METRIC PARKING

User Manual

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Declaration of Conformity

Manufacturer: Metric Group Limited

Manufacturer's Address:
Metric House,
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Westlea,
Swindon
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Product Name: AURA

Product Type: Ticket Vending Machine

Metric Group Limited design and manufacture the Aura ticket vending machine in conformance with specified international standards and regulations applying to such electro-mechanical machines destined for installation in a public environment. The company is registered and certifies its activities comply with:

- ISO 9001:2000 Quality Management Systems.
- ISO 14001:2004 Environmental Management Systems.
- ISO / IEC 27001: 2005 Information Security Management Systems.

United Kingdom's UKDPC Disabled People's Council

The AURA ticket vending machine, when correctly installed in accordance with manufacturers' guidelines, has been approved by the United Kingdom's Disabled People's Council for use by disabled users.

The AURA also conforms to British Standard – BS8300:2001 – "The design of buildings and their approaches to meet the needs of disabled people" and BS EN 12414:1999 "Vehicle parking control equipment – Pay and display ticket machine – Technical and functional requirements".

The owners and operators of the AURA also have responsibilities under:

"The Disability Discrimination Act: 1995 and 2005"

Further information is available from the websites:

Central UK Government - www.gov.uk/disabiity

Disability Rights Commission – http://www.drc-gb.org/

Health and Safety Instructions for Machine Operation and Servicing

1. Due to the weight of a full coin box, it is essential that both hands are used when removing this item.

2. When it is necessary to exchange any component part of the machine, it is essential the main electrical supply is isolated.

3. Emergencies (electrical shock).

    M. If the casualty is touching a live conductor, if the switch is near, switch off the electricity before you touch the casualty. If you cannot readily disconnect the electrical supply take the following precautions before touching the casualty.

    Cover your hands with something which will not conduct electricity. Rubber Gloves, a DRY Macintosh or other article of DRY clothing.

    Note: *It must be remembered that wet rubber articles are useless if moisture on the surface makes contact with wet clothing or skin.*

    b) Stand on a DRY non-conducting material, if you can, such as a rubber mat, thick carpet, a piece of wood or glass.

    c) If none of the above items are available, pull or push the casualty clear with a dry rope or wooden pole. DO NOT use anything made of metal.

    d) Call an ambulance.

Table of contents

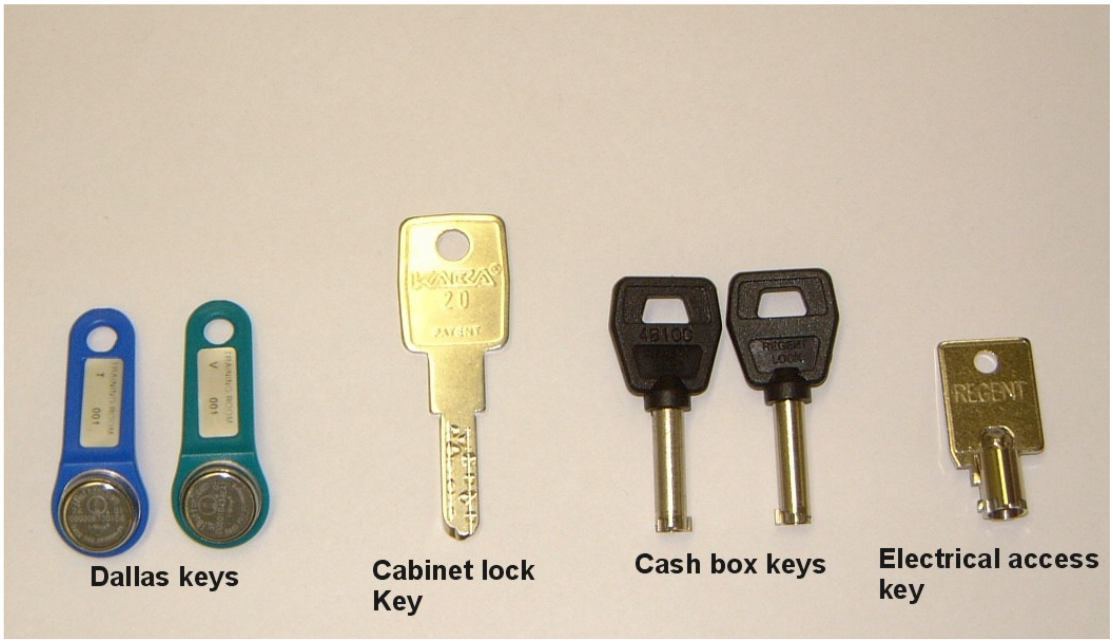
Introduction

The Aura represents the next generation of pay and display machines specifically developed by Metric Group Ltd to satisfy the most rigorous demands of today and tomorrows´ parking needs.
The machines are designed to be reliable, easy to use and maintain in the most demanding of environments.

Routine machine operation

Keys

The keys supplied.



Dallas keys
Operates the electronic locking, vault lock and uppercase lock shutter.

Cabinet lock key (Kaba)
Mechanically opens the lock and lifts the locking bar to open the door.

Cash box keys
One key unlocks the cash box from the lower case vault area, the other unlocks the lid.

Electrical access key
Opens and closes the electrical access door of the lower case. This allows access to the mains switch gear (if fitted) and the battery.

Section 1

Aura upper cabinet

Aura operation

Unlocking the cabinet door

The following procedure assumes the Aura has Application file (page38) Configuration file (page39), tariff file (page40) and if required a key list file (page41) loaded. The Dallas key, used to open the upper case and the vault doors, must be compiled in the key list file. The cabinet door is opened using the Dallas key and a Kaba 20 key. Place the upper case Dallas key onto the receptor mounted in the right side of the coin return cup. The Dallas key is checked for authenticity with the key list and if it matches, the shutter covering the Kaba 20 lock in the upper case will open.
Insert the key and turn clockwise, releasing the locking pins. The door will move forward allowing it to be opened fully.

Kaba 20 lock shutter closed

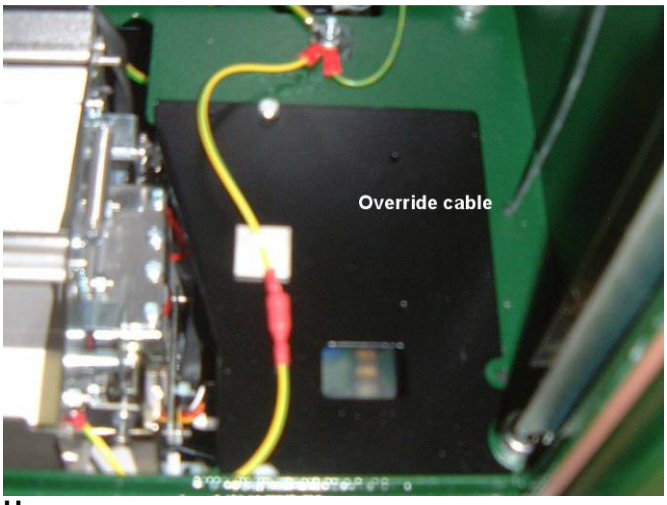

Dallas key

Kaba 20 lock shutter open with key

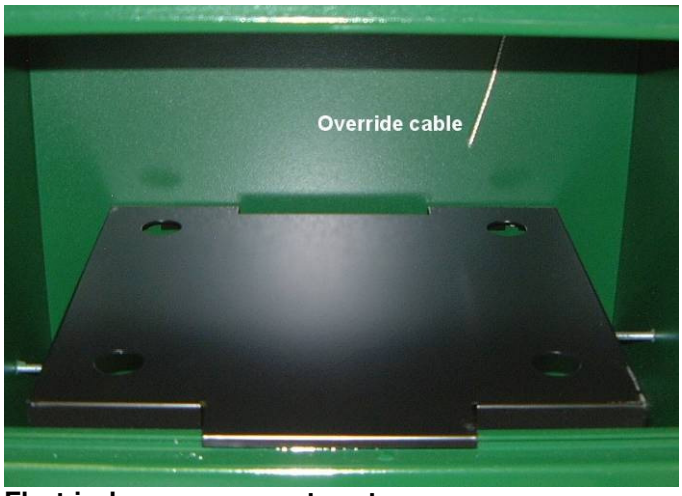

Door open

Mechanical override for upper case shutter cover

In the event of electrical failure the Kaba 20 lock shutter can be opened manually. This does not reduce the security of the upper case, as the correct Kaba 20 key is still required to open the door. Open the electrical access door, a wire cable is positioned to the rear of the chamber and to the right. Pull the wire down, this opens the shutter to allow the Kaba 20 key to be inserted and the door opened in the normal way.

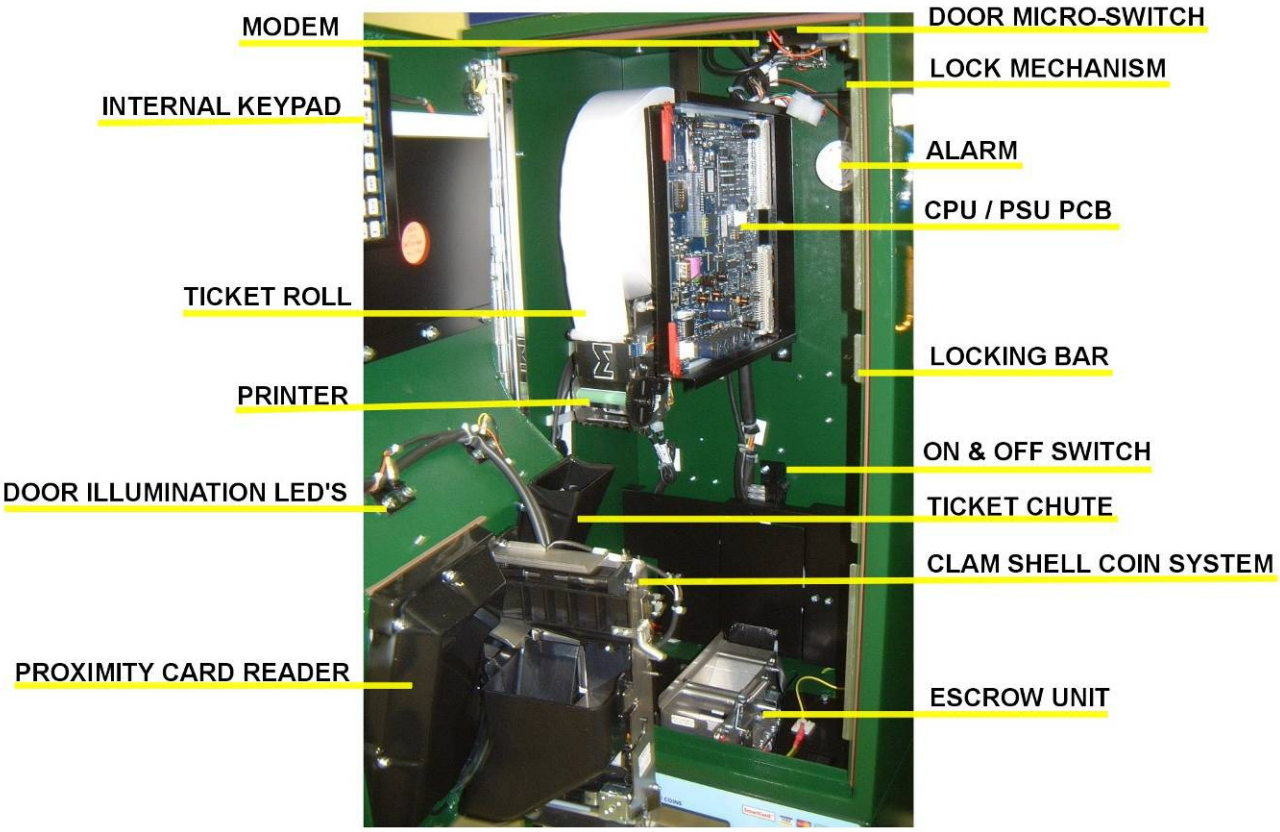


Upper case



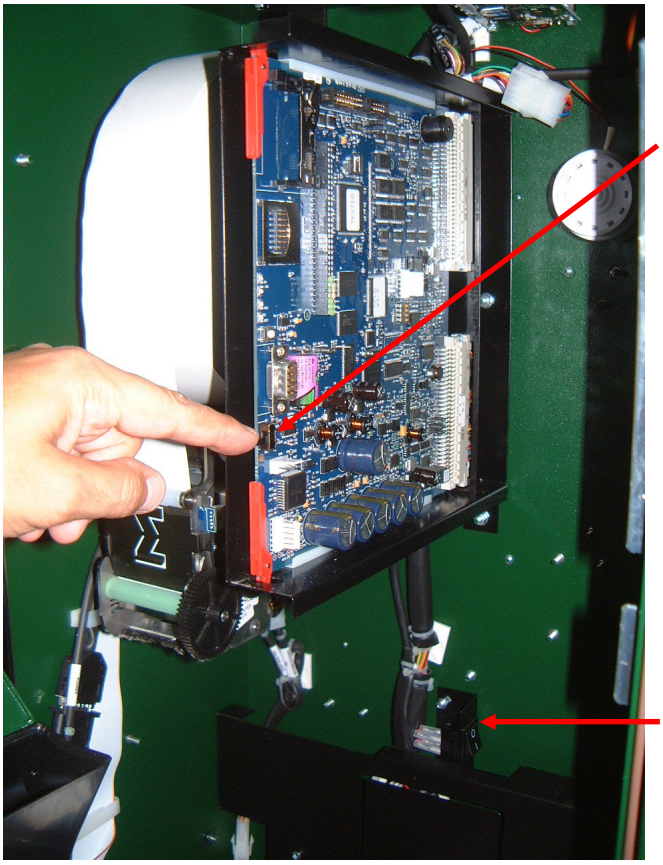
Electrical access compartment

Aura upper case component parts



Upper case

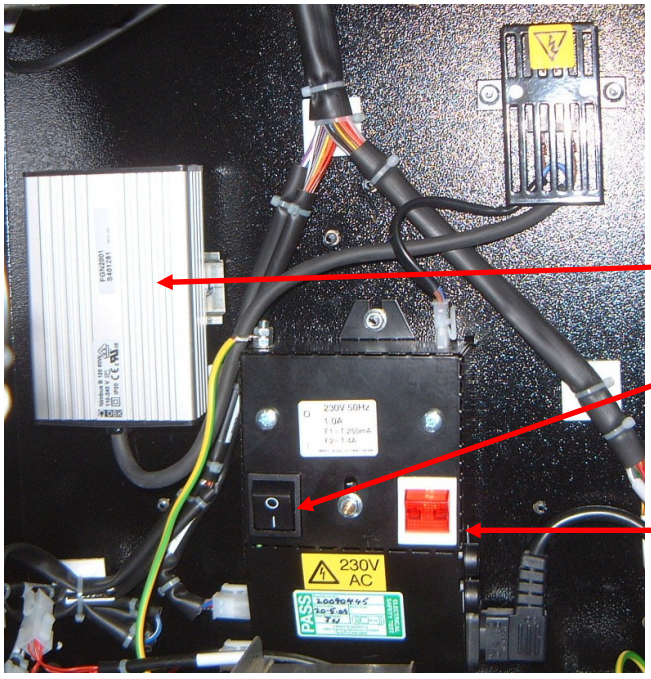
Isolating the power



S1 located on the PCB, switches the Aura on and off electronically.

The single switch located to the rear of the cabinet of a solar powered Aura. This isolates the 12v supply to the PBC.

Isolating power in a solar machine



A mains powered machine PSU is fitted to the rear of the cabinet. This unit has two rocker switches:

Caution this component may be **Hot.**

The black switch on the left of the unit isolates the 12v supply to the PCB.

The Red neon switch isolates the 230v main supply.

Isolating power in a mains machine

Loading tickets

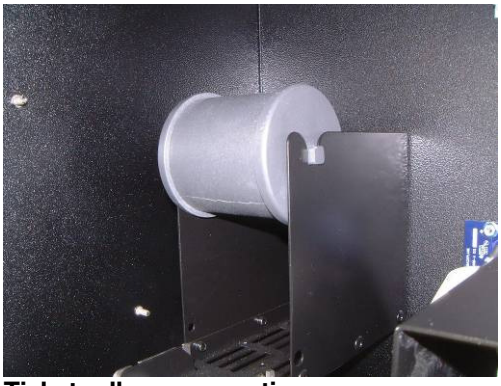
Remove the ticket roller from the rack. This is achieved by lifting the roller from the mounting bracket.

Inserting the ticket roll onto the ticket mounting mechanism

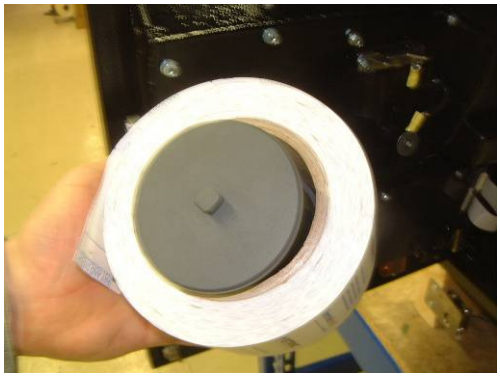
Place the ticket roll over the roller ensuring the black registration mark is on the left hand side facing in.

Installing the ticket mounting mechanism

Place the roller onto the mounting bracket. Ensure the lugs are fully located in the cut outs.



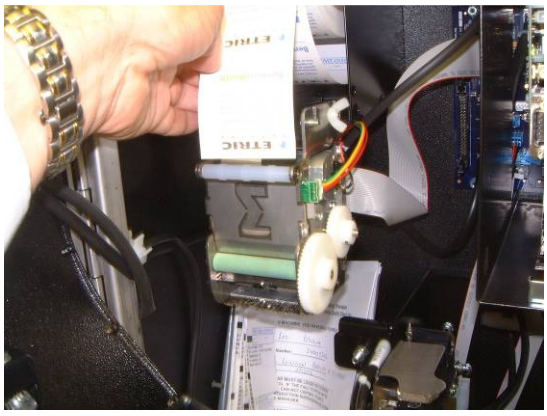
Ticket roller on mounting

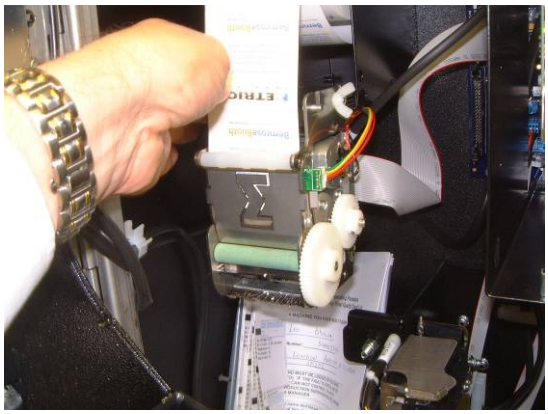


Ticket roll on roller

Loading the tickets into the printer

Carefully push the leading edge of the ticket between the printer plate and the roller. Push the ticket until it stops against the print head.
Whilst slightly pushing the tickets into the printer, perform the **0 1 3** (A580) test ticket routine to ensure correct alignment of the ticket. Rewind any excess ticket loop back onto the roll.
Note: 0 1 1 *(A301) to enter number of tickets on the new roll (non-adhesive tickets 4000, Adhesive 2500). The default burn time should be correct, but if necessary, set the burn time* ***4 1 7*** *(A310) to the lowest level for legible print.*





Internal keypad

The internal keypad is mounted on the inside of the cabinet door. The keypad is mounted on a hinge mechanism allowing the keypad to be moved. This enables the user to look at the display whilst using the keypad. When finished, the keypad will swing back behind the door.

The ticket alert level can be set via the **1 5 3** routine.
After loading a new ticket roll, use the **0 1 1** (A301) routine to enter the number of tickets installed. This will ensure the Aura reports when the ticket level has fallen below the ticket alert level set in the **1 5 3** routine.

1 5 3 – Ticket alert level

This service code allows you to set the point at which the Aura will report that it is running low on ticket stock. This routine allows the user to enter a "Paper Low" warning level.

i.e. 4000 tickets loaded (0 1 1), warning level set 100.

0 1 1 – Setting ticket stock level for printer (A301)

After renewing the ticket stock you need to tell the Aura the amount of tickets loaded. Typical values entered using this code are 4000 for non-laminated stock or 2500 for laminated stock. After entering the ticket quantity, a ticket is produced confirming the update.

Section 2

Lower case

Vault

The vault area is very secure. The vault door is constructed in multiple layers, consisting of hardened steel and composite material. The door is highly resilient to drilling and grinding. Inside the vault area, the sides and rear are protected with hardened steel plates and in addition, the bottom of the vault area is protected.

Opening the vault door

Place the Vault Dallas key onto the receptor mounted to the right side of the coin return cup.

The following procedure assumes the Aura has been programmed with Application, configuration, tariff, and a key list files. (page38). The Dallas key, used to open the vault doors, must be pre loaded into the Aura.
The Dallas key is checked for authenticity with the key list and the vault door opened.
The vault door motor will retract the four locking latches, and the door will open slightly at an angle. Pull the vault door down until it is fully open at 90 degrees to the lower casework. The vault door becomes a shelf for the cash box.

Removing the cash box

Great care must be taken when removing the cash box, as it could be **very heavy**.

Unlock the cash box

Slide the cash box from the lower case onto the shelf. Taking care as the box could be heavy.

An audit ticket is produced when the cash box is removed. Check the audit ticket before lifting the cash box. The amount of coins in the cash box will give an indication as to its weight.

Lift the cash box using BOTH hands.

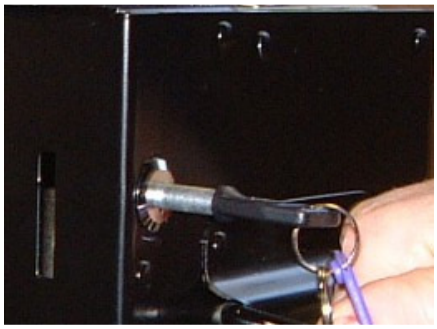
Insert an empty cash box and lock in place.

Lift the vault door up and it will automatically lock.

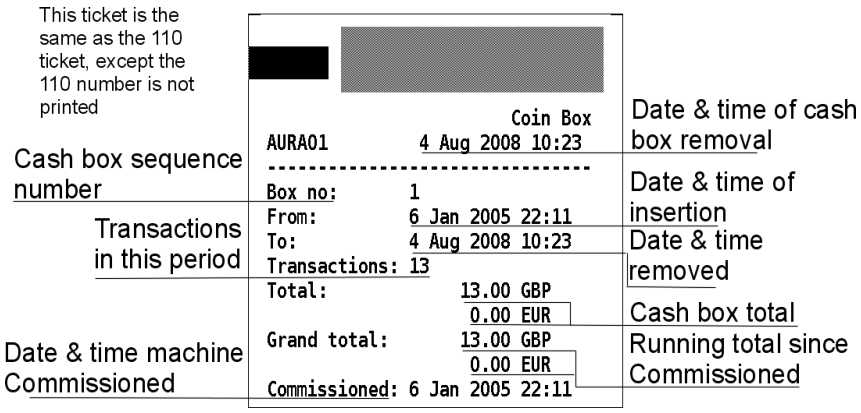
The Aura will return to service.

Removing the cash box from the housing

Using the correct key unlock the cash box securing lock and slide the cash box onto the shelf. Once the cash box has been removed from the vault area, the cash box lid ratchet mechanism will trigger, this ensures the cash box lid is sealed shut and the cash box cannot be re-installed back into the vault area. The ratchet mechanism is re-set when the lid has been removed with the correct key.

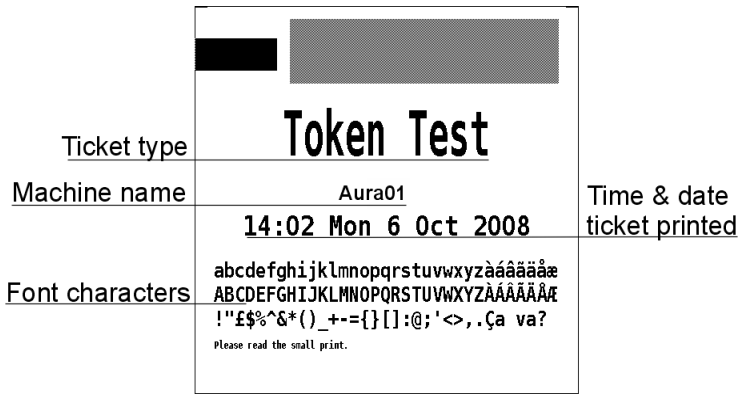


As the cash box is removed the Aura will print a “cash box audit ticket”. The ticket information consists of:



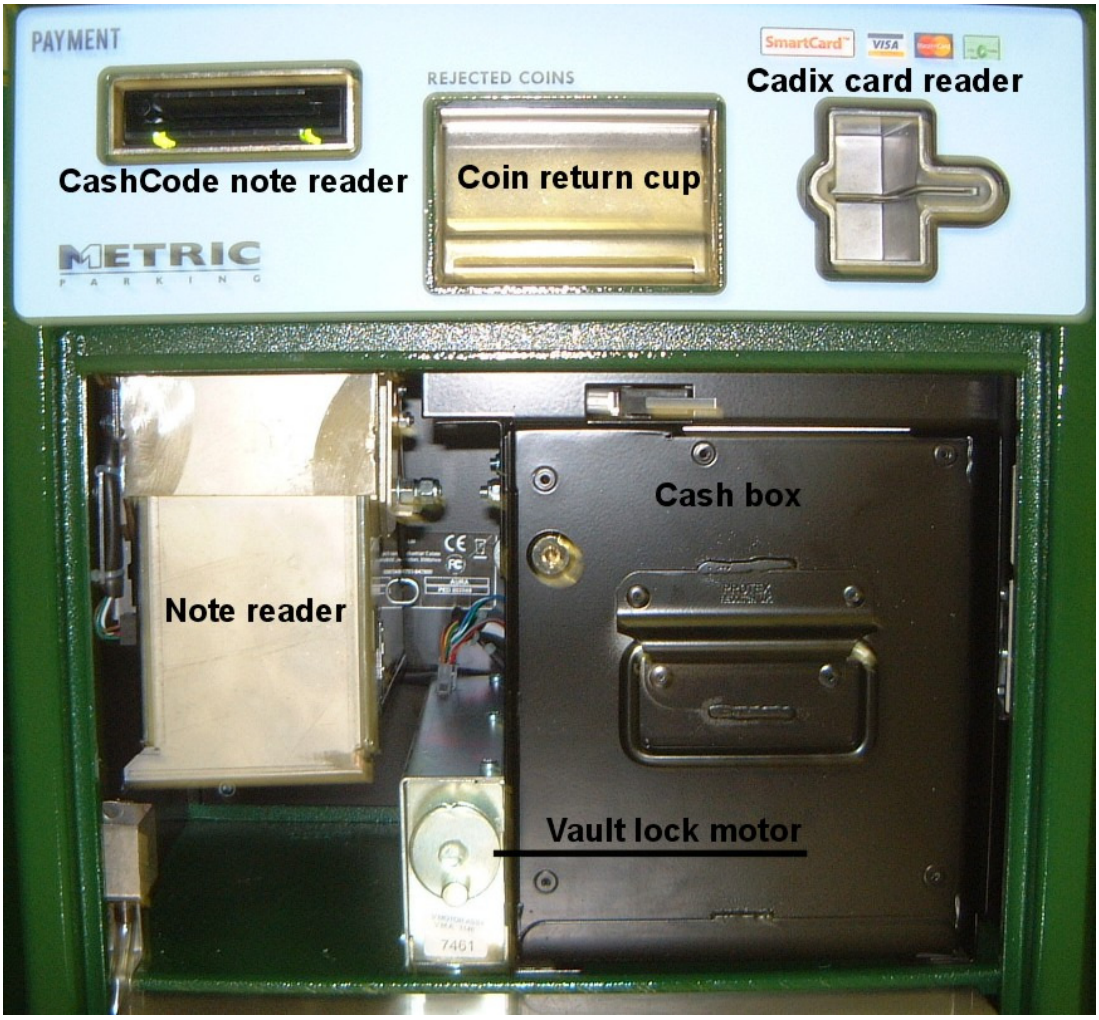
Test token ticket

If required a test token can be used to print a ticket, this is useful to check the operation of the printer. The ticket has the words “**Token Test**” printed across the face; this distinguishes it from a standard ticket.
The token function will still operate even if the machine is not in service.



Lower case

The note reader unit is housed in the left side of the lower case and is accessed via the vault door. The card reader unit is housed in the right side of the lower case.



Removing the note box from lower case

Pull the latch down to release the note reader mechanism.

Pull the bottom of the note reader up to tilt the note reader at 90 degrees.

Squeeze the two metal securing catches together to release the note box from the note reader. The note box will disengage from the note reader mechanism.

Slide the note box out of the note reader mechanism.

Note: A note box audit ticket will be produced.

Slide an empty note box into the note reader mechanism, being careful to ensure the box engages correctly into the rear of the mechanism.

Lift the front of the note box and it will latch into place. The note box will activate and perform a self test.

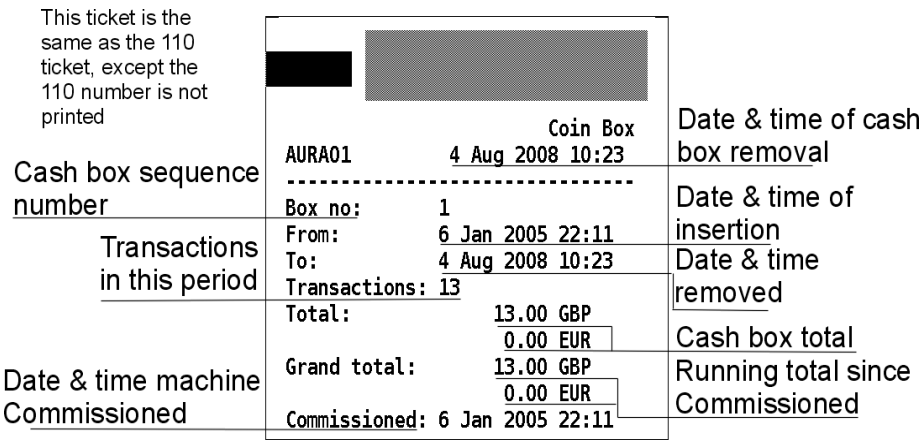
Push the note reader mechanism 90 degrees back to the vertical position.

The note reader will lock into position.

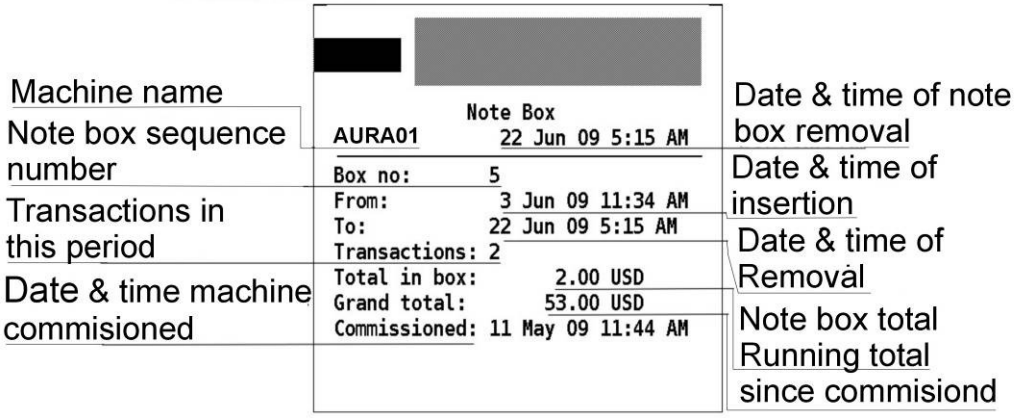
After the cash collection has been completed, the vault door MUST be closed fully. Check the Aura is in service.

Audit tickets

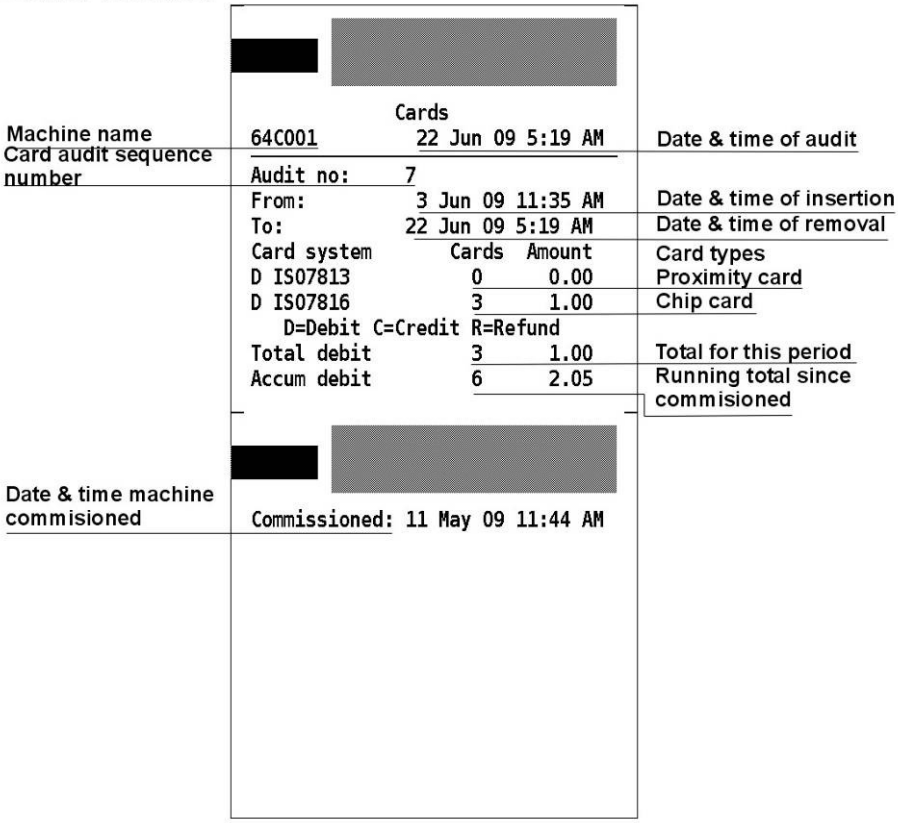
Cash box ticket



Note box ticket



Card ticket


Cards
64C001 22 Jun 09 5:19 AM
Audit no: 7
From: 3 Jun 09 11:35 AM
To: 22 Jun 09 5:19 AM
Card system Cards Amount
D IS07813 0 0.00
D IS07816 3 1.00
D=Debit C=Credit R=Refund
Total debit 3 1.00
Accum debit 6 2.05
Commissioned: 11 May 09 11:44 AM
Machine name
Card audit sequence number
Date & time of audit
Date & time of insertion
Date & time of removal
Card types
Proximity card
Chip card
Total for this period
Running total since commisioned
Date & time machine commisioned

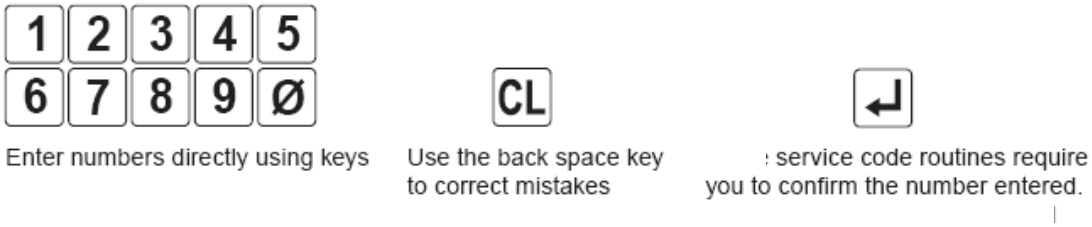
Section 3

Data entry

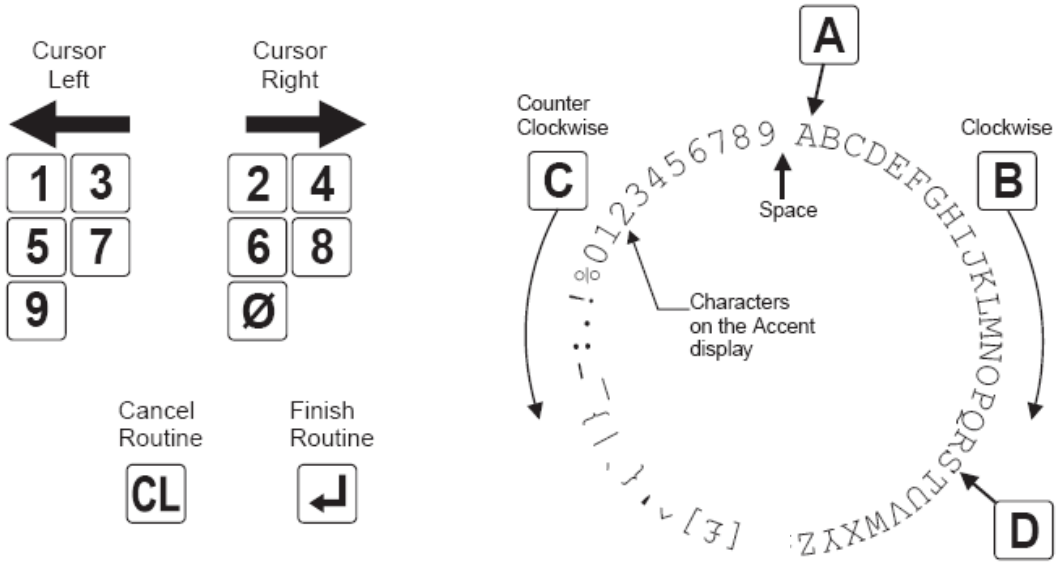
Method of Data Entry

There are three basic methods of entering data into an Aura using the service keypad.

M. Direct numeric entry for items such as times and date. Use the A or B keys to scroll to the time or date.



2. Text or alphanumeric entry for entering of user definable messages and machine names etc.



3. Option selection, where the attendant scrolls forwards and backwards through a predefined list of options before confirming a selection.

Accessing the maintenance menu

There are three possible ways to access an item within the maintenance menu:

- Enter the menu by pressing either the CL or ↵ keys.

1. By navigating the menu hierarchy. This method involves using the maintenance keypad 'A', 'B', 'C' and 'D' keys to select a menu option, then using the enter key to activate the option. When using this method, the A, B, C and D keys are used to move between options in this way:

   'A' – move up one option
   'B' – move down one option
   'C' – move to the first menu option
   'D' – move to the last menu option

2. By entering the number sequence that identifies the menu option. For example, the number sequence **1 0 0** will print the current transaction audit record.

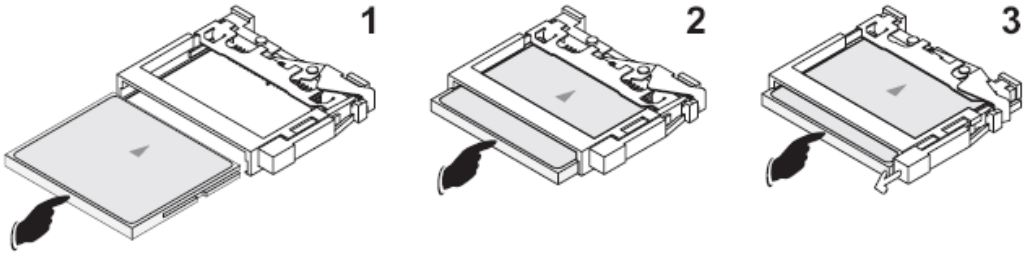
3. By entering an engineering code that is a shortcut to a menu option. Not all of the maintenance menu options have a shortcut code. The codes used are derived from those used in previous versions of the Aura software and have been provided for the convenience of users that are familiar with those codes. However, these codes will not always be supported, so new users should become familiar with the other two methods of menu navigation.

To exit a menu option either use the CL key or the ↵ key.

Note: *When using the "AXXX" code system, ensure it is not entered whilst inside the menu system.*

Commissioning the Aura

Check the Compact Flash Card orientation and insert into the socket.



Inserting a Compact Flash Card

Loading the software

Insert the compact flash card into the socket on the CPU PCB. This card will contain at least one of the following files:
Boot Loader, Application, Configuration, Tariff, Key list and Hot list files.
The CPU PCB is supplied pre-loaded with the application software. If any updates or enhancements are required in the future, new application software can be loaded without overwriting the configuration, tariff and key list files.

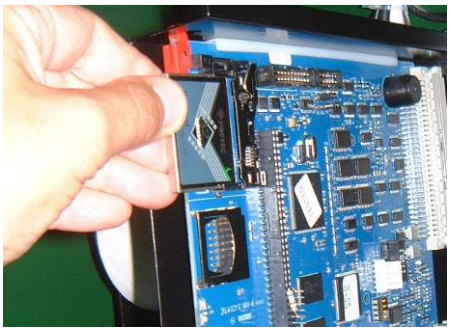


Figure 1 Inserting flash card

Figure 2 Internal keypad

This section is only used on a blank CPU PCB (from manufacture) or if updating an older version of the Boot Loader.

Note: *the Boot Loader is preloaded and this process is not required under normal circumstances.*

Installing a new Boot Loader from the Old V2.00 Boot Loader

Obtain an A550 / 205 ticket for existing BOOT LOADER version

- Ensure the machine is turned off.
- Remove the CPU PCB from the machine.
- Set dipswitch 4 to the on position on the CPU board and then place a jumper onto the BOOTP pins.
- Re-install the CPU PCB.
- Insert the CF card and turn on the machine.
- The machine will go through its process of loading the boot loader, when it has finished loading the display will report “REMOVE CARD”. After the card has been removed the display will report “RESTART M/C”
- Turn off the machine and remove the CPU PCB.
- Set dipswitch 4 back to the off position on the CPU board.
- Re-install the CPU PCB.
- Turn the machine back on.
- The machine will then display “RELOAD BOOT 4.XX PRESS KEY”. Press any key on the internal keypad, and it will start erasing and then will quickly display “PROGRAM OK”.
- Turn the machine off and remove the jumper from the BOOTP pins.
- Now whilst holding down the 0 key on the internal keypad, turn the machine back on to enter the newly loaded boot loader main menu.

Now follow the instructions from the section “Loading an application from boot loader main menu”.

Installing a New Boot Loader from an existing V4.XX Boot Loader

Obtain an A550 / 205 ticket for existing BOOT LOADER version

- Insert the CF card with the new boot loader.
- Turn off machine and place a jumper onto the BOOTP pins.
- Now whilst holding down the 0 key turn the machine back on to enter the boot loader menu screen.
- Scroll to the option LOAD APP FROM CF[1] and press the enter key on internal keypad.
- From the next screen select the app called A:/APP/UPD-NEW.APP and press the enter key on internal keypad.
- The machine will display the application (BOOT LOADER) about to be loaded, if it is the correct application (BOOT LOADER), press the enter key to confirm[2]. Alternatively press the cancel button on the internal keypad to return to the main boot loader screen to select a different one.
- The machine will start to load the new boot loader, and when completed will display “APPLICATION LOADED”. Press the enter key on the internal keypad, to return to the main boot loader screen.
- Scroll to the option START LOADED APP and press the enter key on the internal keypad.
- The machine will display “RELOAD BOOT 4.xx PRESS KET”. Press any key on the internal keypad and the display will show “ERASING” “PROGRAMMING” and then finally “PROGRAMMED OK”.
- Turn off the machine and remove the jumper from the BOOTP pins.
- Whilst holding down the 0 key turn the machine on to enter the newly loaded boot loader main menu

Now follow the instructions from the section “Loading an application from boot loader main menu”.

[1] This is BOOT LOADER software and not the Application software
[2] One or more programs could be on the CF card.

Loading in an Application from Boot Loader Main Menu

- Insert card with the application.
- Scroll to the option LOAD APP FROM CF, and press the enter key on internal keypad[3].
- From the next screen select the relevant app, e.g. A:/APP/TEST.APP and press the enter key[4].
- The machine will display the application about to be loaded. If this is the correct application, press the enter key to confirm. Alternatively, press the cancel button to go back to the main boot loader screen to select a different application.
- The machine will start to load the application, and when completed will display "APPLICATION LOADED". Press the enter key on the internal keypad to return to the main boot loader screen.
- Scroll to the option START LOADED APP and press the enter key on the internal keypad. The machine will start up with the newly loaded application

With the application file installed, proceed to install the configuration file, tariff file, key file, etc.

[3] This is an APPLICATION program and not a BOOT LOADER program
[4] One or more programs could be on the CF card

Note: *The Bootloader menu can be entered by switching the Aura off and holding down the "0" button on the internal keypad and switching the Aura back on.*

The display will show:

BOOTLOADER MENU

1. START LOADED APP
2. LOAD APP FROM CF
3. LOAD APP FROM FLASH
4. START APP SAFE MOD

Select "LOAD APP FROM CF" and load the Bootloader.

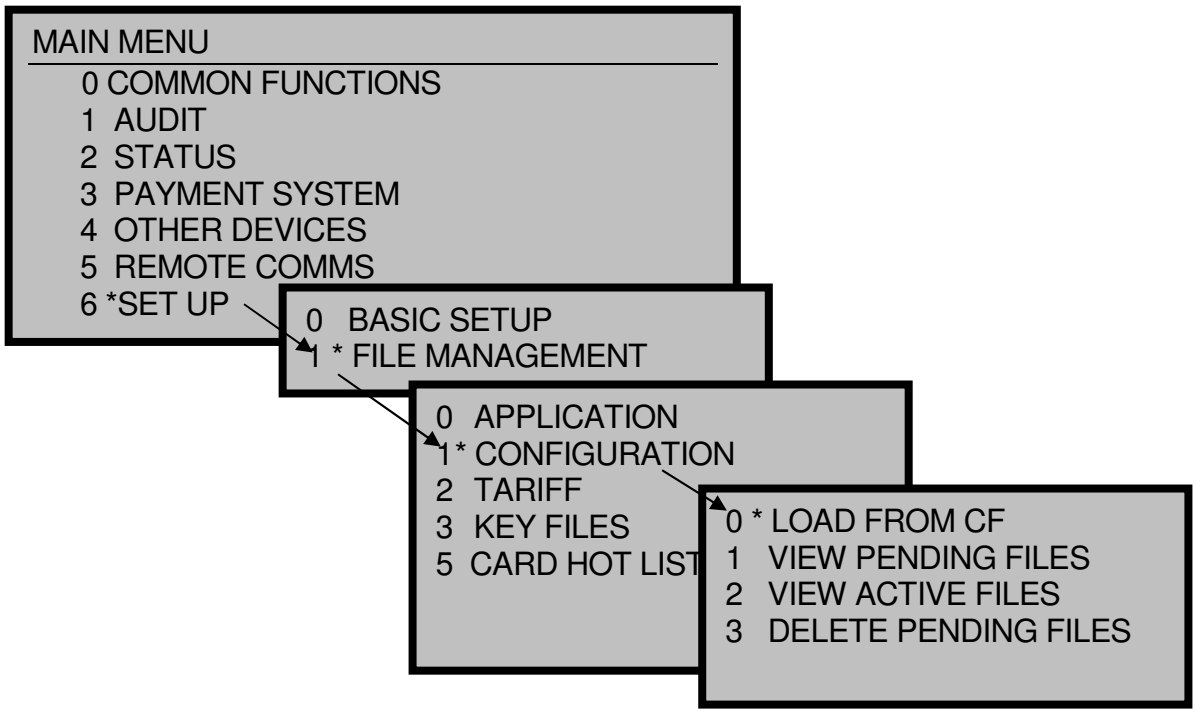
Sequence for loading the software

If the codes are entered directly from the keypad, the Aura will re-boot from each code. Using the menu it is possible to load all these files before re-booting.

Menu structure

Press the ↵ key on the internal keypad to enter the main menu. The display will present the following menu. The * indicates which menu has been selected, press the "B" key to scroll down the menu to select the required function. When highlighted press the ↵ key to enter that menu and select the required function.

Example: loading a configuration file



After loading the configuration file proceed to load the tariff, key and card hot list files (if required).

Setup using shortcut code

- **6 1 1 0** Load configuration[5] file from CF card
- **6 1 2 0** Load tariff[6] file from CF card
- **6 1 3 0** Load key[7] file from CF card
- **6 1 5 0** Load hot list[8] file from CF card

[5] Configuration file. This file contains the machine configuration i.e. coin, card, note reader etc.
[6] Tariff file. This file contains the tariff structure
[7] Key file. This file contains the Dallas keys to be accepted
[8] Hot list file. This file contains a list of cards which will not be accepted

Basic parameters

After loading all the files from the CF card, the basic parameters must be set.

Shortcut code	Function	A code
• **6 0 0**	Set time and date.	A100
• **6 0 1**	Set machine name	A121
The name must be left justified, it can be any length up to 6 characters long, but cannot have any spaces in between, i.e. MET01 not MET 01		
• **6 0 2**	Set location (optional)	
• **6 0 3**	Set location ID.	
Mainly used for chip & pin, (the ID is printed on a credit card receipt) and PERTIS. This could also be used as another line of text if required, (This line of text MUST be set up in the configuration file for it to be available)		
• **6 0 6**	Reset audits & logs	A001 (requires security code)
After loading all the files and setting up the time, date and machine name the machine can be placed in service.		
In addition to the above basic parameters, the ticket level must be entered to ensure an accurate count.		
• **0 1 1**	Enter number of tickets on roll	A301
• **1 5 3**	Enter ticket warning level, i.e. 100	

Note: *Daylight saving time is incorporated within the configuration file; therefore the advance clock and retard clock dates are not required when setting up the machine.*

Loading software

File management

This set of commands allows the configuration and manipulation of the application, configuration, key-list, tariff and hot list files. All the command groups follow the same pattern, i.e.

- There are commands to list the current and loaded files
- There is a command to load a new file from compact flash to the Aura's internal flash memory.
- There is a command to delete a file from the Aura's internal flash memory.

There are several things to note about the way files are used within the Aura:

- In order for a file to be used by the Aura as part of its configuration/operation, that file will require activation.
- The final part of any activation is restarting the Aura software. The engineer may prefer to load all the relevant files before restarting the software, rather than doing so multiple times as each file is loaded and activated. Loading all the files before restarting can only be done using the menu system, and not using the codes directly. Using the codes directly loads each file individually.

Applications[9]

6 1 0 0 – Load application file from compact flash card

The Aura will be supplied from new with an application file already pre-loaded. However, it may be necessary to load an application file. See following procedure.

Loading an application file:

- Insert the CF card into the slot on the CPU PCB
- Press the ↵ key to enter the main menu.
- Select set up.
- Select file management.
- Select application files
- Select Load from CF
    - The CF card could have more than one file, select the correct application and press the ↵ key to load.
- When copy completed, press the ↵ return key to load the file, or alternatively press the CL key to return to the menu to select another file to load.

Note: *Alternatively the 6 1 0 0 shortcut code can be used.*

6 1 0 1 – View pending files

This option will show a list of files that are stored in the Aura's internal flash drive. These files will be pre-built and loaded with the application file. On a pre-programmed date embedded in the file the pending file will become the active file.

6 1 0 2 – View active files

This option will show the current loaded version of the application

6 1 0 3 – Delete pending files

This command will allow the deletion of files held by the Aura's internal flash drive.
This command can be used to delete a file if the customer changes their mind and doesn't require the new application to become the current file on a pre-programmed date.

[9] Note; if the boot loader and the application has just been installed as described earlier, the application does not need to be re-installed.

Configuration

6 1 1 0 – Load configuration file from compact flash card

- Insert the CF card into the slot on the CPU PCB
- Press the ↵ key to enter the main menu.
- Select set up.
- Select file management.
- Select configuration files
- Select Load from CF
    - The CF card could have more than one file, select the correct configuration and press the ↵ key to load.
- When copy completed, press the ↵ return key to load the file, or alternatively press the CL key to return to the menu to select another file to load.

Note: *Alternatively the 6 1 1 0 shortcut code can be used.*

6 1 1 1 – View pending files

This option will show a list of files that are stored in the Aura's internal flash drive. These files will be pre-built and loaded with the configuration file. On a pre-programmed date embedded in the file the pending file will become the active file.

6 1 1 2 – View active files

This option will show the current loaded version of the configuration.

6 1 1 3 – Delete pending files

This command will allow the deletion of files held by the Aura's internal flash drive.
This command can be used to delete a file if the customer changes their mind and doesn't require the new configuration to become the current file on a pre-programmed date.

Tariff

6 1 2 0 – Load tariff file from compact flash card

- Insert the CF card into the slot on the CPU PCB
- Press the ↵ key to enter the main menu.
- Select set up.
- Select file management.
- Select tariff files
- Select Load from CF
    - The CF card could have more than one file, select the correct tariff and press the ↵ key to load.
- When copy completed, press the ↵ return key to load the file, or alternatively press the CL key to return to the menu to select another file to load.

Note: *Alternatively the 6 1 2 0 shortcut code can be used.*

6 1 2 1 – View pending files

This option will show a list of files that are stored in the Aura's internal flash drive. These files will be pre-built and loaded with the tariff file. On a pre-programmed date embedded in the file the pending file will become the active file.

6 1 2 2 – View active files

This option will show the current loaded version of the tariff.

6 1 2 3 – Delete pending files

This command will allow the deletion of files held by the Aura's internal flash drive.
This command can be used to delete a file if the customer changes their mind and doesn't require the new tariff to become the current file on a pre-programmed date.

Key list

6 1 3 0 – Load key list file from compact flash card

- Insert the CF card into the slot on the CPU PCB
- Press the ↵ key to enter the main menu.
- Select set up.
- Select file management.
- Select key list files
- Select Load from CF
    - The CF card could have more than one file, select the correct key list and press the ↵ key to load.
- Display requests "PIN_____". Enter pin number and press ↵
- When copy completed, press the ↵ return key to load the file, or alternatively press the CL key to return to the menu to select another file to load.

Note: *Alternatively the 6 1 3 0 shortcut code can be used.*

6 1 3 1 – View pending files

This option will show a list of files that are stored in the Aura's internal flash drive. These files will be pre-built and loaded with the key list file. On a pre-programmed date embedded in the file the pending file will become the active file.

6 1 3 2 – View active files

This option will show the current loaded version of the key list.

6 1 3 3 – Delete pending files

This command will allow the deletion of files held by the Aura's internal flash drive.
This command can be used to delete a file if the customer changes their mind and doesn't require the new key list to become the current file on a pre-programmed date.

Hot list files

6 1 5 0 – Load hot list file from compact flash card

- Insert the CF card into the slot on the CPU PCB
- Press the ↵ key to enter the main menu.
- Select set up.
- Select file management.
- Select Hot list files
- Select Load from CF
    - The CF card could have more than one file, select the correct hot list file and press the ↵ key to load.
- When copy completed, press the ↵ return key to load the file, or alternatively press the CL key to return to the menu to select another file to load.

Note: *Alternatively the 6 1 5 0 shortcut code can be used.*

6 1 5 1 – View pending files

This option will show a list of files that are stored in the Aura's internal flash drive. These files will be pre-built and loaded with the hot list file. On a pre-programmed date embedded in the file the pending file will become the active file.

6 1 4 2 – View active files

This option will show the current loaded version of the hot list file.

6 1 4 3 – Delete pending files

This command will allow the deletion of files held by the Aura's internal flash drive.
This command can be used to delete a file if the customer changes their mind and doesn't require the new hot list file to become the current file on a pre-programmed date.

6 9 0 – Obey command file on CF

It is possible for the CF card to contain a batch file which will load all files (Configuration, tariff, key list, and hot list files) under one command.

NOTE: *When all files are loaded the Aura must be restarted to activate the files.*

6 9 1 – Print maintenance menu

This function is very useful if the attendant does not have a manual and does not have a code list to hand. Executing this command will result in the machine printing all the service codes and a brief description of each, relevant to the machine configuration. It is important to use this code sparingly as the list is extensive.

Setup

Basic machine set-up

The following set of commands has been provided so that an operator will be able to setup or decommission a machine. When delivered, the Aura will require a minimum of these configuration items to be set:

- Date and time
- Machine name
- Machine location
- Machine location ID
- A configuration file to be loaded and activated
- A tariff file to be loaded and activated
- A key list file to be loaded and activated

Generally, it is recommended that the configuration, key-list and tariff files are loaded and activated (with the required restart) ahead of doing the basic machine setup. This will ensure that the tariff and machine locations lists are as required by the particular installation.

6 0 0 – Set date and time (A100)

This command can be used by an operator to set the machines date and time. Use the internal keypad to alter the date and time. The “B” key scrolls forward and the “A” scrolls back. The “D” key scrolls forward to YEAR-MONTH-TIME, the “C” key scrolls back. When in the correct position press the required number. When completed, press the return key to enter the new date and time.

Note: *If the machine has been decommissioned, the Aura software will require that the date and time is set even though that shown is correct. Changing one single digit of the date field will make the Aura software accept that the date has been changed, even if the digit entered has the same value as was previously shown.*

6 0 1 – Set machine name (A121)

The Aura uses the machine name in many reports, both printed on tickets and in files sent to the back office. Therefore it is essential that a unique machine name is given to every machine. The machine name MUST consist of alphanumeric character and no special characters or spaces.

6 0 2 – Set location

The location field can have up to 26 characters. This produces one line of editable text on the ticket. i.e. street or car park name.

6 0 3 – Set location ID

The ID field can have up to 26 characters. This produces one line of editable text on a PERTIS or credit card receipt ticket. i.e. council or management company, station etc.

6 0 4 – Set ticket text

This routine will allow up to 4 lines of editable text and can have up to 26 characters per line. This function is only available if the ticket file has been configured to implement this.
The display shows the language to be selected, use the “D” & “C” keys to scroll between the languages. Press enter then use the “D” key to scroll down the string line, i.e. “0”, enter the text required. When complete press the  return key. Repeat the above process for any additional lines of text.

6 0 5 – Print ticket text

This routine will print a ticket showing all the text entered in the 6 0 4 routine. Useful for checking the characters are correct.

6 0 6 – Reset audit logs (A001) requires a security code

This command will cause all the current and historic audit records to be cleared. This means that all coin, card and note box history will be lost.

Detailed description of maintenance menu

Commonly used functions

These menu items are provided so that the most frequently performed operations are readily accessible through the menu system.

0 0 - Set language (A104)

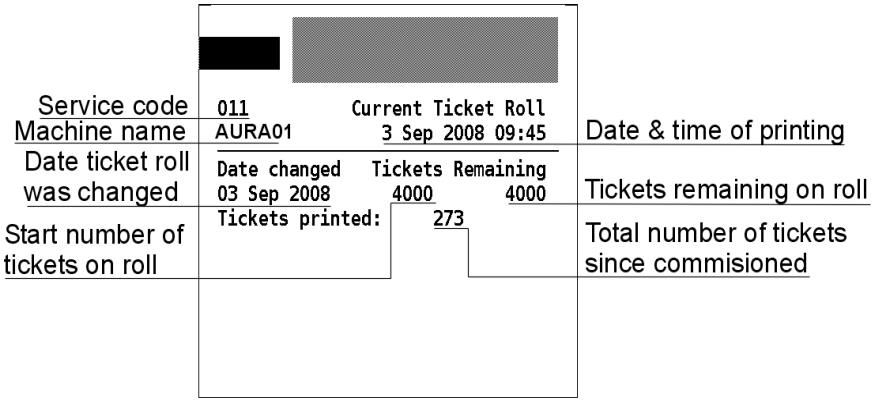
Use this menu item to set the machine language from those available

0 1 0 – Tickets remaining

This command will display the number of tickets that are remaining.

0 1 1 – New ticket roll (A301)

Use this menu item to set the number of tickets on a newly inserted ticket roll. The Aura software will monitor the number of tickets remaining on a roll, and if so configured, is able to send an event to the back office when the roll level is low. After entering the ticket quantity, a ticket is produced confirming the update.



0 1 2 – Feed forward

This command is used as an aid to inserting a new ticket roll.

0 1 3 – Print test ticket (A580)

This command will print a test ticket. This maintenance command should be performed every time a new ticket roll is installed so that the operation of the printer can be verified before the machine is closed.

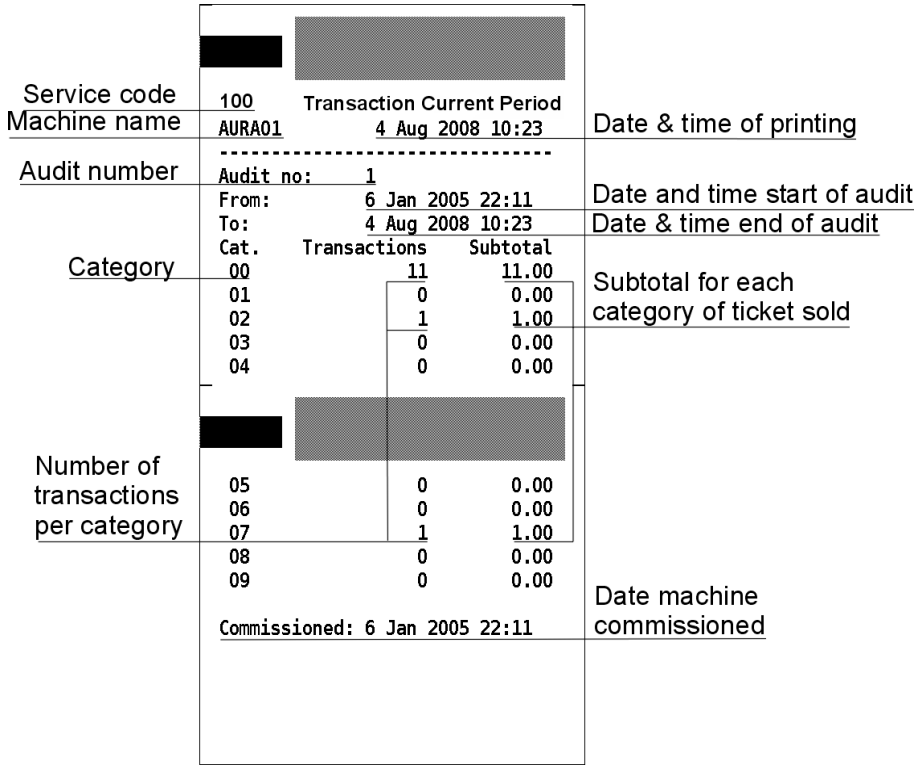
Audit

The Aura software will maintain audits for transactions, coin boxes, note boxes, cards and Dallas keys. A printed report can be produced for each type of audit using these maintenance commands.

Each transaction, coin box, note box and card audit has a current period, a last period and up to ten previous (historic) periods.

1 0 0 – Print current transaction audit (A480)

This ticket shows the number of transactions and subtotals per category between the last cashbox removal and the time the 1 0 0 ticket was printed.



1 0 1 – Print last transaction audit (A481)

This is the same as the 1 0 0 ticket but prints a report associated with the last coin-box withdrawal.

1 0 2 – Print transaction audit history (A482)

This is the same as the 1 0 1 ticket but prints a report associated with the last 10 coin-box withdrawals.

1 0 3 – Print current transaction audit, including free time (A420)

For phase one release of the software, only the category counter part of the report will be produced, and not the time bands. Therefore this ticket will be the same as 1 0 0 ticket.

1 0 4 – Print last audit, including free time (A421)

Same as 1 0 3 but prints a report associated with the last coin-box withdrawal.

1 0 5 – Print history audit, including free time (A422)

This is the same as the 1 0 4 ticket but prints a report associated with the last 10 coin-box withdrawals.

1 0 6 – Print current transaction audit, excluding free time (A430)

For phase one release of the software, only the category counter part of the report will be produced, and not the time bands. Therefore this ticket will be the same as 1 0 0 ticket.

1 0 7 – Print last audit, excluding free time (A431)

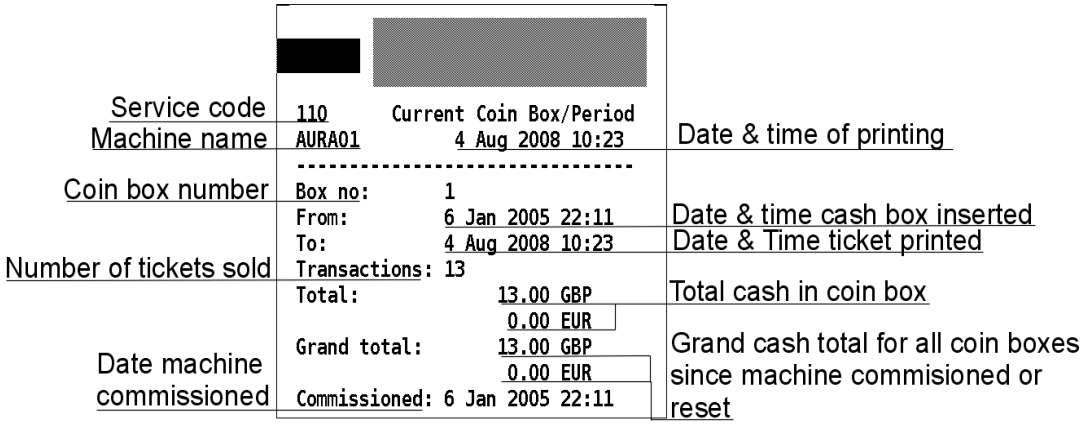
Same as 1 0 3 but prints a report associated with the last coin-box withdrawal.

1 0 8 – Print history audit, excluding free time (A432)

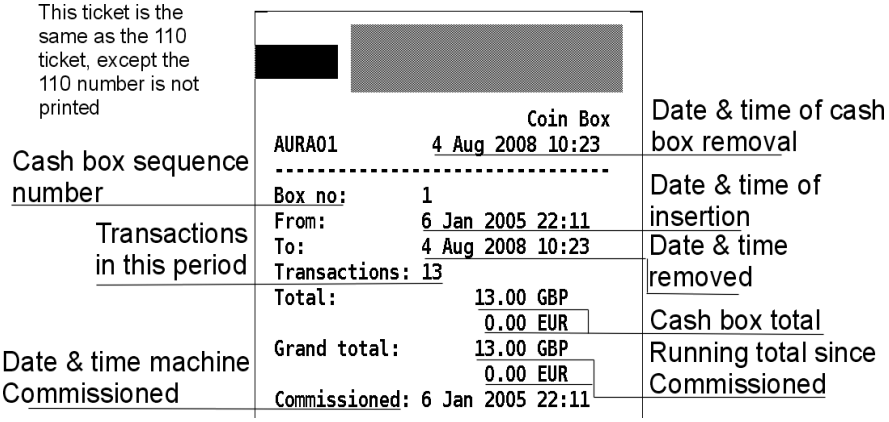
This is the same as the 1 0 4 ticket but prints a report associated with the last 10 coin-box withdrawals.

1 1 0 – Print current cash box summary (A400)

This code will print statistics about the state of the coin-box currently in the machine. If the attendant were to pull a coin-box from the machine immediately after printing this audit, the two tickets would look almost identical except the true coin-box ticket would **NOT** have a service code in the upper left hand corner and the ticket description is different.



Cash box ticket



1 1 1 – Print last cash box summary (A401)

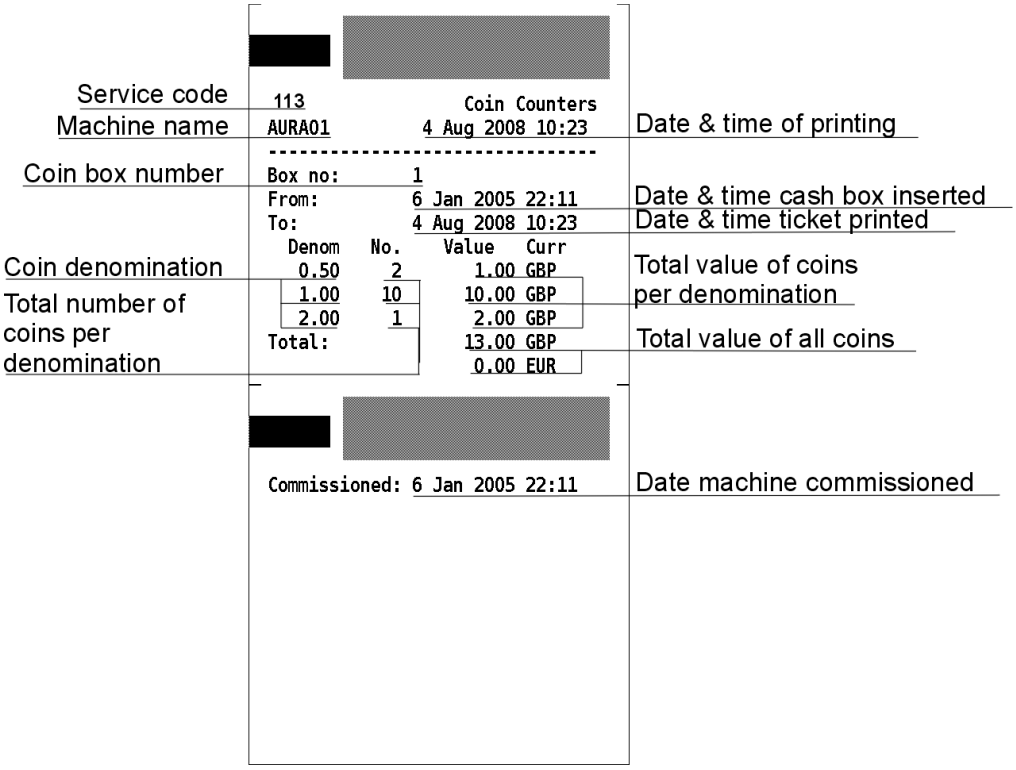
This code will generate the information printed on the last cash box pulled from the machine.

1 1 2 – Print last 10 cash box summary (A402)

Prints audit reports which contain information relating to the previous ten cash boxes. If the number of previous boxes is less than ten, the number of reports produced will reflect that number of boxes. It should be noted that information relating to boxes, historically older than the tenth box, will be lost.

1 1 3 – Print current cash box coin counters (A410)

This report will generate the current state of the coin-box by showing the distribution of each type of coin, by count and total value.



1 1 4 – Print last cash box coin counters (A411)

As code 1 1 3, however it prints a report for the last time the stats were updated due to coin-box removal.

1 1 5 – Print last 10 cash box coin counters (A412)

As code A1 1 3, but will print out up to the last 10 reports.

1 2 0 – Print current note box summary (A570)

Prints an audit report which contains information relating to the note box installed into the machine at the time of the request.

1 2 1 – Print last note box summary (A571)

Prints an audit report which contains statistical information relating to the previous note box.

1 2 2 – Print last 10 note boxes summary (A572)

Prints audit reports which contain information relating to the previous ten note boxes. If the number of previous boxes is less than ten, the number of reports produced will reflect that number of boxes. It should be noted that information relating to boxes, historically older than the tenth box, will be lost.

1 2 3 – Print current note box note counters

This report will generate the current state of the note-box by showing the distribution of each type of note, by count and total value.

1 2 4 – Print last note box note counters

As code 1 2 3, however it prints a report for the last time the stats were updated due to note-box removal.

1 2 5 – Print last 10 note box note counters

As code A1 2 3, but will print out up to the last 10 reports.

1 3 0 – Print current card summary (A470)

This code will show the current audit for cards since the last coin-box withdrawal.

1 3 1 – Print last card summary (A471)

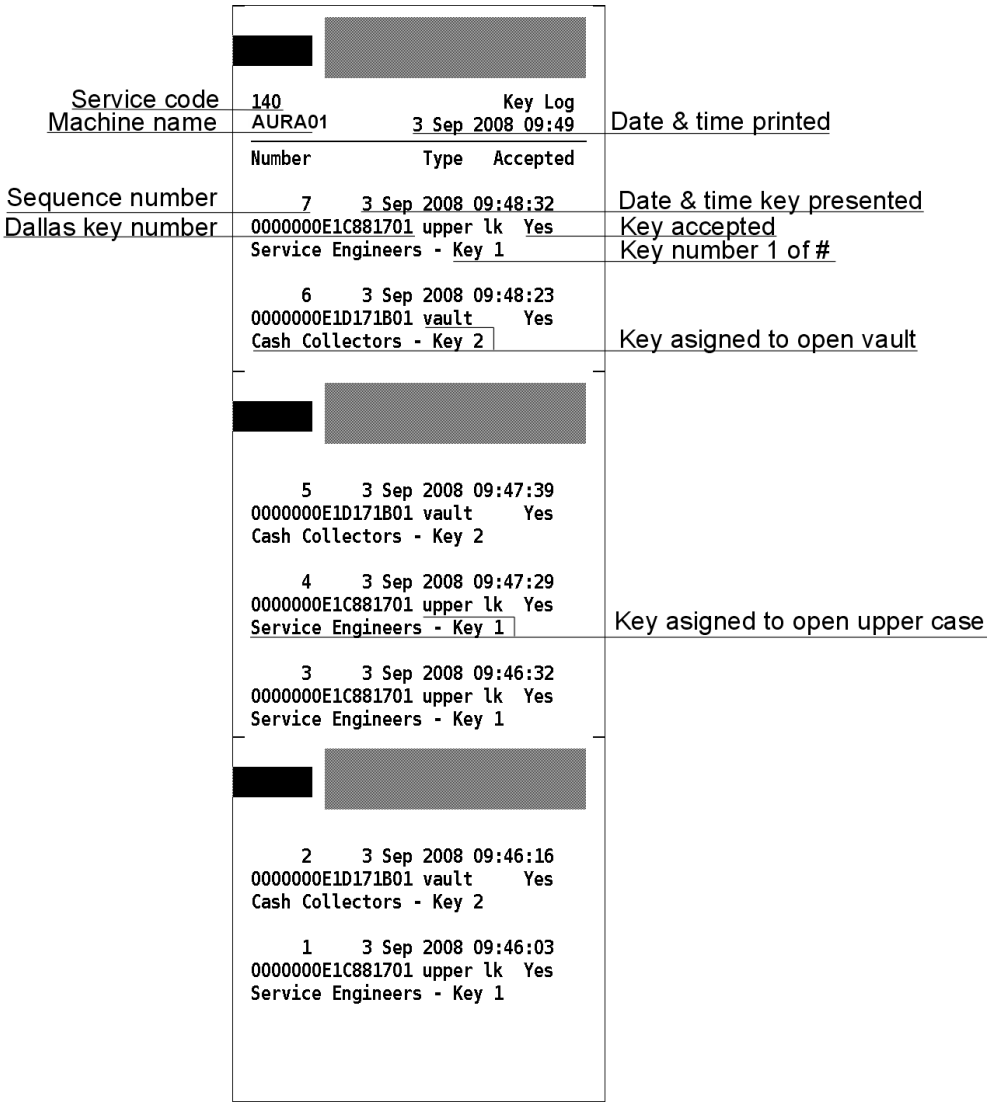
As 1 3 0 but will show the card audit that was printed when the last cashbox was removed.

1 3 2 – Print last 10 card summary (A472)

Prints audit reports which contain information relating to the previous ten card audits linked to cash box removal. If the number of previous boxes is less than ten, the number of reports produced will reflect that number of boxes. It should be noted that information relating to cards, historically older than the tenth box, will be lost.

1 4 0 – Prints the last 10 Dallas keys presented to the machine

This ticket reports the last 10 Dallas keys presented to the machine, it includes the date, time and if it was accepted or rejected, it also includes the unique Dallas key number.

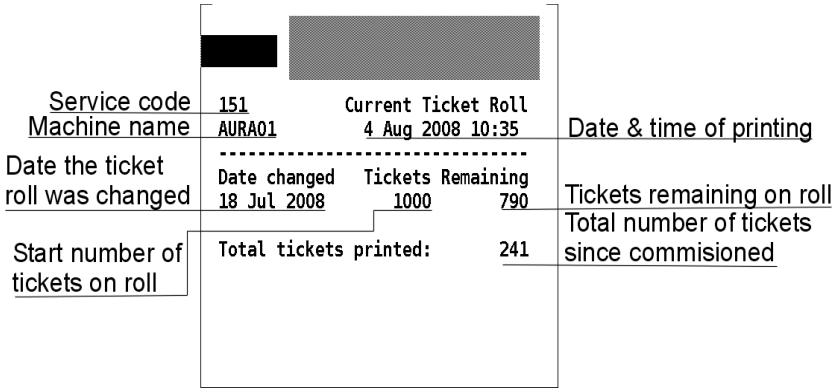


1 5 0 – Displays the current number of tickets

This routine displays the current number of tickets on the roll. The 0 1 1 routine must have been set for this figure to be correct.

1 5 1 – Prints the current number of tickets

This routine prints the current number of tickets on the roll. The 0 1 1 routine must have been set for this figure to be correct. It also shows when the ticket roll was changed and the 0 1 1 routine was set. At the bottom a running total of the number of tickets produced since the machine was commissioned.



1 5 2 – Prints the last 10 dates when the ticket roll was changed

This routine prints the date when the ticket roll was changed and the amount of tickets entered via the 0 1 1 routine, up to the last 10 roll changes are printed.

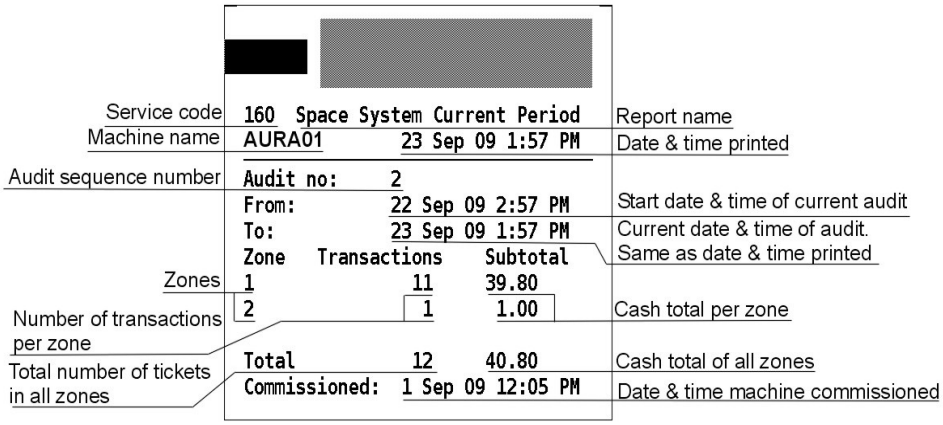
1 5 3 – Displays the ticket low warning level

This routine allows the user to enter a “Paper Low” warning level.
i.e. 4000 tickets loaded (0 1 1), warning level set i.e. 100
When the ticket roll reaches the last 100 tickets, a warning condition will be activated. This will activate the yellow LED on the display and when the machine is interrogated via the **2 0 6** routine, it will report “Paper low”. If the machine is equipped with remote communications, it will report the paper low condition to the back office.

Space system audit report

1 6 0 - Print current (A450)

This routine prints the current audit ticket for all zones.



1 6 1 - Print last (A451)

This routine prints the last audit ticket for all zones.

1 6 2 - Print history (A452)

This routine prints the last 10 audit ticket for all zones.

Note: *For full description of the space system go to page 61.*

Tariff counters

1 7 0 – Print current tariff counters and not clear (A201)

Tariff codes are a list of strings (up to 8 characters long) that can be assigned to cost or time periods within a Tariff. These allow identification of time or cost bands for auditing purposes.

The Tariff Code list must be sequential and ordered by value such that the first one has a value greater than or equal to the current value. The list can be specified to operate in either “TIME” or “MONEY” trigger values.

Example: Assuming ‘Tariff Code Value Type’ is set to “TIME”

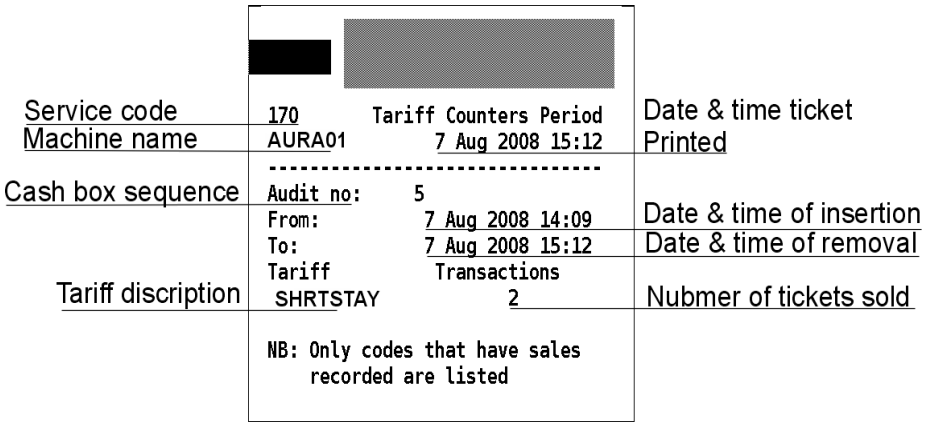
Code	Value (Minutes)	Notes
SHRTSTAY	0	>= 0
LONGSTAY	180	>= 3 hours
ALLDAY	300	>= 5 hours

Example: Assuming Tariff Code Value Type is set to “MONEY”

Code	Value (LDIMS)	Notes
SHRTSTAY	0	>= 0
LONGSTAY	300	>= £3.00
ALLDAY	500	>= £5.00

Note: *If the Tariff Code Type is set to “From properties” this table is not used and the tariff code is obtained directly from the active rule properties section.*

An example of the 1 7 0 ticket.



1 7 1 – Print last tariff counters

Same as the 1 7 0, but for the previous cash box.

1 7 2 – Print last 10 tariff counters

Prints the tariff counters for the last 10 cash boxes.

1 7 3 – Print current tariff counters and clear (A202) requires a security code

This command is similar to the code 1 7 0 except that at the end of a successful print of the report, the tariff counters are reset to zero. These report types are therefore unaffected by either removal of the coin-box or, by the issuing of service code 1 9.

1 9 - Start new audit period (A403)

This is the command that performs a freeze of all current statistical data since the last 1 9, storing it in a backup for retrieval. The counters are reset ready for the next period of time the customer wishes to monitor.

Status

Assessing the machine status

The Aura has many features to help the attendant and Metric solve the majority of problems that can occur.

The 3 main status LEDs, Green, Amber and Red on the display will allow a visual inspection of the current state of the machine.

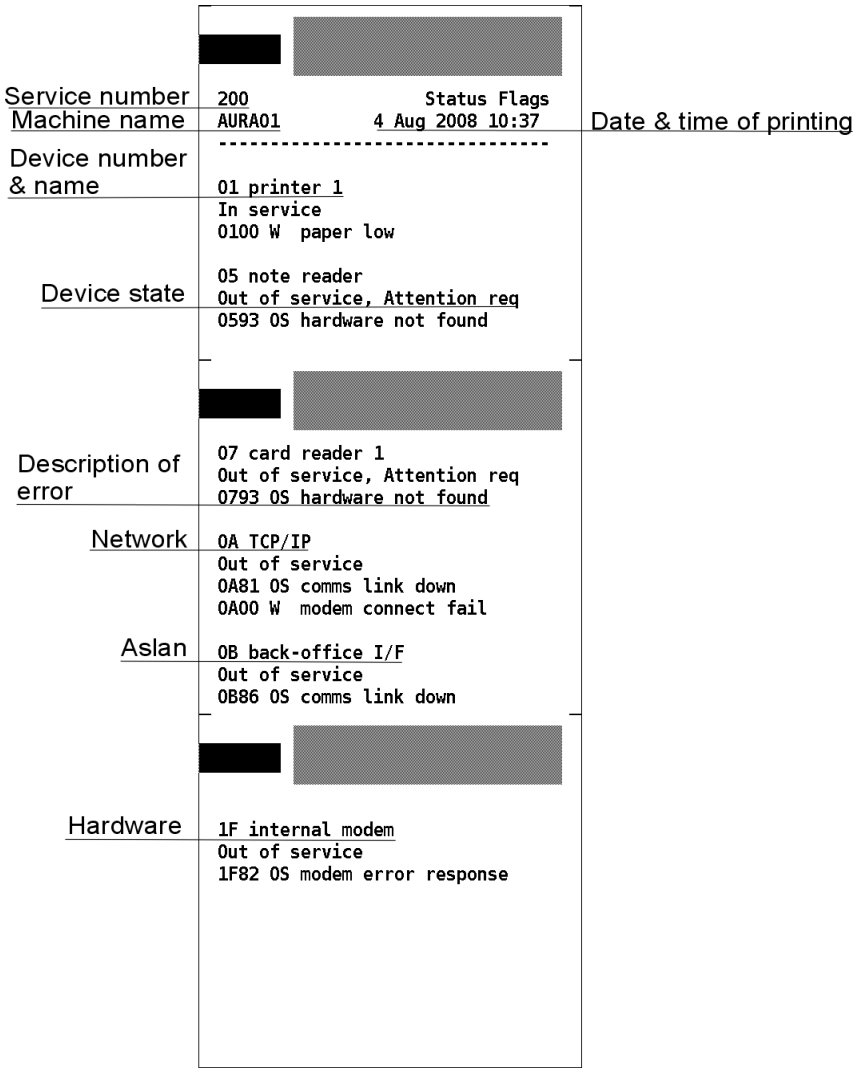
- The Green LED will flash on its own every 60 seconds when there are no status conditions to report.
- The Amber and Green LED's will flash together every 60 seconds when there is a status condition that requires attention but will not place the machine out of service.
- The Red LED will flash every 60 seconds when the machine is out of service and unable to issue tickets.

To wake the Aura lift the coin return flap, then typically it will return to sleep mode after a few seconds.

When an Amber or Red LED is illuminated, the Aura door must be opened to gain access to the internal keypad. Entering one of the following routines will help determine the condition of the machine.

2 0 0 – Print machine status

Printed version of the 2 0 1 routine. Only prints a ticket if an error is detected.



2 0 1 – Display current status (A540)

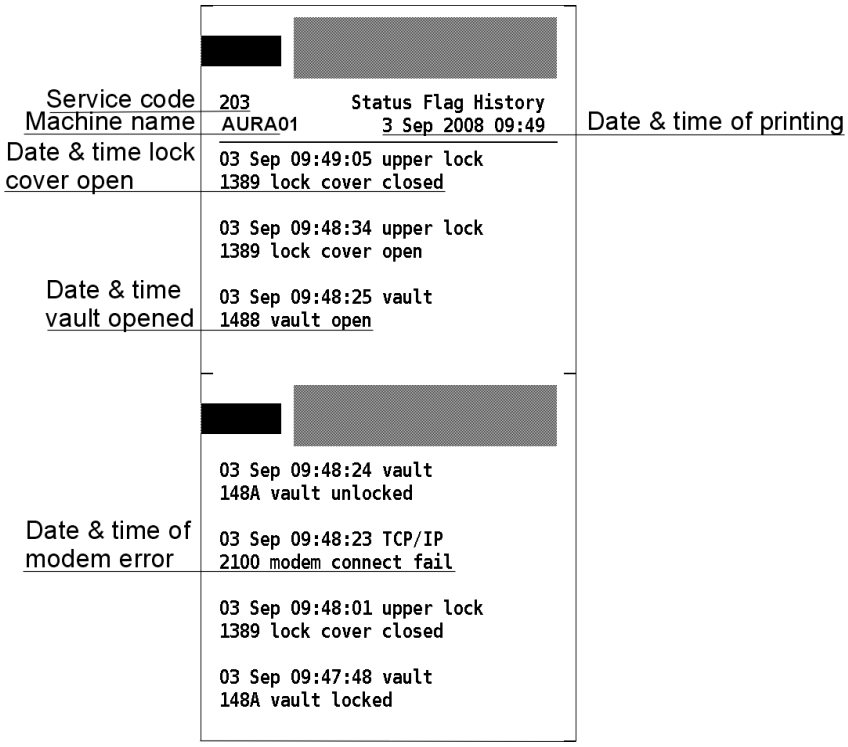
Probably, the single most important function on the machine; when executed, the machine will cycle through various messages displaying any errors or hardware discrepancies that it finds. The very first thing an attendant should do when attending a machine with a suspected problem is enter this code and make a note of any relevant messages.
This routine will display the current status of the machine, “Upper door lock open” , “Synch fail” etc. The status condition will scroll down the screen.

2 0 2 – Display status history

This function displays the log of the last 30 significant events that have occurred within the machine. This is useful in finding out what may have happened in the past, leading up to the problem the machine is exhibiting.

2 0 3 – Print last 30 events of status history (A543)

Printed version of the 2 0 2 routine.



2 0 4 – Print compact flash card directory (A495)

This function prints a report listing the contents and settings of the Compact Flash Card. Note; to enable the data to be obtained a CF card MUST be present in the CPU PCB.

2 0 5 – Print system information (A550)

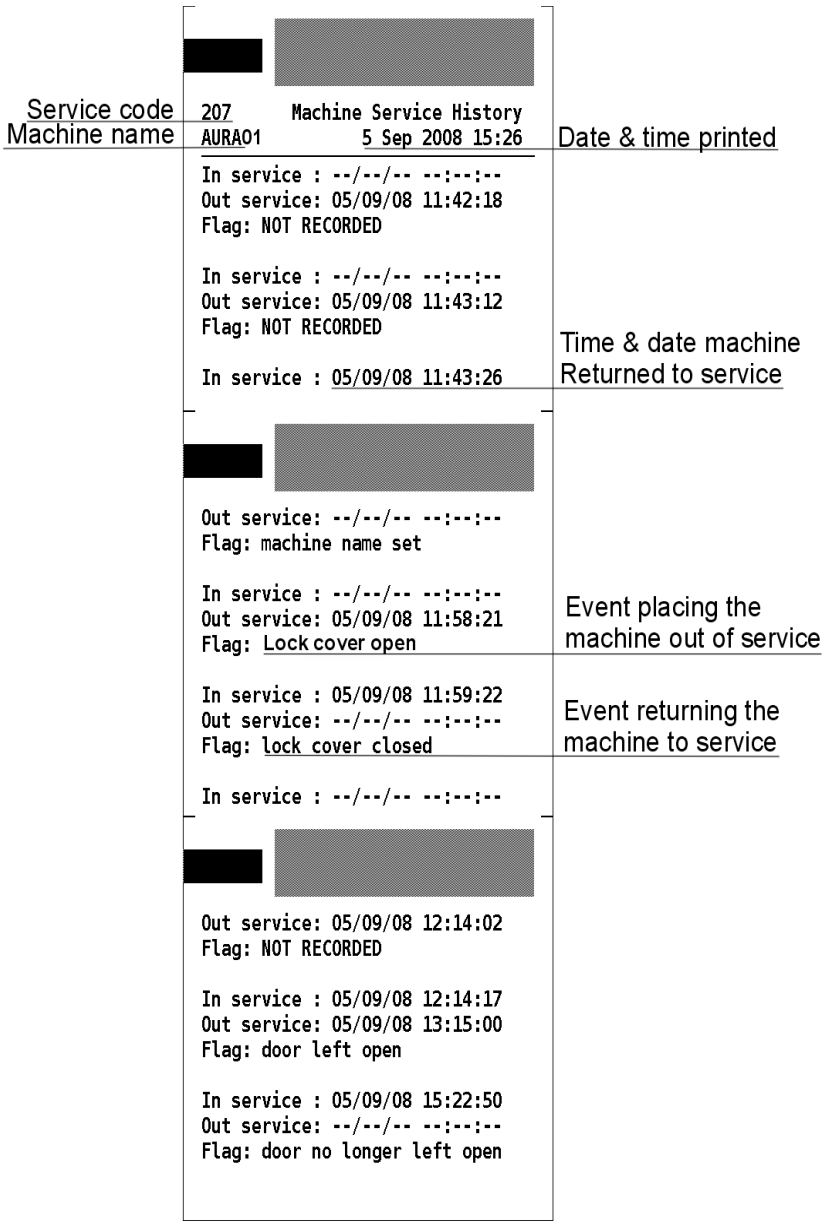
The information on this ticket is extremely important to enable Metric to diagnose problems the machine may exhibit. The ticket displays the version number, Application file, Configuration file, Tariff file, Dallas key files, coin system, note system, card system, printer, modem, upper lock, vault, power supply and boot loader.

2 0 6 – Displays system information

The display scrolls through the same information as printed on the 2 0 5 ticket.

2 0 7 – Print in-service machine history

This ticket prints the time and date when the machine was out of service, it also reports the event which rendered the machine out of service.



2 0 9 – Toggle in service

Use this routine to place the machine out of service or return it to service. Mostly used for the PERTIS configuration, but can be used if required for any configuration. Press the ↵ key to select.

Space system

Variance report

2 1 0 0 - Print space (by zone)

This routine allows the user to select the zone and space to be printed on a ticket. After entering the 2100 code the display will show the following screen, see Figure 1.

Figure 1

Use the internal keypad to select the zone number, then use the “D” key to drop down to select the space number to be printed. Press the return key to print the ticket. See Figure 2.

Note: *The “D” & “A” keys toggle between zone and space.*

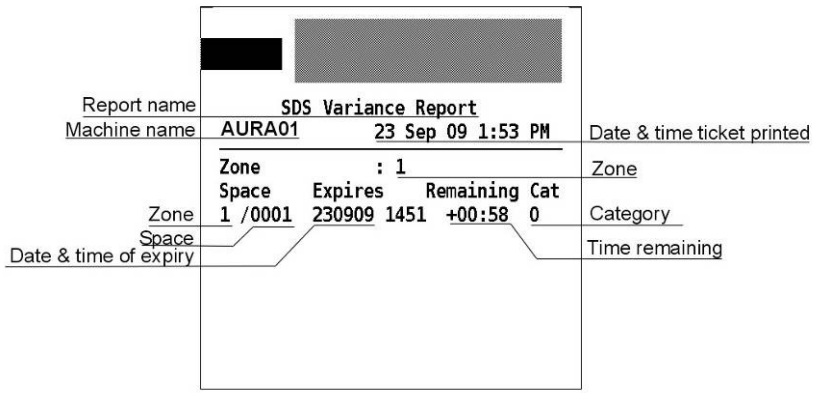


Figure 2

2 1 0 1 - Print space (lookup)

This routine allows the user to select the space to be printed on a ticket. Use the internal keypad to select the space number. Press the return key to print the ticket.
The ticket is similar to 2100.

2 1 0 2 - Print single zone

This routine allows the user to select the zone and the variance required i.e. Minus, Both or Plus time to be printed on a ticket. See Figure 3.

Figure 3

Use the internal keypad to select the zone number to be checked, then use the “D” key to drop down to select the variance required using the “B” key to scroll through the options to be printed. Press the return key to print the ticket. See Figure 4.

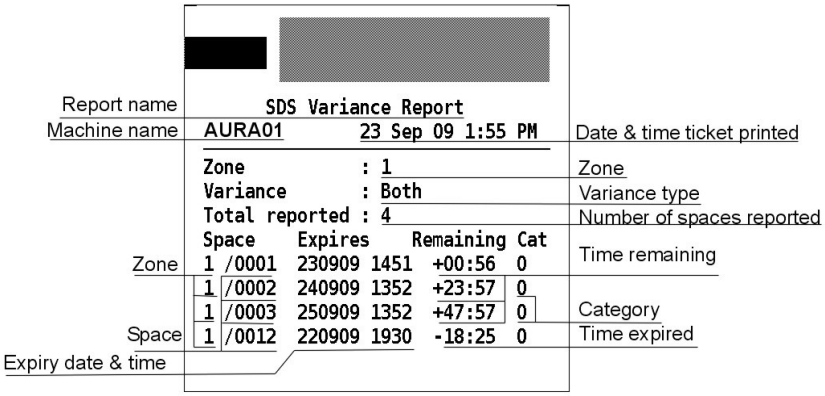


Figure 4

The example ticket above (BOTH) shows the zone and spaces purchased and the date and time of those purchases. The right side of the ticket shows the time remaining / expired per space.

Note: If Minus was selected, only the expired time / spaces would be printed on the ticket. If Plus was selected only the time remaining / spaces would be printed on the ticket.

2 1 0 3 - Print all zones

This routine allows the user to select the zone to be printed on a ticket. Use the internal keypad to select the zone number. Press the return key to print the ticket. See Figure 5.

Figure 5

This routine allows the user to scroll through the options with the "B" key to select the variance required i.e. Minus, Both or Plus time to be printed on a ticket. See Figure 6.

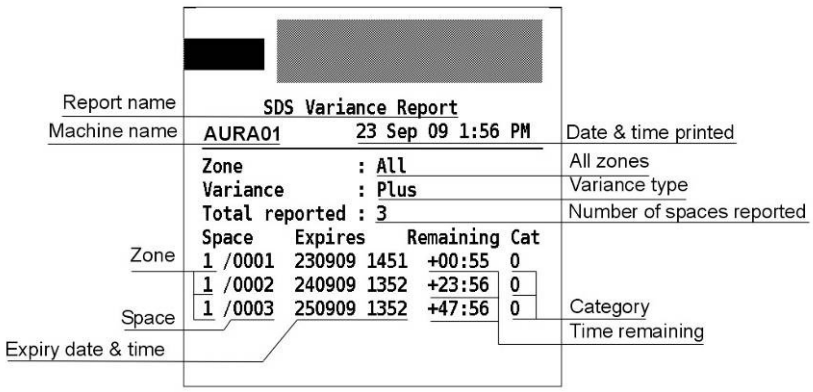


Figure 6

The example ticket above (PLUS) shows the all the zones and spaces purchased and the date and time of those purchases. The right side of the ticket shows the time remaining per space.

Note: *If Minus was selected, only the expired time / spaces will be printed on the ticket. If "Both" is selected, the time remaining and expired per space will be printed on the ticket.*

2 1 1 0 - Show space (by zones)

This routine allows the user to select the zone and space to be shown on the display. After entering the 2110 code the display will show the same screen as the 2100 routine.
Use the internal keypad to select the zone number, then use the “D” key to drop down to select the space number to be shown on the display.
Press the return key to show the information on the display.

Note:*The “D” & “A” keys toggle between zone and space. See Figure 7.*

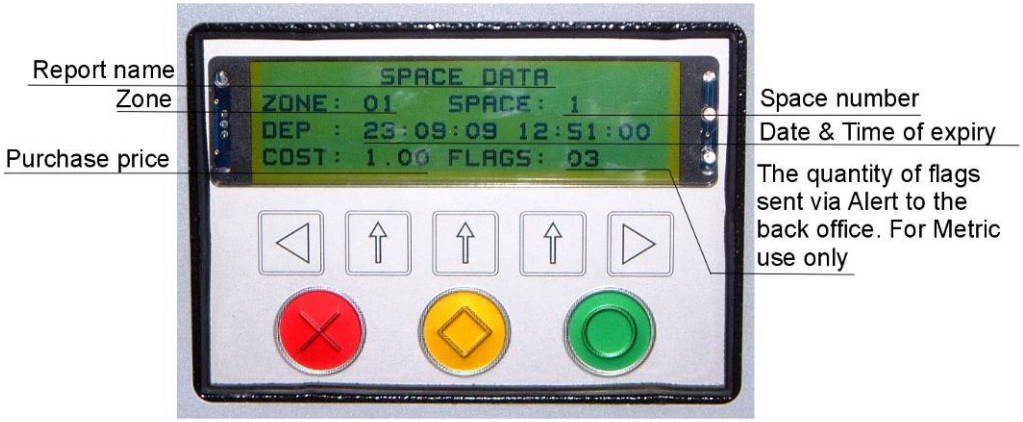


Figure 7

2 1 1 1 - Show space (lookup)

This routine allows the user to select the space to be shown on the display. After entering the 2111 code the display will show the same screen as the 2101 routine.

Use the internal keypad to select the space number. Press the return key to show the information on the display. The display is similar to the 2110 routine.

2 1 1 2 - Display statistics

This routine allows the user to select show the data base statistics. Enter 2112 and press the return key**.** See Figure 8.

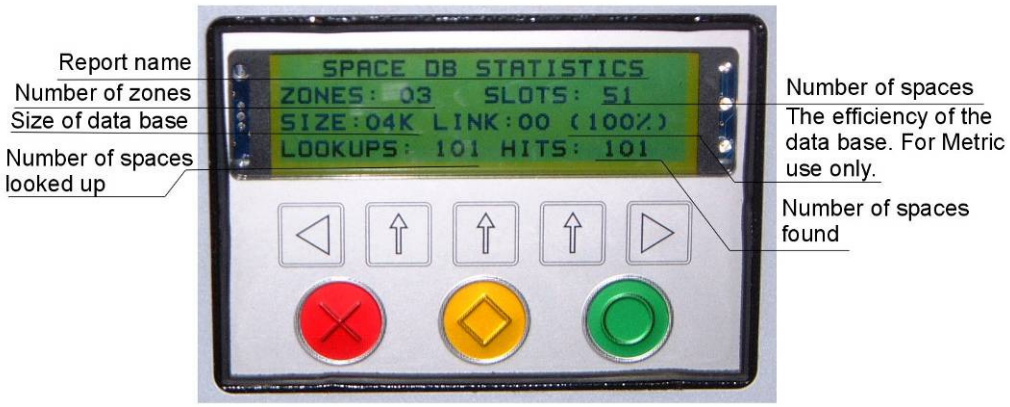


Figure 8

.

2 1 1 3 - Print configuration

This routine prints a ticket with the number of zones, the number of spaces per zone, the zone ranges and the total number of spaces across all zones. See Figure 9.

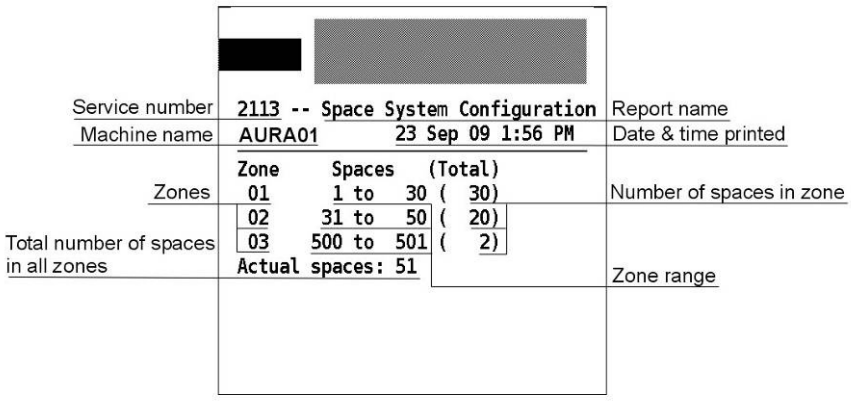


Figure 9

2 1 1 4 - Copy data base to CF

This routine copies the data base onto a compact flash (CF) card. Place a CF card into the slot on the CPU PCB, and enter the 2114 code. Press enter and the data base will be copied onto the CF card.

2 1 1 5 - Copy data base from CF

This routine copies the data base from a compact flash (CF) card to the CPU PCB. Place a CF card into the slot on the CPU PCB, and enter the 2115 code. Press enter and the data base will be copied from the CF card to the CPU PCB.

2 1 1 6 - Print zone

This routine prints a ticket with all spaces within the zone. Enter the customer specific PIN number to print ticket. The ticket shows the space purchased, what time it expires and at the cost of the vend. See Figure 10.

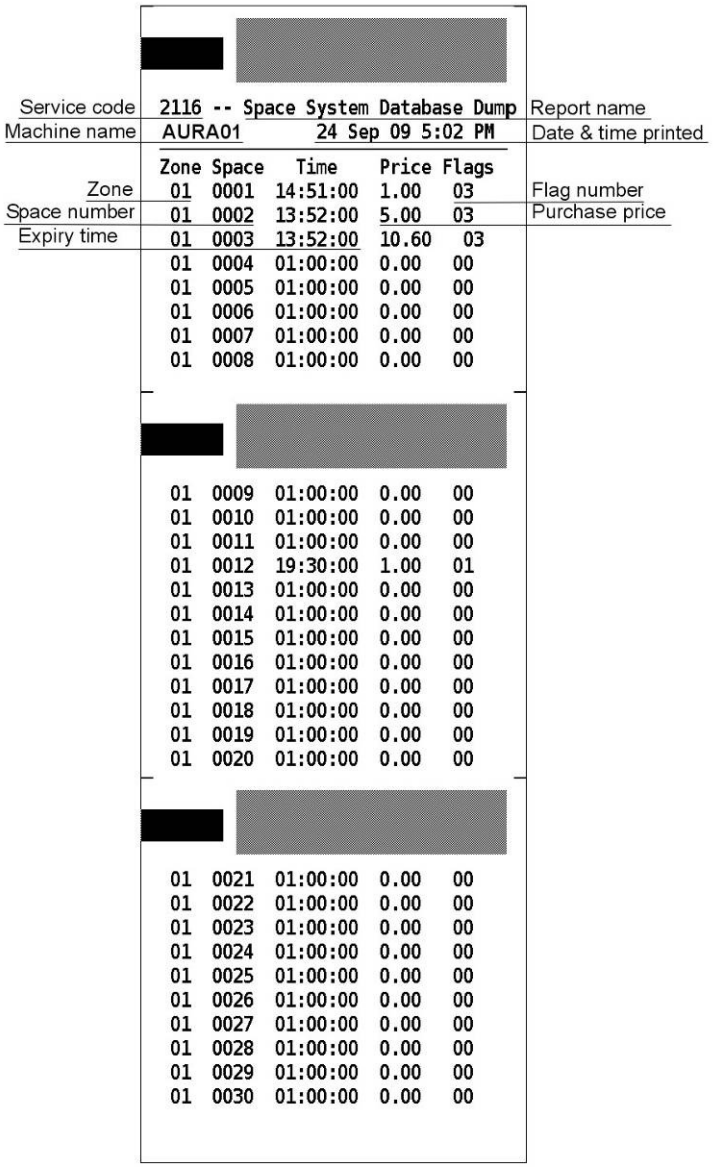


Figure 10

2 1 1 7 - Print all zones

This routine is the same as 2116 but prints all zones within the system. Enter the customer specific PIN number to print ticket.

2 1 2 0 - Aslan display status

This routine displays details of the network connection to the back office. Its shows if the system is enabled, how many attempts have been made to contact the back office, and if it was successful or not. It also shows the last time an attempt was made to contact the back office and if that was successful or not.

2 1 2 1 - Print status

This routine prints a ticket showing the enabled status, the Aslan IP connection address, and port connection. In addition is the system is set up to contact Aslan at regular intervals, as in a networked space system it will show the heartbeat period in minutes. See figure 11.

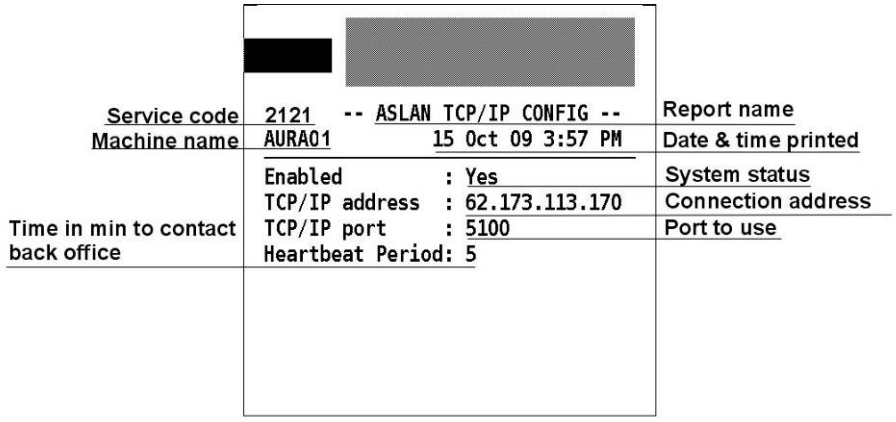


Figure 11

Space system audit report

1 6 0 - Print current (A450)

This routine prints the current audit ticket for all zones. See Figure 11.

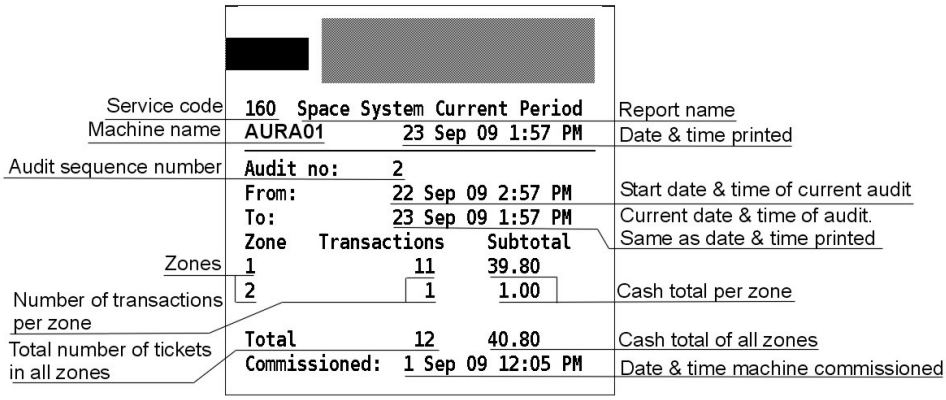


Figure 11

1 6 1 - Print last (A451)

This routine prints the last audit ticket for all zones.

1 6 2 - Print history (A452)

This routine prints the last 10 audit ticket for all zones.

Standard space ticket See Figure 12

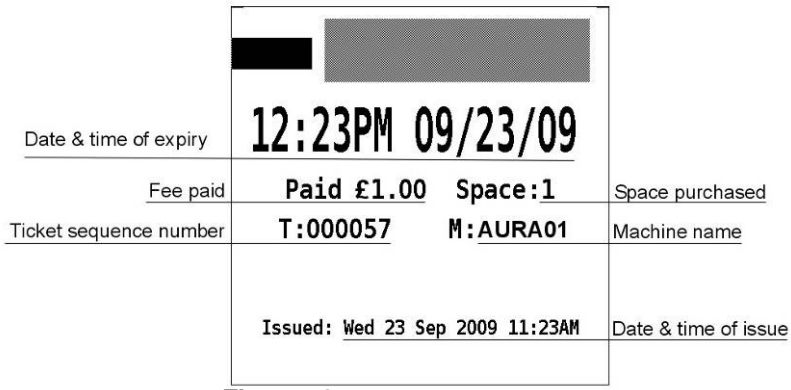


Figure 12

Set Space **D**esignated **S**ystem (**SDS) security code**

This code, entered via the service keypad allows the attendant to alter the default SDS security code. After entering the service code 621, you will be prompted to enter the high level security service code for the machine. Once validated, the SDS security code can be altered. Press the return key to confirm and accept the new SDS code. This code is used by the attendant to gain access to the SDS information.
To clear the current SDS number enter the service code 620, you will be prompted to enter the high level security service code for the machine. Once validated, the SDS number will be cleared.

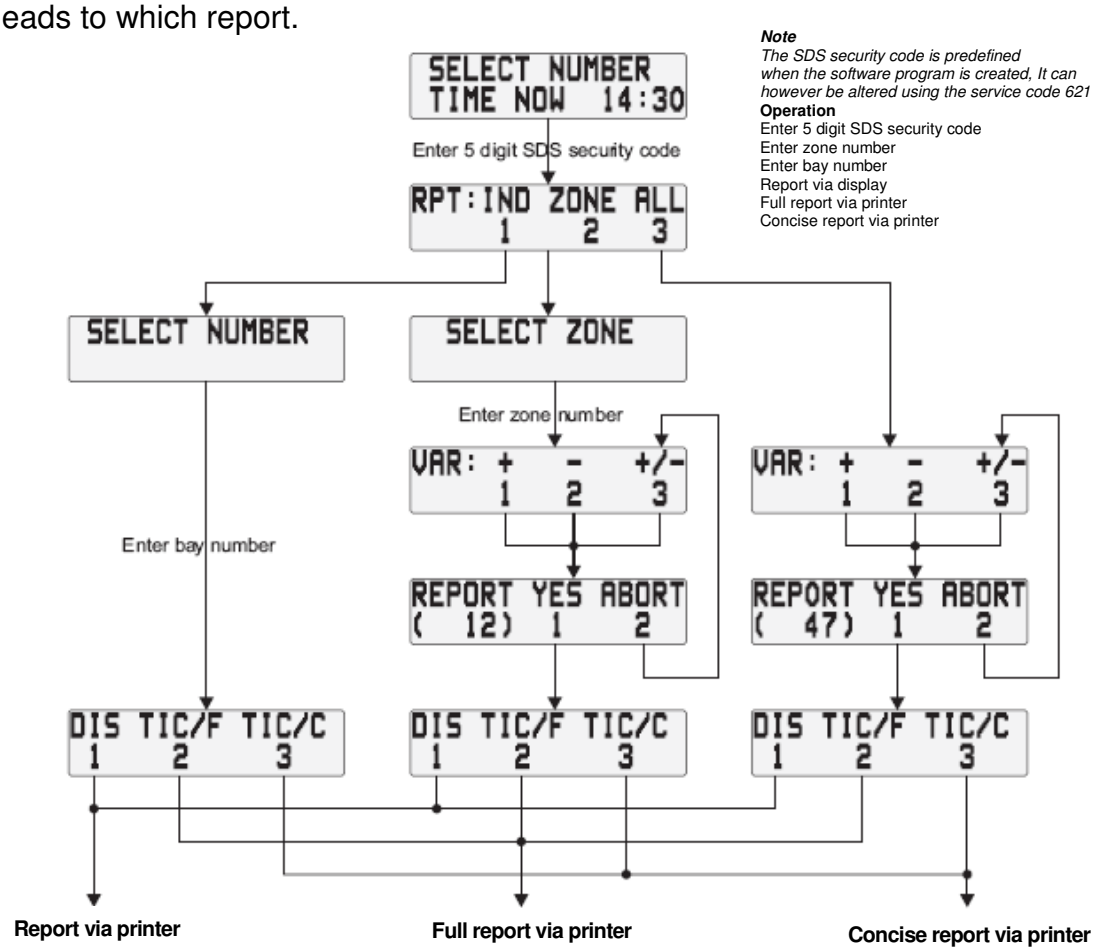
Overview

Stand alone space operation

This manner of operation varies from the more common Pay & Display machine in the following ways, a valid space number on the *Space Keypad*, has to be entered before the machine will accept payment for the space. The machine can be configured to issue a receipt automatically, on request or never. The operation of the machine has to be specified at time of order; it is not a customer configurable option.

Reports Via Space Keypad

Using the **S**pace **D**esignated **S**ystem (SDS) security code, allows access to the following reporting menus.
After entering the SDS security code reports are accessed via a simple menu system. Reports can be sent to the machine's display or printer. The following diagram shows an overall view of the menu system, showing which option leads to which report.



Space reporting menu map

Range of report

After entering the 'SDS code, the display will show 3 options: See figure 13

- ***Ind*** (an individual space number report)
- ***Zone*** (an individual zone report)
- ***All*** (All spaces and zone report)

Figure 13

IND

Selecting ***IND*** (Individual)**,** will display the menu to specify a single space number after entering a valid space number (Figure 14) and pressing the enter button, the output option menu is displayed (Figure 15), here the attendant can choose to send the information about the space to the display or the printer.

Figure 14

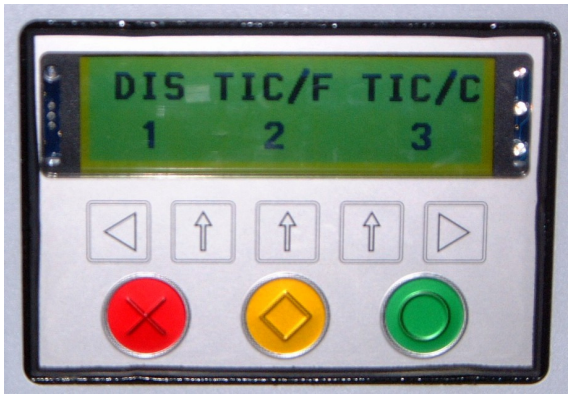


Figure 15

Selecting 1 sends the information to the display, see Figure 16.

Figure 16

Selecting 2 sends the full information to the printer, see Figure 17.

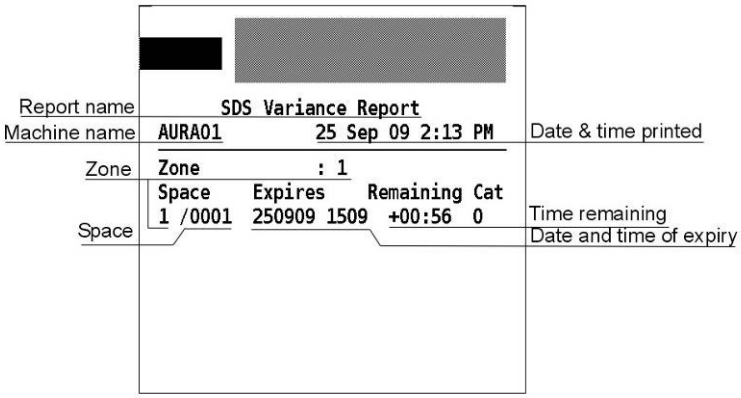


Figure 17

Zone

Selecting ***Zone,*** will display the menu to specify a range of spaces classed by zone, after entering a zone number press the enter button. See Figure 18.

Figure 18

- Selecting the plus will report spaces in the zone with the time remaining from the original purchase (positive time)
- Select the minus will report spaces in the zone with the period of time since the purchased time expired (negative time)
- Select both will report the plus and minus spaces in the zone with the time from the original purchase time remaining and time since expiry. See figure 19.

Figure 19

The screen will show the number of reports available, and a “YES option to continue or an “ABORT” option to cancel the report. See Figure 20.

Figure 20

Selecting the “YES” option, number 1 will display the screen in Figure 21. The output option menu is displayed; this offers three choices to show the information.

1. The information is sent to the display.
2. The information is sent to the printer and a full report is printed.
3. The information is sent to the printer and a concise report is printed.

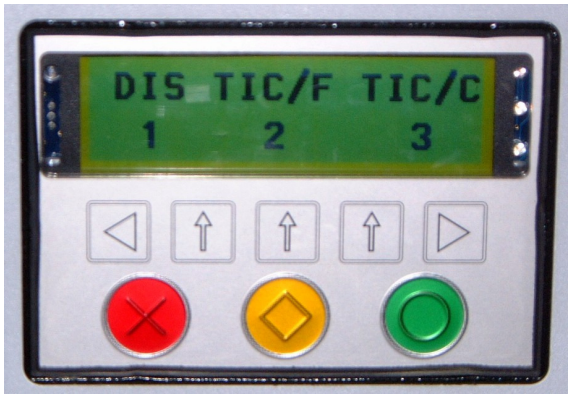


Figure 21

Selecting “1” sends the report to the display. Use the “9” key to scroll through the spaces. See Figure 22.

Figure 22

Selecting “2” prints a full report ticket. See Figure 23.

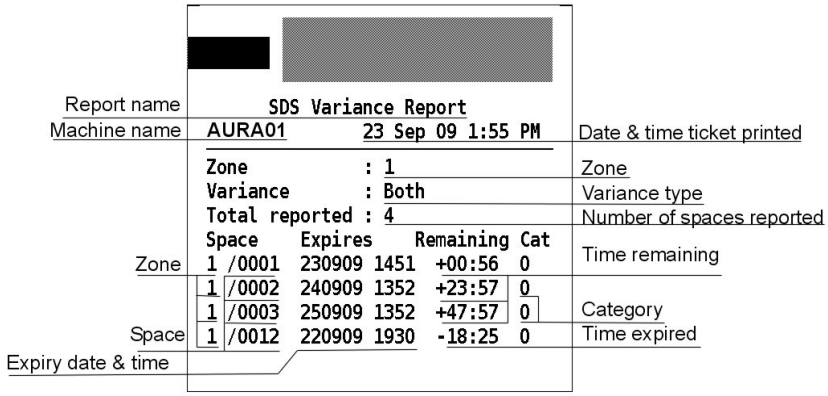


Figure 24

Selecting “3” prints a concise report ticket. Minimum information; Zone, space and time remaining / expired is printed on the ticket.

Selecting ***All,*** will display the variance menu, specify the type of report to produce. They can be either all the spaces with positive time (Plus), all the spaces with negative time (Minus) or both. See Figure 25.

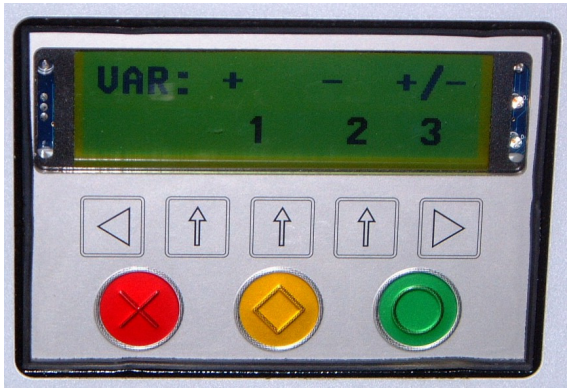


Figure 25

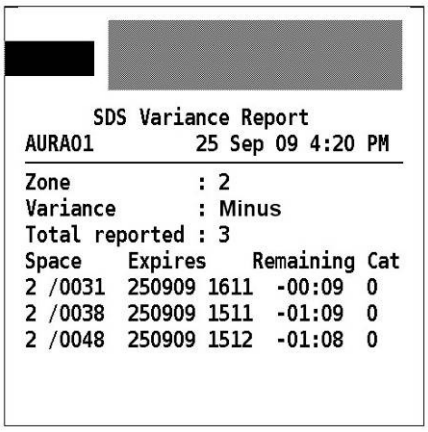
The screen will show the number of reports available, and a “YES option to continue or an “ABORT” option to cancel the report. Selecting the “YES” option, number 1 will display the screen in Figure 26.

Figure 26

Selecting “1” sends the report to the display. Use the “9” key to scroll through the spaces and zones. See Figure 27.

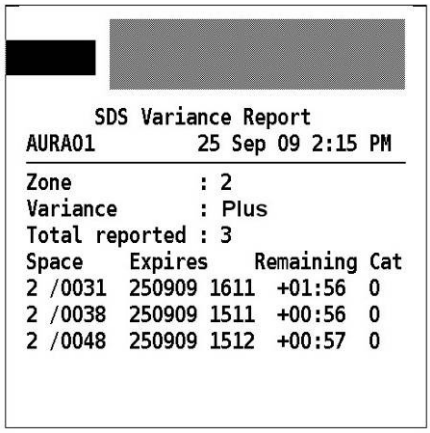
Figure 27

Below examples of the Minus (Figure 28) and Plus time (Figure 29) variance report tickets.



```
      SDS Variance Report
AURA01          25 Sep 09 4:20 PM
Zone            : 2
Variance        : Minus
Total reported : 3
Space    Expires    Remaining Cat
2 /0031  250909 1611  -00:09  0
2 /0038  250909 1511  -01:09  0
2 /0048  250909 1512  -01:08  0
```

Figure 28 Minus time ticket



```
      SDS Variance Report
AURA01          25 Sep 09 2:15 PM
Zone            : 2
Variance        : Plus
Total reported : 3
Space    Expires    Remaining Cat
2 /0031  250909 1611  +01:56  0
2 /0038  250909 1511  +00:56  0
2 /0048  250909 1512  +00:57  0
```

Figure 29 Plus time ticket

Card authorisation

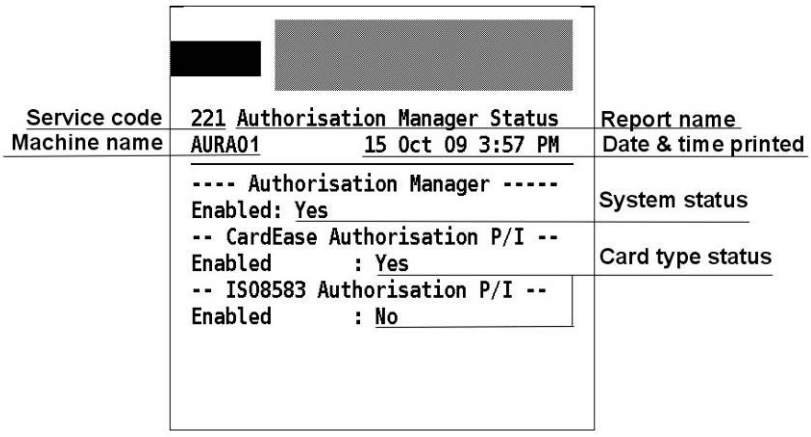
2 2 0 - Display status

This routine shows if the authorisation manager is enabled. The display will show:

AUTHERISATION MANAGER
ENABLED YES or NO

2 2 1 - Print status

This routine prints a ticket showing the enabled status and the card authorisation status.

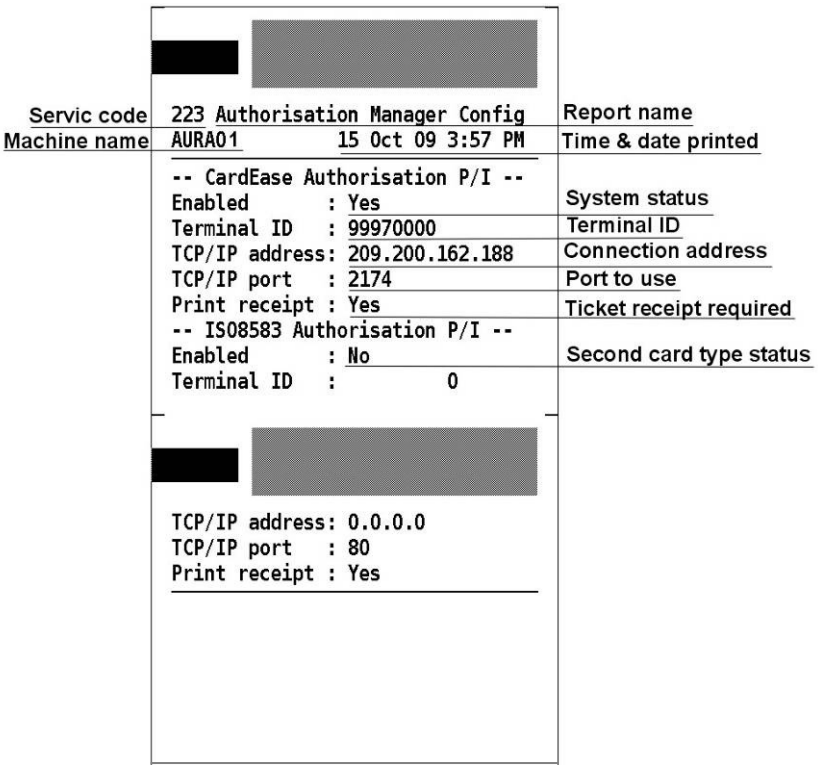


2 2 2 - Enable / Disable

This routine allows the card authorisation to be enabled or disabled.

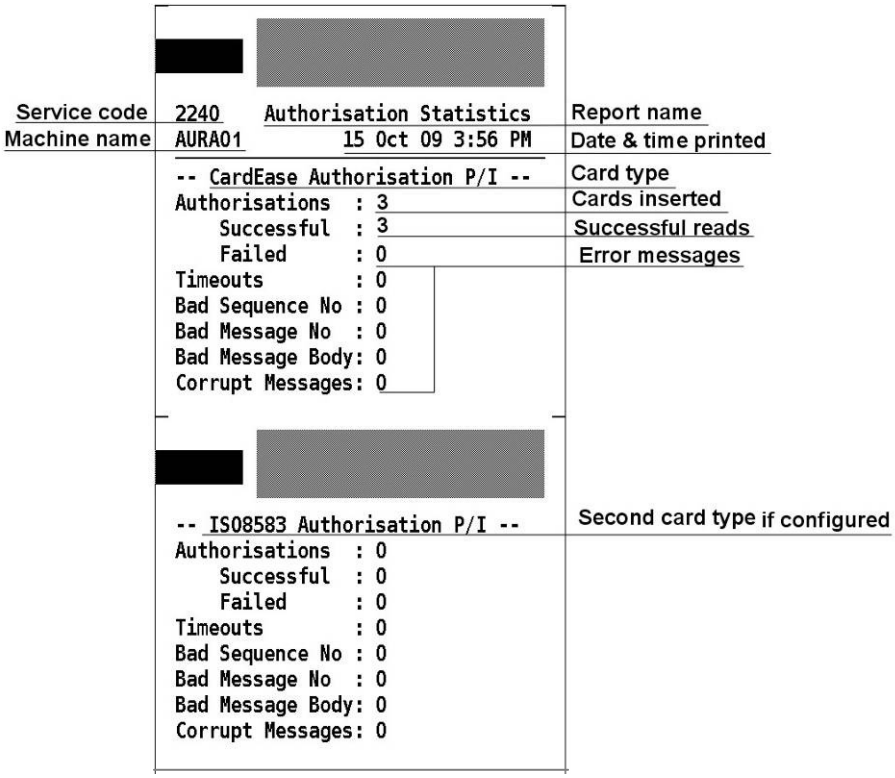
2 2 3 - Print configuration

This routine prints a ticket showing the enabled status and terminal ID, IP address, port number and if a receipt ticket is required for all card types.



2 2 4 0 - Print statistics

This ticket shows the authorised statistics. The number of authorised transactions, the number successful and the number failed, also the number timed out and additional information.



2 2 4 1 - Reset statistics

This routine clears all the statistical date printed on the 2240 ticket.

Payment system maintenance

Coin system

3 1 0 – Displays status

This routine displays the current status of the coin system.
IN SERVICE YES, TYPE AURA, FW VERSION.

3 1 1 – Print in-service coin system history (A440)

This ticket prints the time and date when the coin system was out of service, it also reports the event which rendered the machine out of service. This ticket is the same format as the 2 0 7 ticket.

3 1 2 – Enable / disable coin system

This routine displays a menu whereby the coin system can be disabled. Use the “B” key to scroll to the YES option. Press return to select.

3 1 3 – Single hardware test

This routine operates the reject and accept flaps of the escrow and reports whether it was successful. The display reports “ESCROW REFUND” “ESCROW HOME” followed by “TEST COMPLETED OK”.

3 1 4 – Continual hardware test

This routine is the same as 3 1 3, but is continual. Press the return key to stop test.

3 1 5 – Monitor hardware

This routine monitors the micro-switches on the clam shell, refund flap and cashbox, it also monitors the inductor mounted in the entrance of the coin system. This allows real time monitoring of these inputs. Moving the refund flap, clam shell etc will change the displayed state.

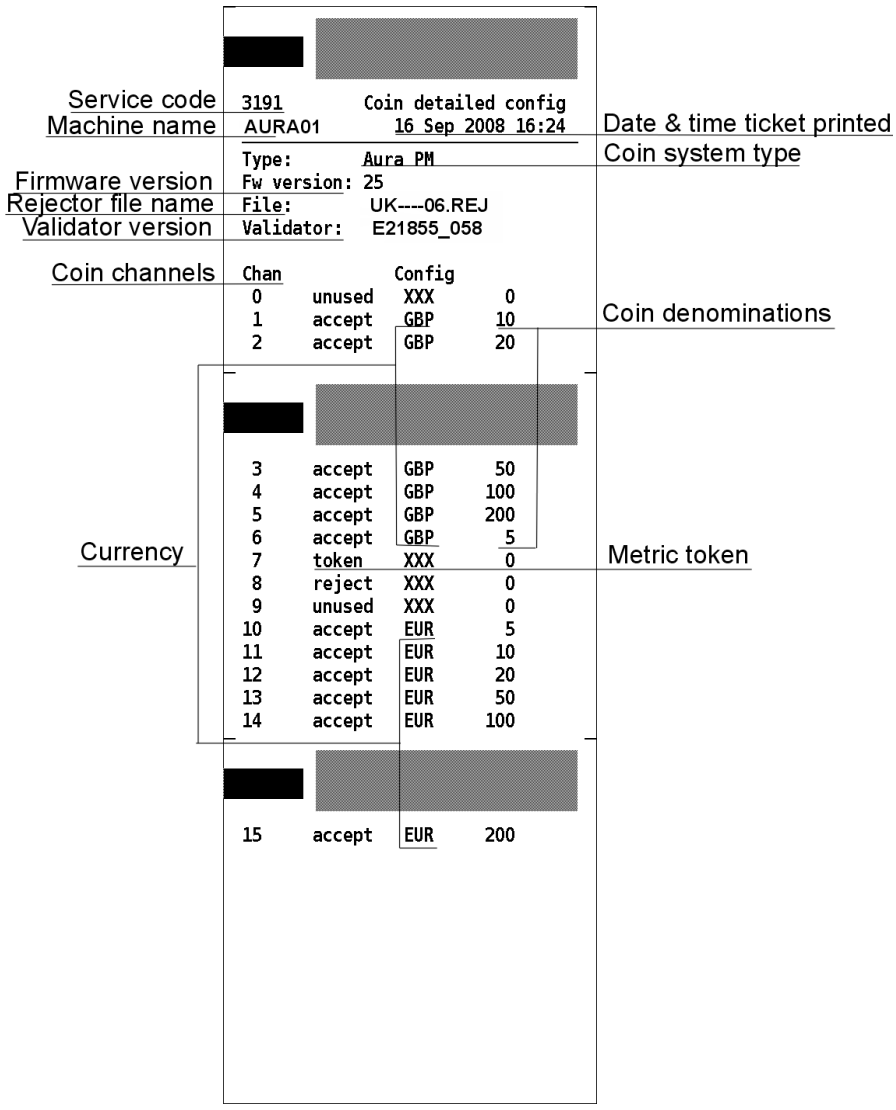
COIN DETECT	NO
CLAM SHELL OPEN	NO
REFUND FLAP OPEN	NO
COIN BOX PRESENT	YES

3 1 9 0 – Print low level trace

This ticket prints the low level sequence of events on the coin system. The ticket information is at a low level, therefore is of limited use.

3 1 9 1 – Print coin detailed configuration

This ticket details the configuration of the validator. Software & firmware versions, file name and validator drawing number. The ticket also shows the channel output for each coin and what denominations are accepted.



Note system

3 2 0 – Displays status

This routine displays the current status of the note system.
IN SERVICE YES, TYPE AURA, FW VERSION.

3 2 1 – Print in-service note reader history (A442)

This ticket prints the time and date when the note reader was out of service, it also reports the event which rendered the machine out of service. This ticket is the same format as the 2 0 7 ticket.

3 2 2 – Enable / disable note system

This routine displays a menu whereby the note system can be disabled. Use the “B” key to scroll to the YES option. Press return to select.

3 2 9 0 – Print low level trace

This ticket prints the low level sequence of events on the note system. The ticket information is at a low level, therefore is of limited use.

3 2 9 1 – Print detailed configuration

This ticket details the configuration of the note reader. Software & firmware versions, file name and validator drawing number. The ticket also shows the channel output for each note/currency and what denominations are accepted.

3 2 9 2 – Power off (firmware update)

Power off the note reader.

3 2 9 3 – Power on (firmware update)

Power on the note reader.

3 2 9 4 – End firmware update

This procedure must be performed to end the update.

Note: *Updating the firmware requires specialist equipment and is therefore not covered in this document.*

All card reader 1

3 3 0 – Displays status

This routine displays the current status of the card system.
IN SERVICE YES, TYPE AURA, FW VERSION.

3 3 1 – Print in-service card reader history (A441)

This ticket prints the time and date when the card reader was out of service, it also reports the event which rendered the machine out of service. This ticket is the same format as the 2 0 7 ticket.

3 3 2 – Enable / disable card system

This routine displays a menu whereby the card system can be disabled. Use the “B” key to scroll to the YES option. Press return to select.

3 3 9 0 – Print low level trace

This ticket prints the low level sequence of events on the note system. The ticket information is at a low level, therefore is of limited use.

Cadix card reader

3 3 3 – Print configuration

This ticket reports the global configuration, Card type, card type map and parameters, CardEase authorisation, TID, TCP/IP address, etc…

Engineering

Not currently implemented

3 3 5 0 – Get reader status

This routine displays the current reader status. The display will show:
COMMAND RESPONSE
RESULTS: DONE
CADIX STATUS AAAA (Note: AAAA = card reader ok)
MAGNETIC CARD YES.

3 3 5 1 – Get reader configuration

This routine displays the current reader configuration. The display will show:
CADIX CONFIGURATION
REPLY AAAAXXXXXXXXXXX
MAGNETIC CARD YES
ENERGY MANAGED NO/YES

3 3 5 2 – Get software version

This routine displays the current reader software version. The display will show:
COMMAND RESPONSE
RESULTS DONE
CADIX STATUS AAAA
DATA BSK71-ML01 V04.04

3 3 5 3 – Set high power

This routine enable the CADiX reader to operate in high power mode, i.e mains powered machines. This code only functions with the correct configuration file.

3 3 5 4 – Set low power (C101)

This routine enable the CADiX reader to operate in low power mode, i.e solar or battery powered machines. This code only functions with the correct configuration file.

3 3 5 5 – Set magnetic head on (C102)

This routine turns the magnetic head of the card reader to on.

3 3 5 6 – Set magnetic head off

This routine turns the magnetic head of the card reader to off. Cards will not be accepted.

Thales Chip & Pin

3 3 3 – Display TMS call status

This command will show the time and date of the last TMS call and the time and date that the next TMS called will occur.

3 3 4 – Print TMS call history

This command will print the TMS call history for the machine. The information printed will include the time and date of the call, the duration of the call and whether the call was successful.

3 3 5 – Engineering mode start (C114)

This command will allow an engineer to put the Thales Chip & Pin reader into engineering mode. Implementing this function keeps the Thales chip & pin system awake. Used to commission or service the unit.

3 3 6 – Engineering mode end (C115)

This command will allow an engineer to take the Thales Chip & Pin reader out of engineering mode. After commissioning or servicing the unit, this code MUST be implemented to bring the reader back into service after the reader has been in engineering mode.

3 3 9 1 – Simulate TMS call

This routine allows an engineer to test the communications used for the TMS function; it makes a TMS call but doesn't update all the files. This is a very useful function to ensure the communication system is operational.

3 3 9 2 – Chip & Pin detailed report

This ticket prints the card reader type, serial number, model firmware version, GPRS network, log on details and location ID.

3 3 9 3 – Start firmware update

This procedure enables new firmware to be uploaded into the Thales controller unit.

3 3 9 4 - End firmware update

At the end of the firmware update implement this routine.

Note: *This process requires specialist equipment and is therefore not covered in this document.*

All card reader 2

3 4 0 – Displays status

This routine displays the current status of the card system.
IN SERVICE YES, TYPE AURA, FW VERSION.

3 4 1 – Print in-service card reader history

This ticket prints the time and date when the card reader was out of service, it also reports the event which rendered the machine out of service. This ticket is the same format as the 2 0 7 ticket.

3 4 2 – Enable / disable card system

This routine displays a menu whereby the card system can be disabled. Use the “B” key to scroll to the YES option. Press return to select.

3 4 3 – OTI Load key file

3 4 9 0 – Print low level trace

This ticket prints the low level sequence of events on the note system. The ticket information is at a low level, therefore is of limited use.

Printer

4 1 0 – Display status

This command shows information pertaining to the status, make and firmware version of the installed printer.

4 1 1 – Feed forward

This routine will feed the paper forward one ticket length.

4 1 2 – Feed back

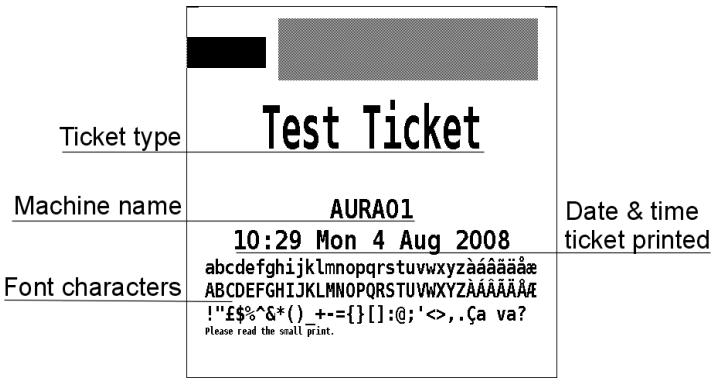
This routine will feed the paper backwards a small amount.

4 1 3 – Cut paper

This routine will operate the knife and cut the paper.

4 1 4 – Test ticket (A580)

This routine is useful to check the paper has loaded correctly and printing a ticket correctly.



4 1 5 – Multiple test ticket

Continual test tickets printed. Pressing the return key stops the routine.

4 1 6 – Align to mark

This routine moves the ticket forward to align with the registration mark printed on the ticket.

4 1 7 – Adjust print quality

This routine has two functions, adjusting the print head burn time and the pulse width of the stepper motor. The display will prompt you for a value i.e.
BURN TIME 100
STEP PULSE 100
100 is the default value. Enter an alternative value in either field and press the enter key to accept. Note; only change these values if advised to do so.
The range is 30 – 300.

Low level debug

4 1 9 0 – Move image to CF card

This routine moves the stored ticket image to CF card.

4 1 9 1 – Image save enable / disable

This routine enables / disables the storage of ticket files in memory. Produce the ticket(s) required, the image will be stored.

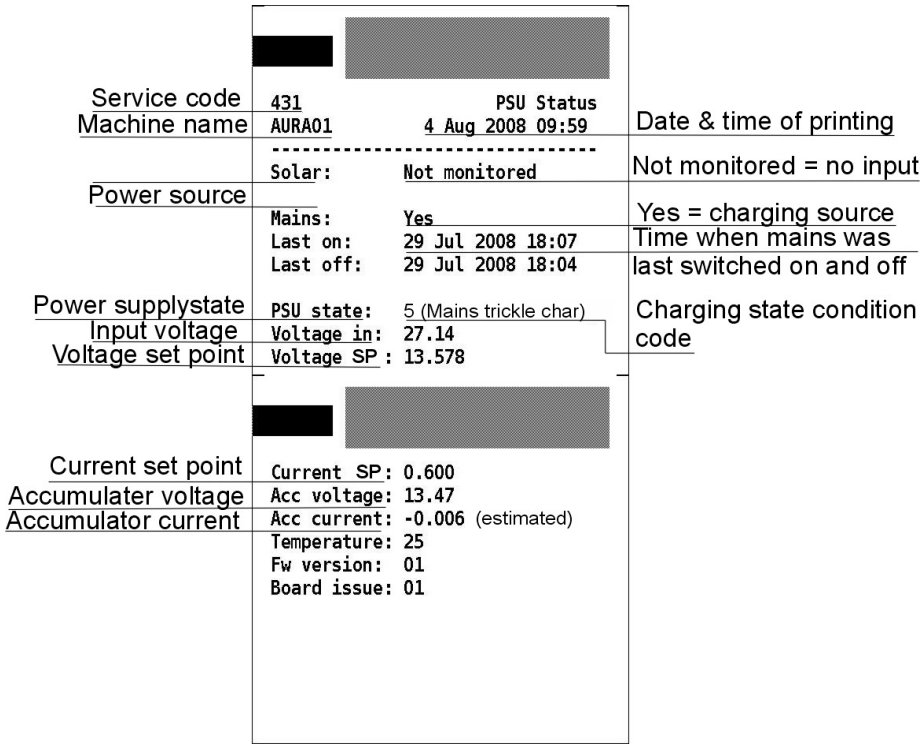
Power supply

4 3 0 – Display status

This routine displays the power source used by the machine and the voltage and current of the battery. If there is a minus sign in front of the **Acc current:** current is being discharged, if there is no sign then the battery is being charged. See below
MAINS YES
SOLAR NOT MONITORED
ACC 13.47V -0.014A
This example shows a mains powered machine with a battery voltage of 13.47 volts and using 14mA of current.

4 3 1 – Print detailed status (A544)

This ticket shows what power source is used to charge the battery; mains or solar. The charging state Burst, Trickle or off, the voltage of the battery and the current, whether charging or discharging (minus sign shows current discharged by the battery). Additional information includes the temperature, FW (Firmware) version and board issue.



Light test

4 4 0 0 – External light on

This command can be used to drive the external light output relay to the on state. Pressing enter will return the output to its previous state. This is an external light and not the halo.

4 4 0 1 – External light off

This command can be used to drive the external light output relay to the off state. Pressing enter will return the output to its previous state.

4 4 0 2 – Panel lights bright

This command can be used to set the panel lights to the bright state. Pressing enter will return the lamps to their previous state.

4 4 0 3 – Panel lights dim

This command can be used to set the panel lights to the dim state. Pressing enter will return the lamps to their previous state.

4 4 0 4 – Panel lights off

This command can be used to set the panel lights to the off state. Pressing enter will return the lamps to their previous state.

4 4 0 5 – All lights off

This command can be used to set the panel and external lights to the off state. Pressing enter will return the lamps to their previous state.

LED tests

The following LED tests have been made available so that the operation of the display panel LEDs can be tested. Each test will return the LED state to the previous state when the test has completed.

4 4 1 0 – Red LED on

4 4 1 1 – Amber LED on

4 4 1 2 – Green LED on

4 4 1 3 – All LEDs on

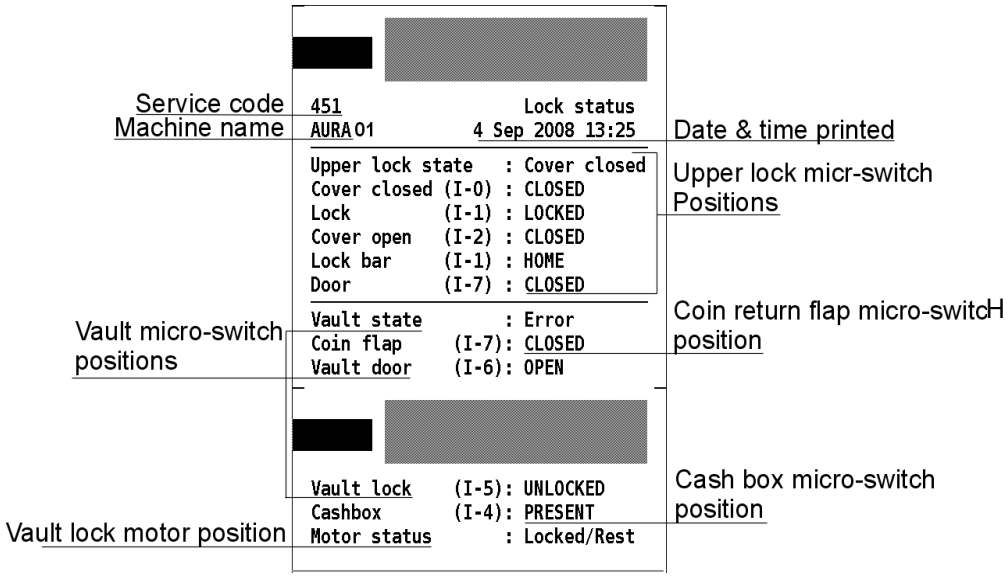
Locks

4 5 0 – Display lock status

This command can be used by an engineer or operator to display the current error status of the Aura' vault lock.

4 5 1 – Print lock status

This routine can be used to print the current status of the Aura vault and upper locks.



4 5 2 0 – Upper lock cover home

This routine open and closed the upper lock cover three times, and parks in the closed position.

4 5 2 1 – Upper lock cover open

This routine opens the upper lock cover.

4 5 2 2 – Upper lock cover close

This routine closes the upper lock cover.

4 5 2 3 – Monitor switches

This menu monitors the operation of the upper lock switches in order to test their operation, the display will update at one second intervals. They include:
DOOR SWITCH
LOCKING BAR SWITCH
LOCK COVER OPEN SWITCH
LOCK COVER CLOSE SWITCH

4 5 3 0 – Reset vault state

This routine clears the flag associated with a vault lock error. It does not necessarily fix the fault.

4 5 3 1 – Allow faulty vault open (D695)

This routine turns the vault motor one revolution. Turn machine off/on, place a vault Dallas key onto the receptor in the coin return cup. Key in the 4 5 3 1 code, the vault lock motor will revolve one revolution. This code allows the vault lock to operate even in a "Vault lock error" state. This code presents a test function onto the display,

4 5 3 2 – Monitor switches

This menu monitors the operation of the vault lock switches in order to test their operation. They include:
VAULT DOOR SWITCH
VAULT LOCK SWITCH
CASH BOX SWITCH
REFUND FLAP SWITCH
NB: The monitor display will update at one second intervals.

4 5 4 – Clears lock state that produce the "Not in service" condition. Aura remains in service with door open (D123)

Whilst the upper cabinet door is open, the Aura remains in service. This command can be used by an engineer to allow the Aura to be in service when its vault and/or upper locks are open. The override is applied once per command, so the next vault or upper lock change of state may cause the machine to go out of service again. It is good practice to restart the Aura after this command has been used. However, because of the way this command works, this is not essential.

4 5 5 – Reset alarm

This routine will cancel the alarm, should the alarm be sounding.

4 5 6 – Open barrier

This routine will activate the output port controlling a remote barrier system. The software must be configured to operate a barrier for this routine to function.

4 6 0 – Monitor Dallas key activity

This command can be used to verify that the Dallas key reader is working and that the key presented is valid and in the current key list.
KEY ID BAXXXXXXXXXXXXX
VALID YES / NO
IN LIST YES / NO
ACCEPT YES / NO (Key list; access time period dependent)
The display will report “Waiting for key” prior to the Dallas key being presented. It will also report “short circuit” if the Dallas key is touching the edge of the coin return cup and not correctly located in the reader.

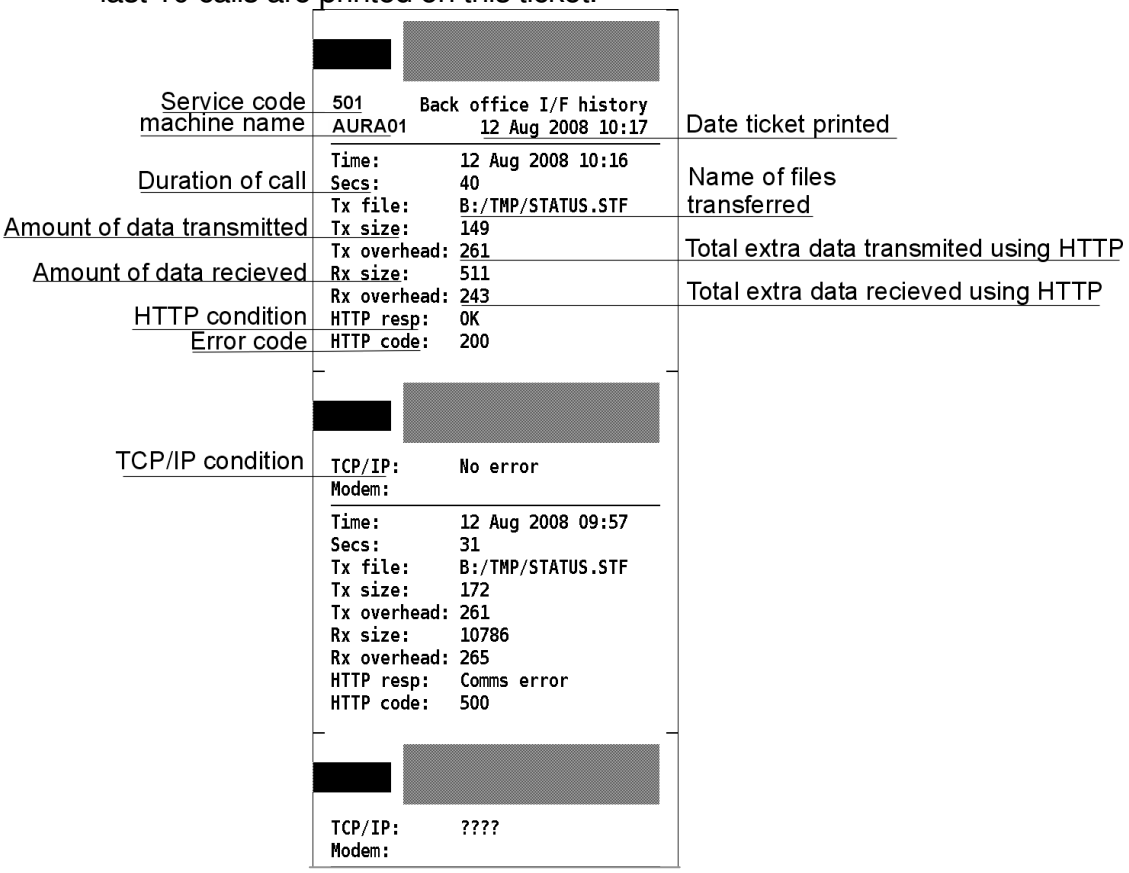
Remote communications

5 0 0 – Display status

This routine displays the current status of the modem, i.e. IDLE, CONNECTED, etc.

5 0 1 – Print history

This routine prints the duration of the call, the name of the files transferred, the amount of data sent and received and the HTTP response. Up to the last 10 calls are printed on this ticket.

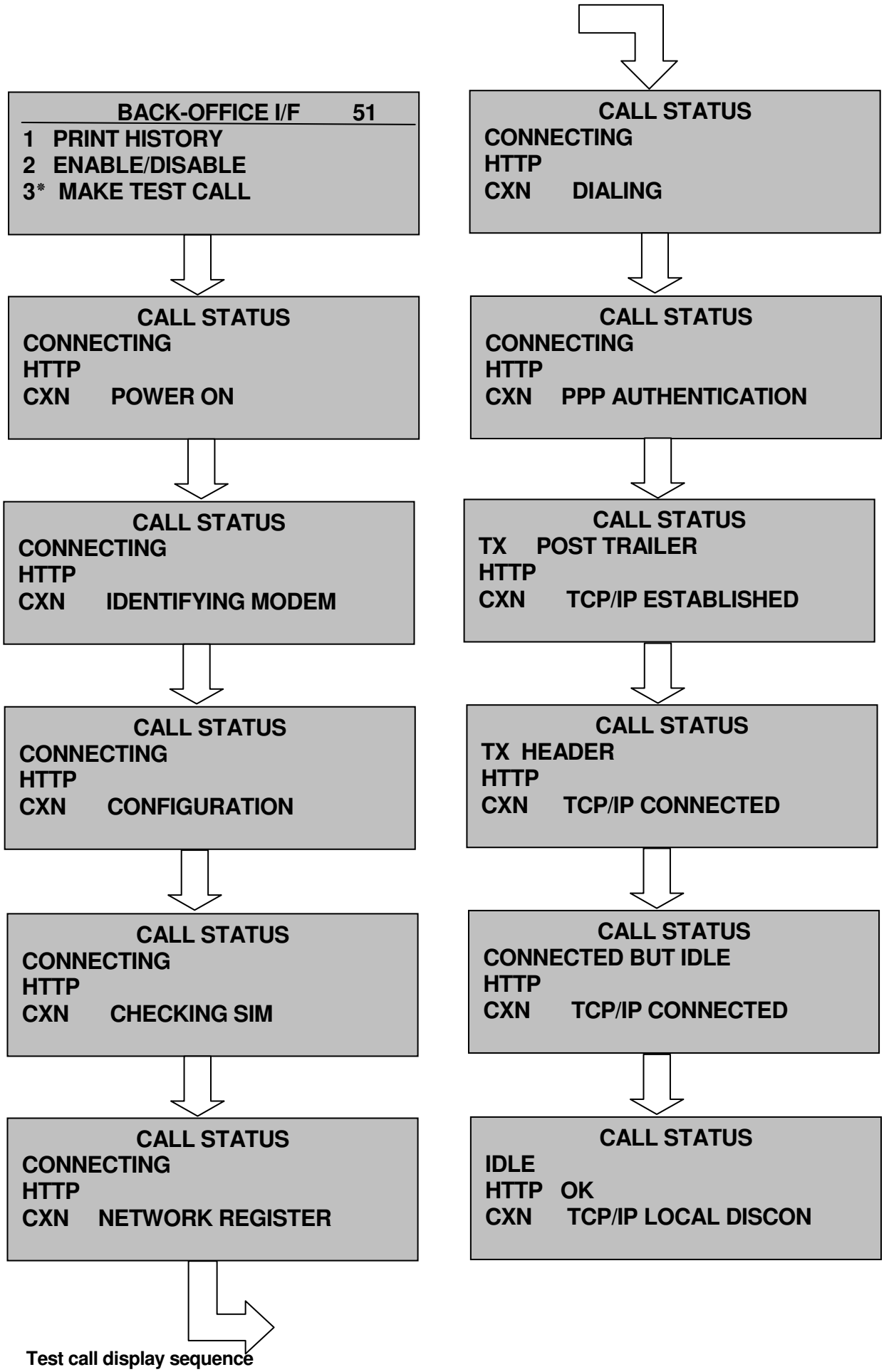


5 0 2 – Enable / disable

This routine displays a menu whereby the system can be disabled. Use the “B” key to scroll to the YES option. Press return to select.

5 0 3 – Make test call (A061)

This command can be used by an engineer to check the ability of the Aura to communicate with a back office system. The test call will involve the creation of a modem connection (where applicable) and an authenticated TCP/IP connection. The test will be positive if the remote HTTP server responds to a poll. No files are exchanged as part of this test. See display sequence on the next page.



Test call display sequence

5 0 9 0 – Print detailed information

This routine prints the configuration of the time outs, URL details, including IP address, port etc.

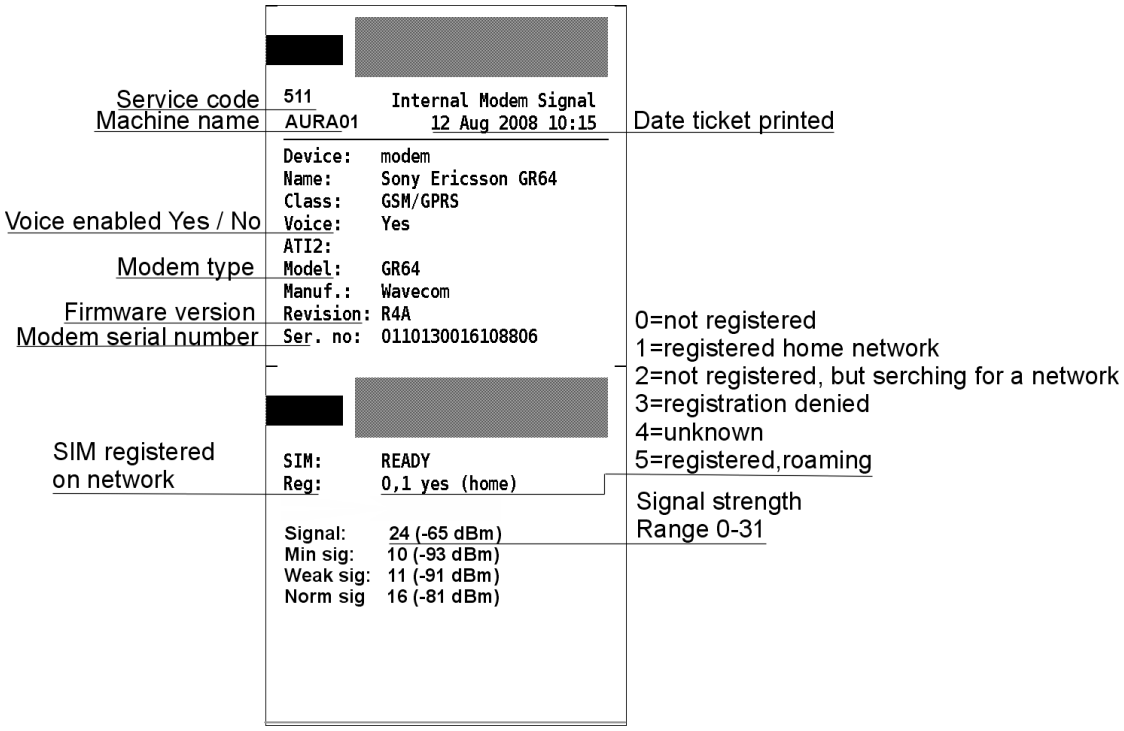
Modem

5 1 0 – Display modem status

This routine displays the current status of the modem. i.e. if not in use reports “DISCONNECTED”, if activated whilst making a call it will display DIALING – CONNECTED – TX & RX DATA.

5 1 1 – Check internal modem (A059)

This routine prints a ticket with the following information:
Modem type, voice activated or not, firmware version, serial number of the modem, if the SIM is registered on the network and the signal strength.

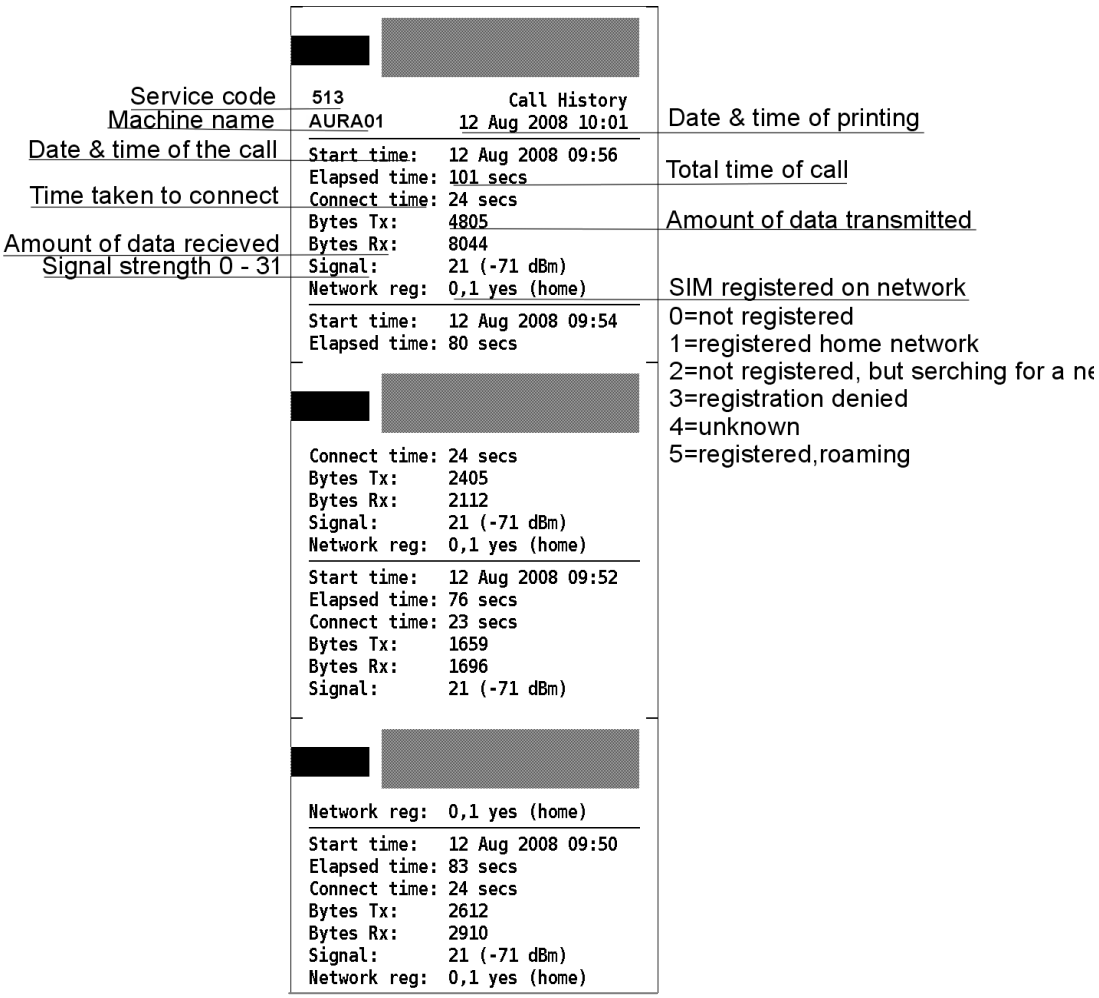


5 1 2 – Monitor signal

This routine monitors the modem signal strength, and updates every 2 seconds.

5 1 3 – Print call history

This ticket prints up to the last ten calls. The information includes: Start time of the call, elapsed time of the call, connect time, number of bytes sent and received, signal strength and if the SIM is registered.



5 1 9 0 – Print low level trace

This ticket shows the AT commands and low level response. This ticket requires specialise knowledge of modem commands.

5 1 9 1 – Print manager trace

This routine prints a ticket with low level information..

5 1 9 2 – Set signal thresholds

This routine adjusts the modem thresholds and requires specialist knowledge. Do not adjust.

5 3 9 0 – Print PPP trace

This routine prints a ticket with low level information.

5 3 9 1 – Print TCP/IP status

This routine prints a ticket with low level information.

5 3 9 2 – Print PPP detailed information

This routine prints The communication type (i.e. PSTN or GSM), modem, phone number, the user and password details.

Configurable setup ID / codes

6 2 0 – Reset Space **D**esignated **S**ystem (**SDS) security code**

This code, entered via the service keypad allows the attendant to alter the default SDS security code. After entering the service code 621, you will be prompted to enter the high level security service code for the machine. Once validated, the SDS security code can be altered. Press the return key to confirm and accept the new SDS code. This code is used by the attendant to gain access to the SDS information.

6 2 1 – Set security code

To clear the current SDS number enter the service code 620, you will be prompted to enter the high level security service code for the machine. Once validated, the SDS number will be cleared.

6 3 2 – Set VAT rate

To change the VAT rate do the following:

- Press Enter on the internal key pad to enter the maintenance menu
- Press 6 to enter the setup sub-menu
- Press 3 to enter the tariff sub-menu
- Press 2 to enter the VAT rate
- Enter the PIN number
- Enter the VAT rate using the numbers on the keypad
- Press Enter to accept the changes
- Exit from the maintenance menu

The data format for the VAT on the Aura machine.
The Aura allows 3 digits from 0 to 9 to be entered. The digits represent tens, units and one decimal place.
Example
To enter a VAT rate of 17.5% enter 175.

6 3 3– Currency exchange rate

To change the exchange rate do the following:

- Press Enter on the internal key pad to enter the maintenance menu
- Press 6 to enter the setup sub-menu
- Press 3 to enter the tariff sub-menu
- Press 3 to enter the exchange rate sub-menu
- Enter the PIN number
- Use the B key to scroll through the available currencies. Press the enter key to select the desired currency.
- Enter the exchange rate. Press Enter
- Press Enter to accept the changed exchange rate.
- Command complete will be displayed on the UI. Press Enter and exit from the maintenance menus.

The data format for the exchange rate on the Aura differs from that on the Accent machine. The Aura allows 8 digits from 0 to 9 to be entered. The exchange rate is calculated in 1000ths of the base currency.

Examples
To set an exchange ratio of 1:1 enter 0001000.

If the base currency is Swiss Francs and the exchange rate is 1.4 Swiss Francs to 1 Euro set the Euro exchange rate to 1400.

6 4 0 0 – CardEase terminal ID (A122)

Allows the setting of a unique identification number used by the merchant (Credit Call) to identify each credit card transaction. This number is associated with the SIM number installed into the GSM phone.
A credit card machine (Not Chip & Pin) must have a location ID. The message 'CCV Not Configured' is shown if the terminal ID has not been entered. If the ID is not set the machine will still come into service, however the card reader will not come into service until the terminal ID is set.

6 4 1 0 – Ompay terminal ID

Not currently implemented.

6 4 1 1 – Ompay accept ID

Not currently implemented.

Section 4

PERTIS

PERTIS

The basic principle is this: if, for any reason, customers are unable to purchase the proper ticket for their journey before travelling, they *must* obtain a Permit to Travel which must be exchanged for a proper travel ticket within two hours. Anyone travelling without a ticket or a Permit To Travel will then be subject to a penalty charge or the full single fare for the journey (whichever is the greater) unless a justifiable reason is put forward.

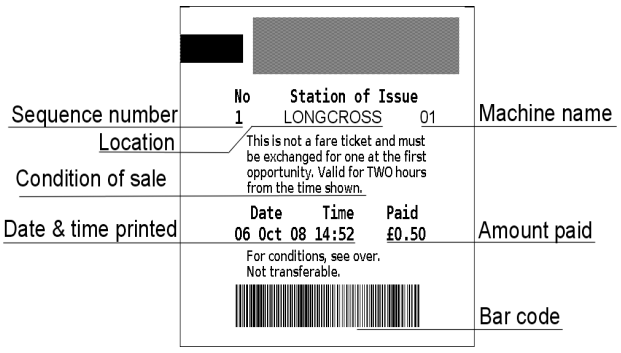
Most stations are equipped with one or more Permit To Travel issuing machines (known as PERTIS) which are only in service when the ticket-office is closed. Permits cannot be obtained as an alternative to a proper ticket except in exceptional circumstances e.g. a complete APTIS failure.

Customers are able to insert into the machine any amount of money from 5p to £30 (subject to a maximum of thirty coins) to obtain the permit by pressing a green Press-for-permit button. The machine will print a receipt which shows the station of issue, the date & time of issue, the amount paid and the conditions of use. The Permit To Travel must then be exchanged for a proper ticket within two hours of the time of purchase.

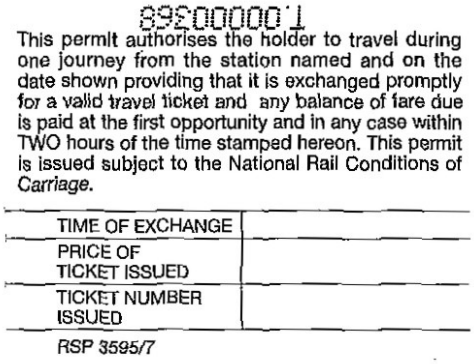
This document gives instructions about servicing the PERTIS machine and accounting for the money removed from it. Other details and instructions about the Penalty Fares scheme are published separately.

PERTIS ticket

This ticket is obtained by inserting money and pressing the press-for-permit (Green) button



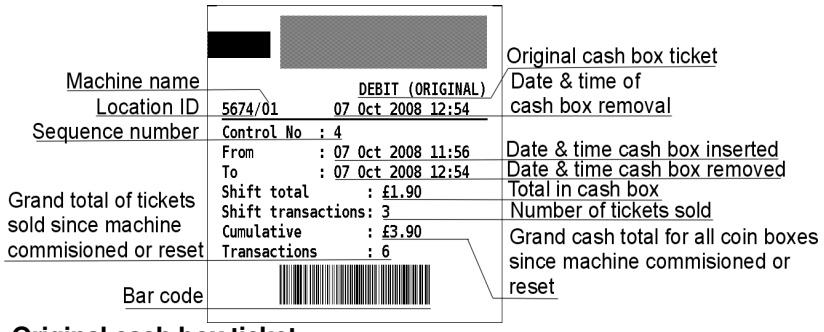
PERTIS front of ticket



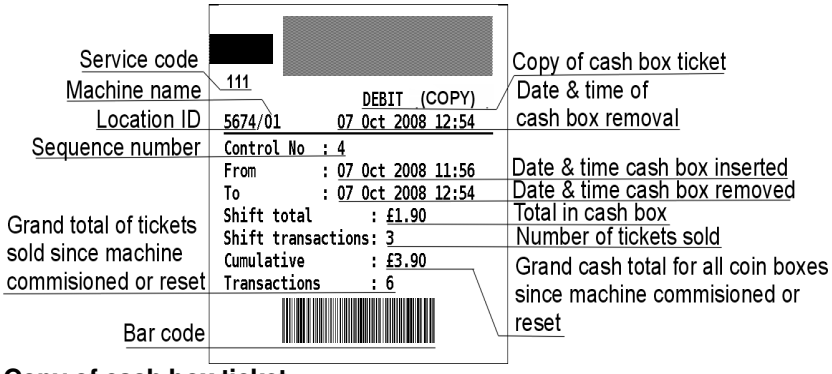
Rear of ticket

Cash box (Debit) ticket

This ticket is produced automatically on removal of the cash box. In the top right hand corner of the ticket the word “DEBIT (ORIGINAL)” is printed. This ticket is only produced when a cash box is removed. A copy of this ticket can be obtained using the 111 code (Print last cash box summary), this ticket will have “DEBIT (COPY)” in the top right hand corner of the ticket. This distinguishes the original from the copy.



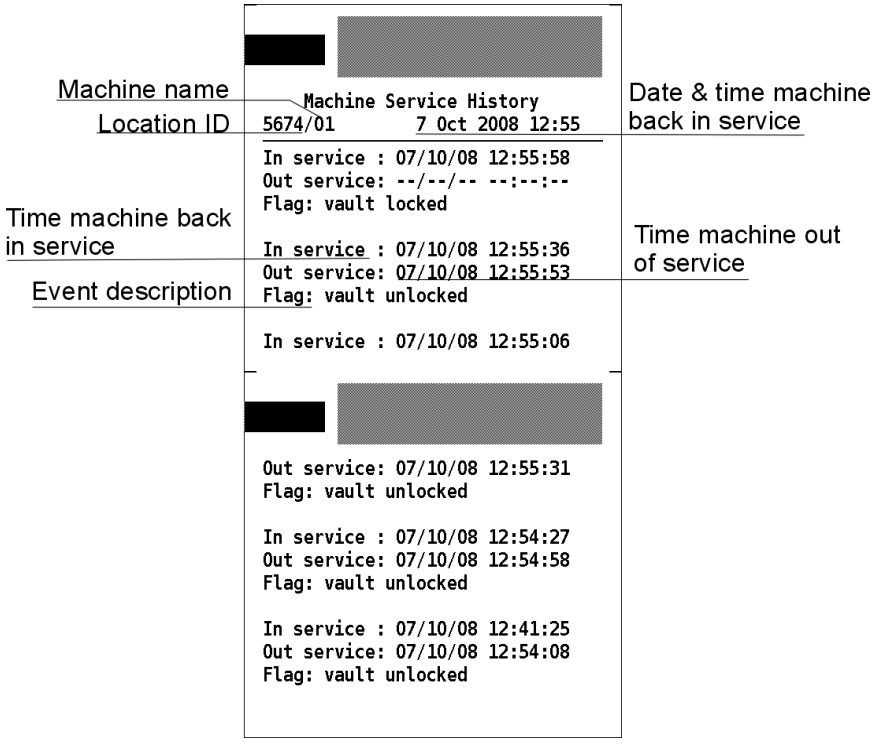
Original cash box ticket



Copy of cash box ticket

The return-to-service ticket

Obtained automatically on closing and locking machine door; provided that there is no fault condition. It is also obtained on closing and locking the coin box door in the pedestal. The Penalty Fares system requires that this return-to-service ticket be kept in the ticket office for reference. This ticket gives the time during which customers were unable to buy tickets because the machine was out of service. This ticket has up to the last 5 in and out of service events.



Note: *This receipt must be retained. It is an essential internal control check that there is no break in the continuity of the receipt serial numbers on hand.*

Section 5

Maintenance menu summary

Maintenance menu summary

Code	Group/Item		Operation
	Commonly used functions		
0 0	Set language	A104	SETUP
0 1 0	Tickets remaining		SERVICE
0 1 1	New ticket roll	A301	SERVICE
0 1 2	Feed forward		SERVICE
0 1 3	Print test ticket	A580	SERVICE
	Audit		
1 0 0	Print current transaction audit	A480	AUDIT
1 0 1	Print last transaction audit	A481	AUDIT
1 0 2	Print transaction audit history	A482	AUDIT
1 0 3	Print current transaction audit, including free time	A420	AUDIT
1 0 4	Print last transaction audit, including free time	A421	AUDIT
1 0 5	Print transaction audit history, including free time	A422	AUDIT
1 0 6	Print current transaction audit, excluding free time	A430	AUDIT
1 0 7	Print last transaction audit, excluding free time	A431	AUDIT
1 0 8	Print transaction audit history, excluding free time	A432	AUDIT
1 1 0	Print current coin box audit	A400	AUDIT
1 1 1	Print last coin box audit	A401	AUDIT
1 1 2	Print coin box audit history	A402	AUDIT
1 1 3	Print current coin box counters	A410	AUDIT
1 1 4	Print last coin box counters	A411	AUDIT
1 1 5	Print coin box counter audit history	A412	AUDIT
1 2 0	Print current note box audit	A570	AUDIT
1 2 1	Print last note box audit	A571	AUDIT
1 2 2	Print note box audit history	A572	AUDIT
1 2 3	Print current note box counters		AUDIT
1 2 4	Print last note box counters		AUDIT
1 2 5	Print note box counter audit history		AUDIT
1 3 0	Print current card audit	A470	AUDIT
1 3 1	Print last card audit	A471	AUDIT
1 3 2	Print card audit history	A472	AUDIT
1 4 0	Print current Dallas key audit		AUDIT
1 5 0	Display current ticket roll use data		AUDIT
1 5 1	Print current ticket roll use data		AUDIT
1 5 2	Print ticket roll use history		AUDIT
1 5 3	Set ticket low warning level		SERVICE
1 6 0	Space system print current	A450	AUDIT
1 6 1	Space system print last	A451	AUDIT
1 6 2	Space system history	A452	AUDIT
1 7 0	Print Current tariff counters and not clear	A201	AUDIT
1 7 1	Print previous tariff counters		AUDIT
1 7 2	Print last 10 tariff counters		AUDIT
1 7 3	Print Current tariff counters and clear	A202	AUDIT
1 9	Start new audit period.	A403	AUDIT

Code	Group/Item		Operation
	Machine status		
2 0 0	Print status flags		STATUS
2 0 1	Display status flags	A540	STATUS
2 0 2	Display status flag history		STATUS
2 0 3	Print status flag history	A543	STATUS
2 0 4	Print CF card usage	A495	STATUS
2 0 5	Print system information	A550	TEST
2 0 6	Display system information	A541	TEST
2 0 7	Print in-service history		STATUS
2 0 9	Toggle in-service		SETUP
	Space system		
	Variance report		
2 1 0 0	Print space (by zone)		SERVICE
2 1 0 1	Print space (lookup)		SERVICE
2 1 0 2	Print single zone		SERVICE
2 1 0 3	Print all zones		SERVICE
	Database		
2 1 1 0	Show space (by zone)		SERVICE
2 1 1 1	Show space (lookup)		SERVICE
2 1 1 2	Display status		SERVICE
2 1 1 3	Print configuration		SERVICE
2 1 1 4	Copy database to CF		SERVICE
2 1 1 5	Copy database from CF		SERVICE
2 1 1 6	Print zone		SERVICE
2 1 1 7	Print all		SERVICE
2 1 2 0	ASLAN display status		SERVICE
2 1 2 1	Configuration		SERVICE
	Card authorisation		
2 2 0	Display status		SERVICE
2 2 1	Print status		SERVICE
2 2 2	Enable / Disable		SERVICE
2 2 3	Print configuration		SERVICE
2 2 4 0	Print statistics		SERVICE
2 2 4 1	Reset statistics		SERVICE
	Payment systems – Coin reader (if installed)		
3 1 0	Display coin system status		TEST
3 1 1	Print in-service history	A440	STATUS
3 1 2	Enable/disable coin system		SETUP
3 1 3	Single hardware test		TEST
3 1 4	Repeated hardware test		TEST
3 1 5	Monitor hardware		TEST
3 1 9 0	Print low level trace		TEST
3 1 9 1	Print coin detailed config		TEST

Code	Group/Item		Operation
	Payment systems – Note reader (if installed)		
3 2 0	Display note reader status		STATUS
3 2 1	Print in-service history	A442	STATUS
3 2 2	Enable/disable note reader		SERVICE
3 2 9 0	Print low level trace		TEST
3 2 9 1	Print detailed config		TEST
3 2 9 2	Power off (Firmware update)		SERVICE
3 2 9 3	Power on (Firmware update)		SERVICE
3 2 9 4	End firmware update mode		SERVICE
	Payment systems – All card reader 1		
3 3 0	Display card systems status		STATUS
3 3 1	Print in-service history	A441	STATUS
3 3 2	Enable/disable all card systems		SERVICE
3 3 9 0	Print low level trace all card systems		TEST
	CADiX reader – engineering mode commands		
3 3 3	Print card systems configuration		TEST
	Engineering		
3 3 4 0	Engineering start		
3 3 4 1	Engineering end		
3 3 4 2	Upload file/data		
3 3 4 3	Download file /data		
3 3 4 4	Application status	Not implemented	
3 3 4 5	Get transactions		
3 3 4 6	Purge transactions		
3 3 4 7	Reset library		
3 3 4 8	Commission SAM		
3 3 4 9	Decommission SAM		
	CADiX reader – configuration commands		
3 3 5 0	Get CADiX reader status		TEST
3 3 5 1	Get reader configuration		TEST
3 3 5 2	Get reader software version		TEST
3 3 5 3	Set reader into high power mode		SETUP
3 3 5 4	Set reader into low power mode		SETUP
3 3 5 5	Enable the magnetic reader function		SETUP
3 3 5 6	Disable the magnetic reader function		SETUP
	Payment systems – Thales Chip & PIN		
3 3 3	Display TMS call status		TEST
3 3 4	Print TMS call history		TEST
3 3 5	Enable “Engineering mode” for Chip & PIN reader	C114	SERVICE
3 3 6	End “Engineering mode” for Chip & PIN reader	C115	SERVICE
3 3 9 1	Simulate a TMS call		TEST
3 3 9 2	Print chip & pin details		TEST
3 3 9 3	Start firmware update		SERVICE
3 3 9 4	End firmware update		SERVICE
	Payment systems – All card reader 2		
3 4 0	Display card systems status		SERVICE
3 4 1	Print in-service history		SERVICE
3 4 2	Enable/disable all card systems		SERVICE
3 4 3	Load OTI file		SERVICE
3 4 9	Low level debug		SERVICE

Code	Group/Item		Operation
	Other devices (printers, lights, locks and keys)		
4 0 0	Close event log and start a new one		SERVICE
4 1 0	Display printer status		STATUS
4 1 1	Feed ticket forward		TEST
4 1 2	Feed ticket backward		TEST
4 1 3	Cut ticket		TEST
4 1 4	Print test ticket	A580	TEST
4 1 5	Print multiple test tickets		TEST
4 1 6	Align to mark		TEST
4 1 7	Adjust print quality	A310	SETUP
4 1 9 0	Move image to CF card		DEBUG
4 1 9 1	Image save enable / disable		DEBUG
4 1 9 2	Printer sensors		
	Power Supply		
4 3 0	Display power supply status summary		STATUS
4 3 1	Print power supply detailed status	A544	TEST
	Lights – Light tests		
4 4 0 0	External light on		TEST
4 4 0 1	External light off		TEST
4 4 0 2	Panel lights bright		TEST
4 4 0 3	Panel lights dim		TEST
4 4 0 4	Panel lights off		TEST
4 4 0 5	All lights off		TEST
	Lights – LED tests		
4 4 1 0	Red LED on		TEST
4 4 1 1	Amber LED on		TEST
4 4 1 2	Green LED on		TEST
4 4 1 3	All LEDs on		TEST
	Locks		
4 5 0	Display lock status		STATUS
4 5 1	Print lock status		STATUS
	Locks – Upper lock		
4 5 2 0	Upper lock cover home		TEST
4 5 2 1	Upper lock cover open		TEST
4 5 2 2	Upper lock cover close		TEST
4 5 2 3	Monitor switches		TEST
	Locks – Vault		
4 5 3 0	Reset vault state (attempt to clear vault fault)		SERVICE
4 5 3 1	Vault in fault state to open on presentation of key	D695	SERVICE
4 5 3 2	Monitor switches		TEST
4 5 4	Clear lock states that are causing “Not in service”	D123	SERVICE
4 5 5	Stop alarm sounding		SERVICE
	Locks – External		
4 5 6 0	Open barrier (output 200ms pulse on barrier control output)		TEST
	Dallas keys		TEST
4 6 0	Monitor Dallas key activity		TEST

Code	Group/Item		Operation
	Remote communications management		
5 0 0	Display status		TEST
5 0 1	Print history		STATUS
5 0 2	Enable / disable		TEST
5 0 3	Make test call to back office	A061	SERVICE
5 0 9 0	Print detailed config		TEST
	Modem		TEST
5 1 0	Display modem status		TEST
5 1 1	Check modem	A059	TEST
5 1 2	Monitor signal		TEST
5 1 3	Print call history		TEST
5 1 9 0	Print low level trace		TEST
5 1 9 1	Print manager trace		TEST
5 1 9 2	Set signal thresholds		SETUP
	TCP/IP		
5 3 9 0	Print PPP trace		TEST
5 3 9 1	Print TCP / IP connections		TEST
5 3 9 2	Print detailed information		TEST
	Set-up		
	Basic machine set-up		
6 0 0	Set date and time	A100	SETUP
6 0 1	Set machine name	A121	SETUP
6 0 2	Set location		SETUP
6 0 3	Set location ID		SETUP
6 0 4	Set ticket text	A511	SETUP
6 0 5	Print ticket text		TEST
6 0 6	Reset audits and logs (requires security code)	A001	SETUP
	File management		
	Applications (Aura operating software)		
6 1 0 0	Load an application into internal storage		SETUP
6 1 0 1	View pending versions		STATUS
6 1 0 2	View active version		STATUS
6 1 0 3	Delete a pending application from internal storage		SETUP
	Configuration files		
6 1 1 0	Load a configuration file into internal storage		SETUP
6 1 1 1	View pending versions		STATUS
6 1 1 2	View active version		STATUS
6 1 1 3	Delete a pending configuration from internal storage		SETUP
	Tariff files		
6 1 2 0	Load a tariff file into internal storage		SETUP
6 1 2 1	View pending versions		STATUS
6 1 2 2	View active version		STATUS
6 1 2 3	Delete a pending tariff file from internal storage		SETUP
	Key list files		
6 1 3 0	Load a Dallas key list file into internal storage		SETUP
6 1 3 1	View pending versions		STATUS
6 1 3 2	View active version		STATUS
6 1 3 3	Delete a Dallas key file		SETUP

Code	Group/Item		Operation
	Hot list files		
6 1 5 0	Load a Hot list file into internal storage		SETUP
6 1 5 1	View pending versions		STATUS
6 1 5 2	View active version		STATUS
6 1 5 3	Delete a pending file		SETUP
	Space system		
6 2 0	Reset	A002	SERVICE
6 2 1	Set security code		SERVICE
	VAT		
6 3 2	Set VAT rate		SERVICE
6 3 3	Set currency exchange rate		SERVICE
	Card authorisation		
6 4 0 0	CardEase terminal ID		SERVICE
6 4 1 0	Ompay terminal ID } Not implemented		SERVICE
6 4 1 1	Ompay acceptor ID }		SERVICE
	Batch files		
6 9 0	Obey command file from CF card		SETUP
6 9 1	Print maintenance menu tree	A999	TEST

Section 6

Document revision record

Document revision record

Date	Details of change	Reviser name	Revision
07/08/06	Author	M. Stanley	Draft 1
17/08/06	First Issue	M. Stanley	Issue 1
05/06/07	Change of post code	M. Stanley	Issue 2
07/06/07	Removed signed certificate	M. Stanley	Issue 2A
01/12/07	Updated for new Aura	M. Stanley	Issue 3
16/10/08	New software structure		
	Only applicable for 1.00.XX	M. Stanley	Issue 4
04/02/09	New software 1.01.00F	M Stanley	Issue 4A
	Note reader & card reader		
	firmware upgrade + hot list		
	Removed Locale file		
	Loading new BOOT loader		
	Page 22 to 24		
17/12/09	New software 1.03. 12	M Stanley	Issue 5
	Space system page		
10/05/10	Update ISO standard 27001	M. Stanley	Issue 5.1
04/01/11	VAT & Exchange rate codes		
	added. Pages 98 & 99	M. Stanley	Issue 5.2