



DCA4

Digitally controlled Audio Matrix



Programming Manual August 2002

Software Version 1.01 and Above



Current
Thinking



Introduction

Voice Alarm (VA) systems are the quickest way to evacuate the public & staff from a building.

Following fire detection, automated messages control the flow of people in stairwells and corridors allowing an orderly evacuation without panic. These messages are supplemented by spoken messages from the fire service or management suite confirming the validity and need to leave the building.

This positive confirmation speeds evacuation and avoids the "false alarm" mentality reducing the risk of death from fire.

Suitability

Voice Alarm systems are recommended for all public buildings and multi story buildings over four floors by BS5588.

In public buildings it's not possible to fire drill the public, as they visit the premises infrequently, so systems such as Voice alarms save valuable time in evacuating the building.

The use of phased messages in multi-story buildings prevents over-crowding in stairwells and at exits, preventing secondary injuries. In phased evacuation, the floor in fire receives the evacuate message, and the floor above & below receive an alert message, preparing them for evacuation.

In more complex scenarios the use of multiple alert and evacuate messages can be beneficial, messages telling the evacuees they are going the right way, and messages asking people to make way for people leaving evacuated areas. These additional messages can dramatically speed up the evacuation especially in malls and large airport environments.

Overview

For small and medium sized installations this self-contained voice alarm controller provides an ideal solution.

The basic controller has 4 monitored zone outputs, and the following inputs: 2 call fire microphone ports, a data control port for networking & configuration, 2 four zone high priority microphone ports, 2 digital message slots (allowing four messages to be held in hardware), a six input fire alarm interface with common de-latch input (24V voltage inputs for connection to sounder circuits), 2 low priority zoned microphone ports, and three stereo music inputs.

The front panel LCD allow selection of volumes, music sources and configuration of all functions, as well as providing access to the 99 event log. In the event of processor failure the 2 fireman's inputs can access the whole system in line with EN60849 and BS5839 pt 8.

Standards Compliance

The @udio Logistics DCA4 complies with all the relevant current Voice Alarm standards including BS5839 parts 1,4 & 8 and EN60849.

We are also monitoring the meetings of the EN54-16 committee to ensure we will comply when this is released.

Additionally the DCA4 complies with the EMC requirements of EN55103-1 and EN55103-2.



Navigating the DCA4 Menus.

All functions of the DCA 4 can be configured using the front panel LCD and the four navigation Keys (UP, DOWN, TICK and CROSS (x)).

When the DCA4 is powered up, it will always revert to the Root Menu, this will be different, depending on the existence of faults or not.

Root Menu (no Faults)

The root display shows the Site name (which defaults to @udio Logistics DCA4 Matrix), and a healthy banner. The date & time shown are the current date & time, pressing tick takes you to the User Access Menu.

@udio Logistics DCA4 Matrix	23:56:00
-System Healthy-	01109102

Root Menu (Faults)

The display shows the Event fault log, the date & time change to that of the fault (up & down scroll through the faults otherwise they scroll every second) in this mode only current faults are shown, however these cannot be accepted to silence the fault buzzer, pressing tick takes you to the User Access Menu.

Event nn of mm Fault Occurred	06:32:00
Zone 1 audio fault	01109102

If faults exist, but the fault log has been cleared, or the buzzer silenced, the display will show as follows:

@udio Logistics DCA4 Matrix	23:56:00
-System in Fault-	01109102

General Menu Format

When tick is pressed for the first time from the root screen, the display will show as follows

DCA4 User menu	06:34:29
>Change Music Source	02109102

The top line displays the parent menu; the bottom line shows the current menu item, and pressing tick will take you to this option.

User Level Menu

For the user menu (level 2), the following menu items are available (some items can be disabled in the management menu DEFAULT ACCESS Settings later)

DCA4 User menu	06:34:29
>Change Music Source	02109102
Change Music Volume	
Change Music Zones	
View Zone Audio Source	
Log In	





Change Music Source menu

This menu changes the music source for zones with music routed to them. The DCA 4 has three music inputs; however only one can be active at a time (local music sources can be input directly into the PERMA series power amplifiers). The names below can be edited in the Management and Engineering menus.

In this example source 1 (CD) is selected, tick selects the next music source, cross exits, when tick is pressed the music source changes instantly.

```
Music Source
0:Mute    1>CD      2:Tape    3:Tuner
```

Change Music Volume menu

This menu allows the user to set the volume of background music in any of the four zones. If external remote volumes are enabled for the zone, this value represents the Maximum level allowed, and is best set with the remote volume control set at maximum.

Up & down change the current highlighted value (zone 3 volume selected in this example), tick highlights the next volume, cross exits. Volume changes are instantaneous, and cannot be recalled.

```
Music Volumes
1: -12dB  2: -6dB   3> -6dB   4: -32dB
```

Change Music Zones menu

This menu selects which zones are receiving the music selected in the previous menu. Up and down changes the value between the source name and none, tick moves to the next Zone, cross exits.

```
Music Zone Selection
1:None    2>CD      3:none    4:CD
```

Audio Source menu

This is a diagnostic display showing the current audio routing by the DCA4, pressing any key returns you to the user menu list.

```
Zone Audio Sources
1:SEC MIC 2:Firemic 3:Alert   4:Evac
```

Login Menu

This allows you to enter a PIN number to gain access to either Management (level 3) or engineer (level 4) menu items, the PIN for each level is different, and can be changed with the correct access level.

Up & Down alter the selected value, tick moves to the next digit, cross moves to the previous digit, or exits if you are on the first digit.

An incorrect PIN returns you to the enter PIN menu.

```
Please enter PIN to LOG IN      06:34:00
      -0***-                    02109102
```



Manager Level Menu

If the manager PIN has been entered the display below is shown, if the Engineer PIN is entered, the Engineering menu is displayed, this is described later. The first item highlighted is the log off menu, pressing tick on this item will return you to the root display and log you off. Pressing cross on any menu item in this list will take you to the root menu, WITHOUT logging you off, if you wish to return to this menu, press tick from the root menu before the THREE minute timeout occurs.

```
DCA4 Manager menu          06:34:29
>Log Off                   02109102
Change Music Source
Change Music Volumes
Change Music Zones
View Zone Audio Source
Change Default Access
View Event Log
Change Paging Volumes
Name Music Sources
Set Remote Volumes
Set Date & Time
Change Manager PIN
```

The next four menu items are the same as the User level menus described earlier.

Change Default access

This menu selects which music functions are enabled in the USER level access menu, some situations require frequent adjustment of audio sources and volumes, others require limited access to these functions, using this menu both situations can be catered for by the DCA4. Up and down changes the value between visible (Y) and Hidden (N), tick moves to the next function, then next. In this example source is highlighted.

```
Default Music Access      Next
Volume :Y Source >Y Zones :N
```

Pressing up or down when Next is highlighted changes its label to SAVE, pressing tick now will exit the menu saving the new states cross exits. Pressing cross at any time exits the menu without saving the values.

```
Default Music Access      >Save
Volume :Y Source :Y Zones :N
```

All menu Items with a 'Save' option generate a log file entry when they are exited by 'saving' to complete an audit trail.



View Event Log Menu

In this menu, the display shows the Event fault log, the date and time of the event. If more than one event exists, up and down scroll through the events. All events are shown, there will always be at least one event in the log; the date and time of the last log clearance (engineering level operation).

Event 1 of 1	13:22:08
Log Cleared	01108102

If a fault has existed but has gone away, the fault buzzer will be sounding and the log will look like this:

Event 2 of 5	13:22:33
Engineer LOGOFF	01108102

Event 3 of 5 Fault Occurred	06:32:00
Zone 1 audio fault	01109102

Event 4 of 5 Fault Cleared	06:34:07
Zone 1 audio fault	01109102

Event 5 of 5	12:05:30
Manager LOGIN	01109102

Pressing tick in this menu silences the fault buzzer (even if current faults exist), and places the following entry into the log:

Event 6 of 6	12:07:11
Fault Buzzer Silenced	01109102

If another fault occurs, it will be entered into the log, and the buzzer restarted. The fault text for all configurable inputs and outputs can be site specific, and altered through the Engineering Menus, each fault description can be up to 30 characters, for example:

Event 7 of 7 Fault Occurred	12:22:55
Lobby Fire Microphone in Fault	01109102

As can be seen from the above event log, all actions, which may affect the system, are logged in accordance with BS5839 and EN54 so a complete audit trail of actions can be attained. Any microphone alterations, cause & effect changes or logins are recorded, for example:

Event 12 of 99	07:01:01
DVA 1 Message 3 Changed	01106102

Event 26 of 99	07:07:11
HP Mic Button 1 Changed	01106102

Event 29 of 99	07:09:41
Fire Contact 6 Changed	01106102



Change Paging Volume menu

This menu allows the user to set the paging microphone volume in any of the four zones.

Up & down change the current highlighted value (zone 1 volume selected in this example), tick highlights the next volume, cross exits. Volume changes are instantaneous, but are only saved when the menu is exited using the save option.

Paging Volumes				Next
1> -4dB	2: -3dB	3: -3dB	4: -5dB	

Pressing up or down when Next is highlighted changes its label to SAVE, pressing tick now will exit the menu saving the new volumes cross exits. Pressing cross at any time exits the menu without saving the values, restoring the original volumes.

Paging Volumes				>Save
1: -4dB	2: -3dB	3: -3dB	4: -5dB	

Name Music Sources Menu

This menu allows the setting of friendly names for each of the three music inputs; these names can be up to 7 characters in length.

Name Music Sources
>Name Music Input 1
Name Music Input 2
Name Music Input 3

All three naming sub menus are identical, so we will describe name music input 2, this will take you to the text input menu, which we will now explore:

Inputting Text

All text input on the DCA4 uses the same technique, the bottom display line shows the phrase "text >" and text can be entered between the > and < signs, giving a simple visual key to the amount of text allowed for this entry (fault texts allow up to 30 characters).

Name Music Input 2	Type
Text >Iafe <	

When text entry is used, the current text for the entry is displayed, with the first character highlighted using an underscore, this is the character which is altered using up and down keys and follows the characters in this List:

```

ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789+
abcdefghijklmnopqrstuvwxyz@?<>.&#()+-=■

```





Special characters appear at the end of each line in the list, '↵' and '■', these are the insert and end of text markers respectively. The cross key deletes the current character, moving the characters to the right of the cursor left one position; tick accepts the current character and moves to the next character.

```
Name Music Input 2           Type
Text >Tape■  <
```

When the last character is entered, or tick is pressed on the end of text character the Type banner is highlighted. If the '■' (EOT) character is used to terminate text entry, the character position containing this character is filled with a space, and all characters to the right of the EOT character are replaced with spaces.

```
Name Music Input 2           >Type
Text >Tape  <
```

If tick is pressed on the Type banner, the cursor goes back to editing text position 1, pressing up or down changes the Type banner to 'Save', now pressing tick will replace the stored text string with the new string, pressing cross will exit without saving the new text.

```
Name Music Input 2           >Save
Text >Tape  <
```

Inserting & Deleting characters

```
Name Music Input 2           Type
Text >Tape  <
```

With 'a' highlighted, pressing the cross key produces the following result, with the last character slot padded with a space, thus:

```
Name Music Input 2           Type
Text >Tee  <
```

With 'p' highlighted, using the up and down keys select the insert character '↵'

```
Name Music Input 2           Type
Text >T↵e  <
```

Pressing the tick key inserts a space where the '↵' character was, and the original character and all characters to the right of the insert character are moved right one place, any characters which exceed the number of allowable characters in the string are lost.

```
Name Music Input 2           Type
Text >T_pe  <
```





Set Remote Volume Menu

This menu allows you to determine which zones have their external volume controls enabled.

```

Remote Volume Control                               Next
1> Yes      2:No      3:No      4:No

```

Up or Down toggle high-lighted value, on Next this changes to Save, pressing Tick now will save the new values and exit, x will exit without saving the values, pressing Up or Down again will change back to next mode, pressing Tick after this will move the cursor to the zone 1 value again.

```

Remote Volume Control                               >Save
1> Yes      2:No      3:No      4:No

```

Remote volume controls vary the audio between mute and the level set by the music volume menu, volume can be continuously varied with an external 50K linear POT, or by using a simple switch, which open circuits the volume pair to MUTE the audio, and when closed returns the audio to the level set by the music volume menu.

Set Date and Time Menu

This menu allows the real time clock on the DCA4 to be Set, the forward arrow shows which value is altered by the up and down keys, pressing tick moves to the next entry, then to the Next Banner. The date and time displayed are the current values when the menu was entered, and they remain static, the clock continues in the background

```

Set Date and Time                                   Next
Date:>01101101  Time: 23:59:59

```

Pressing up or down on the next banner changes it to save, pressing tick now will store the new time in the real time clock, allowing you to synchronise the clock start to a watch. Pressing cross exits the menu without altering the clock.

```

Set Date and Time                                   >Save
Date: 01108102  Time: 09:20:00

```

When the date or time are changed with the Save option, an entry is placed in the Event log, along with the new date and time as follows:

```

Event 5 of 6                                05:12:07
Manager LOGIN                               01101101

```

```

Event 6 of 6                                09:20:00
Date & Time Changed                         01108102

```





Change Manager PIN

This Menu allows the current manager PIN to be changed from the default '3333'. The new PIN needs to be entered twice to verify the value and prevent access being accidentally lost when setting a new PIN

```
Set Manager PIN                               Next
  New Pin 0***   Repeat PIN *****
```

Up and Down alter the current digit, pressing tick move to the next digit, then to the Next banner, up or down on the Next banner changes it to Save.

```
Set Manager PIN                               >Save
  New Pin *****   Repeat PIN *****
```

Pressing tick on the Save banner causes the two pins to be compared, if they match the new PIN is saved, and you are returned to the Manager or Engineer menu.

If the two numbers do not match the following screen is displayed:

```
Set Manager PIN                               Next
  **** PIN numbers do not match ****
```

Pressing any key will return you to the Set manager Pin menu with digit 1 visible again.

When the manager PIN has been changed an entry is made into the Event LOG, for example:

```
Event 55 of 56                               11:01:09
Manager LOGIN                                 05108102
```

```
Event 56 of 56                               11:03:47
Manager PIN Changed                           05108102
```

The next section describes the menus available to the system engineer, by entering the Engineer PIN on the LOGIN menu. If you are logged in as the Manager, you must re-log in by selecting the Log Off menu in the Manager Menu (the first menu item in the list), and then select Log IN and enter the Engineers PIN.



Engineer Level Menu

The Engineer menu is the highest level of access, and allows full configuration of the DCA4.

```

DCA4 Engineer menu          06:34:29
>Log Off                    02109102
Change Music Source
Change Music Volumes
Change Music Zones
View Zone Audio Source
Change Default Access
View Event Log
Change Paging Volumes
Name Music Sources
Set Remote Volumes
Set Date & Time
Change Manager PIN
Change Engineer PIN
LP Microphone Set Up
HP Microphone Set Up
Message Settings
Event LOG Settings
Set Cause & Effects
Change Emergency Volumes
Edit Fault Text
Set Fault monitoring
Edit Site Name
Engineer Test Menu
Set Next Service Date

```

Change Engineer PIN

This Menu allows the current Engineer PIN to be changed from the default '4444'. The new PIN needs to be entered twice to verify the value and prevent access being accidentally lost when setting a new PIN

```

Set Engineer PIN           Next
  New Pin 0***   Repeat PIN ****

```

Up and Down alter the current digit, pressing tick move to the next digit, then to the Next banner, up or down on the Next banner changes it to Save.

```

Set Engineer PIN           >Save
  New Pin ****   Repeat PIN ****

```

Pressing tick on the Save banner causes the two pins to be compared, if they match the new PIN is saved, and you are returned to the Engineer menu. If the PIN numbers do not match you will be asked to re-enter the new PIN, an event log entry will be made on a successful change, as with the Management PIN.





LP Microphone Set Up Menu

This menu allows the setting of values for the low priority microphone, several items can be changed, both low priority microphones have the same friendly name and button routing, however the fault texts for each of the two low priority microphone inputs are independent.

```
LP Microphone Set Up Menu
>Change microphone name
  Set Button 1 Zones
  Set Button 2 Zones
  Set Button 3 Zones
  Set Button 4 Zones
```

Change Microphone Name Menu

This menu allows the setting of a friendly name for the low priority microphones; this name can be up to 7 characters in length, and is the name displayed in the View Zone Audio Source Menu. If only one of the two inputs is used this can be used to identify the paging source, for example if the microphone is located in the reception the friendly name may be:

```
Name LP microphones                                     Type
Text >Recept <
```

The text entry is identical to that described earlier for the Name Music Sources Menu.

Set Microphone button zones.

This menu allows you to determine the zones selected by the buttons on the Low priority microphones (both microphones share the same routing), all four buttons function identically, so we will only describe button 1.

```
Low Priority Mic Button 1                               Next
1>Yes          2:Yes          3:Yes          4:No
```

Up or Down toggle high-lighted value, on Next, up and down toggle the banner to Save, pressing Tick now will save the new values and exit, generating a log file entry, x will exit without saving the values, pressing Up or Down again will change back to next mode, pressing Tick after this will move the cursor to the zone 1 value again.

```
Low Priority Mic Button 1                               >Save
1>Yes          2:Yes          3:Yes          4:No
```

In the above example button 1 on the low priority microphone addresses zones 1, 2 and 3, allowing a single zone-paging panel to be routed to multiple zones.





HP Microphone Set Up Menu

This menu allows the setting of values for the low priority microphone, several items can be changed, both high priority microphones have the same friendly name and button routing, however the fault texts for each of the two microphone inputs are independent.

```
HP Microphone Set Up Menu
>Change microphone name
Set Volume used
Set Button 1 Zones
Set Button 2 Zones
Set Button 3 Zones
Set Button 4 Zones
```

Change Microphone Name Menu

This menu allows the setting of a friendly name for the low priority microphones; this name can be up to 7 characters in length, and is the name displayed in the View Zone Audio Source Menu. If only one of the two inputs is used this can be used to identify the paging source, for example if the microphone is located in the security office the friendly name may be:

```
Name HP microphones                               Type
Text >Secur <
```

The text entry is identical to that described earlier for the Name Music Sources Menu.

Set Volume Used Menu

This menu selects which volume setting is used for the High Priority microphones, between paging level and emergency level

```
Set Volume Used                                     Next
HP Microphone Volume > Emergency
```

Up or Down toggle between emergency and paging, tick moves to the Next banner, up and down toggle the banner to Save, pressing Tick now will save the new values and exit, generating a log file entry, x will exit without saving the values.

Set Microphone Button Zones Menu.

This menu allows you to determine the zones selected by the buttons on the High priority microphones (both microphones share the same routing), all four buttons function identically and are handled in exactly the same way as the Low priority microphones described earlier.

```
High Priority Mic Button 1                           >Next
1:Yes      2:No      3:No      4:No
```





Message Store Setting Menu

This menu allows the setting friendly names for each of the DVA (Digital Voice Announcer) messages.

```

Message Store Setting Menu
>DVA 1 Messages Available
DVA 1 Message 1 name
DVA 1 Message 2 name
DVA 1 Message 3 name
DVA 2 Messages Available
DVA 2 Message 1 name
DVA 2 Message 2 name
DVA 2 Message 3 name

```

The two DVA message stores are identical in operation, only one message at a time can be played from each message store, and DVA 1 has priority over DVA 2. The messages are also prioritised, with message 3 being the highest priority message, followed by 2 then 1. Please see the @udio Safe message module data sheet for more information on the operation and recording of these message stores.

Messages Available Menu

This menu determines which of the three messages, which can be recorded into an @udio Safe module are available for use by the DCA4

```

DVA 1 Messages Available      Next
1:Test      2:Evac      3>None

```

Up or Down toggle high-lighted value between none and the friendly name given to this message, tick moves on to the next message slot, then the Next banner, if up or down is pressed this banner changes to Save, pressing tick on Save will save the new availability list and create a log file entry.

Change Message Name Menu

This menu allows the setting of a friendly name for each of the three messages in both of the message stores; this name can be up to 7 characters in length, and is the name displayed in the View Zone Audio Source Menu, the fire cause and effects table and the message available menu. In this example, message 2 on DVA 2 is the staff call message, so its friendly name may be:

```

DVA 2 Message 2 Name      Type
Text >Staff <

```

The text entry is identical to that described earlier for the Name Music Sources Menu. When the name is saved an entry is made into the log file.





Event Log Settings Menu

This menu allows the Event log to be printed to a serial printer on the RS232c Port, and to clear the log. When the menu is entered the clear log option is always set to NO. If both values are set to set to yes, the log is printed before it is cleared, and all events following this change are immediately sent to the printer port, until the Print option is reset to NO.

```
Event Log                                     Next
Print Event Log :Yes   Clear Log >No
```

Up or Down toggle between Yes and No, tick moves to the next item, then the Next banner, up and down toggle the banner to Exec, pressing Tick now will do the requested actions and exit, generating a log file entry, x will exit without executing the log commands.

Set Cause & Effects Menu

This menu allows the fire interface contacts to be configured, all six inputs are identical, and can be used to trigger any of up to six DVA (Digital Voice Announcer) messages stored in the DCA4.

```
Set Fire Cause & Effects
>Fire Contact 1 settings
Fire Contact 2 settings
Fire Contact 3 settings
Fire Contact 4 settings
Fire Contact 5 settings
Fire Contact 6 settings
```

Fire Contact settings Menu

If a message from store 1 has already been entered in this line of C&E then this is the only message allowed from store 1, similarly for store 2

```
Fire Alarm Contact 2                             Next
1:Alert    2:Evac    3>Alert    4:None
```

Up or Down toggle high-lighted value, on Next this changes to Save, pressing Tick now will save the new values and exit, x will exit without saving the values, pressing Up or Down again will change back to next mode, pressing Tick after this will move the cursor to the zone 1 value again.

```
Fire Alarm Contact 2                             >Save
1:Alert    2:Evac    3:Alert    4:None
```

Any changes to the cause & effects table generate a log file entry. The contacts do not have to be used for fire alarm inputs, and contacts 5 & 6 are normally used for management (such as no smoking or unattended baggage) or test messages.

```
Fire Alarm Contact 6                             >Next
1:nosmoke 2:nosmoke 3:nosmoke 4:None
```





Change Emergency Volumes Menu

This menu allows the user to set the emergency microphone volume in any of the four zones.

Up & down change the current highlighted value (zone 1 volume selected in this example), tick highlights the next volume, cross exits. Volume changes are instantaneous, but are only saved when the menu is exited using the save option.

```

Emergency Paging Volumes                               Next
1> -4dB  2: -3dB  3: -3dB  4: -5dB

```

Pressing up or down when Next is highlighted changes its label to SAVE, pressing tick now will exit the menu saving the new volumes cross exits. Pressing cross at any time exits the menu without saving the values, restoring the original volumes.

```

Emergency Paging Volumes                               >Save
1: -4dB  2: -3dB  3: -3dB  4: -5dB

```

Edit Fault Text Menu

This menu allows the Engineer to set site specific fault information for all the external fault events available on the DCA4.

```

Edit Fault Text
>Fire Microphone 1
Fire Microphone 2
HP Microphone 1
HP Microphone 2
Data Microphone
Message Store 1
Message Store 2
LP Microphone 1
LP Microphone 2
Next Service Date

```

The text entry for all the faults is the same and as described earlier in the set music source name menu. The 'Next Service Date' fault text is displayed when the onboard date clock exceeds the date set in the Set Service Date Menu, described later.

```

Edit Fire Microphone 1 Fault                               Type
Text >Eault on Lobby Fire Microphone<

```

If tick is pressed on the Type banner, the cursor goes back to editing text position 1, pressing up or down changes the Type banner to 'Save', now pressing tick will replace the stored text string with the new string, pressing cross will exit without saving the new text.

```

Edit Fire Microphone 1 Fault                               >Save
Text >Fault on Lobby Fire Microphone<

```





Set Fault Monitoring Menu

This menu allows the Engineer to set which external faults are monitored and generate Log File entries on the DCA4.

```
Fault Monitoring
>Fault Monitor Zones
  Fault Monitor Inputs
```

Fault monitor Zones

This menu sets which audio output zones are monitored. If a zone is not used, the monitoring for that zone should be switched off to prevent this zone showing a continuous fault. Pressing Tick moves to next zone, then Next.

```
Fault Monitor Zones                               Next
1> YES      2: YES      3: YES      4: NO
```

Up or Down toggle high-lighted value, on Next this changes to Save, pressing Tick now will save the new values and exit, x will exit without saving the values, pressing Up or Down again will change back to next mode, pressing Tick after this will move the cursor to the zone 1 value again.

```
Fault Monitor Zones                               >Save
1: YES      2: YES      3: YES      4: NO
```

Fault Monitor Inputs

This menu sets which audio inputs are monitored. If an input is not used, the monitoring for that input should be switched off to prevent it showing a continuous fault. Pressing Tick moves to next zone, then Next.

```
Fault Monitor Microphones                           Next
FMic1 >Y FMic2 :Y HPMic1 :Y HPMic2 :Y
```

Pressing Tick on 'Next' moves to next page which starts with the data microphone, up/down toggles the high-lighted value, x leaves without changing value.

```
Fault Monitor Microphones                           >Next
Data Mic:Y LPMic1 :Y LPMic2 :N Network:N
```

Up or Down toggle high-lighted value, on Next this changes to Save, pressing Tick now will save the new values and exit, x will exit without saving the values, pressing Up or Down again will change to next mode again, pressing Tick then will move to Fmic1 page again.

```
Fault Monitor Microphones                           >Save
Data Mic:Y LPMic1 :Y LPMic2 :N Network:N
```





Edit Site Name Menu

The site name is the text displayed on the top line of the root menu, this can be altered to a site specific name or company name. Text is entered in the same way as for the faults and is described in the set music name menu in the user menu section. The default text for the site name is "
@udio Logistics DCA4 Matrix "

```
Edit Site Name                                     Type
Text >@CME PLC 2129 large St London <
```

If tick is pressed on the Type banner, the cursor goes back to editing text position 1, pressing up or down changes the Type banner to 'Save', now pressing tick will replace the stored text string with the new string, pressing cross will exit without saving the new text.

```
Edit Site Name                                     >Save
Text >@CME PLC 2129 large St London <
```

Engineer Test Menu

This menu allows the Engineer to test individual audio output zones on the DCA4, or to walk test the zones, or broadcast to any selected zones simultaneously. The menus allow the Engineer to select which message is used,

```
Engineer Test
>Engineer Zone Test
  Set Test Message
```

Engineer Zone Test

This menu selects which zones receive the Engineer Test Message. When you enter the menu, the test action is always Stop, and all zones are set to unselected (No). This menu does not time out after 3 minutes, so care should be taken that unauthorised users do not gain access to the system.

```
Engineer Zone Test                               Stop
1:No      2:>No      3:No      4:No
```

Tick moves to next zone, then Stop, then back to zone 1, up and down toggle the highlighted value, x leaves engineer test mode.

```
Engineer Zone Test                               >Walk
1:Yes     2:No      3:Yes     4:No
```

When Stop is highlighted, up and down toggle the action between Walk, Bloc and Stop. Walk plays the test message 3 times to the first selected zone, then 3 times to the next zone and so on, repeating until stop is selected.

```
Engineer Zone Test                               >Bloc
1:Yes     2:No      3:Yes     4:No
```

The 'Bloc' Option broadcasts to all the selected zones simultaneously.





Engineer Test Message

This menu selects which DVA message is used by the Engineer Test Menu. The Default message is DVA 1 message 1, usually deemed the "Test" message.

```
Engineer Test Message           Next
Message Name >Test
```

The Up and down keys scroll through the friendly names of the messages, only valid messages are displayed. The Tick key toggles between message name and Next. Up and down on Next toggles the value to Save, pressing tick will now save the new message value, and exit generating a log file entry.

Set Next Service Date

This menu allows the Engineer to set the date of the next planned maintenance visit for this system. When the on board date clock exceeds this date, a "Fault" is generated and placed in the fault log to prompt the site owners to have the system tested as required by BS5839 and EN54.

```
Next Service Date             Next
Enter Date: >15/10/03
```

The Up and down keys change the currently highlighted value. The Tick key moves between Day, Month, Year and Next. Up and down on Next toggles the value to Save, pressing tick will now save the new 'next service date', and exit generating a log file entry.

Continuing Development

The features of the DCA4 are far reaching and represent the current leading edge in Voice Alarm Control Equipment, however we are mindful of the needs of our customers and their clients, so we have a policy of continual improvement. The DCA4 has been designed to be updateable without removing the Lid, using a secure programming adapter. An engineer who has been trained by Current Thinking should only do this.

While we subject all our software to a rigorous quality system we acknowledge that bugs may be present due to the number of possible permutations offered by the DCA4's flexibility. If you discover any bugs, or have additional requirements, please email dca4@current-thinking.com

Regular updates, hints and FAQs will be posted on the current thinking websites at:

www.current-thinking.com

or

www.voice-alarm.net

