
Blue Chip Technology

Interactive Kiosk Technical Manual



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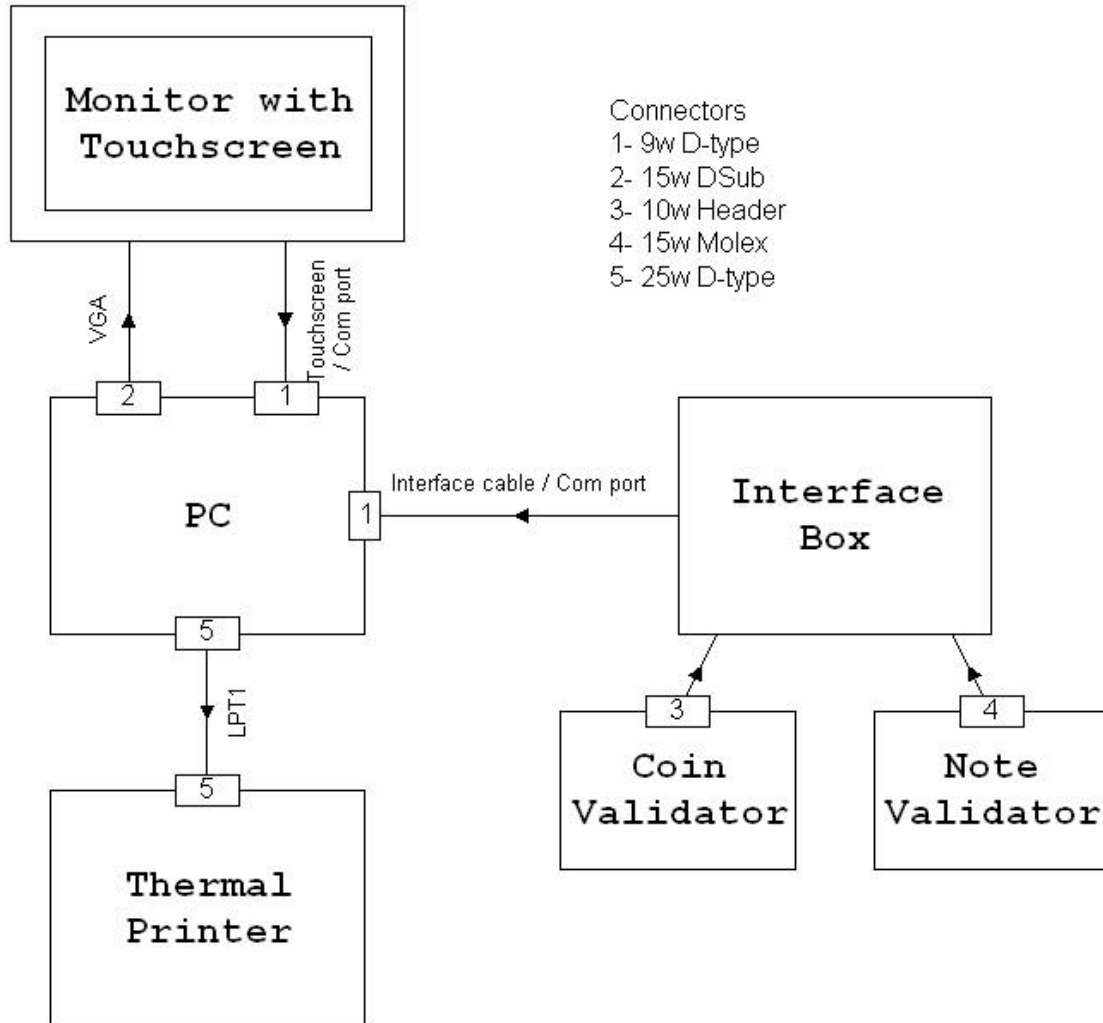
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General Overview

The Standard kiosk consists of a PC, Touchscreen Monitor and options. These options include: -

Coin Validator, Note Validator and Thermal Printer. A block diagram is shown below.

Figure 1



The Model and descriptions of each item may differ but in general these are: -

Monitor with Touchscreen = 17" Chassis mounted monitor

PC = Entry level Asus Terminator with Additional PCI Serial Card

Interface box = Coin Plus RS, Options include single, dual, SR3 or AD968 version

Coin Validator = SR3 or Older AD968(with 20wIDC)

Note Validator = NV4

Thermal Printer = TPT-60 ticket printer. Note. This item has a separate PSU

Detail of Optional Items

PC - The PC is an Entry level PC with On board VGA/LAN/Snd/USB. Currently the PC has at least 1 parallel port, 1 x Serial ports, 1 x VGA, 1 x 10/100 Lan and Speaker output. In most cases it is necessary to fit an additional PCI Serial card to give at least another serial port.

Interface box - This is the item that sits between the PC serial port and the Validators. It will only function if the serial port is opened with software. This can be achieved by using Hyperterminal or any other terminal emulator software. Details of how to do this is can be found in the testing section.

There are currently two major versions of this. The AD968 version has a 20w ribbon cable to connect to the coin Validator. The SR3 version has a 10w ribbon cable.

Once a note or coin has been accepted then this box will send an ASCII character down the serial port to the PC. These Characters are detailed below.

Data is produced in the following format:

- 1200 Baud
- 8-bit data
- No-parity
- One stop bit

Table 1 *Output data table*

Coin Channel	Output Data		
	ASCII	Hex	Decimal
B	'B'	\$42	66
C	'C'	\$43	67
D	'D'	\$44	68
E	'E'	\$45	69
F	'F'	\$46	70
Note Channel	'M'	\$4D	77

The table above shows the output from one version of the Interface Box. In this the note channel pulses once per £5, for instance £10 = 'MM', £20 = 'MMMM'

A second type of Interface box is also in use that outputs ASCII '1' for £5, '2' for £10 and '3' for £20. If you are unsure as to what type of interface box you have, then please contact Blue Chip Technology Limited, Technical Support

Coin validators

Two models exist, SR3 and AD968. Both Validators can be programmed to accept many different coin denominations. Although the procedure may be different it is possible to enable and disable some or all channels hence restricting the number of different coins. In both cases these are programmed to accept 10p,20p,50p,£1 and £2 by default. The SR3 is also able to accept Euro coins of the value 10c, 20c, 50c, 1Euro and 2Euro. Please **Note** swapping between AD968 and SR3 is not possible unless Faceplate, Interface Box and Cash box are changed also.

Note validators

The NV4 Bank Note Validator is a compact currency tester, suitable for most money machines. It will accept up to four different denominations of notes, inserted in any orientation with most currencies, and will cope with different designs of banknote having the same value such as are found in the United Kingdom or Spain.

Two configurations exist, Pulse Stream Mode and Serial mode. The Older Kiosks that have AD968 validators must have the Note validator programmed in Pulse Stream Mode. The SR3 version can accept Either Pulse Stream or Serial mode. For details on how to check see the configuration section.

Important: -

Do not attempt to lubricate the mechanisms as this may affect the note transport.

Do not polish the lens as this may alter the optical characteristics.

If the unit is re-taught pay particular attention to the instructions. Good teaching is essential to ensure satisfactory operation.

Thermal Printer

The Standard printer is a thermal TPT60, it requires thermal paper and can only be printed on one side. The paper comes in two sizes 12mm and 25mm diameter, make sure when ordering new printer paper that the correct spindle size is quoted. Only paper of 60mm width should be used.

GREEN LED : When the led is turned on, it means that printer power is on.

YELLOW LED :When the led is on it means printer status ok.

When the led is blinking it means paper end

RED LED : When the led is on it means near paper end

Configuration

SR3 - Enabling and Inhibiting Coins

Before changing the configuration make sure that No Terminal Emulator software i.e. Hyperterminal or GPAS is running.

To set Enable Specific Coins mode

1. Remove validator from front plate.
2. Switch off power to the validator by removing the 10w ribbon cable.
3. Adjust Program Dil switches to 1= ON, 2= ON, 3= OFF, 4=OFF (see Diagram) and ensure the Teach and Security switches (positions 5 & 6) are set to OFF.
4. Switch on the power to the validator by fitting 10w ribbon cable.
5. Press the reject lever within a 20-second time-out period. Check LED goes **RED**
6. Insert specific coins to be enabled and check that they are accepted i.e. pass down the accept path. **Note: - The coin may have to be entered in a number of times.**
7. Press the reject lever to return to operational mode.
8. Switch off power to the validator by removing the 10w ribbon cable.
9. Return Dil switches to normal position 1-6 = OFF

For Example

To enable 50p and 20p.

1. Adjust Program slide switches to 1= ON, 2= ON, 3= OFF, 4= OFF.
2. Press the reject lever.
3. Insert 50p and 20p and check that they are accepted.
4. Press the reject lever to return to operational mode

To set Inhibit Specific Coins mode

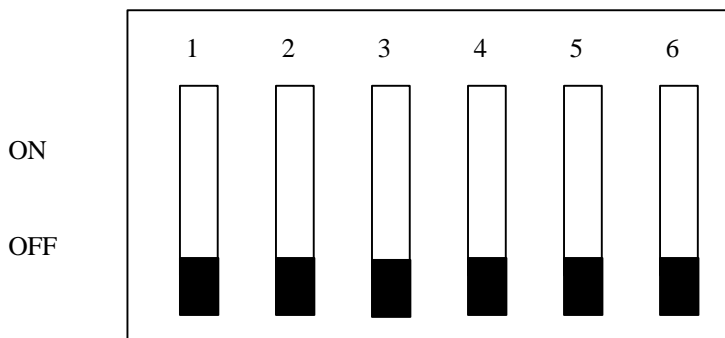
1. Remove validator from front plate.
 2. Switch off power to the validator by removing the 10w ribbon cable.
 3. Adjust Program Dil switches to 1= ON, 2= ON, 3= OFF, 4=ON (see Diagram) and ensure the Teach and Security switches (positions 5 & 6) are set to OFF.
 4. Switch on the power to the validator by fitting 10w ribbon cable.
 5. Press the reject lever within a 20-second time-out period. **Make sure LED goes to RED.**
 6. Insert specific coins to be inhibited and check that they are accepted i.e. pass down the accept path.
 7. Press the reject lever to return to operational mode.
 8. Switch off power to the validator by removing ribbon cable.
- Return Dil switches to normal position 1-6 = OFF

For Example:

To inhibit 50p and 20p.

1. Adjust Program Dil switches to 1= ON, 2= ON, 3= OFF, 4= ON.
2. Press the reject lever.
3. Insert 50p and 20p and check that they are accepted.
4. Press the reject lever to return to operational mode
5. Verify that 50p and 20p coins are now rejected

Diagram: Program Switch Bank – 6 Way Dil Switch



1	2	3	4	5	6
Program 1	Program 2	Program 3	Program 4	Teach on/off	Security on/off

Table 2 SR3 Dil Switch Guide

SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	FUNCTION
	ON					Enable bank 1 and bank 2
ON	ON					Enable a coin
			ON			Disable alarm
ON			ON			Enable alarm
	ON		ON			Erase all windows (Step 1)
ON						Erase all windows (Step 2)
ON	ON		ON			Inhibit a coin
		ON	ON			Enable bank 1 only
ON		ON	ON			Enable bank 2 only

NV4 - Checking pulse stream mode

Referring to Figure 1, In particular the LEDs on the topside opposite the Validator release button.

Entering £5 and checking that NO Led's flash when the note is accepted can check Pulse Stream Output Mode.

If normal mode is selected then the channels LED's will flash indicating the value of the Note (with reference to what each channel has been programmed with) i.e.
Channel 1 = £5, Channel 2 = £10, Channel 3 = £20

Advanced NV4 Diagnostics

Entering Special Menu

To call up the menu selection, first press and hold down the select button. Whilst you are holding it down slide the teach/run switch up to the teach position and then release the select switch. If the select switch is now momentarily pressed the channel lights will move from channel 1 to channel 2 etc.

Pulse Stream Output Toggle:

While in Special menu select channel 2 then slide the teach/run switch down to the run position and then back to the teach position you will toggle the pulse stream output on or off. Return the teach/run switch back to the run position and wait two seconds. **Note** there is no indication that pulse steam mode has been selected.

Programming Serial channels with correct values.

- 1 Slide to teach
- 2 Select Channel, using select button, once for channel 1, twice for channel 2 etc.
- 3 Return slide switch to run. **Important** Wait till LED's start to flash then return slide switch back to teach.
- 4 Press select for the number of pulses required on each channel. The channel LED will light every time select is pressed.
 - ◆ The Channel selected will be shown on the LED in Inverse. i.e. for channel2 LED's 1,3,4 will be lit.

- ◆ We program 1 pulse for each £5, therefore £5 = 1pulse, £10 = 2 pulses, £20 = 4 pulses.

5 Return Slide switch back to run

Repeat for each channel.

Ad968 Programming Procedure

1. Introduction

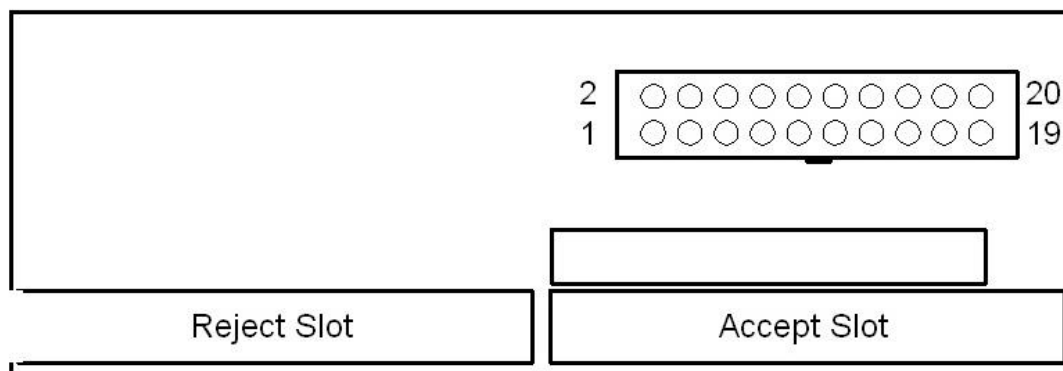
1.1. The AD-968 is fully programmable to accept up to eight coins within the specified limits. Programming/re-programming is achieved by passing the nominated coins through the selector with the required options selected on a bank of 10 dip switches. Optional settings permit a “mean” value to be selected from either 2 or 4 coins with a range of 8 “window” settings to suit the sensitivity required by the customer. Inhibits can be applied either by the internal dip switch or externally, via the 20-way connector. Coin pulses can also be monitored via the connector for audit purposes.

2. Connection requirements

2.1. It is very important to only supply the validator with just power. Attempting to reprogram this unit with data lines connected could lead to failure and possible erasure of all channel information.

Supply only with +12v to pin 17 and Gnd to pin18 as shown in figure2 below

Figure 2



3. Programming

- 3.1. Remove the back of the selector by prising it open from the locating plug in the centre of the bottom edge.
- 3.2. Select the “write” coin data mode by setting dip switches 1, 2 and 10 as in shown in Figure 3.

Figure 3

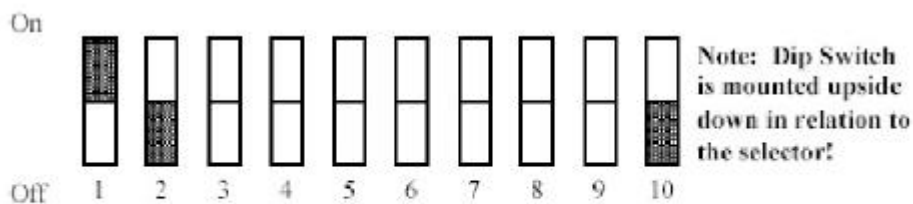
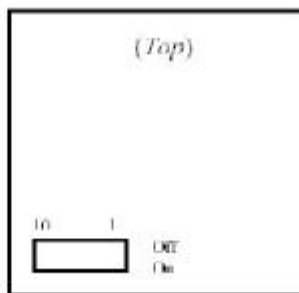


Figure 1(DIP switch programme mode)



3.3. Select the location to be programmed by setting dipswitches as in table 3

Table 3(Coin Location)

Switch setting			Coin
3	4	5	
OFF	OFF	OFF	COIN 1
ON	OFF	OFF	COIN 2
OFF	ON	OFF	COIN 3
ON	ON	OFF	COIN 4
OFF	OFF	ON	COIN 5
ON	OFF	ON	COIN 6
OFF	ON	ON	COIN 7
ON	ON	ON	COIN 8

3.4. Select the 2 or 4 coin “mean” setting option with dip switch 6 as follows:

OFF for 2 coins ON for 4 coins

3.5. Select the coin data width to achieve the desired sensitivity by setting dip switches 7, 8 and 9 as in Table 4.

Table 4(Coin Data Width)

Switch setting			Code
7	8	9	
OFF	OFF	OFF	A (Narrow Tolerance)
ON	OFF	OFF	B
OFF	ON	OFF	C
ON	ON	OFF	D
OFF	OFF	ON	E
ON	OFF	ON	F
OFF	ON	ON	G
ON	ON	ON	H (Wide Tolerance)

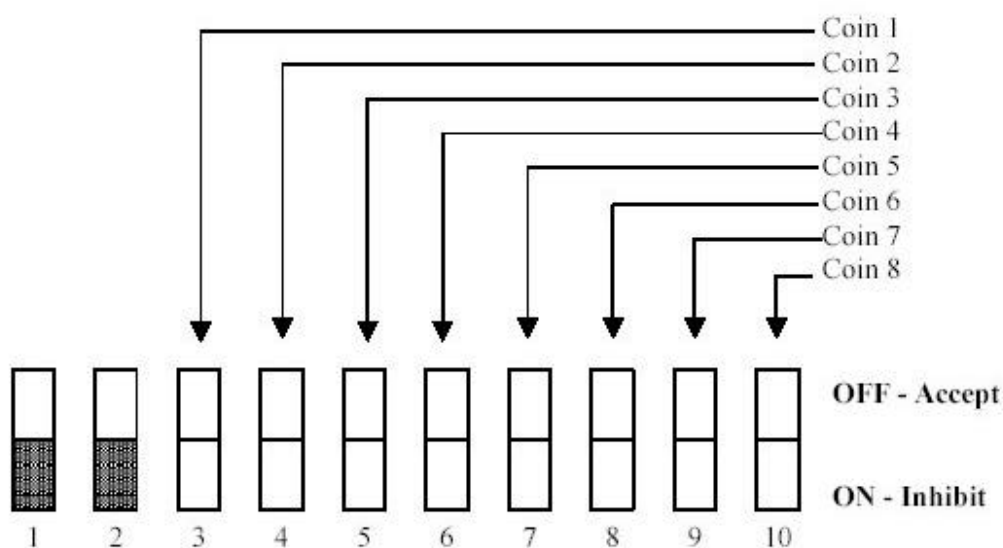
3.6. Mount the selector in its normal operating position using a suitable frame and power up.

- 3.7. Pass 2 or 4 coins through the selector depending upon the option selected in 3.4 above.

N.B. It is very important to pass only 2 or 4 coins as any lesser or greater quantity will leave the validator incompletely programmed. If in doubt, briefly disconnect the power to reset and re-insert the coins.

- 3.8. Repeat for additional coins, changing the location as in Table 3.
- 3.9. When programming is complete, set dip switches 1 and 2 to OFF as in Figure 4, inhibiting any locations not required by switching the appropriate coin position dip switches 3 - 10 to ON.

Figure 4



- 3.10. Undertake a final test with a selection of coins to confirm the settings.

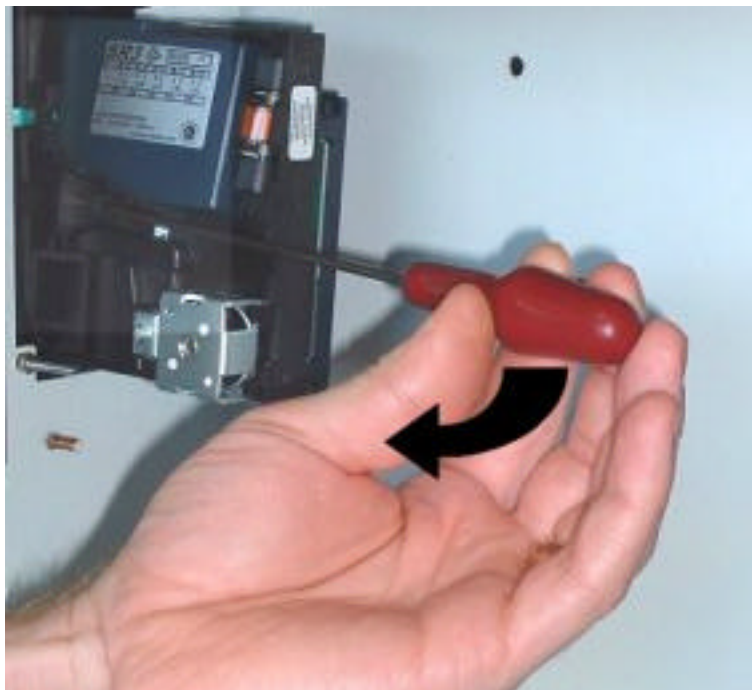
Swap out procedures

Removing the SR3 coin validator

Remove cash box as detailed in procedure, lever catch away from the SR3 (as shown below) and pull SR3 towards rear of kiosk. Remove 10w-ribbon cable

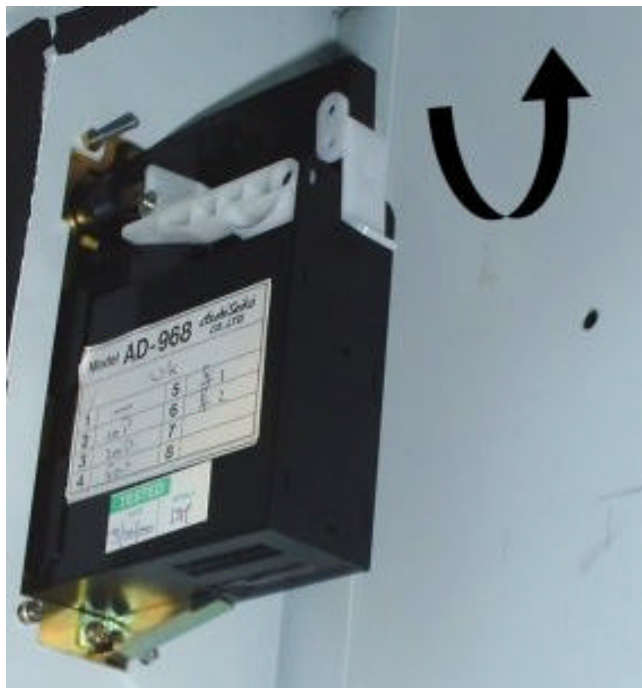


or

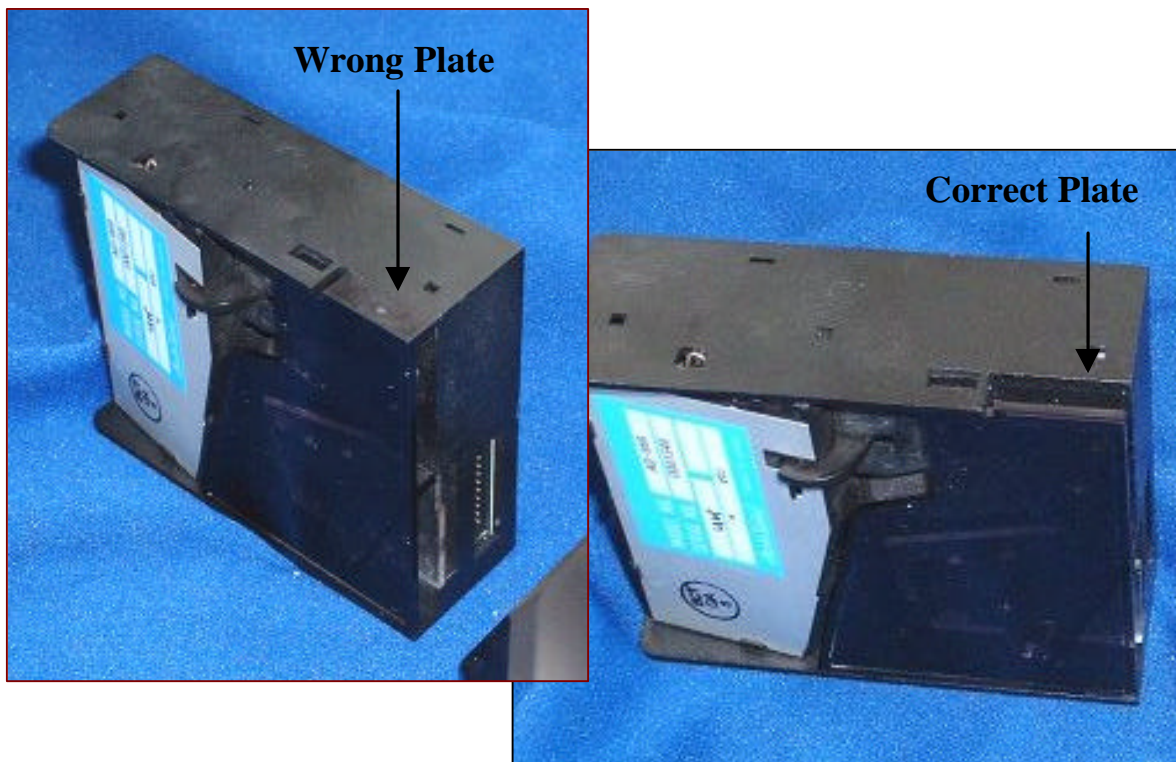


Removing the AD968 coin validator

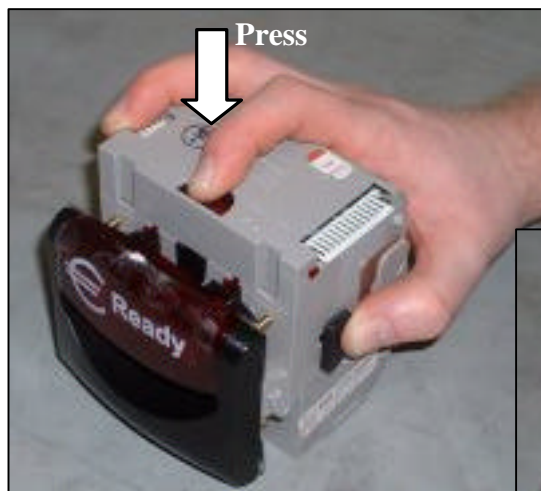
Remove cash box as detailed in procedure, pull the white lever upwards and pull AD968 towards rear of kiosk. Remove 20w-ribbon cable.



The AD968 has an changeable reject cover, it is very important to ensure that the correct one is fitted. Refer to the pictures below for details.

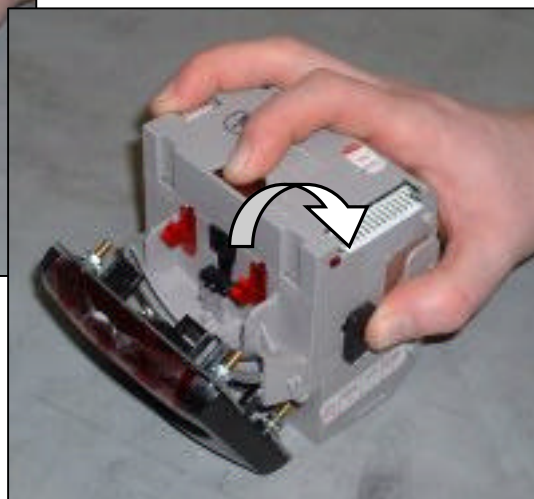


Removing the NV4 note validator



Remove cash box as detailed in procedure. Pressing button on top of validator will release the NV4 from the faceplate.

See Picture left (shown outside chassis for clarity)

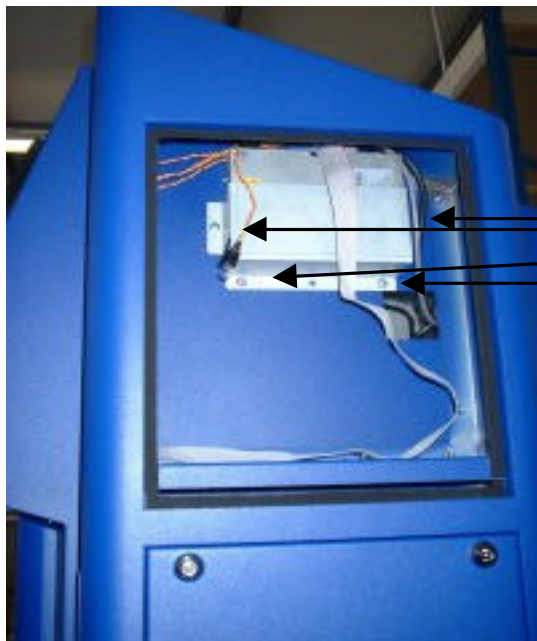


It will remain hinged on bottom of faceplate. See picture right

It is now possible to remove data cable. Once removed the NV4 can be extracted from the kiosk.

Removing the Coin + RS Interface box

Disconnect all cables, these include Power/ Serial/ Coin data/ Note Data(Optional)/ Indicator Bulb(optional).



It is necessary to remove Shroud and monitor in order to undo the nuts and bolts that hold the Interface box in place.

Undo 4x Screws as shown.

It is now possible to remove plate and Interface box.

Removing the Monitor

Please note this Item is heavy and assistance may be required.

Disconnect all cables, these include Power/ touchscreen/ OSD cable(optional)

Open Front door, Remove Monitor Shroud by undoing wing nut on left and right underside of shroud. See figure X. Push Shroud up until it is detached from Kiosk. Remove Earth strap using 8mm spanner.



Figure 5

Undo 4 x M5 x12mm bolts that hold monitor to base plate using 8mm spanner, then slide monitor forward and remove from chassis.

Shroud Locking bolts

M5 bolts under monitor

Testing

Test Software

It is important to try and isolate the software already on the PC therefore a dos based terminal emulator can be used to achieve this. An example of such software is procomm. Some basic instructions on interfacing with the Cash interface hardware follows.

Basic instructions for KIOSK testing.

Copy Files to bootable floppy, do not run within NT dos window. This test proves the hardware is working fully.

Run procomm.exe

Alt+F10 for help

Alt+P to set protocol, once in this screen select 8) for 1200,N,8,1 and 20) or 21) for Com 1 or 2.

Check Bulb is lit, then enter Coin(s) Note(s) as required.
Check Correct character as displayed on screen. See List below.

Alt + X to exit

List

AD968 version

£0.10 = 'C'

£0.20 = 'D'

£0.50 = 'E'

£1.00 = 'F'

£2.00 = 'B'

SR3 Version

£0.10 = 'B'

£0.20 = 'C'

£0.50 = 'D'

£1.00 = 'E'

£2.00 = 'F'

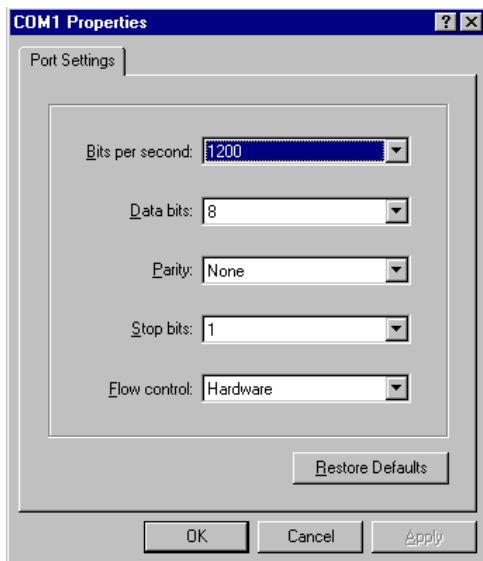
All NV4 Notes have 'M' for each £5 except another option is: -
£5 = '1', £10 = '2', £20 = '3'

Testing the Interface box

The Interface box is connected to a serial port of the PC. Determine which serial port this is attached to then. Either Check with the customer's software or Run Hyperterminal. This can be found in a normal Windows Installation under Programs/ Accessories/ Change setting to 1200 baud, as shown in figure 6 below. Connecting to the port will Light the Bulb on the Interface box and light the Note acceptor.

Important unless this connection takes place then no coins or note will be accepted.

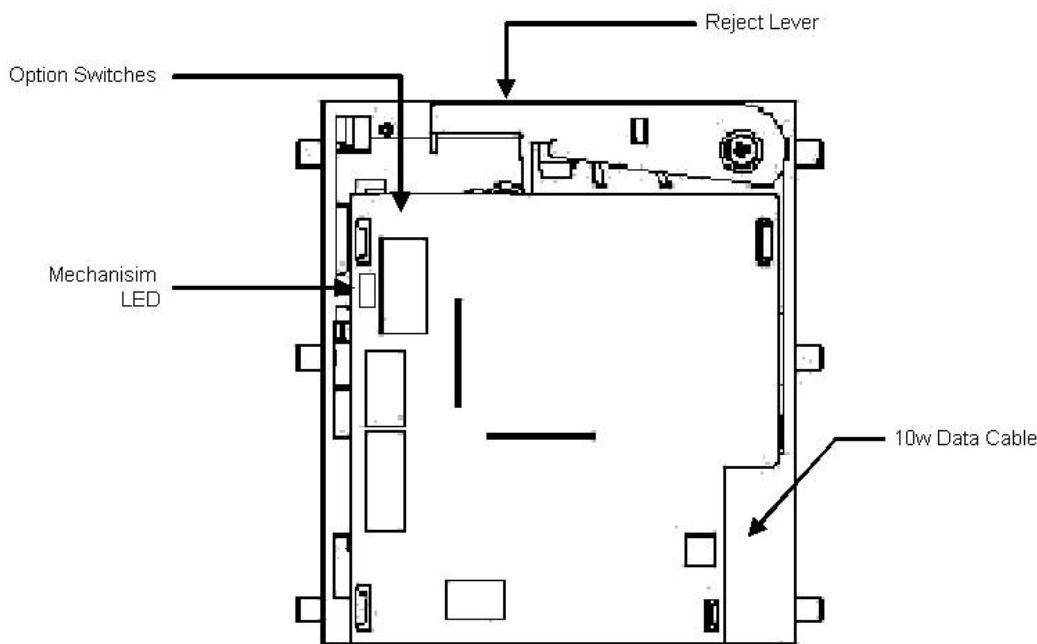
Figure 6



Testing the SR3

Once Communication has been established the SR3 will be ready to accept coins the green LED should be lit. See Figure 7. It may be necessary to remove the SR3 from the front plate to see the LED's, refer to "Removing the SR3 coin validator" section for details.

Figure 7



Pass a valid coin through the SR3, check the LED flashes RED once. For other combinations refer to debug table 5 below

Table 5 Debug table

1 Red pulse	Coin accepted/ Reject lever pressed
2 Red pulses	Coin outside programmed window
3 Red pulses	Coin Valid, but Inhibited
4 Red pulses	Master Inhibit from Interface box

NOTE If the SR3 is not held in faceplate then a high reject rate may be seen. The SR3 must be kept still and vertical otherwise valid coins may be rejected.

The label on the side of the SR3 indicates channel values. This information is used to translate serial values sent by the interface box. For instance 10p is normally on channel 2 and will output a value of 'B' within the terminal emulator software. See table below for clarity.

Feed coins into the SR3 of every valid denomination check the terminal emulator gives correct results. Check any invalid coins, such as 1p,2p,5p and check they are rejected.

Table 6

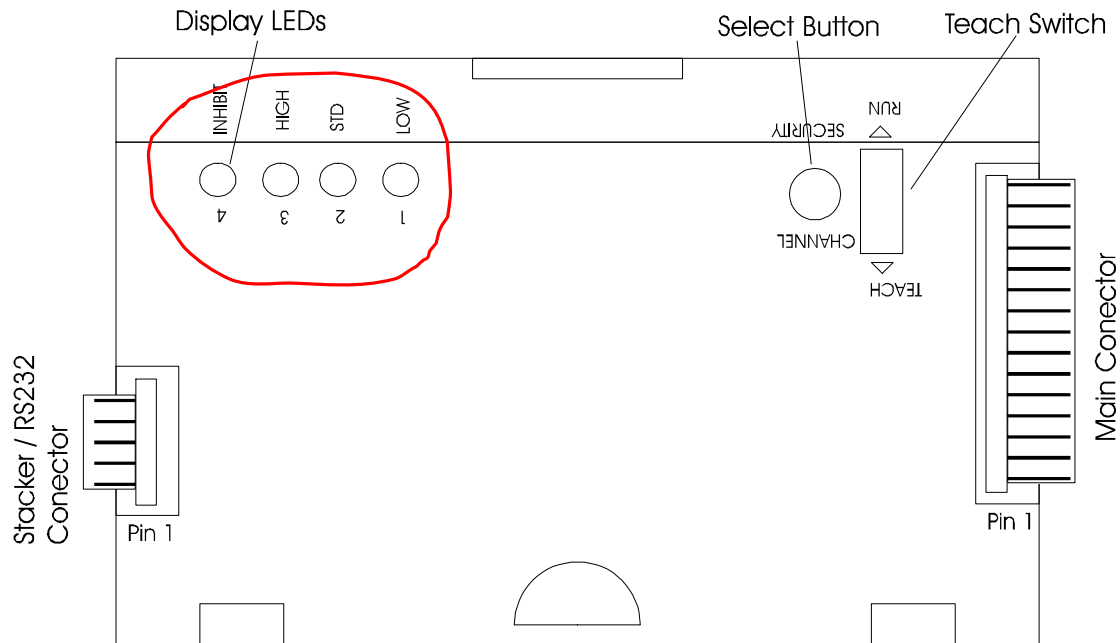
UK				
SR3 Channel Number	Currency Value	Serial Value	GPAS Channel Number	GPAS Value
2	£0.10	B	1	10
3	£0.20	C	2	20
4	£0.50	D	3	50
5	£1.00	E	4	100
6	£2.00	F	5	200
-	£5.00	M	6	500

Euro				
SR3 Channel Number	Currency Value	Serial Value	GPAS Channel Number	GPAS Value
2	€2.00	B	1	10
3	€1.00	C	2	20
4	€0.50	D	3	50
5	€0.20	E	4	100
6	€0.10	F	5	200
-	€5.00	M	6	500

Testing the NV4

Refer to figure 8 below (**Display LEDs**).

Figure 8

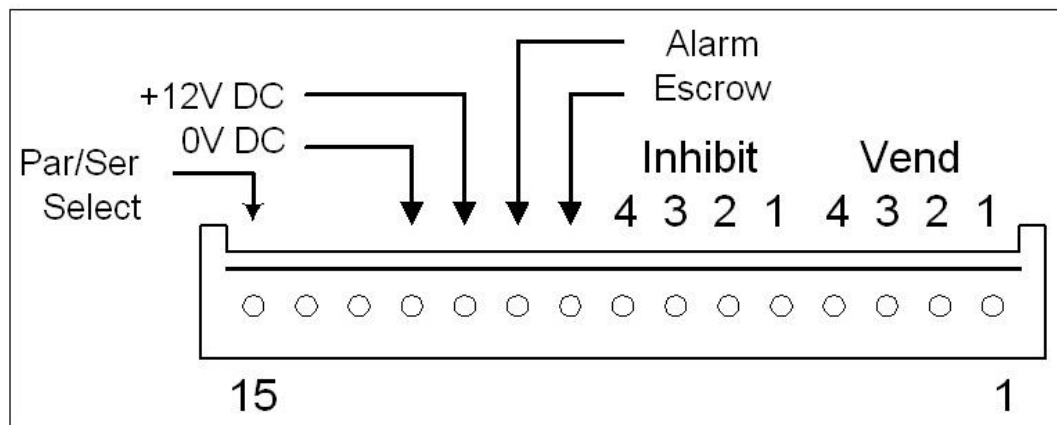


LED 2 + 3 should flash alternately, this proves power is applied to the NV4.

Check front display light is lit, this proves communications are good.

Feed notes into front bezel check they are taken in and accepted. This proves the NV4 is working. If notes are rejected without being taken in then either the Inhibits are high or the NV4 is faulty. To check the Inhibits refer to figure 9, check voltage (+12V) on Pin11, 12. Then check the inhibit lines (pins 5-8) are low (typically 0.7V). If these are high then no notes will be accepted. Check/ Swap the interface box

Figure 9



Testing the AD968

Once Communication has been established the AD968 will be ready to accept coins. The AD698 has no visible indication of either power good or communication. The only indication of good communication is the light behind the front plate, see diagrams. The label on the side of the AD968 indicates channel values. This information is used to translate serial values sent by the interface box. For instance 10p is normally on channel 2 and will output a value of 'C' within the terminal emulator software. See table 7 below for clarity.

Feed coins into the AD968 of every denomination including invalid coins, such as 1p,2p,5p and check they are rejected. It is **Important** that the rejected coins are returned back out through the reject slot of the faceplate as there are two types of reject plates on the AD968. See the section " Removing the AD968 coin validator" for details.

Table 7

UK				
AD968 Channel Number	Currency Value	Serial Value	GPAS Channel Number	GPAS Value
6	£2.00	B	1	200
2	£0.10	C	2	10
3	£0.20	D	3	20
4	£0.50	E	4	50
5	£1.00	F	5	100
-	£5.00	M	6	500

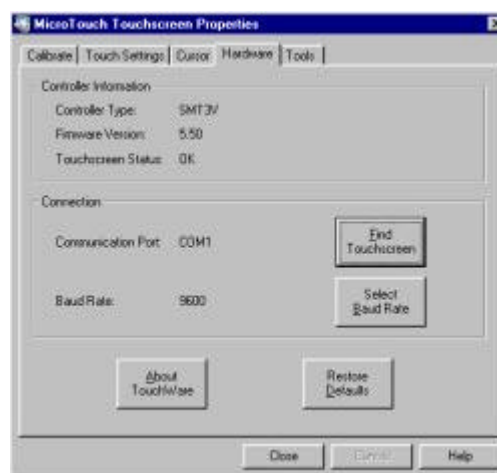
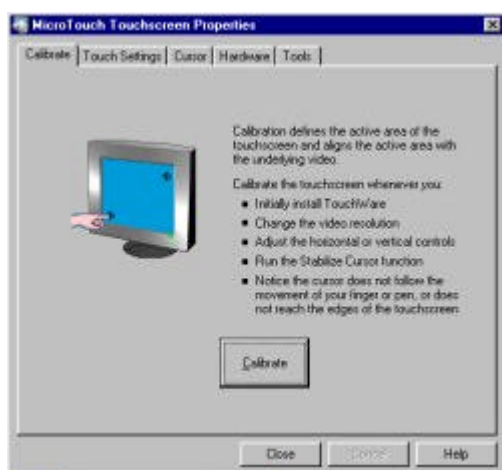
Testing the Touchscreen Monitor

The Monitor On Screen Display (OSD) controls can be in one of three locations: -

- 1) on the rear of the monitor
- 2) on the front behind the bezel
- 3) on a remote lead

The first 2 locations will have small recessed buttons, two for navigating through the menu and two for selecting and exit. The third option has two buttons and one rotary knob for selecting menu items. In all cases pressing a button will bring the OSD up on screen. After a short time the menu will disappear without user intervention.

Checking the touch screen requires a connection to the PC, mostly Com1. The PC should be configured to load the "Microtouch" software at start up. This does a search of the com port and should detect the presence of the touchscreen controller. It can be manually configured via the control panel applet as shown.



It is recommended that the touchscreen is re-calibrated if either software is reinstalled or the front bezel is removed for any reason.

Testing the Printer

The printer can be checked without the need for a PC. To do this first remove the Power Lead from the Printer. Then Hold down the Form Feed key the printer prints any fonts examples, the head temperature, an example of barcode (EAN8) and the 5 graphic pages programmed in flash. This function continues until the printer is turned off.

If testing is required from a Microsoft Windows environment then one of two things can be tried.

- 1) Loading the Windows printer Driver provided on the disk and then doing a test print or
- 2) Using Gpas custom software, first check the printer is enabled in the gpas config utility. Then enter some value to a account and check a ticket is printed.

If paper is fed but no text appears then, check the paper is correct way up and fed into the printer

PROGRAMMING AND SELF-TEST

When the printer is switched on, the two keys LF and FF have SELF-TEST and PROGRAMMING functions.

Hold down the Line Feed key to enter into SETUP mode. A heading will be printed indicating the printer model and firmware release, as well as a report on the current programming. At this point, press either LF to quit setup mode or FF to enter into setup mode. The FF key is used to confirm the data entered, while the LF key is used to select one of the entries of an item. The table below shows all the available options. The default values are marked with an asterisk.

Table 8 PROGRAMMING OPTION TABLE

Baud rate	19200 baud 9600* 4800, 2400, 1200, 600	Serial communication speed
Protocol	Xon/xoff* Cts	Mode by which the printer communicates to the pc that it is ready to receive
Autofeed	Off* On	If on, the carriage return character(0dh) is read as line feed
Paper end	Disabled* Enabled	If enabled, the printer stops when the paper reserve photocell is not darkened
Paper sens	High Norm* Mid Low Double copy paper	Selects paper sensitivity, that is, the duration of the strobe pulse applied to the printing head.
Width	Normal* Double QUADRUPLE	Selects default printing width
Height	Normal* Double	Selects default printing height

Troubleshooting

Problem	Check:	Solution
Dead, nothing on the screen.	Power to Chassis. Check the main input fuse.	Also is a fuse holder built into the IEC main input socket located at the rear RHS of the chassis.
	If the internal fan is on then, power is getting to the mains terminal block.	Check the PC is switched on.
	If the PC is on then check monitor has power.	Also check the VGA lead. Some older Monitors had a removable VGA lead. Check it's plugged in at both ends.
Coins are being rejected all the time.	The serial port must be open for comms	Check with Hyperterminal or custom software that you can communicate with the coin mechanism
	Check correct serial port is assigned with Hyperterminal or Custom software.	You can move the touchscreen around the serial ports to verify each port.
	Check all cables are fully inserted, this includes Ribbon cables to the Coin validator and serial connection to the PC	Remove cables and reinsert.
	Coin Validator may be faulty.	Swap with another.
	Check all valid coins,	One channel may be inhibited. If Note validator present and working then Coin Validator may be faulty.
	Check that coin path is clear	Coins may be jammed in unit
	Check the coin path is clear	Check that there is no obstruction between the coin mechanism and the coin box
	Check the coin path is clear	Check that the correct coin box is being used.
	The coin path is dirty	Clean the coin path with a lightly damp cloth. A build up of dirt can affect the sensors so that it doesn't recognise the coins
Some coins are being rejected but others are not	Check the GPAS or application software to ensure specific coins are not inhibited	Enable coins in application
	Coin Mechanism forgets what coins are enabled/inhibited	Remove the interface cable from the mechanism, wait 20 seconds and reattach. Check
	Coin Mechanism forgets what coins are enabled/inhibited	Re teach the Mechanism what coins are enabled/inhibited as outlined earlier in this manual.
	Coin Mechanism has lost its memory of a specific coin identities	Swap with another. Note: The Coin mechanism can be re taught the identity of specific coins. For advice on how to do this please contact Blue Chip Technical Support.

NV4 Note Acceptor and Thermal Printer Issues

Problem	Check:	Solution
Validator will not take notes:	Is the Bezel Illuminated?	Check power supply
	Is the Bezel Illuminated?	Check cable connections NV4-Interface box, and Interface box-PC
	The serial port must be open for comms	Check with Hyperterminal or custom software that you can communicate with the note mechanism
	Is the jumper cable connected from the top to the bottom of the validator?	Test cable
	IS the GPAS software or other application running	Restart application
	Is the Teach Run switch in Run?	Slide Teach switch to RUN
Validator runs slowly or intermittently:	Make sure there are no foreign objects in the note path	Clean the note path
	Check for damage	Replace Path components
	Ensure there is no grease on tyres	Replace tyres
Notes pass through the validator but do not give a vend signal	Is the unit in TEACH mode? - check the Teach/Run switch	Make sure the validator is in run mode.
	Is the power supply inside specification.	Ensure correct supply and sufficient current..
All notes are being accepted as £5	Pulse Mode may be disabled.	Check and enable
New notes are not being accepted	Are these notes newly released from Central Bank	New Issue of Bank notes occurs from time to time. The NV4 requires to be reprogrammed with the latest available note set
TP-60		
Paper not being fed through when printing	Rollers not locked in correct position	Move the white lever into the up position to lock the rollers
	Paper Jammed in mechanism	Disconnect Printer from power and PC and remove from mounting. Remove paper and any obstructions. Re insert paper and ensure it is running OK. Contact Technical Support and ask for Technical Information Note 18 which gives instructions on correctly inserting paper.
	Paper Jammed in mechanism	Remove jam as above, and check that the correct dimension of paper is being used

Touch Screen Display Issues

Problem	Check:	Solution
Monitor Display Dim	Check Brightness controls	Adjust Brightness levels
	Brightness levels at maximum	Display nearing end of life. Replace when it becomes unusable
Touch Screen Not working	Check cable connections	Reattach cables if loose
	Check Serial Port working	Switch Touch Screen to alternative Serial port and recheck
	Check for scratches on surface of Touch screen, especially around the edges of the display Check for moisture on screen	If surface scratched, replace display Moisture will short the touch screen sensors. Remove front bezel and dry display. Re attach bezel, and recalibrate. Replace display if this doesn't work
	Check for closeness of bezel to display.	If Bezel pushed in, this will short touch screen sensors. Slacken of Bezel and recalibrate
Touch Screen responding slow	Calibration out	Recalibrate touch screen
	Bezel pushed in towards screen	Slacken bezel and recalibrate
Touch Screen not accurate	Calibration out	Recalibrate touch screen

Using Cash boxes

Important Note: - There are two types of coin cash boxes. One for the SR3 and one for the AD968. **Do not mix them up.**



and lift above the locating screws. Then move the box towards the rear of the kiosk and then rotate the box outwards.

In Order to maintain the validators it is necessary to remove the cash box. The ideal way to remove the box is to grab the handle

