

12. The gaming machine will not accept any tickets inserted which has a value less than the minimum bet value of the gaming machine. The gaming machine will reject these tickets as soon as it receives the 71H response from the host. The gaming machine will not transmit 71H echo to the host in this instance. Following this, the gaming machine will send a peripheral MDB with Byte 15, bit 4 ("Ticket Rejected - Ticket value less than BCV). As soon as the host receives the Peripheral MDB with Byte 14, bit 5 "Printer Valid Ticket In Data" set to 1 and the above error bit set, the host must assume that the gaming machine has rejected the ticket since the value is too low. This bit will be reset when the next ticket in command (70H) is initiated by the gaming machine**.**

13. For a ticket with a value greater than the gaming machine’s minimum wagering denomination, but not divisible by the gaming machine’s minimum wagering denomination, is inserted into the gaming machine, the gaming will display the total value of the ticket including the residual amount against the credit meter displayed in dollars & cents. The player must be able to collect any residual amount less than the minimum credit value by printing a ticket for this amount or by performing a cancel credit for this amount.

14. During the time that the gaming machine is communicating with the Host System for validation information on a player initiated transaction, the gaming machine shall display a message informing the patron of the pending nature of the ticket validation process.

15. If either the gaming machine is unable to validate a ticket presented for redemption, or unable to communicate the information, the gaming machine shall return the ticket to the patron, and shall display an appropriate message to the player.

16. The gaming machine will set the “Ten consecutive rejects” error bit (Byte 15 bit 2 of MDB1) when the gaming machine has rejected ten consecutive tickets presented for redemption. This bit will be cleared on the next instance when the gaming machine is able to redeem a ticket. The host will log this error. This counter will be reset to zero on any time the gaming machine is able to correctly redeem a ticket.

17. The gaming machine will set the “Miscellaneous error in ticket redemption” error bit (Byte 15 bit 3 of MDB1) under any other error conditions associated with ticket redemption.

18. The gaming machine will have capability to display full information on the last 35 tickets printed, accepted and rejected. A minimum of the last two tickets printed, accepted and rejected must be stored in the gaming machine's critical memory.

19. The system will authorize and allow the Gaming machine to accept only legitimate tickets printed on the current trading date and the previous trading date. Any legitimate tickets older than the current and previous trading dates can only be cashed out at the Cashier booth.

20. The gaming machine must have a capability to display the "Total amount for Ticket Printed (Ticket Out) in with cents meter, Bytes 115 to 119 of peripheral MDB" and "Total amount for Ticket Accepted (Ticket In) in with cents meter, Bytes 120 to 124 of peripheral MDB" meters in the audit screen.

21. The command types 71H & 72H are packets similar to the current CCCE packets. The gaming machine must accept 72H command only if the contents of the packet 71H matches with that in the 72H. If any of the fields are different, (except command class & checksum) this command will not be accepted as a valid command.

22. The amount field in 71H will be zero in all instances except when the ticket is being authorized by the host.

23. All TITO specific (70H/71H) packets are transmitted by the gaming machine through port P1 only.

24. The host systems that support TITO capability are expected to echo the time in the packet 70H into packets 71H & 72H while sending responses to the gaming machine.

25. The MDB valid "Ticket In" flag will be set to one after the RAM clear.

26. A configuration option where the machine will output MDB version number of 1.01 even when it is outputting all parameters required to support interfacing with link controllers supporting CCCE extension capabilities as specified in NSW Communication protocol version 2.2 is recommended to enable the EGM to be interfaced with legacy host systems in a non-TITO environment.

27. The EGM is expected to send a MDB with "Ticket stacking completed" bit set to low (zero) as soon as it receives 72H (phase 2) from the host (Command to accept the ticket). The ticket stacking is expected to be completed within a maximum period of ten seconds. After the stacking is completed the EGM is expected to send a MDB with "Ticket stacking completed" bit set to high (one) along with the updated meters. The host will wait for a maximum period of 10 seconds to receive an MDB with the "Ticket stacking completed" bit to high (one) after receipt of a MDB with this bit set to low. If the host does not receive this MDB with this bit set to high (one) within this period, it will lock the EGM using port P1 SEF and will send an appropriate message to the audit trail. One of the suggested methods of unlocking the EGM from this condition is by inserting an attendant card in the PTM. Alternatively in small venues where the EGM does not have a PTM, this may be achieved by a function from the host.

6. Peripheral MDB Specifications

Information is to be encoded in packed BCD format except in cases where it is impractical to apply this technique eg Start of block, all configuration, status & implementation bytes and the unique identifier field of the ticket.

Byte 1 (FF) - Start of block (unique byte)

Byte 2 (22) - Manufacturer Data Block Identifier

Byte 3 - Manufacturer ID Least Significant Digit LSD and LSD+1. The LSD is to be in the lower nibble.
- The manufacturer ID will be a unique number allocated by the CLGCA.

Byte 4 (00) - Spare currently “00”.

Byte 5 - GMID Least Significant Digit LSD and LSD+1. The LSD is to be in the lower nibble.
Byte 6 - GMID LSD+2 and LSD+3. LSD+2 in the lower nibble.
Byte 7 - GMID LSD+4 and Most Significant Digit (MSD). LSD+4 in the lower nibble.

Byte 8 (A5) - Data block version number LSD and LSD+1. LSD in lower nibble.
Byte 9 (5A) - Data block version number LSD+2 and MSD. LSD+2 in lower nibble.

Byte 10 (05) - MDB Type Least Significant Digit LSD and LSD+1. The LSD is to be in the lower nibble.
Byte 11 (01) - MDB Type LSD+2 and Most Significant Digit (MSD). LSD+2 in the lower nibble. Indicates that this version supports TITO.
_ 0100 Defines the original AGMMA V1.x MDB for the Bill Acceptor
_ 0101 Defines the AGMMA V2.x MDB for Peripheral devices.
_ 0103 Defines the AGMMA V3.x MDB for CCCE protocol extension
_ 0104 Defines the AGMMA V4.10 MDB for TITO Support
_ 0105 Defines the AGMMA V4.18 & GTA 4.20 MDB for TITO Support
Byte 10 - 05 means version 5 of MDB and Byte 11 - 01 means Peripheral MDB

Byte 12 - Bill Acceptor Status byte 1
#0 - Bill Acceptor Door Open.
#1 - Bill Acceptor Comms Error.
#2 - Bill Acceptor Failure.
#3 - Bill Acceptor Full.
#4 - Bill Acceptor Stacker Removed.
#5 - Bill Acceptor Out of Service.
#6 - Reserved for Future Use.
#7 - Always Zero.

Byte 13 - Bill Acceptor Status byte 2
#0 - Reserved for Future Use.
#1 - Reserved for Future Use.
#2 - Reserved for Future Use.
#3 - Reserved for Future Use.
#4 - Reserved for Future Use.
#5 - Reserved for Future Use.
#6 - Reserved for Future Use.
#7 - Always Zero

Byte 14 - Misc Status byte 1
#0 - Cash Box Drop Door.
#1 - Paper Low
If the printer can detect the paper low then this bit is to be set to ‘1’ when the printer is running low on paper. This is not a lockup condition.
#2 - Printer Valid “Ticket Out” Data
This indicates that a valid “Ticket Out” Data is being transmitted through port P1.
#3 - Printer Fault
This is set to ‘1’ during a printer fault that requires intervention by authorised personnel. This will put the machine into a lockup state and as such the “Cancel Credit Error” flag in the SDB is also required to be set to ‘1’ when a printer fault occurs.
#4 - Printer Paper Out
When the printer detects the paper is out this bit is to be set to ‘1’ and the GAMING MACHINE is to be placed in a lockup state. The Printer Fault bit above is also to be set to ‘1’ as this is a printer fault.
#5 - Printer Valid “Ticket In” Data
‘0’ means the machine is waiting for response from host for a “Ticket In” request.
‘1’ means the machine is no longer waiting for any response from the host for a “Ticket In” request.

#6 - Always Zero.
#7 - Always Zero.

Byte 15 - Misc Status byte 2
#0 – "Ticket In" Communication Error.
#1 – "Ticket In" Rejected by host.
#2 – Ten Consecutive Rejects.
#3 – Miscellaneous/Manufacturer specific error in ticket redemption.
#4 – Ticket Rejected - Ticket value less than BCV.
#5 – Ticket Stacking Completed.
#6 - Reserved for Future Use.
#7 - Always Zero.

Note: Ticket In Communication Error, Ticket In Rejected by host, Miscellaneous/Manufacturer specific error in ticket redemption & Ticket Rejected - Ticket value less than BCV bits are reset when the next ticket in command (70H) is initiated.

Byte 16 - Number of Bills Inserted $5 meter (LSD and LSD+1). LSD in lower nibble.
Byte 20 - Number of Bills Inserted $5 meter (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 21 - Number of Bills Inserted $10 meter (LSD and LSD+1). LSD in lower nibble.
Byte 25 - Number of Bills Inserted $10 meter (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 26 - Number of Bills Inserted $20 meter (LSD and LSD+1). LSD in lower nibble.
Byte 30 - Number of Bills Inserted $20 meter (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 31 - Number of Bills Inserted $50 meter (LSD and LSD+1). LSD in lower nibble.
Byte 35 - Number of Bills Inserted $50 meter (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 36 - Number of Bills Inserted $100 meter (LSD and LSD+1). LSD in lower nibble.
Byte 40 - Number of Bills Inserted $100 meter (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 41 - Total number of Tickets accepted (LSD and LSD+1). LSD in lower nibble.
Byte 45 - Total number of Tickets accepted (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 46 - Total number of Tickets rejected (LSD and LSD+1). LSD in lower nibble.
Byte 50 - Total number of Tickets rejected (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 51 - Number of Bills Inserted Spare meter 3 (LSD and LSD+1). LSD in lower nibble.
Byte 55 - Number of Bills Inserted Spare meter 3 (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 56 - Total Bills Inserted Dollar Value meter (LSD and LSD+1). LSD in lower nibble.
The Total Bills Inserted Dollar Value meter is in cents.
Byte 60 - Total Bills Inserted Dollar Value meter (LSD+8 and MSD). LSD+8 in lower nibble.
This meter will increment only when bank notes are accepted.

Byte 61 - Total Number of Bills Inserted meter (LSD and LSD+1). LSD in lower nibble.
Byte 66 - Total Number Bills Inserted meter (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 67 - Date of Ticket Print (LSD and LSD+1). LSD in lower nibble.
Date as appearing on the ticket, in ddmmyyyy format, Eg: 25111997 (25/11/97). LSD in the lowest nibble (ie. LSD in low nibble of byte 67 and LSD+1 in the high nibble. MSD in the high nibble of byte 70)
Byte 70 - (LSD+6 and MSD). LSD+6 in lower nibble.

Byte 71 - Time of the Ticket Print (LSD and LSD+1). LSD in lower nibble.
Time in 24hr format. Eg: 230137 (11:01:37pm). LSD in the lowest nibble. (ie. LSD in low nibble of byte 71 and LSD+1 in the high nibble. MSD in the high nibble of byte 73).
Byte 73 - (LSD+4 and MSD). LSD+4 in lower nibble.

Byte 74 - Unique Identifier (LSD and LSD+1). LSD in lower nibble
Refer to the Printer Unique Identifier section later on the following pages. LSD in the lowest nibble. (ie. LSD in low nibble of byte 74 and LSD+1 in the high nibble. MSD in the high nibble of byte 81). Last 2 bytes will be zero filled.
Byte 83 - (LSD+18 and MSD). LSD+18 in lower nibble.

Byte 84 - Amount of the Ticket in cents (LSD and LSD+1). LSD in lower nibble.
Amount in cents (10 digits, 5 bytes). LSD in the lowest nibble. (ie. LSD in low nibble of byte 84 and LSD+1 in the high nibble. MSD in the high nibble of byte 88).
Byte 88 - (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 89 - Sequential Number of the Ticket (LSD and LSD+1). LSD in lower nibble.
The numerical characters from the sequential ticket number that appears in the ticket (10 digits, 5 bytes). LSD in the lowest nibble. (ie. LSD in low nibble of byte 89 and LSD+1 in the high nibble. MSD in the high nibble of byte 93).
Byte 93 - (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 94 - Machine Configuration byte 1
#0 - Hopper Configured.
If the gaming machine has a hopper installed then this bit is set to 1. This indicates that gaming machine can payout of the hopper, it does not indicate if the hopper is enabled or operational.
#1 - Bill Acceptor Configured.
If the gaming machine has a bill acceptor installed then this bit is set to 1. This indicates that the gaming machine can accept bills, it does not indicate if the bill acceptor is enabled and or operational.
#2 - Printer Configured.
If the gaming machine has a printer installed then this bit is set to 1. This indicates that the gaming machine can print various tickets, it does not indicate if the printer is enabled and or operational.
#3 - Reserved for Future Use.
#4 - Reserved for Future Use.
#5 - Reserved for Future Use.
#6 - Reserved for Future Use.
#7 - Always Zero.

Byte 95 - Machine Configuration byte 2
#0 - Reserved for Future Use.
#1 - Reserved for Future Use.
#2 - Reserved for Future Use.
#3 - Reserved for Future Use.
#4 - Reserved for Future Use.
#5 - Reserved for Future Use.
#6 - Reserved for Future Use.
#7 - Always Zero.

Byte 96 - Status 1 byte for CCCE Class *(Note 1)*
#0 - 1 Standard Progressive win Payment Completed.
#1 - 1 Mystery Progressive win Payment Completed.
#2 - 1 CCCE with cents transfer Completed
#3 - 1 Mystery Progressive win
#4 - 0 spare
#5 - 0 spare
#6 - 0 spare
#7 - Always Zero.

Byte 97 - Status 2 byte for CCCE Class
#0 - 0 spare
#1 - 0 spare
#2 - 0 spare
#3 - 0 spare
#4 - 0 spare
#5 - 0 spare

#6 - 0 spare
#7 - Always Zero.

Byte 98 - CCCE Class implementation byte 1
#0 - 1 Standard Progressive win notification implemented.
#1 - 1 Mystery Progressive win notification implemented
#2 - 1 CCCE increment / decrement in cents implemented
#3 - 1 Standard Progressive win payment implemented
#4 - 1 Mystery Progressive win payment implemented
#5 - 1 Standard Progressive game current pool value implemented
#6 - 1 Mystery Progressive game current pool value implemented
#7 - Always Zero.

Byte 99 - TITO Class implementation byte
#0 - “Ticket in” Using Port 1 Supported
#1 - “Time Broadcast” Implemented
#2 - 0 Spare
#3 - 0 Spare
#4 - 0 spare
#5 - 0 spare
#6 - 0 spare
#7 - Always Zero.
---
meter is in cents
Byte 100 - Total amount for Standard Progressive win payment in meter (LSD and LSD+1). LSD in lower nibble.
. Byte 104 - Total amount for Standard Progressive win payment in meter (LSD+8 and MSD). LSD+8 in lower nibble.
---
meter is in cents
Byte 105 - Total amount for Mystery Progressive win Payment in meter (LSD and LSD+1). LSD in lower nibble.
Byte 109 - Total amount for Mystery Progressive win Payment in meter (LSD+8 and MSD). LSD+8 in lower nibble.
---
meter is in cents
Byte 110 - Total amount for CCCE transfer in with cents meter (LSD and LSD+1). LSD in lower nibble.
Byte 114 - Total amount for CCCE transfer in with cents meter (LSD+8 and MSD). LSD+8 in lower nibble.
---
meter is in cents
Byte 115 - Total amount for Ticket Printed (Ticket Out) in with cents meter (LSD and LSD+1). LSD in lower nibble.
Byte 119 - Total amount for Ticket Printed (Ticket Out) in with cents meter (LSD+8 and MSD). LSD+8 in lower nibble.
---
meter is in cents
Byte 120 - Total amount for Ticket Accepted (Ticket In) in with cents meter (LSD and LSD+1). LSD in lower nibble.
Byte 124 - Total amount for Ticket Accepted (Ticket In) in with cents meter (LSD+8 and MSD). LSD+8 in lower nibble.

Byte 125 & 126 (00) - Reserved for future use.

Byte 127 - Checksum lower nibble (0XH)
Byte 128 - Checksum upper nibble (X0)
---

7. Combined Jackpot Pool Updates

The current version of NSW Communication Protocol version 2.2 supports transmission of jackpot pool values through command classes E0 to EF. However, transmission of jackpot pool values individually is a very inefficient method from the point of view of the utilization of the communication bandwidth. The new broadcast pool update will contain a maximum of four levels. The number of jackpot pool levels contained in the broadcast pool update packet will depend upon the jackpot levels supported by the controller. Hence this packet length will vary between 17 bytes to 35 bytes depending upon the number of jackpot pool values included in this packet. Two command classes to transmit broadcast pools values as given below are included:

7.1 Standard Progressive Pool Update

The structure of Standard Progressive Pool Value command is defined as follows:

Byte 1 -FF - Start of block (unique)

Byte 2 -Command Class (60H)

Byte 3 -GMID Least Significant Digit (LSD) and LSD+1. The LSD is to be in the lower nibble
Byte 4 -GMID LSD+2 and LSD+3. LSD+2 in the lower nibble
Byte 5 -GMID LSD+4 and Most Significant Digit (MSD). LSD+4 in the lower nibble

---

Byte 6 -PCID Least Significant Digit (LSD) and LSD+1. The LSD is to be in the lower nibble
Byte 7 -PCID LSD+2 and LSD+3. LSD+2 in the lower nibble
Byte 8 -PCID LSD+4 and Most Significant Digit (MSD). LSD+4 in the lower nibble

---

Byte 9 – Number of jackpot pools updates included in this packet (From 1 to 4)

Byte 10 –Jackpot Level (From 1 to 4)

Byte 11 -Amount LSD and LSD+1. LSD in lower nibble
Byte 12 -Amount LSD+2 and LSD+3. LSD+2 in lower nibble
Byte 13 -Amount LSD+4 and LSD+5. LSD+4 in lower nibble
Byte 14 -Amount LSD+6 and LSD+7, LSD+6 in lower nibble
Byte 15 -Amount LSD+8 and MSD, LSD+8 in lower nibble

Byte 16 –Jackpot Level (From 1 to 4)

Byte 17 -Amount LSD and LSD+1. LSD in lower nibble
Byte 18 -Amount LSD+2 and LSD+3. LSD+2 in lower nibble
Byte 19 -Amount LSD+4 and LSD+5. LSD+4 in lower nibble
Byte 20 -Amount LSD+6 and LSD+7, LSD+6 in lower nibble
Byte 21 -Amount LSD+8 and MSD, LSD+8 in lower nibble

Byte 22 –Jackpot Level (From 1 to 4)

Byte 23 -Amount LSD and LSD+1. LSD in lower nibble
Byte 24 -Amount LSD+2 and LSD+3. LSD+2 in lower nibble
Byte 25 -Amount LSD+4 and LSD+5. LSD+4 in lower nibble
Byte 26 -Amount LSD+6 and LSD+7, LSD+6 in lower nibble
Byte 27 -Amount LSD+8 and MSD, LSD+8 in lower nibble

Byte 28 –Jackpot Level (From 1 to 4)

Byte 29 -Amount LSD and LSD+1. LSD in lower nibble
Byte 30 -Amount LSD+2 and LSD+3. LSD+2 in lower nibble
Byte 31 -Amount LSD+4 and LSD+5. LSD+4 in lower nibble

Byte 32 -Amount LSD+6 and LSD+7, LSD+6 in lower nibble
Byte 33 -Amount LSD+8 and MSD, LSD+8 in lower nibble

Byte 34 -Checksum lower nibble (0XH)
Byte 35 - Checksum upper nibble (X0H)

The checksum is generated by applying modulo 2 addition to each of the bytes 2 to 33.

7.2 Standard Mystery Pool Update

The structure of Standard Mystery Pool Value command is defined as follows:

Byte 1 -FF - Start of block (unique)

Byte 2 -Command Class (62H)

Byte 3 -GMID Least Significant Digit (LSD) and LSD+1. The LSD is to be in the lower nibble
Byte 4 -GMID LSD+2 and LSD+3. LSD+2 in the lower nibble
Byte 5 -GMID LSD+4 and Most Significant Digit (MSD). LSD+4 in the lower nibble
---
Byte 6 -PCID Least Significant Digit (LSD) and LSD+1. The LSD is to be in the lower nibble
Byte 7 -PCID LSD+2 and LSD+3. LSD+2 in the lower nibble
Byte 8 -PCID LSD+4 and Most Significant Digit (MSD). LSD+4 in the lower nibble
---
Byte 9 – Number of jackpot pools updates included in this packet (From 1 to 4)

Byte 10 –Jackpot Level (From 1 to 4)

Byte 11 -Amount LSD and LSD+1. LSD in lower nibble
Byte 12 -Amount LSD+2 and LSD+3. LSD+2 in lower nibble
Byte 13 -Amount LSD+4 and LSD+5. LSD+4 in lower nibble
Byte 14 -Amount LSD+6 and LSD+7, LSD+6 in lower nibble
Byte 15 -Amount LSD+8 and MSD, LSD+8 in lower nibble

Byte 16 –Jackpot Level (From 1 to 4)

Byte 17 -Amount LSD and LSD+1. LSD in lower nibble
Byte 18 -Amount LSD+2 and LSD+3. LSD+2 in lower nibble
Byte 19 -Amount LSD+4 and LSD+5. LSD+4 in lower nibble
Byte 20 -Amount LSD+6 and LSD+7, LSD+6 in lower nibble
Byte 21 -Amount LSD+8 and MSD, LSD+8 in lower nibble

Byte 22 –Jackpot Level (From 1 to 4)

Byte 23 -Amount LSD and LSD+1. LSD in lower nibble
Byte 24 -Amount LSD+2 and LSD+3. LSD+2 in lower nibble
Byte 25 -Amount LSD+4 and LSD+5. LSD+4 in lower nibble
Byte 26 -Amount LSD+6 and LSD+7, LSD+6 in lower nibble
Byte 27 -Amount LSD+8 and MSD, LSD+8 in lower nibble

Byte 28 –Jackpot Level (From 1 to 4)

Byte 29 -Amount LSD and LSD+1. LSD in lower nibble
Byte 30 -Amount LSD+2 and LSD+3. LSD+2 in lower nibble
Byte 31 -Amount LSD+4 and LSD+5. LSD+4 in lower nibble
Byte 32 -Amount LSD+6 and LSD+7, LSD+6 in lower nibble
Byte 33 -Amount LSD+8 and MSD, LSD+8 in lower nibble

Byte 34 -Checksum lower nibble (0XH)
Byte 35 - Checksum upper nibble (X0H)

The checksum is generated by applying modulo 2 addition to each of the bytes 2 to 33.

Revision History

Issue	Date	Reason for Issue
2.00	04/12/97	First Release
2.01	08/12/97	1. Changed the bar code type to Interleaved 2 of 5 2. Changed the Unique Identifier Contents to 6 digits of GMID and 10 digits of date and time in seconds since 01/01/1970. 3. Added the Unique identifier encryption and decryption information. 4. Changed the "Ticket Printing" flag to "Valid Ticket Information" flag. The operational definition has also changed. 5. Added the Representative Sample Tickets. 6. "Venue Name" has become Optional. 7. Changed the size of the machine serial number field to 15 characters. 8. Changed the size of the fields for the "sequential ticket number" and "amount" in the MDB to 5 bytes. 9. Changed the size of the field "Unique Identifier" in the MDB to 10 bytes. 10. Added the Ticket Validation Line.
2.02	17/12/97	1. Added the Customer Identification fields on the ticket.
2.03	17/12/97	1. Increased the space for writing the patron address.
2.04	19/12/97	1. Machine Serial Number is optional.
3.00	4/07/98	1. Updated references to the current CLGCA revisions. 2. Removed the use of SEF 2 signal and introduced the optional use of SEF 4 signal. Updated the related diagram. 3. Introduced better clarification for the use of the "SEF" signals. 4. Removed the "Off-line" ticket printing completely. It will now be based on Cancel Credit notes. 5. Removed the "Ticket Printed Off Line" message on the ticket. 6. Changed the 30 second wait between 2 printed tickets to simply disabling the coin entry and note entry for the duration of the ticket print. 7. Removed the "Bar Code Number Encryption" requirement. 8. Clarified the use of the 8 byte UID in the 10 byte MDB field. 9. Removed the sample Tattersalls Ticket.
3.01	7/07/98	1. Removed references to a "draft" standard, since the standards are current. 2. Corrected the range of the time, to year 2054.
3.02 Rev 1	29/07/98	1. Removed recommendation re Cancel Credit procedure 2. Shutdown line to be compulsory 3. $10,000+ ticket expanded 4. Changed Cancel credit procedure to allow ticket to be printed by the intervention of an attendant. 5. Changed Ticket contents to correctly indicate the details on the ticket. 6. Included Firmware Id details for ticket. 7. Venue line & serial No line to be left blank. 8. Added attendant intervention ticket. 9. Change the word site to State in GMID. 10. Added the amount to also be printed in written format. 11. Included Bar Code information under Bar Code instead of as a separate appendix. 12. Included Sample Attendant ticket. 13. Included Tattersalls Ticket Sample
3.02 Rev2	10/08/98	1. Inclusion of a Random Number in the Unique Identifier
3.03	22/09/98	1. The Random number is included in the sequential ticket

		number. 2. Hopper/Printer section included. 3. "Attendant Cancel Credit" ticket and a procedure introduced. 4. Sample Tattersalls ticket removed. 5. Shutdown line to be Optional.
3.04	28/09/98	1. Updated the mode of operation section. Clarified various options.
3.05	20/10/98	1. Changed all references to "Central Monitoring System" to be "Host System", in line with the discussion with the CLGCA. 2. The Real time clock availability in the ticket printer machines is compulsory 3. Specifically state that all pay out mechanisms is available through a ticket printer machine. 4. Clarified the functionality of the machine during a printer fault.
3.06	23/11/98	1. Clarified the reference sources. 2. Clarified the
3.07	26/11/98	1. Included the specifications for residual gamble on hopper & printer machines. See Section
4.00	31/03/03	1. Added Ticket In / Ticket Out Specification. 2. Added the CCCE and MDB modifications for the TITO machines. 3. Added the on-screen messages for rejected tickets. 4. Removed the requirement for the connection to an approved system for "Ticket Out" only machines 5. Added the G-Line number. 6. Added Bar Code number printing.
4.01	08/04/03	1. Updated Ticket in MDB 2. Added Money In meter to Ticket In MDB.
4.02	11/04/03	1. Interim Ticket In implementation. This means no special CCCE definition. Use the current CCCE definition. 2. Residual Ticket Value is handled by printing a "whole dollar" ticket with a residual in the credit meter. 3. Include the 100 ticket accepted in the audit mode. 4. Removed the "00-99" Random number requirement for the sequential ticket number to be consistent with the field implementation.
4.03	11/08/03	1. Removed all reference to "Attendant Cancel Credit" ticket. 2. Changed number of tickets accepted and rejected in Audit mode to 5. 3. Reason removed from tickets rejected in Audit mode.
4.04	22/01/04	1. Include National Standard 7 changes.
4.05	18/04/06	1. Update for TITO requirements. 2. Update Standards versions. 3. Update MDB definition. 4. Update for single and dual copy ticket printers 5. Removed requirement for converting Tickets to whole $ amounts and printing multiple tickets.
4.10	11/05/06	1. Incorporated changes to support Ticket In communication using new command classes.

4.11	23/05/06	1. Included specifications for the display of clock in section 3.2.2 2. Added points 19 & 20 in section 4. 3. Modified point 18 in section 4. 4. Corrected minor typos
4.12	25/05/06	1. Description of point 12 in section 4 modified. 2. Byte 15, Bit 4 error code added.
4.13	25/05/06	1. In point 7, section 4 , changed the description of “Sequence Number” to “Unique Identifier”
4.14	25/05/06	1. Corrected typo in section 4, point 18; changed from “Stores” to “Stored”
4.15	16/10/06	1. Detailed specifications for Ticket layout included. 2. Clarifications provided earlier included. 3. Jackpot broadcast pool packets added.
4.16	20/10/06	1. Firmware ID & Venue name changed in Sample ticket. 2. MDB Version number in byte 10 changed 05 (Version changed 1.05) 3. Paragraph 3 added in section 1 (Introduction)
4.17	24/10/06	1. Date format updated in the Sample Ticket
4.18	02/01/07	1. Added range for font sizes 2. Modified MDB transmission requirements when gaming machine is installed with ticket in disabled (section 5 point 11)
4.20	01/09/10	1. Incorporates corrections given in clarification document 2. Changes LAB to CLGCA 3. Changes the G line information 4. Changes ticket limit to $2000 5. Minor clarification for MDB Byte 14