Atronic
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e-motion Hi(!)bility™ / Cashline™

Ticket IN - Ticket OUT

Rev. 1.0

April 2004

www.atronic.com

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Ticket In - Ticket Out (TITO) for Atronic International

This document aims to give an overview how to set up Atronic Video Slot Machines for various TITO applications. It refers to recent TITO supporting software applied by Atronic International (RoW).

Please read this manual and clarify settings **BEFORE** starting the configuration process. Initial Setup settings may interact with PC-Setup settings. Later configuration changes need a RAM reset.

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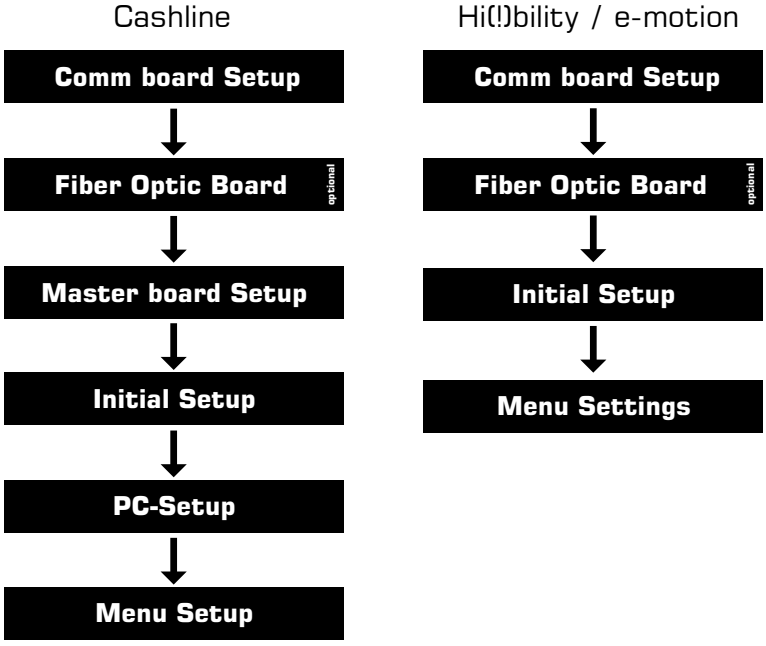
***Note**:*
This document includes information relevant primarily to TITO setup. Please refer to manual modules "Software" and "Operating" for more detailed information.

Introduction

An Atronic machine that is configured for TITO can vend tickets (coupons), printed by a thermal ticket printer, instead of **or** in addition to Hopper pay-outs. These tickets can be redeemed either by inserting them into another machine configured for TITO or by "Cashing In" the tickets. When a ticket is inserted into an gaming machine configured for TITO, the accordingly amount of credits is booked to the machines Credit Meter upon ticket validation.

Configuration Overview



Ticket Types

CASHOUT TICKET
After the Cashout button has been pressed, the machine prints a CASHOUT TICKET for the amount of cashable credits. The bar code is centered.

CHANGE TICKET
If $1 machine accepts a ticket for $2.25, the machine gets 2 credits to the credit meter and prints a CHANGE TICKET for $0.25. The bar code is centered.

Machine Requirements

- **Thermal Ticket Printer**
  Atronic International currently uses Ticket Printers from Seiko Instruments™ and Ithaca™.
  Cashline machines uses Seiko PSA-66 printers only.
  Current approved Seiko firmware version is SR.2.4.0

- **Bill Validator**
  The bill validator has to be equipped with a barcode supporting firmware. A currency specific bill table file (*.BT1) is needed for PC-Setup.

***Note**:*
A JCM™ Firmware version subindex higher than "06" indicates barcode support (e.g. Ver.1.34-19).

- **Atronic Comm Board 68k V2.10**
  Needed for online system communication.

- **Comm Key**
  A Comm Key is necessary to enable ticket redemption. Hi(!)bility machines must use CommKey-A-01.

- **Fiber Optic Board (optional)**
  The Atronic Fiber Optic Board is necessary to link the machine into a fiber optics network used by systems such as IGT's EZ-Pay™ ticketing system.

- **TITO supporting Main and Comm software**
  Cashline machines:
  - P-Level Main software "USI" version with selectable $1200 limit. See RN-04-047-01 for details.
  - Comm software P_S5-MB-STD_-B-08A or P_09-MR-STD_-_-08A.

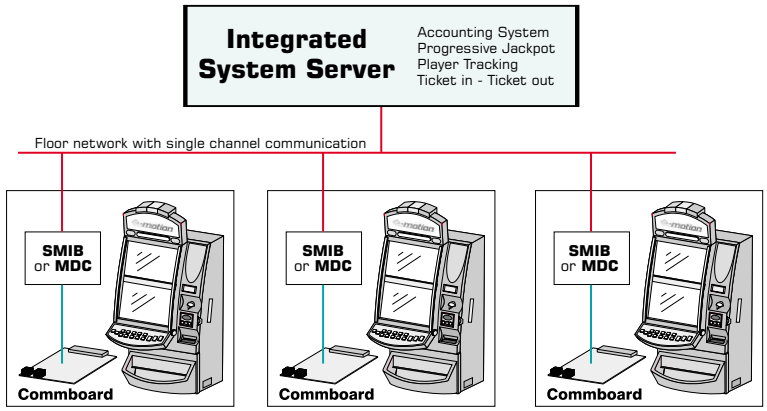
  Hi(!)bility / e-motion machines:
  - Comm software Q_S5-MG-STD_-B-08A

***Note**:*
Recent software versions at time of document creation. Later versions may apply, too.

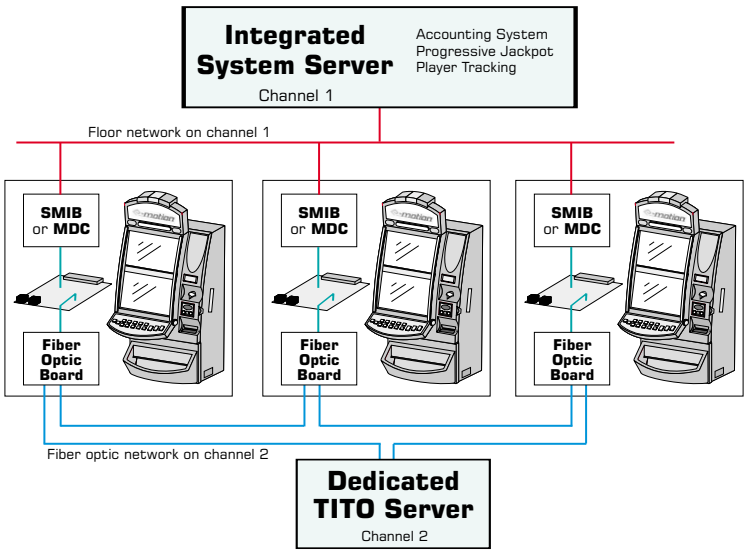
- **Mounting kits**
  Please refer to cabinet and printer specific mounting instructions for details.

- **Accounting System Brackets** (WBC only)
  Atronic WBC cabinets need specialized accounting and player tracking system brackets for ticket printer installations. Machines with 2.5" brackets also need an additional (Topbox) spacer to convert to 3" brackets. Please refer to cabinet specific mounting instructions for details.

Single wire and 2 wire TITO systems



Single wire / Single channel
In a single wire / single channel environment all system communications runs on a single network wire. Applications such as Accounting, Progressive Jackpot, Player Tracking and TITO are handled by an integrated system server.



2 wire system
In a 2 wire environment there are two discrete lines. Applications, such as Accounting, Progressive Jackpot and Player Tracking, handled by an integrated system server, are communicating via standard (ethernet) network on SAS channel 1. The dedicated TITO system is connected via discrete fiber optic network, communicating on SAS channel 2.

Fiber Optic Board

To connect the machine to a fiber optic 2-wire TITO environment, it is necessary to have an Atronic Fiber Optic Board installed. The Fiber Optic Board converts signals from RS232 (typical) or Current Loop (TTL) to fiber optic and vice versa.

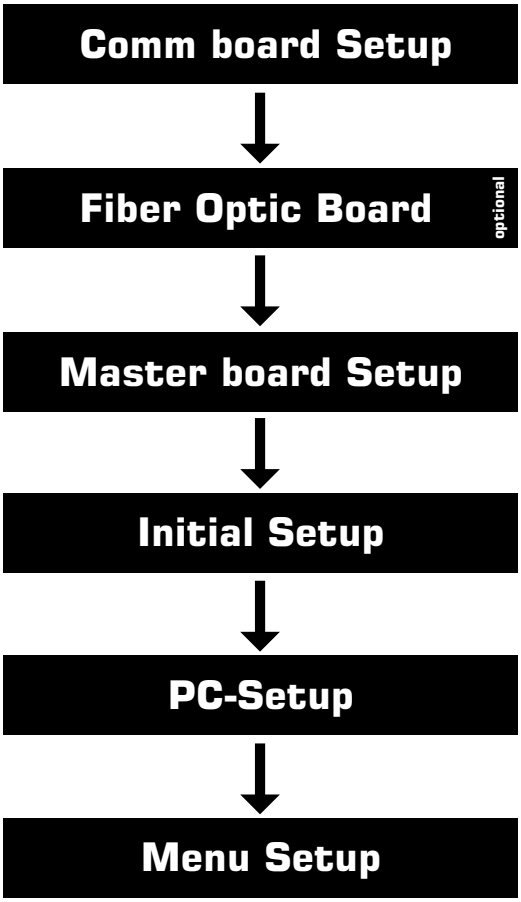
The 68k Comm board will need software capable of Dual Channel communication and the board itself configured for Dual Channel communication.

The Fiber Optic Board is available as a 110V or a 230V kit. The Atronic Fiber Optic Kit includes:

- 1 Atronic Fiber Optic Board
- 1 power supply
- 1 RS232 ribbon cable
- 1 fiber optic cable

TITO Settings

Cashline machines



Comm Board 68K Setup / Cashline

Check which Comm software is installed. Comm software versions P_S5-xx-xxx and version P_09-MR-STD_-_-08A (next page) **use different DIP settings!**

Comm Board Configuration / P_S5-xx-xxx versions

This chapter refers to (SAS) Comm board software version **P_S5-MB-STD_-B-08A** (new naming).

1. Check if all pre-requirements are fulfilled

2. Set the machines accounting system addresses. Each machine must have a unique address. Adress range is 01 to 99. Dual Channel communication is automatically enabled when a System Adress other than 00 is selected on Channel 2 rotary switches S3 and S4.

3. Set DIP switch S5 / 6 to ON
   to enable the accounting system communication.

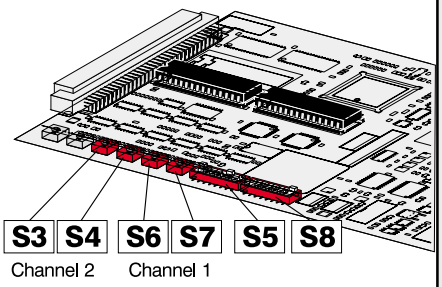
4. *For dual channel mode only*:
   Allocate communication functions to channel 1 or channel 2 with DIP-switches S8 / 2 - 6.
   TITO = Coupon (Switch S8 / 6)

DIP switch bank S8								Affected LongPolls		
1	2	3	4	5	6	7	8	**Channel Allocation Table**		
	Off							Prog JP	Chan 1	0x80, 0x86
	On							Prog JP	Chan 2	
		Off						EFT	Chan 1	0x22 to 0x26, 0x28, 0x29
		On						EFT	Chan 2	0x62 to 0x67, 0x28, 0x29
			Off					Bonus	Chan 1	0x2E, 0x8A, 0x8B
			On					Bonus	Chan 2	
				Off				Control	Chan 1	0x03 to 0x07, 0x0A to 0x0C
				On				Control	Chan 2	0x94, 0xA8
					Off			Coupon	Chan 1	0x4C, 0x4D 0x57, 0x58, 0x70, 0x71
					On			Coupon	Chan 2	0x7D (Exp 0x3F, 0x57, 0x67, 0x68)
						Off				CB sends Total drop meter to host
						On				CB sends Coin drop meter **
							On			Message if accountingsystem isn't connected
							Off			No message if accountingsystem isn't connected

5. Set DIP switch S8 / 8 to ON (optional)
   to enable a machine lock and an on-screen message, in the case of a loss of communication to the accounting system.

Proceed on page 10

Setting Accounting System Addresses



Address on channel 1 (SAS)
S6: x10 digit
S7: x1 digit

Address on channel 2 (SAS)
S3: x10 digit
S4: x1 digit

Address 00 disables channel

Example:
Set Channel 1 to address 01
S6 = 0, S7 = 1

Set Channel 2 to address 23
S3 = 2, S4 = 3

Comm Board 68K Setup / Cashline

Comm Board Configuration using P_09-MR-STD_-_-08A Comm software

This chapter refers **exclusively** to (SAS) Comm board software version **P_09-MR-STD_-_-08A**.

1. Check if all pre-requirements are fulfilled

2. Set DIP switch S5 / 6 to ON
   to enable the accounting system communication.

3. Set to single or dual channel mode
   Set S8 / 1 to OFF for single channel mode.
   Set S8 / 1 to ON for dual channel mode.

4. Set channel allocation for dual channel mode
   Allocate communication functions to SAS channel 1 or channel 2 with DIP-switches S8 / 2 - 6.

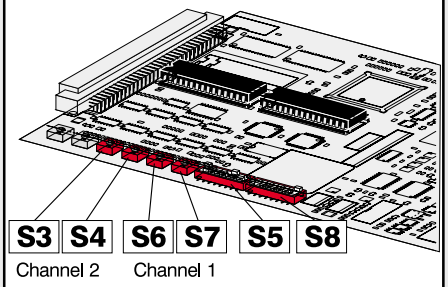
DIP-switch S8								Function	Affected Long Polls and exeptions
1	2	3	4	5	6	7	8		
OFF	-Ignored-							**Single channel**	
ON	-See below-							**Dual Channel**	
ON	OFF							Prog. Jackpot Channel 1	0x80, 0x86
ON	ON							Prog. Jackpot Channel 2	
ON		OFF						EFT Channel 1	0x22 to 0x26, 0x28, 0x29 0x62 to 0x67, 0x28, 0x29
ON		ON						EFT Channel 2	
ON			OFF					Bonus Channel 1	0x2E, 0x8A, 0x8B
ON			ON					Bonus Channel 2	
ON				OFF				Control Channel 1	0x03 to 0x07, 0x0A to 0x0C 0x94, 0xA8
ON				ON				Control Channel 2	
ON					OFF			Coupon Channel 1	0c4C, 0x4D, 0x57, 0x58, 0x70, 0x71 0x7D (Exp. 0x3F, 0x57, 0x67, 0x68)
ON					ON			Coupon Channel 2	
x							OFF		CB sends Total drop meter to host
x							ON		CB sends Coin drop meter (BALLY)

5. Set machines accounting system addresses
   Each machine must have a unique address. Adress range is 01 to 99.

Proceed on next page.

***Note**:*
Comm software versions P_09-MR-MIS_-_-08A and P_09-MR-NC_-_-08A are using DIP settings as described on page 8.

Setting Accounting System Addresses



Address on channel 1 (SAS)
S6: x10 digit
S7: x1 digit

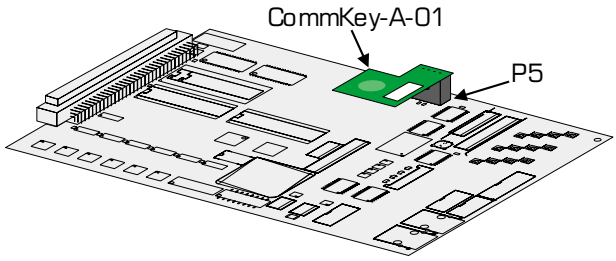
Address on channel 2 (SAS)
S3: x10 digit
S4: x1 digit

Example:
Set Channel 1 to address 01
S6 = 0, S7 = 1

Set Channel 2 to address 23
S3 = 2, S4 = 3

Comm Board 68K Setup / Cashline

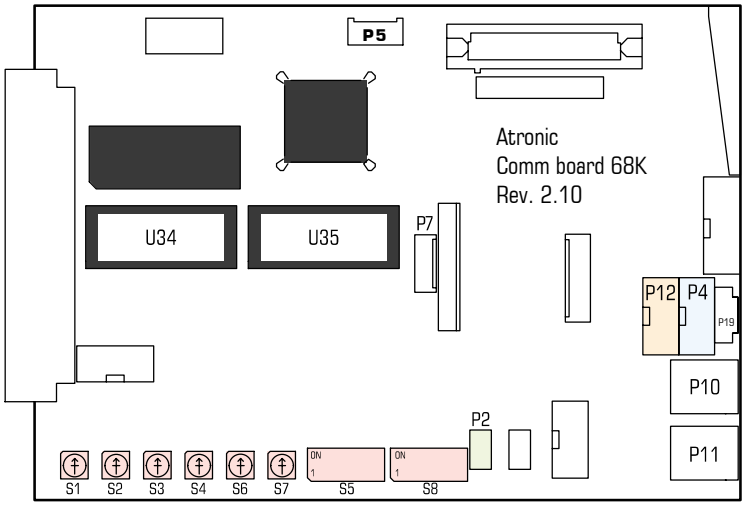
6. Install a Comm Key Dongle to Comm board P5 connector, to enable Ticket In functionality.



7. Re-install Comm board and connect to SMIB or Fiber optic board (next page).

P12 = SAS Channel 1 - RS232 Interface
P4 = SAS Channel 2 - RS232 Interface

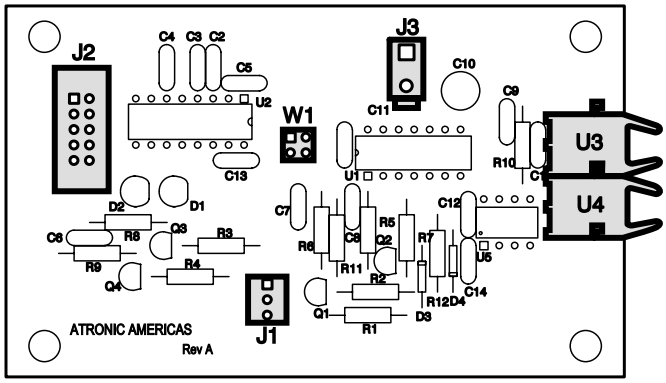
P2 = SAS Channel 1 - Current Loop Interface
(used with Mikohn SMIB and UPT-Harness)
P19 = SAS Channel 2 - Current Loop Interface



Fiber Optic Board - Setup

Fiber Optic Board Setup (RS232 mode)

The Fiber Optics Board can be configured to communicate either on SAS channel 1 or on channel 2.



1. Make sure Comm board is set to Dual channel mode and TITO communication is set to desired channel.
   - Channel 1 Set DIP Switch S8 / 6 to OFF
   - Channel 2 Set DIP Switch S8 / 6 to ON

2. Set Jumper **W1** to RS232 mode (Pins 1 & 2)

3. Connect RS232 Cable from Fiber Optic Board **J2** to the Comm board.
   - Channel 1 Connect to Comm board **P12**
   - Channel 2 Connect to Comm board **P4**

4. Connect the Fiber Optic Board power supply to **J3.**

5. Connect the transmitting fiber optic cable (the one that is lit) to **U3** (fiber optical receiver terminal).

6. Connect the fiber optic cable from the Fiber Optic Board kit to **U4** (fiber optical transmitter terminal) and run it to the next machine or to the TITO system.

All fiber optic connections from the Fiber Optic Boards and the TITO system must complete a loop in order for the TITO system to communicate.

Note:
See also fiber optics wiring overview on page 38.

Note:
The fiber optic cable that is transmitting is coming either from the TITO system or another machine.

The fiber optic cable ends and transmit and receive terminals are color-coded.
Grey to Grey
Blue to Blue

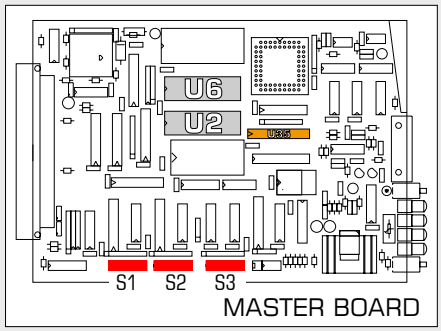
Master Board Settings / Cashline

This chapter is for Cashline machines, only.

Necessary settings

These settings are necessary to have TITO working.

Switch	Set	Description
S2 / 4	ON	Bill validator is enabled
S3 / 8	OFF	Value of accepted bill is added to the credit meter.



Standard settings

These settings are standard settings for most environments and can be altered, if necessary.

Switch	Set	Description
S1 / 2	ON	Hopper must be refilled, if empty.
S1 / 3-4	OFF	Pay maximum payout limit from Hopper. Rest is hand pay.
S1 / 7-8	OFF	Inserted coins are added to the credit meter. No IN meter displayed.
S2 / 1	OFF	Add win amount to credit meter.
S2 / 3	ON	Hopper jam must be cleared
S2 / 5	OFF	GM pays top prize amount accourding to pay table.
S2 / 8	OFF	Top light with 3 lamps.
S3 / 7	ON	GM locks with error message, in case of a coin diverter malfunction.

Leave all other switches to OFF.

Initial Setup / Cashline

Some settings during Initial Setup are necessary to have TITO applications working. Some settings are optional.

- **Revert to hopper feature** (optional)

  If ENABLED a hopper pay out will be forced, in case of a printer error.
  If DISABLED, the machine locks in case of a printer error and *Call Attendant* is displayed.

- **Commboard required** (necessary)

  Set to YES in an TITO environment.

- **(On-screen) Cashout Options** (optional)

  If "Tipping Money" is enabled, players can cashout a tip. This tip can be cashed out either by hopper or ticket. A Cash Tip (paid by hopper) has to be smaller or equal to the "Hopper Payout Limit" or the "Ticket Base Value" (if pay mode is set to TICKET 2 within PC-Setup).

  If "(On-screen) Cashout Options" is enabled, players can decide how the cashout is splitted into coins and ticket. All previous pay mode settings made during PC-Setup can be overruled by players choice. The maximum hopper payout is still limited by the "Hopper Payout Limit" setting.

- **Set Billacceptor Type** (necessary)

  Set to "JCM", if a JCM™ WBA bill acceptor is installed (typical).

- **Residual Credits Payout** (optional)

  This setting only affects, if PC-Setup option "Residual Credits" is set to HOPPER. In this case residual credits are handled as adjusted in this menu.

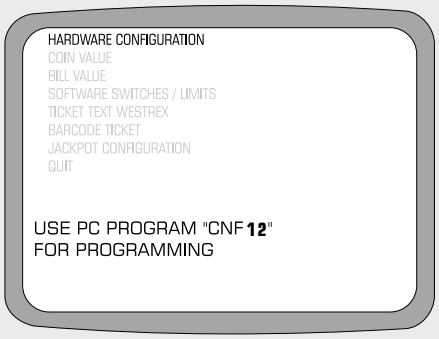
Other settings during Initial Setup do not affect TITO.

***Note**:*
Some settings made during Initial Setup, interact with settings which will be made later during PC-Setup.

PC-Setup / Cashline

The machine routine "PC-Setup" has to be carried out to setup hardware and software for TITO application. A notebook with Atronic configuration software "CNF12.exe" installed, has to be connected to the machine for setup.

After initial setup has been completed the machine will automatically start the PC-Setup screen. Do not skip this section! With P-Level main software installed, PC-Setup can only be run once, directly after initial setup! Further changes will need a RAM Reset.



The PC-Setup start screen

The "CNF12.exe" start screen.

PC-Setup versions

The information in the lower left hand corner of the PC-Setup start screen indicates which configuration software version to use on your notebook. Current main software with TITO support uses "CNF12.exe".

PC-Setup procedure overview

1. With the notebook switched off, connect the PC-Setup Dongle G/E 0300 to the printer port.

2. Power up notebook and run it in DOS mode.

3. Connect the PC Setup cable to the RS232 connector on the Main Board and then connect the other end to the notebook serial port (COM1).

4. Select the directory in which the "CNF12.exe" program is installed and start the program.

5. Carry out "Hardware Configuration", "Bill Values", "Software Switches / Limits" and "Barcode Ticket" configuration, as described on next pages. Use Receive and send procedure.

   Menu items "Coin Values" and "Ticket Text Westrex" are not used for TITO configuration.

Receive and send procedure

1. When entering any configuration page, press "F1" on your notebook to receive current configuration.

2. Alter settings.

3. Press "F2" to send altered settings to the machine.

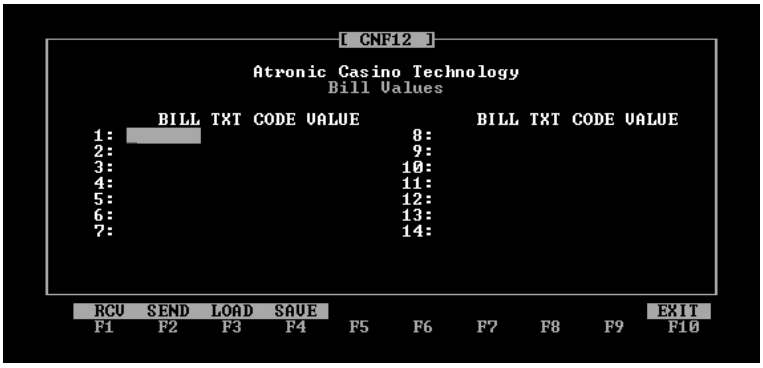
PC-Setup / Cashline

Hardware Configuration

This routine allows configuration of the machine according to the actual installed hardware like coin and bill acceptor, hopper and ticket printer.

1. Set "Coin Acceptor" to YES, if applicable.
2. Set "Bill Acceptor" to YES.
3. Set "Hopper" to YES, if applicable.
4. Set "Ticket Printer" to SEIKO SEIKO TPL.

Bill Values



Use the bill table file (*.BT1) that came with the JCM™ bill acceptor firmware to configure the bill table.

1. Press F3 and load a bill table file (e.g. EURO.BT1).
3. Press F2 to send the bill table to the machine.

Machines configured to US-$ (default) need no bill table configuration.

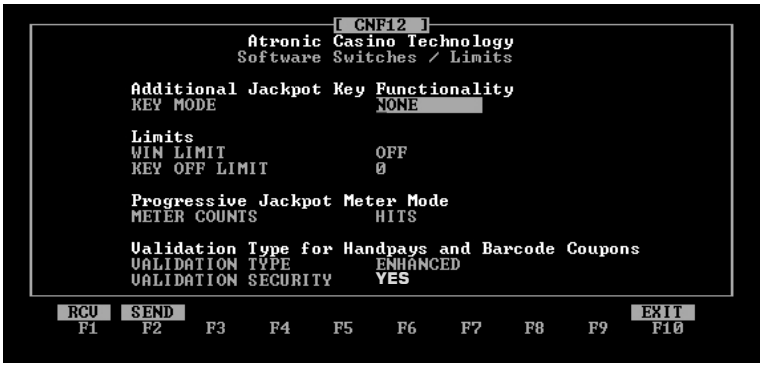
Receive and send procedure

1. When entering this page press "F1" on your notebook to receive current machine configuration.
2. Alter settings.
3. Press "F2" to send altered settings to the machine.

Note:
A Ticket Printer can be used together with a hopper.

PC-Setup / Cashline

Software Switches / Limits



This routine allows to set a "key off limit", to set the "Jackpot Meter mode" and to set the "validation type for handpays and barcode coupons".

1. Leave "Key Mode" to NONE.
   Any other setting will be ignored by the machine.

2. Set ($1200) "Win Limit" to OFF (default) or ON, according to jurisdictional needs.

3. Set "Key Off Limit", if needed.

   "0" or **"None":** The machine prints the ticket without any check of the current payout amount.

   Higher than "0": The machine checks wether the payout amount is higher than the key off limit. If so, the machine locks and the ticket has to be confirmed by turning the jackpot key. After printing the ticket, the machine returns to game mode. If the payout amount is below the limit, the machine prints out the ticket immediatly.

4. Set "Progressive Jackpot Meter Mode".
   Select HITS or VALUE to be counted on the Jackpot hardmeter (mechanical meter 6).

5. Set "Validation Type for Handpays and Barcode Coupons", according to TITO host system settings. Detailed description of "Validation Types" and "Validation Security" on next page.

Receive and send procedure

1. When entering this page press "F1" on your notebook to receive current machine configuration.

2. Alter settings.

3. Press "F2" to send altered settings to the machine.

***Note**:*
Setting for most TITO systems:
Validation Type - ENHANCED
Validation Security - ON

PC-Setup / Cashline

Software Switches / Limits (continued)

Validation Types
Set Validation Type and Validation Security according to TITO host system settings.

NONE
Do not use this setting in an TITO environment.

When is NONE used?
Used for non-online accounting procedures (Westrex printer).

STANDARD
The Comm board creates a 8-digit validation number upon ticket request and stores it in memory. When the validation number is verified valid (and stored) by the TITO host system the ticket is valid.

When is STANDARD used?
When an accounting system has TITO functionality. Setting not recommended.

ENHANCED
The Comm board creates a 16-digit validation number upon ticket request and stores it in memory. When the validation number is verified valid (and stored) by the TITO host system the ticket is valid. To create a enhanced validation number, a validation ID and a validation sequence number must maintain in memory.

When is ENHANCED used?
Typical setting if an accounting system has TITO functionality or a dedicated TITO host system is used. Used with most SAS based TITO systems

Validation Security:

NO: The validation number can be stored in a buffer, before it is fetched by the TITO host. Machine is playable without validation ID set.

***Note**:*
Enhanced Validation also allows validation of handpays.

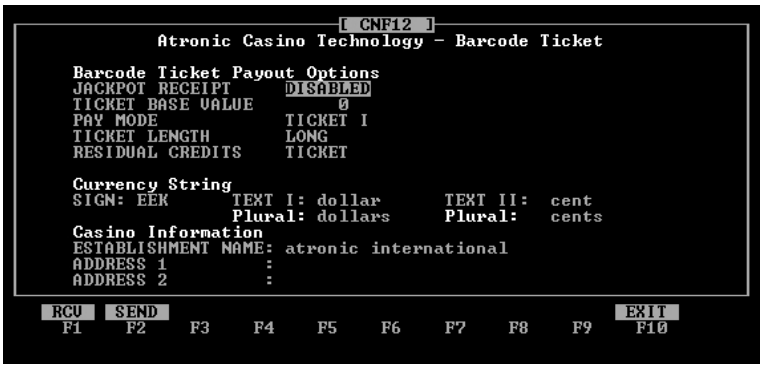
YES: (Typical setting) The TITO host system fetches the validation number from the Comm board immediately upon ticket request. The validation number has to be verified valid and sent back to the Comm board, before the ticket can be printed. The machine will remain locked until a validation ID and a starting sequence number is set by the TITO host system (upon machine power up).

SYSTEM
Tickets require a 16-digit validation number plus a 2-digit validation system ID supplied by the accounting system at the time of the cash out. In this mode the Comm board may refuse validation, e.g. when the link to the accounting system is disabled. If validation is not possible, the machine will tilt and force a Handpay. Setting Validation Security has no effect.

When is SYSTEM used?
When the accounting system supplies the validation number for a ticket.

PC-Setup / Cashline

Barcode Ticket



This routine allows configuration of ticket handling.

Jackpot Receipt:

Set to ENABLED or DISABLED (default).
If set to ENABLED, a Jackpot reicept is printed when a (Jackpot) handpay is reset by the attendant. The reicept is intended for casino internal accounting use only and is not cashable or playable. System validation does not support Jackpot receipts

Ticket Base Value:

- TICKET BASE VALUE = 0:
  All credits will be printed on a ticket. Automatically set, if Pay Mode TICKET 1 is selected.

- TICKET BASE VALUE = 1:
  All Credits up to the HOPPER LIMIT are paid via hopper. The rest is printed on a ticket. Automatically set if Pay Mode HOPPER 1 is selected.

- TICKET BASE VALUE **greater than** 1:
  Hopper pays up to the TICKET BASE VALUE. The rest is payed by ticket. This allows ticket values to be rounded to multiples of certain values, to prevent residual credits when the ticket is redemptioned by a machine with different denomination.

For example: If TICKET BASE VALUE is set to 100 credits and In-Multiplier is 10, only tickets with values of $10, $20, $30 ... will be printed.

Receive and send procedure

1. When entering this page press "F1" on your notebook to receive current machine configuration.

2. Alter settings.

3. Press "F2" to send altered settings to the machine.

Note:
A printed Jackpot receipt will not change the metering of the handpay.

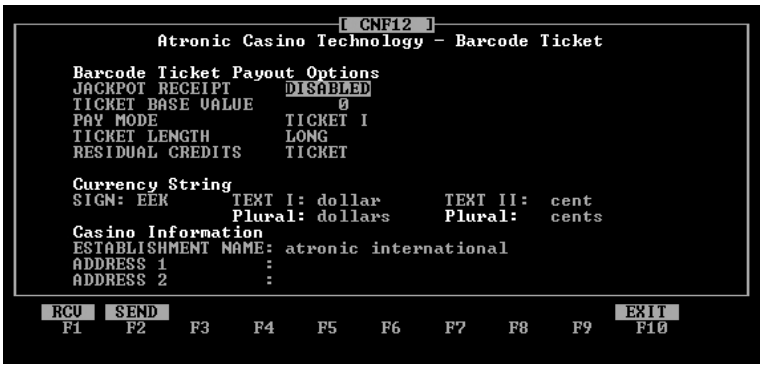
***Note**:*
Examples of different Ticket Base Value settings can be found on pages 33 - 35.

***Note**:*
TICKET BASE VALUE has to be smaller than HOPPER PAYOUT LIMIT.

***Note**:*
If the machine is tokenized and RESIDUAL CREDITS is set to TICKET, the residual credits are added to the ticket amount. This may result in tickets with odd values.

PC-Setup / Cashline

Barcode Ticket (continued)



Pay Mode

The "Pay Mode" determines how a pay out is splitted into Ticket- and Hopper pay outs. The pay mode of residual credits has to to be set separately.

- TICKET 1
  All credits (incl. residual) are paid by a ticket. TICKET BASE VALUE is automatically set to 0.

- TICKET 2
  All credits up to the next TICKET BASE VALUE are paid by the Hopper. The rest is printed on a ticket.

- HOPPER 1
  The Hopper pays up to the Hopper Limit. The rest is printed on a ticket. TICKET BASE VALUE is automatically set to 1.

- HOPPER 2
  If the pay out is below HOPPER PAYOUT LIMIT:
  All credits are paid via Hopper.

  If the pay out is above HOPPER PAYOUT LIMIT:
  A ticket rounded to a (maximal) multiple of the TICKET BASE VALUE is printed. The rest is paid via hopper.

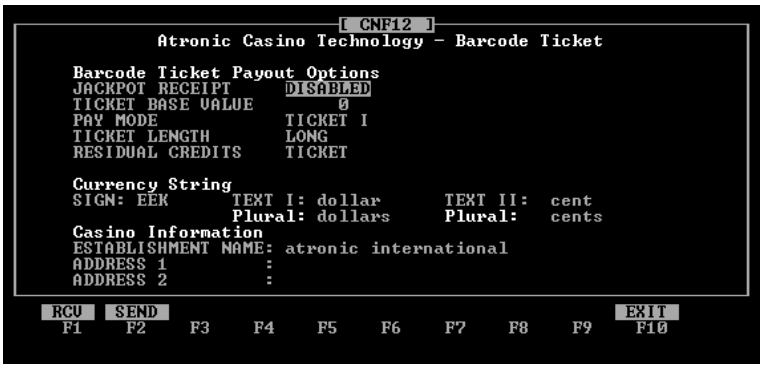
If selecting TICKET 2 or HOPPER 2, it is necessary to set a TICKET BASE VALUE. If no TICKET BASE VALUE is configured, the machine will automatically set a TICKET BASE VALUE equal to the In-Multiplier.

***Note**:*
Examples of different Pay Mode settings can be found on pages 33 - 35.

***Note**:*
See also page 21 for HOPPER PAYOUT LIMIT configuration.

PC-Setup / Cashline

Barcode Ticket (continued)



Ticket Length:

Do allways set "Ticket Lenght" to LONG.

Residual Credits:

- HOPPER
  Residual credits are handeled as set with Initial setup option RESIDUAL CREDITS PAYOUT (Handpay / Locked" or "No Handpay").

- TICKET
  Residual credits will be added to the ticket values.

Currency String

Configure the currency strings that are printed onto the tickets. Default values are:

Sign:	*$*	Text I:	*Dollar*	Text II: *Cent*
		Plural:	*Dollars*	Plural: *Cents*

Casino Information:

Casino name and address can be entered and will be printed on the ticket. Most accounting systems that use ENHANCED Validation will automatically configure (and overwrite!) these fields on power up. Depending on the accounting system this can take some minutes. Machine is locked without this field configured.

Receive and send procedure

1. When entering this page press "F1" on your notebook to receive current machine configuration.

2. Alter settings.

3. Press "F2" to send altered settings to the machine.

***Note**:*
Currency strings configurated in this menu, are also used in the "Cashout Options" screen and "Tipping Money" screen (if enabled).

***Note**:*
When configuring this fields manually, make sure to fill in the same text that the accounting system uses.

Menu Setup / Cashline

After PC-Setup is completed, Menu Setup is required to enable "Voucher Redemption" (Ticket In) and to set "Hopper Payout Limit", if applicable.

1. Open main door and press green "Service" button.
2. Select "Menu Setup".

Voucher Redemption

By enabling Voucher Redemption, the Ticket In feature is activated.

1. Set "Voucher Redemption" to ENABLED and set "Code Lenght" to 18.

2. Save settings and quit.

This feature can also be used to disable Voucher redemption.

Hopper Payout Limit:

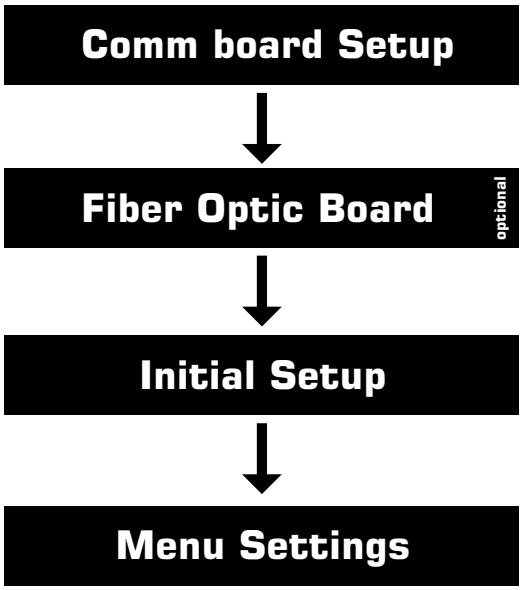
This option only affects TITO setup if a "Ticket Base Value" of 1 is set or if the revert to hopper feature is activated.

The unit for Hopper Payout Limit is **coins**.

This sets the maximum number of coins, which can be paid out on a single cash out.

TITO Settings

Hi(!)bility / e-motion machines



Comm Board 68K Setup / Hi(!)bility

Comm Board Configuration

This chapter refers to (SAS) Comm board software versions **Q_S5-MG-STD_-B-08A** and later.

Comm board 68K is capable of Dual Channel communication, when using SAS protocoll. Dual Channel communication may be required in TITO environments that have a dedicated TITO system in addition to an Accounting System without TITO support built in.

1. Check if all pre-requirements are fulfilled

2. Set the machines accounting system addresses. Each machine must have a unique address. Adress range is 01 to 99. Dual Channel communication is automatically enabled when a System Adress other than 00 is selected on Channel 2 rotary switches S3 and S4.

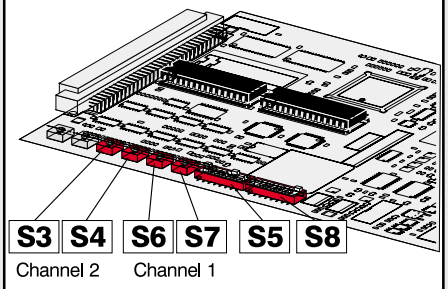
3. Set DIP switch S5 / 6 to ON
   to enable the accounting system communication.

4. *For dual channel mode only*:
   Allocate communication functions to channel 1 or channel 2 with DIP-switches S8 / 2 - 6.
   TITO = Coupon (Switch S8 / 6)

DIP switch bank S8								Cannel Allocation Table		Affected LongPolls
1	2	3	4	5	6	7	8			
	Off							Prog JP	Chan 1	0x80, 0x86
	On							Prog JP	Chan 2	
		Off						EFT	Chan 1	0x22 to 0x26, 0x28, 0x29
		On						EFT	Chan 2	0x62 to 0x67, 0x28, 0x29
			Off					Bonus	Chan 1	0x2E, 0x8A, 0x8B
			On					Bonus	Chan 2	
				Off				Control	Chan 1	0x03 to 0x07, 0x0A to 0x0C
				On				Control	Chan 2	0x94, 0xA8
					Off			Coupon	Chan 1	0x4C, 0x4D 0x57, 0x58, 0x70, 0x71
					On			Coupon	Chan 2	0x7D (Exp 0x3F, 0x57, 0x67, 0x68)
						Off				CB sends Total drop meter to host
						On				CB sends Coin drop meter **
							On			Message if accountingsystem isn't connected
							Off			No message if accountingsystem isn't connected

5. Set DIP switch S8 / 8 to ON (optional)
   to enable a machine lock and an on-screen message, in the case of a loss of communication to the accounting system.

Setting Accounting System Addresses



Address on channel 1 (SAS)
S6: x10 digit
S7: x1 digit

Address on channel 2 (SAS)
S3: x10 digit
S4: x1 digit

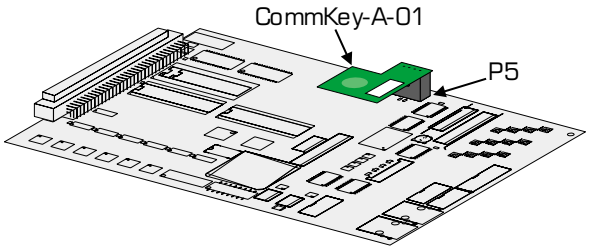
Address 00 disables channel

Example:
Set Channel 1 to address 01
S6 = 0, S7 = 1

Set Channel 2 to address 23
S3 = 2, S4 = 3

Comm Board 68K Setup / Hi(!)bility

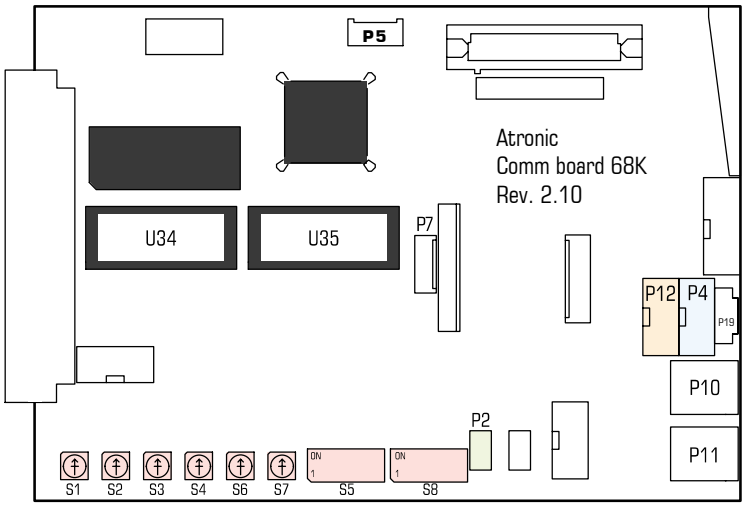
6. Install a Comm Key Dongle to Comm board P5 connector, to enable Ticket In functionality. Use only version CommKey-A-01 for e-motion machines.



7. Re-install Comm board and connect to SMIB or Fiber Optic Board (next page).

P12 = SAS Channel 1 - RS232 Interface
P4 = SAS Channel 2 - RS232 Interface

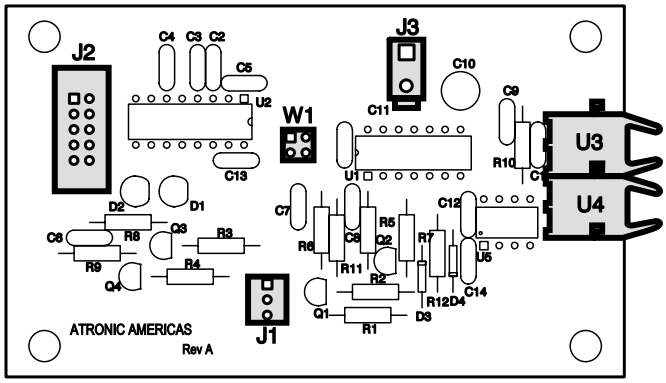
P2 = SAS Channel 1 - Current Loop Interface
(used with Mikohn SMIB and UPT-Harness)
P19 = SAS Channel 2 - Current Loop Interface



Fiber Optic Board Setup / Hi(!)bility

Fiber Optic Board Setup (RS232 mode)

The Fiber Optics Board can be configured to communicate either on SAS channel 1 or on channel 2.



1. Make sure Comm board is set to Dual channel mode and TITO communication is set to desired channel.
   - Channel 1 Set DIP Switch S8 / 6 to OFF
   - Channel 2 Set DIP Switch S8 / 6 to ON

2. Set Jumper **W1** to RS232 mode (Pins 1 & 2)

3. Connect RS232 Cable from Fiber Optic Board **J2** to the Comm board.
   - Channel 1 Connect to Comm board **P12**
   - Channel 2 Connect to Comm board **P4**

4. Connect the Fiber Optic Board power supply to **J3.**

5. Connect the transmitting fiber optic cable (the one that is lit) to **U3** (fiber optical receiver terminal).

6. Connect the fiber optic cable from the Fiber Optic Board kit to **U4** (fiber optical transmitter terminal) and run it to the next machine or to the TITO system.

All fiber optic connections from the Fiber Optic Boards and the TITO system must complete a loop in order for the TITO system to communicate.

Note:
See also fiber optics wiring overview on page 38.

Note:
The fiber optic cable that is transmitting is coming either from the TITO system or another machine.

The fiber optic cable ends and transmit and receive terminals are color-coded.
Grey to Grey
Blue to Blue

Init Setup / Hi(!)bility

To configure machine for Ticket In - Ticket Out support, some configuration changes are necessary.

1. Make sure that the ticket printer is proper installed and conncted.

2. Carry out a RAM Reset.

3. During the following power up the machine initializes the connected ticket printer automatically.

3. Carry out Init Setup.
   Set "Comm board required" to YES.

4. If the ticket printer is initialised the Init Setup item "Printer Setup" is selectable.

5. Select: Printer YES

6. The following configurations are now selectable

   - Revert to Hopper: YES or NO
     In the case of a ticket printer malfunction:
     - if YES is selected, pay-out is done by the Hopper.
     - if NO is selected, pay-out is hand pay.

   - Validation Type: NONE, STANDARD, ENHANCED or SYSTEM
   - Validation Security: YES or NO.

   See description of Validation Types on next page.

7. When Init Setup is finished, the machine displayes the basic-screen with the message TICKET TEXT NOT INITIALIZED. This text has to be configured by the Setup Menu item "Casino Information". The machine is not playable without this text configured! Some accounting systems that use Enhanced Validation will automatically configure these fields.

8. Carry out further configurations within machines' Service Menu (next pages).

***Note**:*
Setting for most TITO systems:
Validation Type - ENHANCED
Validation Security - ON

Init Setup / Hi(!)bility

Validation Types
Set Validation Type and Validation Security according to TITO host system settings.

NONE
Do not use this setting in an TITO environment.

When is NONE used?
Used for non-online accounting procedures (Westrex printer).

STANDARD
The Comm board creates a 8-digit validation number upon ticket request and stores it in memory. When the validation number is verified valid (and stored) by the TITO host system the ticket is valid.

When is STANDARD used?
When an accounting system has TITO functionality. Setting not recommended.

ENHANCED
The Comm board creates a 16-digit validation number upon ticket request and stores it in memory. When the validation number is verified valid (and stored) by the TITO host system the ticket is valid. To create a enhanced validation number, a validation ID and a validation sequence number must maintain in memory.

When is ENHANCED used?
Typical setting if an accounting system has TITO functionality or a dedicated TITO host system is used. Used with most SAS based TITO systems

Validation Security:

NO: The validation number can be stored in a buffer, before it is fetched by the TITO host. Machine is playable without validation ID set.

YES: (Typical setting) The TITO host system fetches the validation number from the Comm board immediately upon ticket request. The validation number has to be verified valid and sent back to the Comm board, before the ticket can be printed. The machine will remain locked until a validation ID and a starting sequence number is set by the TITO host system (upon machine power up).

***Note**:*
Enhanced Validation also allows validation of handpays.

SYSTEM
Tickets require a 16-digit validation number plus a 2-digit validation system ID supplied by the accounting system at the time of the cash out. In this mode the Comm board may refuse validation, e.g. when the link to the accounting system is disabled. If validation is not possible, the machine will tilt and force a Handpay. Setting Validation Security has no effect.

When is SYSTEM used?
When the accounting system supplies the validation number for a ticket.

TITO Settings / Hi(!)bility

Barcode Payout

Pay Mode Configuration

The "Pay Mode" determines how a pay out is splitted into Ticket- and Hopper pay outs. The pay mode of residual credits has to to be set seperately.

1. Enter the Service Menu and select "Settings/Hardware/Printer/Barcode Payout.

2. Select VOUCHER 1, VOUCHER 2, HOPPER 1 or HOPPER 2

3. If selected VOUCHER 2 or HOPPER 2, set a VOUCHER BASE VALUE and the RESIDUAL CREDITS mode (next page).

4. Save settings.

- VOUCHER 1
  All credits (incl. residual) are paid by a ticket. VOUCHER BASE VALUE is automatically set to 0.

- VOUCHER 2
  All credits up to the next VOUCHER BASE VALUE are paid by the Hopper. The rest is printed on a ticket.

- HOPPER 1
  Hopper pays up to the Hopper Limit. The rest is printed on a ticket. VOUCHER BASE VALUE is automatically set to 1.

- HOPPER 2
  If pay out is below HOPPER PAYOUT LIMIT:
  All credits are paid by the hopper.

  If the pay out is above HOPPER PAYOUT LIMIT:
  A ticket rounded to a (maximal) multiple of the VOUCHER BASE VALUE is printed. The rest is paid via hopper.

***Note**:*
Examples of different Pay Mode settings can be found on pages 33 - 35.

TITO Settings / Hi(!)bility

Voucher Base Value

- VOUCHER BASE VALUE = 0:
  All credits will be printed on a ticket. Automatically set, if Pay Mode TICKET 1 is selected.

- VOUCHER BASE VALUE = 1:
  All Credits up to the HOPPER LIMIT are paid via hopper. The rest is printed on a ticket. Automatically set if Pay Mode HOPPER 1 is selected.

- VOUCHER BASE VALUE **greater than** 1:
  Hopper pays up to the VOUCHER BASE VALUE. The rest is payed by ticket. This allows ticket values to be rounded to multiples of certain values, to prevent residual credits when the ticket is redemptioned by a machine with different denomination.

For example: If VOUCHER BASE VALUE is set to 100 credits and In-Multiplier is 10, only tickets with values of $10, $20, $30 ... will be printed.

Note: *The VOUCHER BASE VALUE should always be smaller than the HOPPER LIMIT.*

Note*:*
If the machine is tokenized and RESIDUAL CREDITS is set to VOUCHER, the residual credits are added to the ticket amount. This may result in tickets with odd values.

Residual Credits

Define the handling of residual credits.

- HOPPER
  Residual credits are paid as configured in the Initial Setup item "Residual Credits Payout". Options are "Handpay / Locked", "Handpay / Playable" or "No Handpay". See section software for detailed descriptions.

- VOUCHER
  Residual credits are always paid by a voucher.

Jackpot Receipt:

Set to ENABLED or DISABLED (default).
If set to ENABLED, a Jackpot receipt is printed when a (Jackpot) handpay is reset by the attendant. The reicept is intended for casino internal accounting use only and is not cashable or playable. System validation does not support Jackpot receipts

Note:
A printed Jackpot receipt will not change the metering of the handpay.

TITO Settings / Hi(!)bility

Casino Information

To configure the Casino Information text that is printed onto the tickets, follow these steps:

1. Open main door and press green service button to enter the Service Menu.

2. Select "Settings/Hardware/Printer/Casino Information".

3. Enter text for "Establishment", "Adress 1+2"

   When configuring this fields manually, make sure to fill in the same text that the accounting system uses (if applicable).

4. Save settings

5. The Ticket Text configuration is finished and the message TICKET TEXT NOT INITIALIZED expires.

Casino name and address can be entered and will be printed onto the ticket. Most accounting systems that use ENHANCED Validation will automatically configure (and overwrite!) these fields on power up. Depending on the accounting system this can take some minutes. The machine is locked without this fields configured.

Currency Setup

Configure the currency strings that are printed onto the tickets.

1. Enter the Service Menu and select "Settings/Hardware/Printer/Currency Setup".

2. Edit Text.
   Text 1: SINGULAR
   PLURAL
   Text 2: SINGULAR
   PLURAL

4. Save settings.

Example:
Text 1: *Dollar*
Dollars
Text 2 *Cent*
Cents

TITO Settings / Hi(!)bility

Voucher Redemption

Voucher Redemption by the bill acceptor (Ticket In) has to be enabled for TITO applications.

1. Enter the Service Menu and select "Settings/Hardware/Bill Acceptor/Voucher Redemption.

2. Select YES if you want the bill acceptor to accept vouchers (Setting necessary for TITO)

   (Select NO if you don't want the bill acceptor to accept vouchers)

3. Save settings.

Additional Settings

Disable Ticket Printer

The Ticket Printer can be disable or enabled via Service Menu setting. This might be usefull in case of a ticket printer error or loss of communication to the online system.

1. Enter the Service Menu and select "Settings/Hardware/General

2. Select PRINTER NO to disable the ticket printer.
   or
   Select PRINTER YES to enable the ticket printer (Set to YES for TITO).

3. Save settings.

Appendix

Pay Mode Examples

This sections shows some examples, how different settings for "PAY MODE", "TICKET BASE VALUE" AND "RESIDUAL CREDITS" affect pay outs.

Common values for all examples:
In-Multiplier = 10
Hopper Payout Limit = 200 credits

***Note**:*
*Within Menu Setup "Hopper Payout Limit" is given in **coins**. This value has to be multiplied by the In-Multiplier to get the "Hopper Payout Limit" in **credits**.*

1. Pay Mode set to TICKET 1

All credits (incl. residual) are paid via ticket.
Settings for "Residual Credits (Init Setup and PC-Setup)" does not affect pay out.

2. Pay Mode set to TICKET 2

Ticket Base Value = 100 credits.

a) Residual Credits (PC-Setup) set to HOPPER

Cashout 9 credits:
0 by hopper; 0 by ticket
9 residual credits handled as set in Init Setup

Cashout 199 credits:
90 by hopper; 100 by ticket
9 residual credits handled as set in Init Setup

Cashout 299 credits:
90 by hopper; 200 by ticket
9 residual credits handled as set in Init Setup

b) Residual Credits (PC-Setup) set to TICKET

Cashout 9 credits:
0 by hopper; 9 by ticket

Cashout 199 credits:
90 by hopper; 109 by ticket

Cashout 299 credits:
90 by hopper; 209 by ticket

Pay Mode Examples

continued

Common values for all examples:
In-Multiplier = 10
Hopper Payout Limit = 200 credits

3. Pay Mode set to HOPPER 1
Ticket Base Value set to 1.

a) Residual Credits (PC-Setup) set to HOPPER

Cashout 9 credits:
0 by hopper; 0 by ticket
9 residual credits handled as set in Init Setup

Cashout 199 credits:
190 by hopper; 0 by ticket
9 residual credits handled as set in Init Setup

Cashout 299 credits:
200 by hopper; 99 by ticket
(Residual credits are added to the ticket value, if cashout is above Hopper Payout Limit.)

b) Residual Credits (PC-Setup) set to TICKET

Cashout 9 credits:
0 by hopper; 9 by ticket

Cashout 199 credits:
190 by hopper; 9 by ticket

Cashout 299 credits:
200 by hopper; 99 by ticket

Pay Mode Examples

continued

Common values for all examples:
In-Multiplier = 10
Hopper Payout Limit = 200 credits

4. Pay Mode set to HOPPER 2
Ticket Base Value set to 100 credits.

a) Residual Credits (PC-Setup) set to HOPPER

Cashout 9 credits:
0 by hopper; 0 by ticket
9 residual credits handled as set in Init Setup

Cashout 199 credits:
190 by hopper; 0 by ticket
9 residual credits handled as set in Init Setup

Cashout 299 credits:
90 by hopper; 200 by ticket
9 residual credits handled as set in Init Setup

b) Residual Credits (PC-Setup) set to TICKET

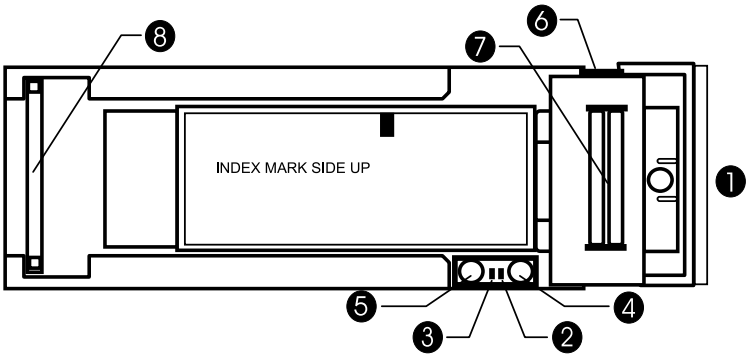
Cashout 9 credits:
0 by hopper; 9 by ticket

Cashout 199 credits:
190 by hopper; 9 by ticket

Cashout 299 credits:
90 by hopper; 209 by ticket

Ticket Printer Seiko PSA-66-ST

Please refer to document "Manual OP Mo GEN Ticket Printer Seiko PSA-66" for more detailed instructions.



1. Front Bezel Display
2. Error! LED
3. Status LED
4. FEED Button
5. CUT Button (no function)
6. Platen Release Lever
7. Paper Insertion Slot
8. Ribbon Cable

Self Test

To start a printer self test, depress and hold the FEED button during power up or reset. A ticket with actual printer configuration is printed.

Bezel Display Status

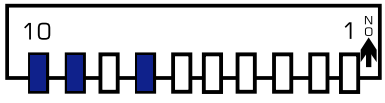
Bezel Display	Status
Solid On	Printer Idle and Ready
Slow Blink	Paper Low
Fast Blink	Ticket Printer and/or Ticket in Chute
Off	Printer power off

Error Conditions indicated by Keypad LEDs

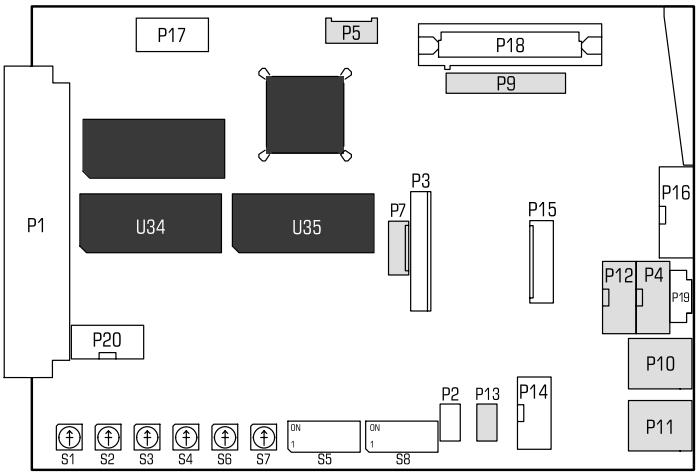
Condition	Status LED	Error LED
Unit Powered Off	OFF	OFF
Unit Ready	ON	OFF
Unit Flushed	ON	ON
Paper Out	OFF	ON
Platen Down	OFF	ON
Temperature Error	OFF	Med Blink
Voltage Error	OFF	Slow Blink
Print Head Error	ON	Fast Blink
Mising Black Index Mark	ON	Fast Blink
Paper Jam	ON	Fast Blink

Dipswitch setting for use in Atronic machines (RS-232 mode)

1-6	OFF
7	ON
8	OFF
9	ON
10	ON



Comm board 68k Rev. 2.10 - Connectors



Connector	Interface	Protocol / Function
P1		to backplane
P2	TTL	SAS channel 1 (TTL)
P3		optional Jackpot trigger
P4	RS232	GRIPS *or* **SAS channel 2**
P5		Comm Key connector
P7		External Display
P9		+12V
P10, P11	RS485	A-LINK, Mikohn *or* SAS channel 3
P12	RS232	**SAS channel 1**
P13	TTL	Bally
P14	TTL	DACOM
P15		not used
P16	RS422	VLC
P17		internal use
P18	RS422	XSeries
P19	TTL	SAS channel 2 (TTL)
P20		not used

TTL = Current Loop interface

Connector function depends on the implemented protocol version of the Commboard software.

***Note**: Connectors P10 and P11 are parallel wired.*

Fiber Optic Board - Wiring Overview

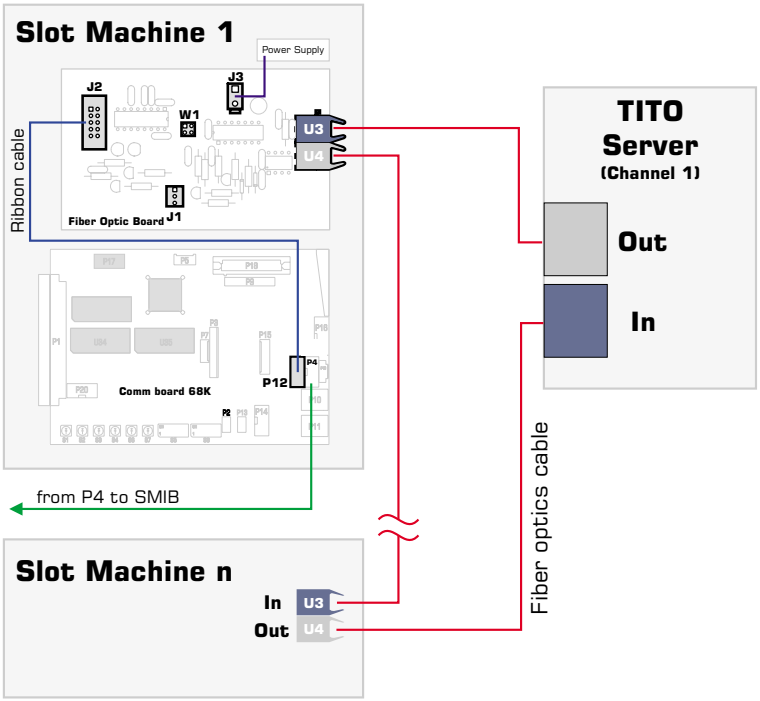


Figure 1:

TITO communication on channel 1

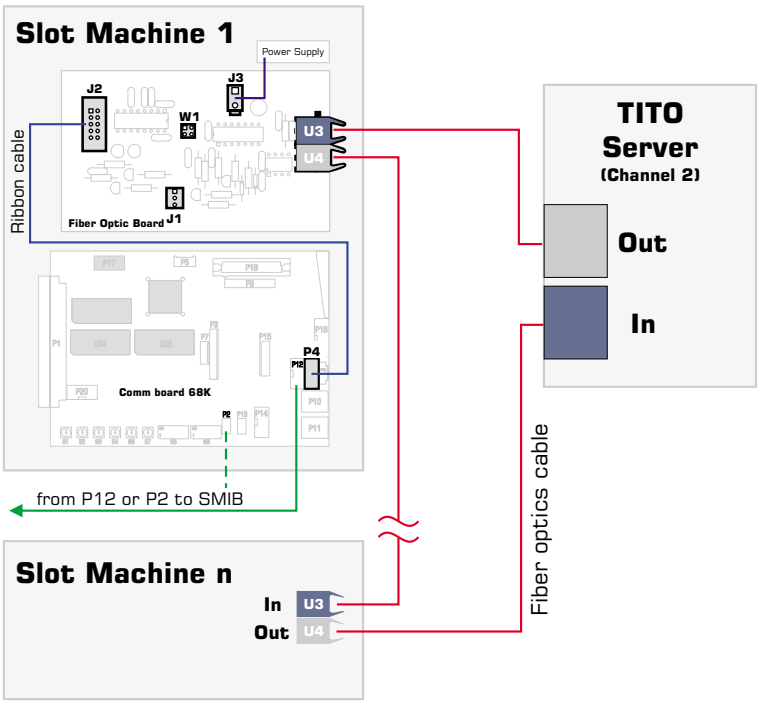


Figure 2:

TITO communication on channel 2

Fiber Optic Board - Trouble Shooting

Fiber Optic Board Trouble Shooting:

There are transmit (green) and receive (red) LEDs that "talk" to indicate TITO system and Fiber Optic board communication.

If the receive (red) is not lit:

- Check the fiber optic cable at **U4**,
  Is it correctly plugged in?
  Is the cable in good condition?
- Check the Fiber Optic Board or TITO system that is transmitting to it.

If the transmit (Green) is not lit:

- Check the RS232 **J2** or Current Loop **J1** cables,
  Are they correctly plugged in?
  Is the cable in good condition?
- Check the Fiber Optic Board Jumper **W1** setting.
- Is the Comm board configured correctly?