Admaster TM6000e
Installation and Commissioning

Rev 1
13/11/2019

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1 Connections

The Admaster uses pluggable screw terminals for all connections.
Ensure the following:
Cable connections are made using Bootlace Ferrules.
Cable connections on wires less than 0.5sq mm incorporate Strain Relief.

1.1 Connecting Network

The Admaster requires a connection to at least one local PC or Laptop via Ethernet.

a) Do not attempt to connect to a client's network until authorised to do so by their IT network administrator. The Admaster requires a static IP address, Subnet mask and a Default gateway that is specific to each site.
b) Initial connection is always to the technician's laptop.
c) Connect the technician's laptop to the LAN connection on the rear panel using a standard Ethernet cable.

1.2 Connecting Power Supplies

The Admaster can be powered by one or two power sources. Typically, the primary power source is a 24VDC 2A or greater mains converter (PS) and the secondary source is 24VDC from batteries (Bat). The Admaster will remain fully functional if either power source is present. By design, power will always be drawn from the PS if this is available.

a) Connect as per figure 1 on page 5

1.3 Connecting Play on Demand Receivers (PODR)'s

The Admaster may be connected to one or more PODR's. It is possible to connect up to 16 PODR's on the same cable. Each PODR must be given a different address by setting internal DIP switches. A typical installation will require only one PODR, however if communication is erratic or there are areas where POD buttons do not work, additional PODR's can be used to extend range.

Do not hot swap the POD Receiver, ensure the TM6000e mixer is powered down before connecting or disconnecting.

a) Connect as per figure 1 on page 5

1.4 Connecting Remote Controls

The Admaster may be connected to remote switches to operate Chime, Alert and Evac tones. An "Activity" output is also provided to signal external devices when selected channels are active. Typically, this may be used to drive local speaker volume controls fitted with override relays. A fused 24V DC output terminal and a ground terminal are provided for remote devices.

a) Connect as per figure 2 on page 6

1.5 Connecting ALC speakers

The Admaster uses the speakers in a sample area to monitor ambient noise levels in that area. The volume levels of selected sources are adjusted to compensate for background noise and then delivered to the input of the external power amplifier. For optimum results, only the speakers in the sample area should be connected through the Admaster.

a) Connect as per figure 5 on page 9

1.6 Connecting Audio Output

The output of the Admaster is transformer balanced and provides 1V RMS into a 600R load. The Admaster Output should be connected to a suitable power amplifier.

a) Connect as per figures 3 and 4 on page 7 and 8

Q: *Do I connect Admaster "Out" to my amplifiers "Mic In" "Aux In" or "Line In"?*
A: "Line In" is always the best option. Choose "Aux In" or "Mic In" if Line In is not available on your amplifier. If "Aux In" or "Mic In" is used, limit the amplifier gain by turning its volume control down.

Q: *Do I connect my amp as un-balanced or balanced?*
A: This is impossible to know for all variations of Power Amplifiers and Mixer/Amplifiers on the market. The Admaster has a transformer coupled output so, correctly connected it supports both balanced and unbalanced Power Amplifiers. Always use the balanced connection option if the Power Amplifier has a "Balanced In" connection. Balanced signal lines are much less susceptible to induced noise (can be heard as a hum through the speakers). As a rule of thumb, always use the balanced option if the length of cable is greater than 2 metres.

Q: *Is my amp grounded or floating?*
A: Again, this is impossible to know for all variations of Power Amplifiers and Mixer/Amplifiers on the market. The Admaster has a transformer coupled output so, correctly connected it supports both grounded and floating Power Amplifiers. More than one ground connection on a signal cable can result in induced noise (can be heard as a hum through the speakers). If your amplifier is grounded, use the floating connection option. If your amplifier is floating, use the grounded connection option. As a rule of thumb, use the floating connection option if the amplifier has a mains supply cord with an EARTH connection.

1.7 Connecting Magic Microphones

The Admaster supports up to 16 Magic Microphones. Magic Microphones are connected in parallel. Wiring can be loop-in loop-out, star, or a combination of loop-in, loop-out and star. Do not connect non-Magic Microphones to this input.

a) Connect as per figure 1 on page 5

1.8 Connecting General Purpose Inputs

The Admaster has 7 identical General Purpose inputs. Inputs can be configured as balanced or unbalanced. Inputs are software configurable, allowing connection to most types of audio sources. Examples of how to connect different audio sources are provided.

a) Connect as per figures 1 and 2 on page 5 and 6

Q: *Do I connect my audio source as un-balanced or balanced?*
A: This is impossible to know for all variations of audio sources on the market. The Admaster has balanced inputs so, correctly connected it supports both balanced and unbalanced audio sources. Always use balanced connection option if the audio source has a "Balanced Out" option. Balanced signal lines are much less susceptible to induced noise (can be heard as a hum through the speakers) and should always be used if the length of cable is greater than 2 metres.

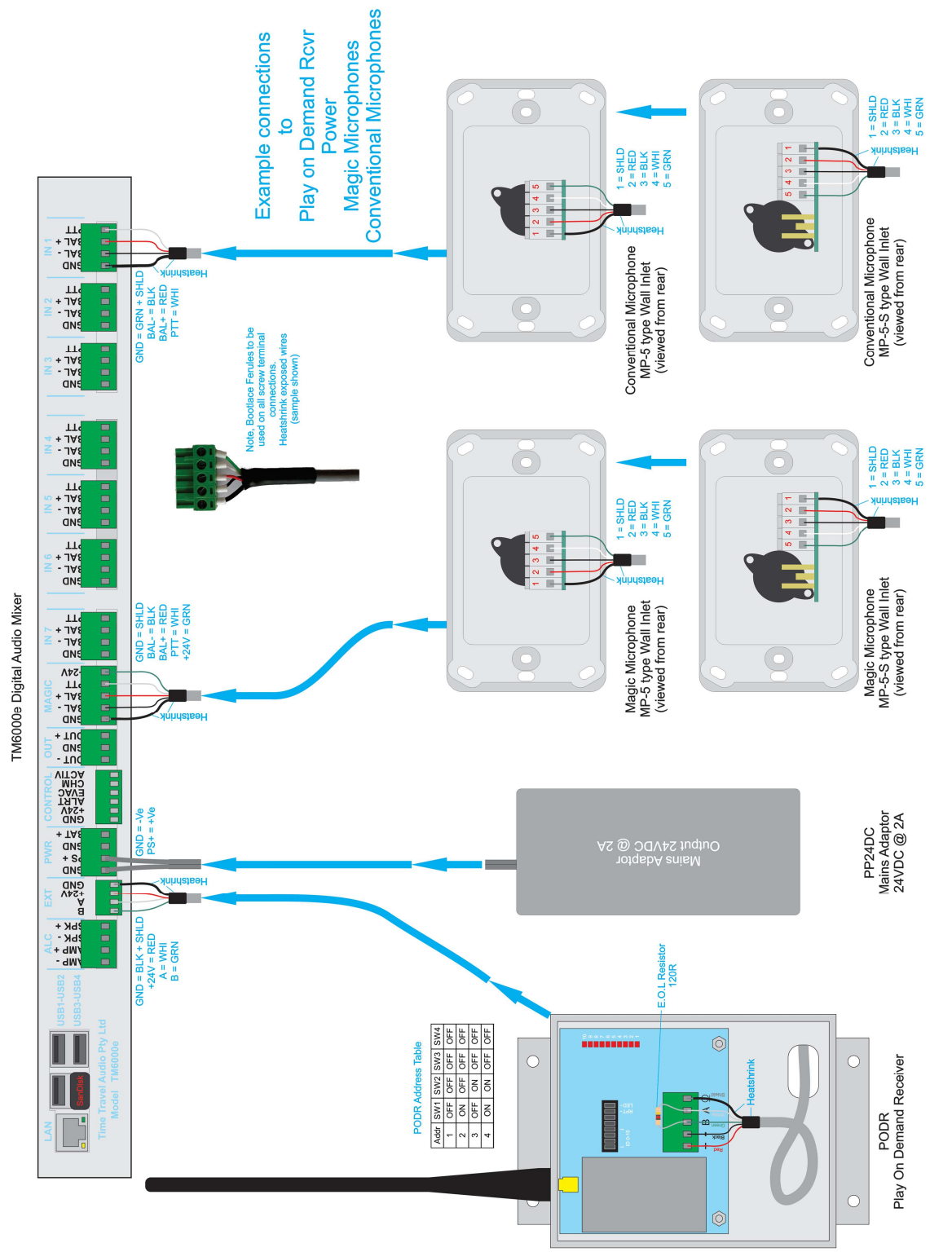


Figure 1 - TM6000e Example Connections – Play on Demand Receiver, Magic Microphones and Conventional Microphones

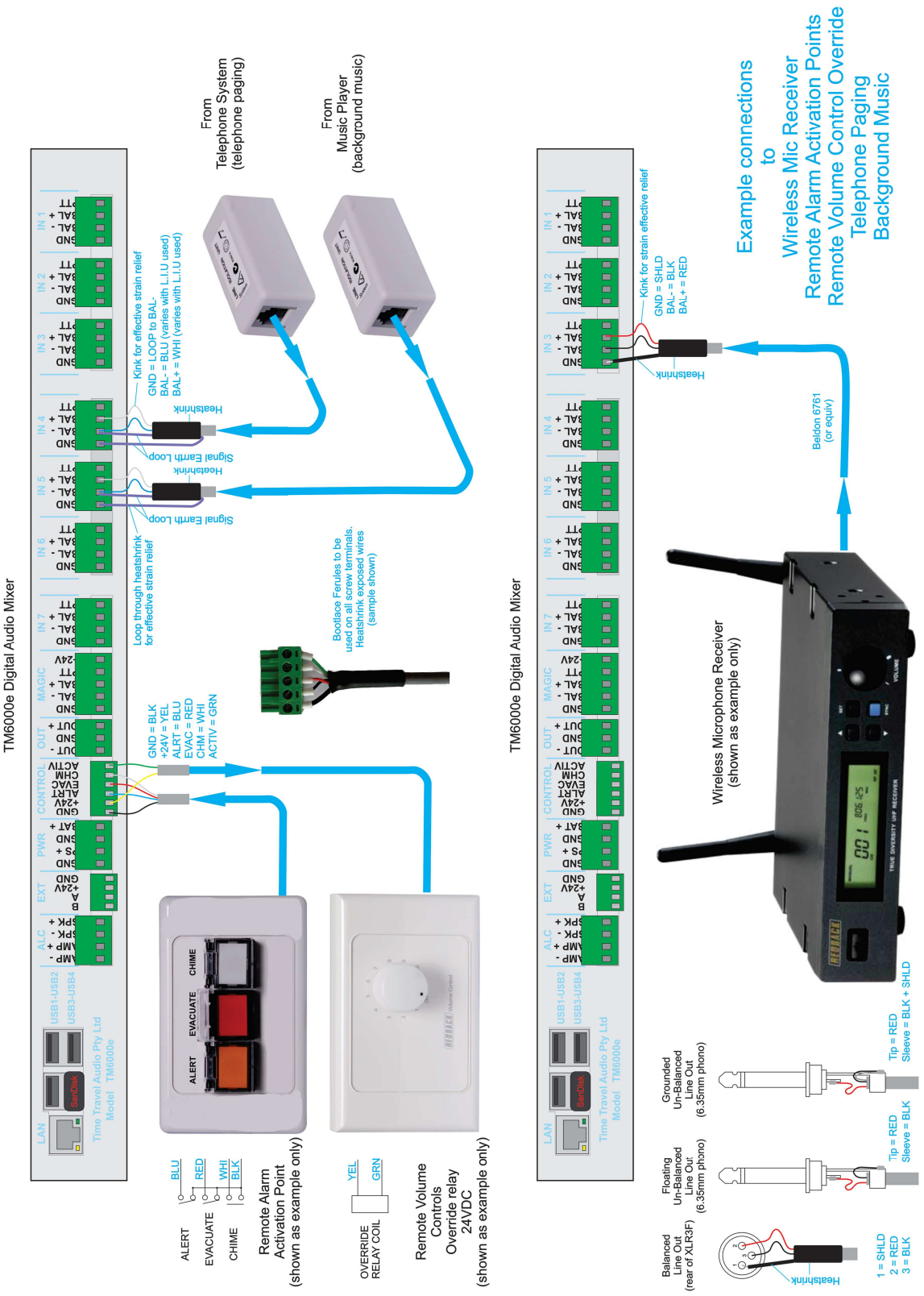


Figure 2 - TM6000e Example Connections – Wireless Microphone Receiver, Remote Alarm Activation Points, Remote Volume Control Override, Telephone Paging and Background Music

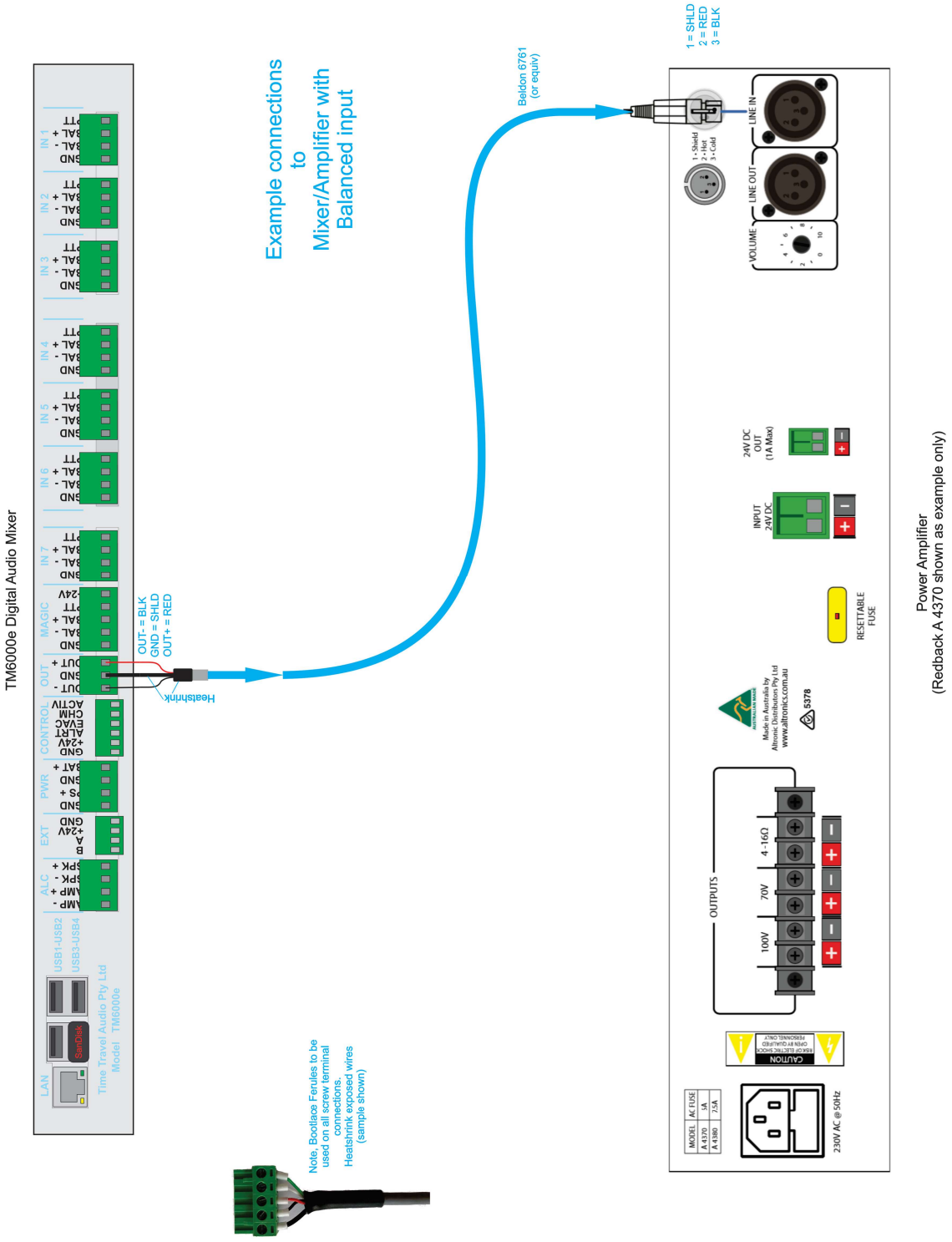


Figure 3 - TM6000e Example Connections – Power Amplifier with Balanced input

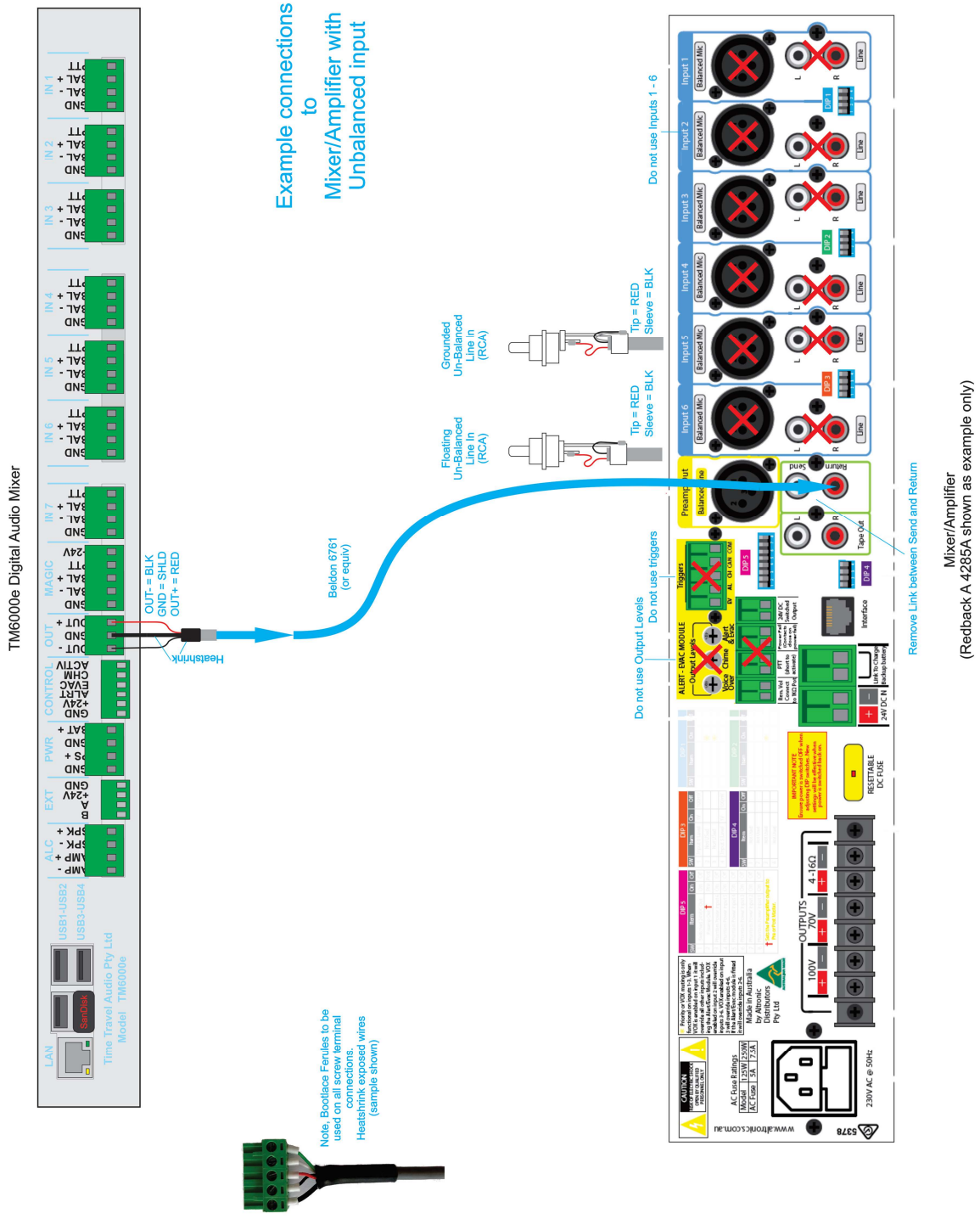


Figure 4 - TM6000e Example Connections – Mixer / Amplifier with Unbalanced input

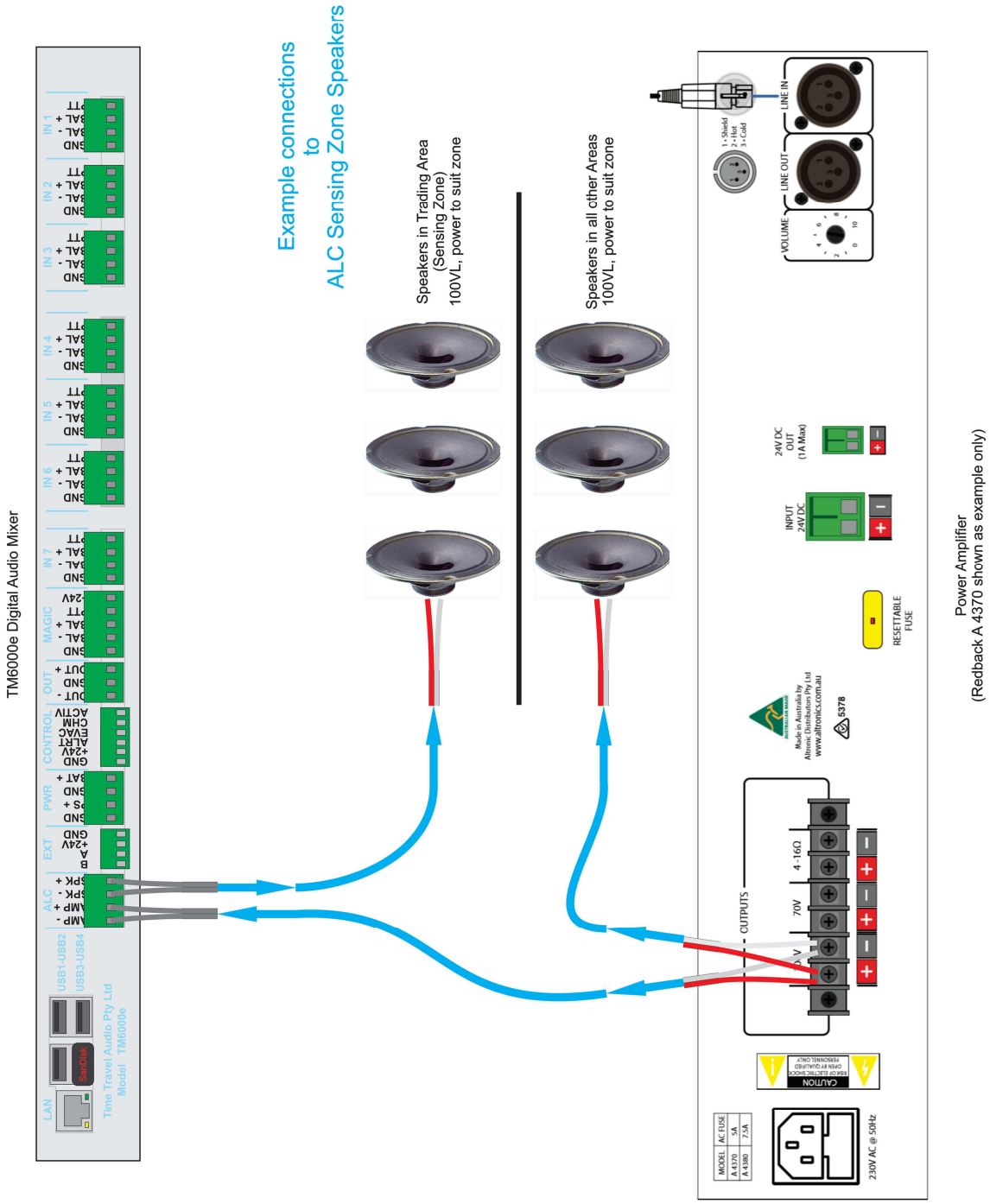


Figure 5 - TM6000e Example Connections – ALC Sensing Zone Speakers

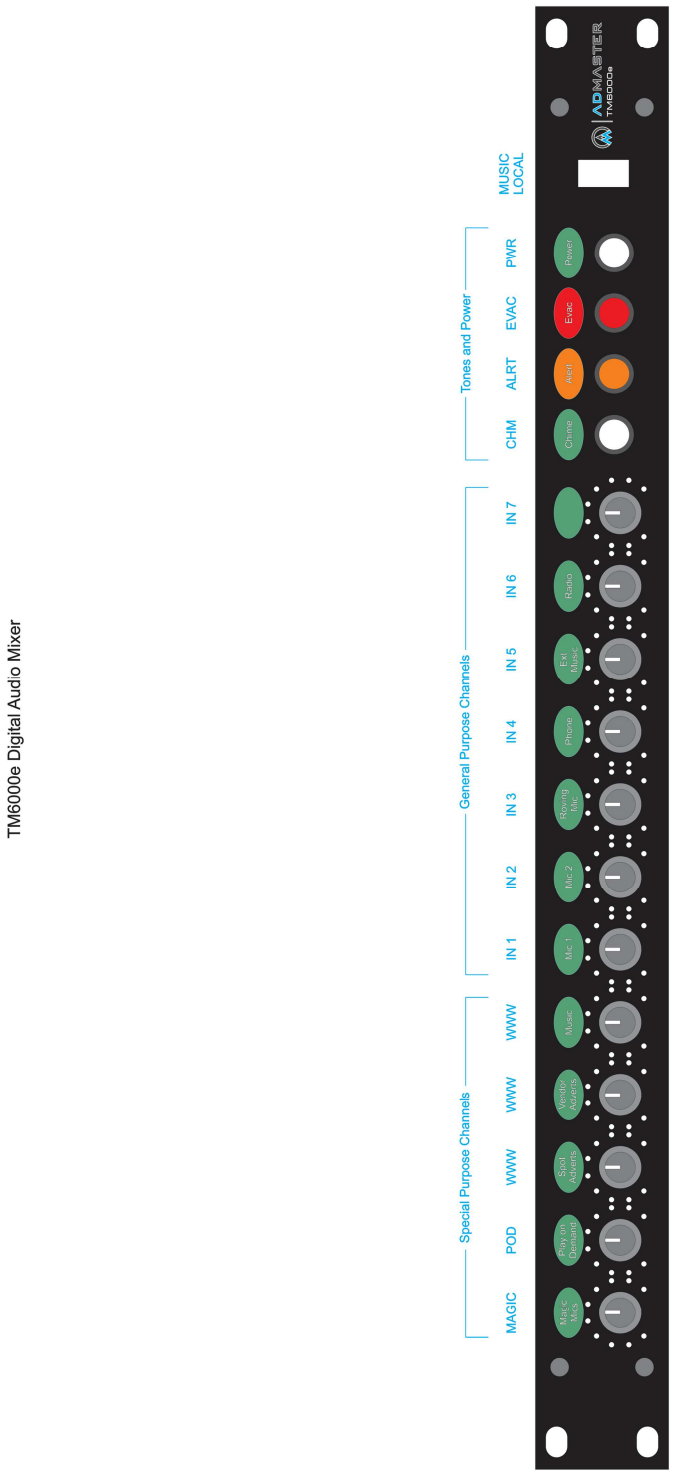


Figure 6 - TM6000e Digital Audio Mixer – Front Panel Controls

2 Storage Devices

> The Admaster has up to 4 separate memory storage devices. When replacing a unit in the field, it may be necessary to remove some of the storage devices because they contain site specific information and audio files. A detailed description of each memory storage device follows.

2.1 Storage Device - Operating System

> The operating system does not contain site specific or customer specific information or audio files. The operating system Micro-SD card should only be replaced at the direction of the manufacturer. Follow the instructions below to replace the operating system.

a) Remove power to the Admaster.
b) Remove the lid.
c) Locate the Operating System Micro-SD card shown below.

d) Press the Micro-SD card inward (towards the rear panel) to eject.
e) Remove the Micro-SD card.
f) Using a soft cloth or non-fragrant tissue, wipe the gold coloured contacts of the replacement Micro-SD card to remove any contaminants such as oil from your fingers.
g) Install the new Micro-SD card with the gold coloured fingers facing up.
h) Refit the lid.
i) Power the unit on. Allow 2 minutes to power up.

2.2 Storage Device - Settings and Local Recordings

> The settings and local recordings are stored on the USB Flash drive installed in the USB-3 slot. The list below shows the content of this storage device.

i. Audio and settings for locally recorded IV - Interval promotions.
ii. Audio and settings for locally recorded ST - Set Time messages.
iii. Audio and settings for locally recorded POD - Play on Demand messages.
iv. Audio and settings for group pushed messages or promotions.
v. Audio and settings for Cloudclick vendor advertising.
vi. Mixer settings.
vii. Network and IP settings.
viii. Site name, Post code.
ix. Local time zone.

> Follow the instructions below to replace the settings and local recordings storage device.

a) Remove power to the Admaster.
b) Locate USB-3 slot, LHS in the picture below.

c) Remove the Flash Drive.
d) Fit new Flash Drive.
e) Power the unit on. Allow 2 minutes to power up.

2.3 Storage Device - Music from WWW

Music content delivered via the WWW is stored on the USB Flash drive installed in the USB-4 slot. Music audio files on this device are encrypted and will only play on Admaster. The list below shows the content of this storage device.

i. Music audio files delivered via WWW.
ii. Music playlists delivered via the WWW.

Follow the instructions below to replace the music from WWW storage device.

a) Remove power to the Admaster.
b) Locate USB-4 slot, RHS in the picture below.

c) Remove the Flash Drive.
d) Fit new Flash Drive.
e) Power the unit on. Allow 2 minutes to power up.

2.4 Storage Device - Music Local

> ⚠ User supplied music files can be played from the USB port on the front panel. Audio files loaded onto this device must be in the correct format.

i. Media file system - FAT32.
ii. Stored on the root of the media only. ie: no folders.
iii. Filename must not contain illegal characters. eg: ! # $ % ^ & * ( ) / \ ? - .
iv. Mono or Stereo.
v. Sample rate - 44100.
vi. Bit rate - 64kbs or 128kbs.
vii. Audio levels must be normalised.
viii. Acceptable metadata - ID3 tags only. This includes Title, Artist, Album, Year, Track, Genre, Comment.
ix. Unacceptable metadata - album covers, embedded normalisation and any other metadata not listed above.

> ⚠ Follow the instructions below to replace the music from Music Local storage device.

a) This storage device can be removed and replaced while the power is on.
b) Locate USB-1 slot on the front panel.

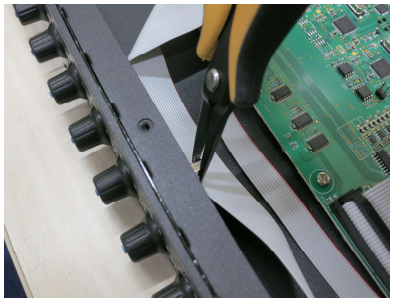
c) Remove the Flash Drive.
d) Ensure music files conform to requirements above
e) Fit new Flash Drive.

3 Labels

The Admaster has labels above each channel's volume control. These illuminate when the channel is active. The label is printed on a lens that can be replaced if necessary. Follow the instruction below to replace a lens.

3.1 Labels - Changing a Channel Label

a) Remove the lid.
b) Remove the front panel screws
c) Remove the standoff nut.



d) Remove old lens by pressing from front.
e) Press new lens in from rear. Use soft screwdriver handle until flush.

f) Fit the front panel screws and tighten.
g) Tighten the standoff nut.
h) Refit the lid.

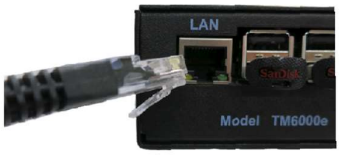
4 Power

The Admaster has three power states, Off, Standby and On. To allow for firmware and content updates that may be delivered via the WWW at any time, the power state must remain in either the On or Standby states.

4.1 Power On

Caution. Do not power up the Admaster if it is connected to the client's network.

a) Disconnect the cable connecting to the client's network.



b) Turn on the 24VDC or battery supply.
c) Unit will power up in the On state. Allow 2 minutes for completion.

4.2 Power Off

For diagnostic purposes or recovering from serious malfunction, it is possible to momentarily turn the Admaster power Off via the front panel. The Admaster will always return to the On state. Follow the instructions below to momentarily cycle power Off.

a) Press and hold the Power button.
b) Wait until all lights are off.
c) Release the Power button.
d) Unit will power up in the On state. Allow 2 minutes for completion.

4.3 Power Standby

The Admaster is always in either the Standby or On power states. In Standby, power consumption is reduced to a minimum and the unit will appear to be "Off". Follow the instructions below to cycle between Standby and On states.

a) Momentarily press the Power button.
b) Power will cycle from On to Standby or from Standby to On.

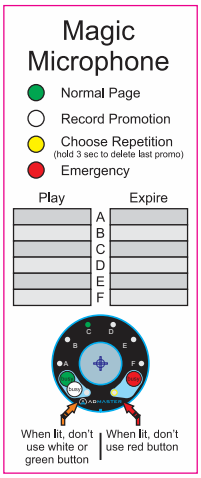
5 Installing Peripheral Equipment

5.1 Installing Peripheral Equipment - Magic Microphones

⚠	Magic Microphones should not be located:
⚠	In locations that will be washed down.
⚠	In locations where passing trolleys or carts are likely to cause damage.
⚠	In locations where entanglement with other cords or equipment is likely.

⚠	Follow the instructions below to install a Magic Microphone.

a) Locate the wall plate connection at a height above ground that will not permit the Magic Mic to contact the floor should it fall from the Mounting Cradle.
b) Locate the Mounting Cradle to the side of, and higher than the wall plate connection.
c) If located in a food prep area, ensure Mounting Cradle to wall joint meets food preparation area health standards.
d) Place the Magic Mic Legend sticker alongside the Mounting Cradle. This is important as it identifies this microphone point as suitable for connection to Magic Microphones only.



5.2 Installing Peripheral Equipment - Play on Demand Button Receivers (PODR)'s

a) Locate each PODR as high as possible, centrally located and with clear line of sight to the majority of desired coverage area. The Antenna should be in free air and vertical.
b) Loop the cable slightly inside the enclosure as a strain relief.
c) Ensure 120R resistor is fitted to connector of furthest unit only. (If there is only one PODR in the system, it is the furthest unit and should therefore have a resistor fitted).
d) Connect as per figure 1 on page 5.
e) Set each receiver with a unique address starting at Address 1, then 2, then 3, etc.

Use DIP switches to set the address.

Function	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
Address 1	OFF	OFF	OFF	OFF	N/A	N/A	N/A	N/A
Address 2	ON	OFF	OFF	OFF	N/A	N/A	N/A	N/A
Address 3	OFF	ON	OFF	OFF	N/A	N/A	N/A	N/A
Address 4	ON	ON	OFF	OFF	N/A	N/A	N/A	N/A
Address 5	OFF	OFF	ON	OFF	N/A	N/A	N/A	N/A
Address 6	ON	OFF	ON	OFF	N/A	N/A	N/A	N/A
Address 7	OFF	ON	ON	OFF	N/A	N/A	N/A	N/A
Address 8	ON	ON	ON	OFF	N/A	N/A	N/A	N/A
Address 9	OFF	OFF	OFF	ON	N/A	N/A	N/A	N/A
Address 10	ON	OFF	OFF	ON	N/A	N/A	N/A	N/A
Address 11	OFF	ON	OFF	ON	N/A	N/A	N/A	N/A
Address 12	ON	ON	OFF	ON	N/A	N/A	N/A	N/A
Address 13	OFF	OFF	ON	ON	N/A	N/A	N/A	N/A
Address 14	ON	OFF	ON	ON	N/A	N/A	N/A	N/A
Address 15	OFF	ON	ON	ON	N/A	N/A	N/A	N/A
Address 16	ON	ON	ON	ON	N/A	N/A	N/A	N/A

5.3 Installing Peripheral Equipment - Play On Demand Buttons (POD)'s

- PODs should not be located:
- In locations that will be washed down.
- In locations where passing trolleys or carts are likely to cause damage.

Follow the instructions below to install a POD button.

a) Consider "Configuring" and "Discovering" POD's before deploying, see below
b) Remove faceplate surround, remove faceplate from mounting block.
c) Set aside the splash-seal gasket.
d) Install Batteries. Use AAA Lithium only.
e) Locate the drain hole in the mounting block. Ensure this is at the bottom.
f) If located in a food prep area, ensure mounting block to wall joint meets food preparation area health standards.
g) Refit faceplate to mounting block ensuring splash-seal gasket is in place.

5.4 Configuration - Play On Demand Button (POD) One Shot or Continuous

- POD's are battery operated and wireless. POD's can be configured as One Shot or Continued operation. POD's must be "Discovered" to be used on the Admaster system. POD's require 2 x AAA batteries. Use Lithium batteries only.
- POD's configured for One Shot operation will self-cancel 15 seconds after being pressed. This conserves battery power and does not require the user to press the cancel button. A message triggered by a one-shot POD will play once only.
- POD's configured for Continued operation will not self-cancel. A message triggered by a continued operation POD will play repeatedly until manually cancelled by the user.

Follow the instructions below to configure a POD as One Shot or Continued operation.

a) Remove the surround and unscrew faceplate to access the battery.
b) Remove one battery.
c) Press and hold the large triangle shaped button.
d) Reinstall the battery.
e) Wait 3 seconds.
f) Release the large triangle button.
g) Press the small oval button. Light will alternate On/Off.
h) Choose On for One Shot operation. Choose Off for Continued operation.
i) Momentarily remove, then replace one battery.
j) POD will remain configured in the same mode until modified.
k) Replace the faceplate screws and surround.

6 Network

Do not attempt to connect to the client's network until authorised to do so by their IT network administrator. You will need a static IP address, Subnet mask and a Default gateway specific to each site. The document "Admaster TM6000e IT Requirements" should be pre-provided to the IT administrator.

When powered up with the Chime key held pressed, the Admaster assumes the factory default IP address of 192.168.150.205. Under all other conditions the Admaster assumes the IP address entered in the configuration screen found at URL 192.168.150.205/network.htm. Connecting an incorrectly configured Admaster to a client's network could cause other equipment on the network, eg: cash registers, security devices, ordering systems etc to malfunction. Great care must be taken to ensure this does not occur.

6.1 Network - Configuring IP and Subnet Mask to the Client's Network

Do not connect Admaster to a client's network until the following steps are taken.

a) Connect the Admaster to the technician's laptop using a standard Ethernet cable.
b) Make a note of the laptop's IP settings so you can return them to normal when completed.
c) Change the laptop's network adaptor TCP/IP v4 settings so it can initially communicate with the Admaster.
d) DHCP/Static Static
e) IP address 192.168.150.200
f) Subnet Mask 255.255.255.000
g) Apply 24VDC or Battery power to the Admaster.
h) Press and hold the Power button until all lights are off.
i) Press and hold the Chime button.
j) Release the Power button.
k) Wait until Chime, Alert and Evac light flash repeatedly.
l) Release the Chime button.
m) Wait 60 seconds.
n) The Admaster TM6000e is now set to its "Forced" TCP/IP address of 192.168.150.205
o) From your Laptop's Firefox or Chrome browser enter the following URL 192.168.150.205/network.htm
p) Wait 30 seconds. You will be connected to the Admaster network settings page.
q) Enter the IP address, Subnet mask and Default gateway given to you by the client's IT network administrator.
r) When you are sure you have entered the correct IP, Subnet mask and Default gateway numbers, click "Click here to change settings"
s) Connection to your Laptop is now lost.

6.2 Network - Connecting to the Client's Network

> Do not connect to the client's network until authorised to do so by their IT network administrator. You will need a static IP address, Subnet mask and a Default gateway specific to each site.

a) Do not connect Admaster to a client's network until "Configuring IP and Subnet Mask to the Client's Network" steps above have been completed.
b) Power cycle the Admaster by pressing and holding the Power button until all front panel lights are off. Release the Power button.
c) Connect the Admaster to the client's network using a standard Ethernet cable.
d) Test the connection to Admaster from the clients Laptop or PC by entering the IP address you were issued.
e) If required, you can reconnect to a laptop that is not connected to the client's network by repeating the steps in - "Configuring IP and Subnet Mask to the Client's Network"

7 Configuration

> The Admaster configuration pages are intentionally hidden from general view. When using the client's PC or Laptop to access the configuration pages use Chrome "Incognito" or Firefox "Private" windows. This will ensure that browser "History" does not allow the client easy access to these pages.

> To access a configuration page, enter the IP address allocated by the IT administrator followed by the name of the configuration page. e.g. *192.168.000.125/network.htm*

Seven Configuration pages can be accessed.

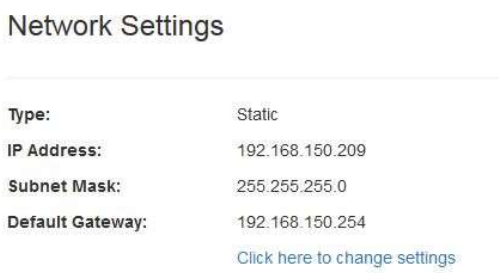
a) ???.???.???.???/network.htm
b) ???.???.???.???/aec.htm
c) ???.???.???.???/alc.htm
d) ???.???.???.???/mixer.htm
e) ???.???.???.???/pod.htm
f) ???.???.???.???/diagnostics.htm
g) ???.???.???.???/setup.htm

> From any configuration page it is also possible to navigate to other configuration pages by using the quick links available on each page.

7.1 Configuration - Network

> *Read the section* **"Configuring IP and Subnet Mask to the Client's Network"**.

a) Access Network Settings at ???.???.???.???/network.htm



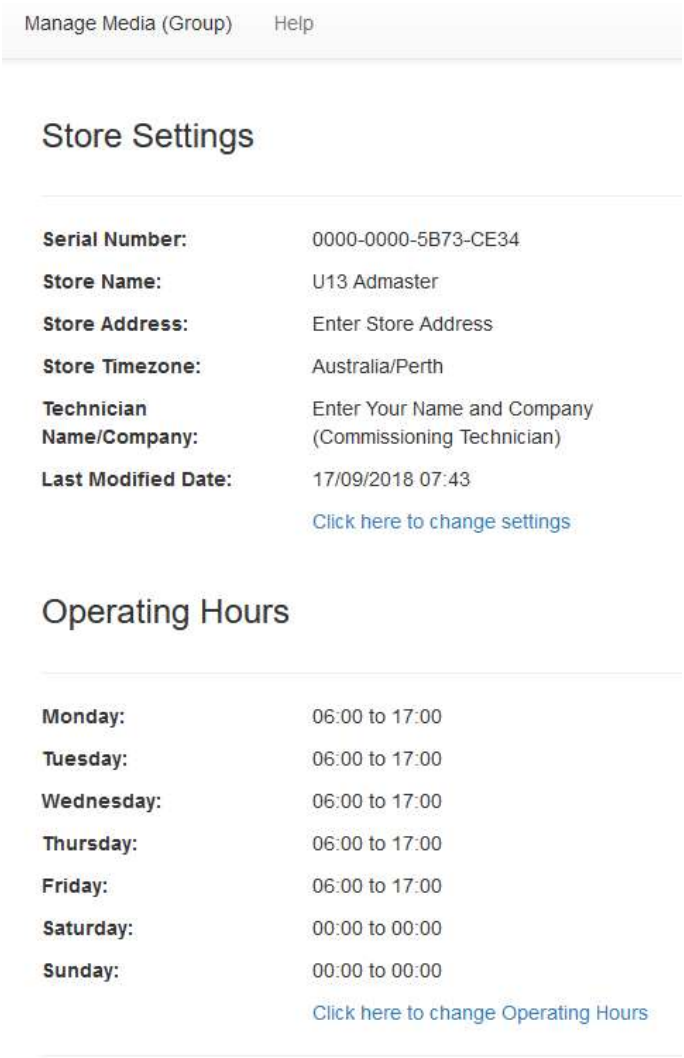
b) View or edit IP Address, Subnet Mask and Default Gateway.
c) Press "Click here to save settings".

7.2 Configuration - Setup

⚠	A Setup page is provided to record important information about the installation.

⚠	Follow the instructions below to record general information about the installation.

a) Access the Setup page at ???.???.???.???/setup.htm



b) Under Store Settings, click on “Click here to change settings”.
c) Enter the store name.
d) Enter the store address.
e) Enter the time zone.
f) Enter your name and company.
g) Click “Save”.
h) Under Operating Hours, click on “Click here to change settings”.
i) Enter opening and closing time for each day. Note 24:00 clock.
j) Click “Save”.

7.3 Configuration - Mixer Settings

The Admaster's System Channels and General Purpose Channels can be customised using Mixer settings.

Follow the instructions below to customise.

a) Access the Mixer page at ???.???.???.???/mixer.htm

Mixer Settings

Name	Vol	Min Vol	Max Vol	Priority	Bass	Treble	600R	Input	ALC	Activity	Chime	Trigger	VOX lvl	VOX Sustain	Edit
MagicMic	5%	0%	100%	0	0dB	0dB			Yes	Yes	No Chime				
Staff Assist	0%	0%	100%	2	0dB	0dB			Yes	Yes	No Chime				
Vendor Ads	0%	0%	100%	4	0dB	0dB			Yes	Yes	No Chime				
Spot Ads	0%	0%	100%	2	0dB	0dB			Yes	Yes	No Chime				
Web Music	0%	0%	54%	16	0dB	0dB			Yes	No	No Chime				
input	0%	0%	100%	16	0dB	2dB	Yes	500mV RMS	No	Yes	No Chime	PTT			
input 2	0%	0%	100%	16	7dB	1dB	No	500mV RMS	Yes	Yes	No Chime	PTT			
input 3	0%	0%	100%	16	0dB	10dB	No	500mV RMS	Yes	Yes	No Chime	PTT			
input 4	0%	0%	100%	16	0dB	0dB	No	250mV RMS	Yes	Yes	No Chime	PTT			
input 5	0%	0%	100%	16	1dB	1dB	No	250mV RMS	Yes	Yes	No Chime	PTT			
music	0%	0%	100%	16	4dB	1dB	No	250mV RMS	Yes	No	No Chime	PTT			
music	0%	0%	100%	16	-5dB	6dB	Yes	250mV RMS	Yes	Yes	No Chime	Always			
Chime	35%			1						Yes	Chime 1				
Alert	35%			1						Yes					
Evac	35%			1						Yes					

b) **Name.** Change the text in this field to reflect the purpose of each channel. Text can be up to 16 alpha numeric characters including spaces and must not include special characters. !@#$%^&*() <>?:" etc.

c) **Vol.** Displays the volume for each channel. As set by the front panel volume control.

d) **Min Vol and Max Vol.** Set the minimum and maximum desired volume for each channel. The settable range is linear 0 – 100%.

e) **Priority.** Set the priority for each channel. The range is 4 – 16, with 16 being the lowest priority. Priorities 0, 1, 2 and 3 are reserved for system use.

f) **Bass and Treble.** Set the Bass and Treble tone control for each channel. The range is -10dB to +10dB.

g) **600R.** Set the input impedance for each channel. Tick if 600R termination is required. Leave un-ticked if 10k termination is required. Typically, 600R is required only for dynamic microphones on long cables.

h) **Input.** Set the input sensitivity for each channel. The range is 1mV – 1V. Typically Dynamic Microphones will be 5mV, Radio Tuners 250mV, etc.

i) **ALC.** Set to YES if Automatic Level Control is required on this channel.

j) **Activity.** When set to YES, Control Activity output terminal will be driven low if channel is active. When set to NO, Control Activity output terminal will be unaffected if channel is active.

k) **Chime.** (Not functional in this revision).

l) **Trigger.** When set to PTT, Channel activation requires PTT terminal to be driven low. When set to VOX, Channel activation requires a signal on input terminals exceeding VOX level. Set to ON, Channel is active.

m) **VOX Lvl (Voice Operated Switch Level).** Set the input level required to trigger channel. The range is linear 0 – 100.

n) **VOX Sustain (Voice Operated Switch Sustain).** Set the time channel will remain active after removal of VOX trigger. The range is 1 – 10 seconds.

o) **Type. (hidden).** Select the purpose of each channel. Choose "Music" for each channel that is connected to a music source. Select General for all other channels. Music type channels will become active if the front panel volume control is > 0.

7.4 Configuration - Play On Demand Button (POD) Discovery

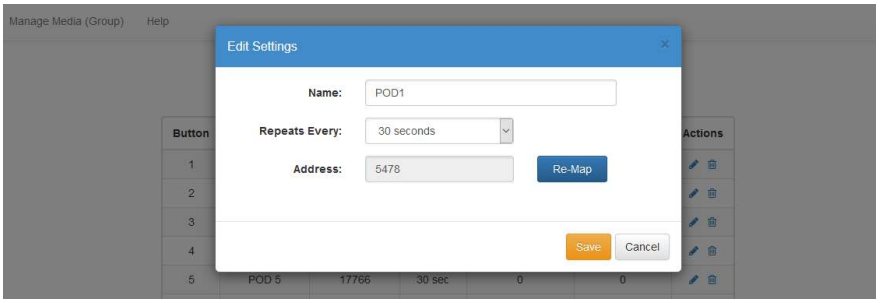
> POD's must be "Discovered" to be used on the Admaster system. Up to 32 POD's can be used. Ensure all previously activated POD's are cancelled before attempting to discover a new POD.
>
> Follow the instructions below to discover POD's.

a) Access POD Button Mapping page at ???.???.???.???/pod.htm
b) Click on the rubbish bin symbol to cancel or delete a mapped POD button.

Play-on-Demand Button Mapping

Button	Name	Address	Repeats	Battery (1 to 7)	RSSI (1 to 10)	Actions
1	Not Assigned	Not Assigned	30 sec	0	0	
2	Not Assigned	Not Assigned	30 sec	0	0	
3	Not Assigned	Not Assigned	30 sec	0	0	
4	Not Assigned	Not Assigned	30 sec	0	0	
5	Not Assigned	Not Assigned	30 sec	0	0	
6	Not Assigned	Not Assigned	30 sec	0	0	
7	Not Assigned	Not Assigned	30 sec	0	0	
8	Not Assigned	Not Assigned	30 sec	0	0	
9	Not Assigned	Not Assigned	30 sec	0	0	
10	Not Assigned	Not Assigned	30 sec	0	0	
11	Not Assigned	Not Assigned	30 sec	0	0	
12	Not Assigned	Not Assigned	30 sec	0	0	

c) Click on the pencil symbol to map a new POD.



d) On the POD, press the triangle shaped button and the Cancel button simultaneously.
e) Click the Re-Map button.
f) If found, the unique address of the POD will be displayed in the Address box.
g) Enter a name for this POD.
h) Click Save.
i) On the POD, press the Cancel button to end discovery transmission.
j) Repeat for all PODs. When complete, ensure there are no duplicate addresses in the address column.

7.5 Configuration - Warning Tones and Chime (AEC)

> The Admaster can produce warning type tones and melody chimes. Different tones, melody chimes or sound files can be uploaded.

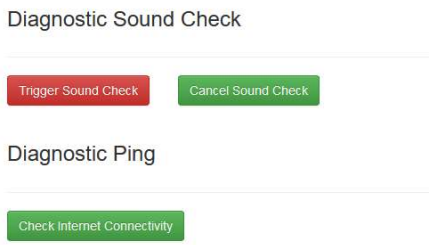
a) This page is intentionally locked.
b) Exit.

7.6 Configuration - Diagnostics

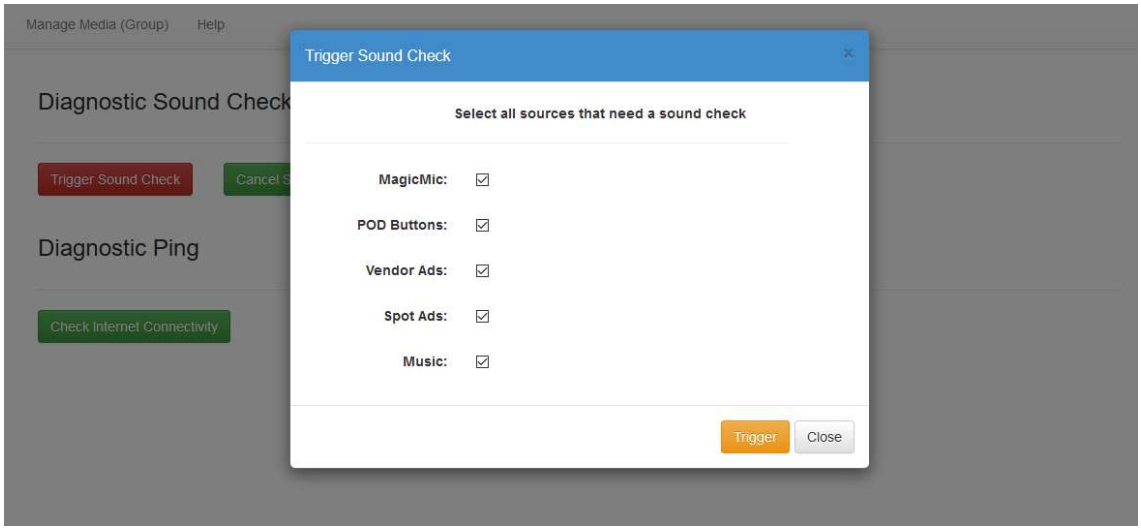
- A Diagnostics page is provided to assist in commissioning.
- To check volume levels throughout the store, the commissioning technician can trigger a sound check that plays a pre-recorded message every 2 minutes.
- To check internet connectivity, the commissioning technician can “ping” Google DNS servers.

- Follow the instructions below to trigger a sound check.

a) Access the Diagnostics page at ???.???.???.???/diagnostics.htm



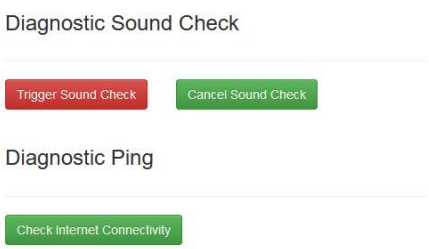
b) Click Trigger Sound Check.



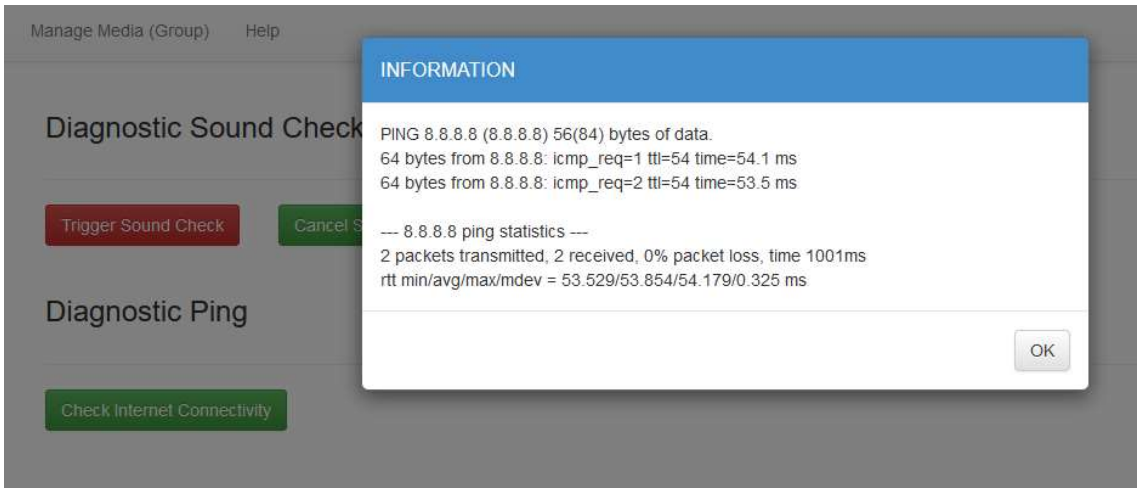
c) Check one or more of the sound check tests.
d) Click Trigger.
e) When complete, click Cancel Sound Check.

Follow the instructions below to check internet connectivity.

f) Access the Diagnostics page at ???.???.???.???/diagnostics.htm



g) Click Check Internet Connectivity.



h) Review … 8.8.8.8 ping statistics.

i) A good internet connection is indicated if 0% packet loss is reported.

7.7 Configuration - Automatic level Control (ALC) View

> The Admaster uses the loudspeakers in the “sampling” area, to sense ambient noise levels and adjusts some or all program levels to suit varying noise conditions. For the ALC to function correctly, it must be set up and calibrated to its environment.

The ALC samples background noise levels when there is program silence. i.e.: paging, adverts, music etc. are not being broadcast. This is achieved in one of 3 ways.

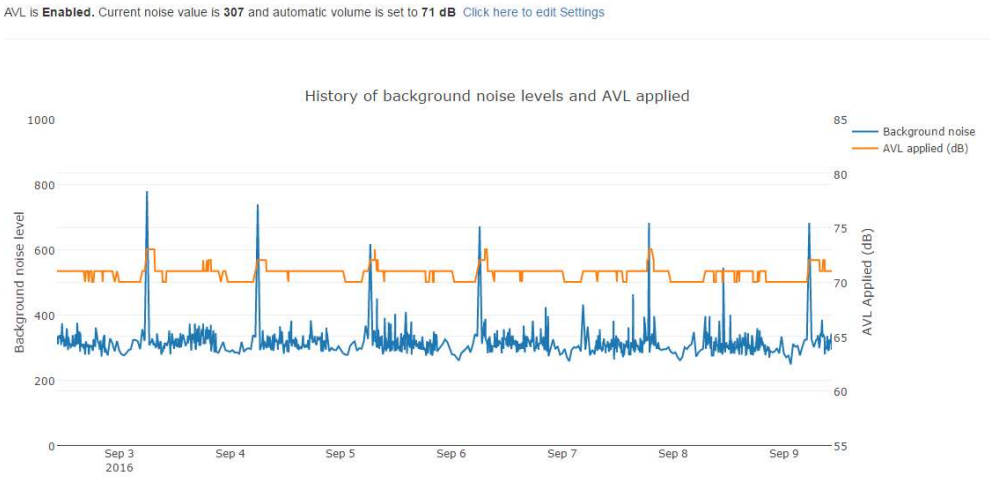
i. The source of music is via the Admaster’s built in music player. ALC samples may be taken during the 3 second intentional silence period at the end of each music track. Approximately 20 ambient noise samples may be taken per hour. This gives a consistent and accurate ALC response to changing background noise levels.
ii. The source of music is an external music player. Reliable detection of music track end is not possible. Instead, ALC samples are taken during the intentional 3 second silence period at the end of a paging announcements. The timing of these announcements is unpredictable, so the number of samples taken per hour will vary, giving a less than optimum ALC response.
iii. The source of music is an external music player and there are no paging announcements for a extended time, the Admaster will initiate a “forced” ALC sample.

During all ALC sampling periods, the speakers in the sampling area are momentarily disconnected from the amplifier and connected to the internal sampling circuitry. The ALC sampling period is approximately 3 seconds.

Forced ALC sampling will not be taken if non-music channels are active. Forced ALC sampling will be terminated immediately if a non-music channel becomes active.

Parameters can be set to limit the quantity of ALC samples taken per hour and how often forced ALC samples will be taken. Each mixer channel may be configured to respond to, or ignore, ALC variations.

a) Access the ALC at ???.???.???.???/alc.htm

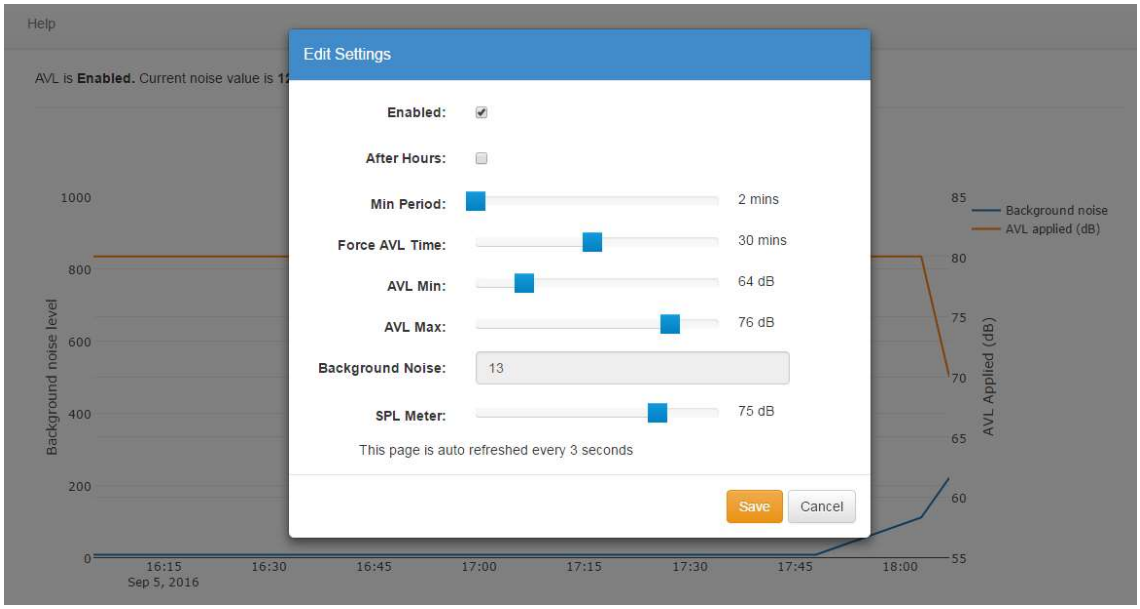


b) The graph shows the history of the measured noise levels in the sampling area over the past 7 days. To zoom in, left mouse click and drag right to cover the area of interest then release. This can be repeated if necessary. Double left mouse click restores to full view.
c) The Blue line represents the actual noise level sampled and the orange line represents the gain or attenuation applied to the program signals in response to the background noise changes.

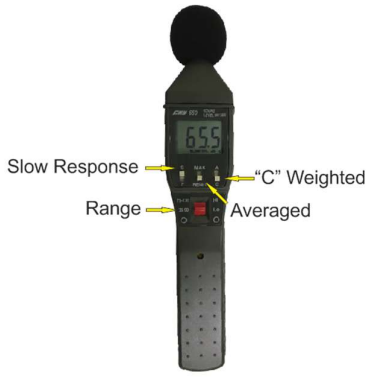
7.8 Configuration - Automatic level Control (ALC) Calibrate

⚠	Follow the instructions below to setup and calibrate the ALC.

a) Access the ALC page at ???.???.???.???/alc.htm
b) Beware, the following step forces the Admaster into ALC Setup mode and all other mixer functions will be temporarily disabled.
c) Access the ALC Edit Settings page by clicking “Click here to edit settings”.



d) Beware, closing this dialog box by pressing the “Save” button will recalibrate the ALC to new Background noise levels. Use the “Cancel” button if you do not wish to re-calibrate the ALC.
e) If ALC is required, tick “Enabled”.
f) Wait at least 30 seconds for a sufficient quantity of samples to be taken. “Background Noise” will be sampled and a new value will be displayed every 3 seconds. This value reflects the “Raw” noise level measured by the speakers in the sampling area. The value will be between 0 (low) and 1000 (high).
g) When the displayed background noise value has stabilised, it should be checked to confirm that it is within acceptable range. If out of range, the ALC gain setting link on the TM6000e internal main board will need to be changed. Please consult “Acceptable Background Noise Values” table at the end of this section.
h) Set the Minimum Period slider to 2 minutes. During periods of extended silence, the minimum time between ALC samples will be 2 minutes. This prevents excessive ALC sampling.
i) Set the Force AVL Time slider to 30 minutes. During periods of extended mixer inactivity, the ALC will take a forced ALC sample every 30 minutes.
j) Set the AVL Min slider to 64dB (typical) and AVL Max slider to 76dB (typical). The ALC is now limited to applying +/- 6dB of gain or attenuation to the program signal. This is particularly useful if the background noise levels in the sampling area are expected to have extreme variations, and a measured response to these variations is required.
k) Take note of the current level of noise in the sampling area over a 5-minute period. This can be done by observing a handheld SPL meter set to “C weighting”, “Slow response” and “Averaged” or by manual observation.



> Background noise measurements can be highly subjective and will often require interpretation or estimation. SPL readings should be observed over a 5-minute period, ignoring all non-typical noise events.

l) Background noise readings in supermarkets or large retail stores could be categorised into 5 groups.

i. 60dB SPLC - Very quiet, no activity.
ii. 65dB SPLC - Quiet, minimal activity.
iii. 70dB SPLC - Normal, normal activity.
iv. 75dB SPLC - Loud, high activity.
v. 80dB SPLC - Very loud, machinery running.

m) Set the SPL Meter slider to the interpreted SPL value.
n) Click "Save" to save any changes and apply the currently displayed background noise level to the SPL meter value, or click "Cancel" to return to ALC History page without applying changes.
o) The Admaster will begin or continue to take ALC samples in program silence periods or when forced by the timeout set in Force AVL.

7.8.1 Acceptable Background Noise Values

> The Admaster ALC sensing circuitry can accept a wide range of input signal levels. The internal option jumper pictured below can be set to Low, Medium or High sensitivity. It may be necessary to change the sensitivity if the sensing speakers *or sensing microphone* are not delivering signal levels within an acceptable range.

> Option Jumper fitted to RHS is High sensitivity, LHS is Medium sensitivity and removed is Low sensitivity.

Observed (SPL or manual) Background Noise Level	Acceptable Background Noise Level	Change Link to Hi Sensitivity if	Change Link to Low Sensitivity if
Very quiet, no activity	3 - 95	<3	>95
Quiet, minimal activity	6 - 200	<6	>200
Normal, Normal activity	10 - 300	<10	>300
Loud, high activity	20 - 600	<20	>600
Very loud, machinery running	30 - 950	<30	>950