

## Software Update V2.01

September 1999

These notes are an addendum to User Guide AP3299 issue 2.

Allen & Heath are committed to ongoing product development. The **icon** now benefits from new features and improvements with the release of V2.01 operating software which can be downloaded free of charge from the Internet. Instructions for loading this software into the mixer are provided on our web site.



<http://www.allen-heath.com>



**IMPORTANT NOTE** : The user settings and memories are lost when new operating software is loaded. We recommend that you save these first using a MIDI or PC archiver so that they can be loaded back into the mixer after the update. A Windows® compatible archiving utility may be downloaded from the Allen & Heath web site.

## MAJOR NEW FEATURES AND ENHANCEMENTS

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- COPY, PASTE, RESET and UNDO functions improve memory handling.
- RECALL now available from SONG and VENUE screens as well as HOME.
- SONG or VENUE memory being stored to becomes current for quicker programming.
- Screen does not return to HOME after storing a song or venue memory.
- Sets can be recalled from the SET screen as well as HOME.
- 'SET OFF' display changed to 'NO SET' for clarity.
- Auto increment of song number for quicker programming of sets.
- Last action UNDO extended to more functions. Button now lights when available.
- Confirm screens added for better display of current action.
- Rotary control and cursor key acceleration added for quicker access.
- Gate and compressor views added to channel EQ buttons for full parameter editing.
- Gain reduction meter added to compressor and gate for dynamic display of function.
- Compressor RESPONSE parameter split for independent ATTACK and RELEASE control.
- Simultaneous IN/OUT display for channel EQ, compressor and gate.
- SAFE function extended for isolating selected channel parameters from the automation.
- USERMODE utility provides three operating modes for selectable control lockout.
- FX name and parameter screens combined for better viewing of differences between effects.
- More FX1 presets added.
- FX2 reverbs improved. Better parameter control of combined delay+reverb effects.
- FX1/2 footpedal function extended to control any effects parameter or any channel volume.
- MIDI control extended for remote access to all performance parameters.
- USERNAME is displayed on power up and the standby screen for unit identification.

# DESCRIPTION

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Features have been added to make the **icon** even easier to use and more versatile in its application. Many minor updates improve operating speed, information display and ease of use. Existing users should have no difficulty adapting to the new software as the operating principles remain unchanged. They shall, however, benefit from the new features added which further extend the sound processing and automation control. These are described below. If further information is required on these or any other features of the product please contact your Allen & Heath agent or email technical support direct at [support@allen-heath.com](mailto:support@allen-heath.com)

## SONG AND VENUE MEMORIES

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**STORE TO** Press ENTER to store the current mixer settings to the displayed memory number. Use the  $\tau$  keys or soft strip control 10 (song) or 9 (venue) to select a different memory number if required. Note that this number becomes current after pressing ENTER. Unlike the previous version the display does not return to the HOME screen after store is complete. This is better for continued editing of the memory name or lock function.

**RECALL** Previously only available in the HOME screen, the memories can now be recalled within the SONG or VENUE screens. Use the  $\tau$  keys or soft strip control 10 (song) or 9 (venue) to select a different memory number if required. To recall the same number press  $\nu$  once first.

**COPY** Press COPY while in the STORE or RECALL screen. This copies the current song or venue settings to the copy buffer. The PASTE key lights to show that valid data is available in the buffer.

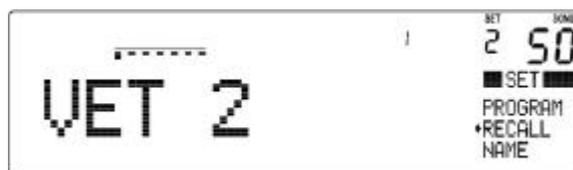
**PASTE** The PASTE key lights only if valid copy data is available. The key flashes if the copy data is different to the current mixer settings. The key lights but does not flash if the data is the same as current. If copy data is not available the key does not light. Press PASTE to overwrite the mixer settings with the contents of the copy buffer. It is not possible to paste data direct to the memories. This should be done by first pasting data to the mixer then using the store function.

**RESET** Press RESET while in the STORE or RECALL screen. This resets all associated parameters to their default settings so providing a useful starting point for a new mix.

**UNDO** Press UNDO to reverse the last action carried out. Confirm screens and the undo function prevent the memories or mixer settings from being inadvertently overwritten and lost. Note that undo is only available immediately after the unwanted action has been carried out. The UNDO key lights when this function is available.

## SET PROGRAMMING

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**RECALL** Previously only available in the HOME screen, sets can now be recalled in the SET screen. Use the  $\tau$  keys or soft control 8 to select the required set number 1 to 9, auto or no set. Note that this number becomes current after pressing ENTER.

**NO SET** The display 'SET OFF' has been changed to 'NO SET' to avoid confusion. The factory default is no set active. Use the new recall function in the SET screen to select a set for programming or play.

**PROGRAM AUTO INCREMENT** Programming a set has been made easier with less button pressing required. Each time a song memory is entered at the end of the set the cursor automatically advances to the next position and the song number increments by one. A set of incremental songs can be quickly programmed simply by repeating ENTER. The usual song selection and editing functions are still available.

**SET PLAY** Further information is provided in the HOME screen to display when the set has been interrupted by recalling a song not part of the active set, for example, playing an audience request. The SETNAME is struck out (~~SET 2~~) until PAUSE or NEXT is pressed to continue the set sequence.

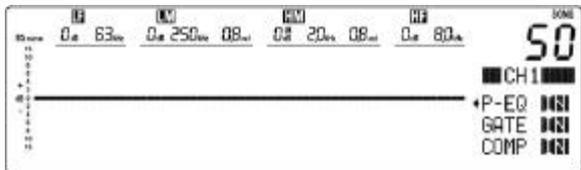
## UNDO

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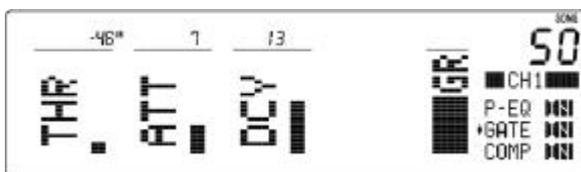
This facility has been extended to more functions including memory store and recall, set programming and the new safes map feature. The UNDO key lights when available. Confirm screens display briefly the action being undone. Note that UNDO is also available in the HOME screen to undo a memory recall using the NEXT key, footswitch or cursor keys.

## CHANNEL GATE AND COMPRESSOR VIEWS

In addition to the all channel GATE and COMP screens, the gate and compressor settings can now be edited independently for each channel. This presents all channel parameters for interactive editing. For example, press EQ1 to select channel 1:

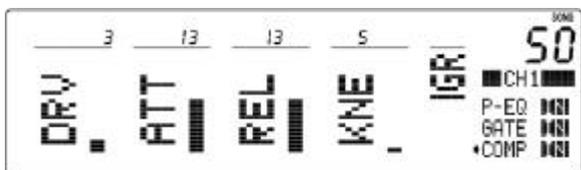


The EQ screen is displayed and parameters adjusted in the normal way. Press EQ1 again or press  $\theta$  to display the GATE screen:



Use soft controls 4, 5 and 6 to adjust the threshold, attack and decay parameters. The new gain reduction (GR) meter indicates when the gate is on, signal muted (bar on) or off, signal routed (bar off).

Press EQ1 again or press  $\theta$  to display the COMPRESSOR screen:



Use soft controls 4, 5, 6 and 7 to adjust the drive (how much compression), attack, release and hard/soft knee parameters. The GR gain reduction meter indicates how much compression is active. This shows you how hard the compressor is working.

**ATTACK AND RELEASE** The original RESPONSE parameter has now been split into independent ATTACK and RELEASE parameters for improved compressor control.

**IN/OUT** The OUT key works in each screen providing independent switching for the EQ, gate and compressor. In/out status is displayed for all three on the right of the display. The OUT key displays status for the active screen as usual.

**COPY** The copy/paste function is now available in each screen. EQ, gate or compressor settings may be copied between channels or memories. The PASTE key lights if valid data is available. It flashes if the copy data is different to the current settings.

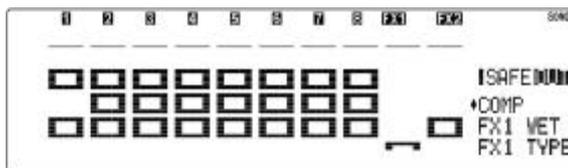
## AUTOMATION SAFES SYSTEM

The '**Channel Safes**' function to isolate channels from the automation works as before, very useful during pre-programmed live performance when changing channel allocation 'on the fly', for example using a 'spare guitar' channel for a last minute guest vocal.

In addition to this a powerful new '**Parameter Safes**' function is added. Selected parameters on selected channels can be made safe from MIDI and song memory recall. This lets you decide how you want the automation to work.

For example, a musician may simply want to recall effects, compressor and gate settings to change the music 'style' between songs. Other parameters such as monitor levels, EQ and mutes would be manually controlled and not affected by the automation. On the other hand, a conference application may require that the memories simply change channel levels and mutes without affecting the EQ or dynamics settings.

**MAKING PARAMETERS SAFE** Press the CHANNEL SAFE key. It flashes to warn that the console is in safes edit mode:



The display shows a 'map' of the channels and associated parameters. Columns show channels, rows show parameters. Use the  $\pi\theta\tau\nu$  cursor keys to navigate to the required channel parameter. Press ENTER to make the selected parameter safe from the associated channel. A filled box displays a parameter made safe, hollow displays a parameter affected by the automation. Default is no parameters safe. If a channel has been made 'channel safe' using its MUTE key then small boxes are displayed for all its parameters.

**SAFE IN/OUT** Press the OUT key to toggle the safes map active or disabled. Status is displayed on any screen where it can be active. This includes song memory recall, console paste and reset. These functions do not affect 'song safe' parameters with SAFE IN displayed, or channels which have been made 'performance safe'. Switching safes OUT is useful when wishing to paste or reset all console settings regardless of how the automation is set up.

Note that channels made 'channel safe' using the MUTE keys are not affected by 'parameter safes' in/out status. Note also that the PAUSE patch is not affected by any safes settings.

## USERMODE UTILITY

A new utility feature is added to provide three modes of console operation. These are known as 'user modes' and provide different levels of control access for the day to day operator.

Press UTIL repeatedly until the USERMODE menu item is displayed. Use the  $\tau$  cursor keys to scroll through the three mode options. Enter the mode required. The mode may be changed at any time.

**NORMAL MODE** = Full control.

This is the default mode. All controls and automation are available. Normal mode is ideal for live performers using the performance memories.

**LIVE MODE** = Manual console operation + optional recall of memories using Set.

All controls are available except for the automation. Song, set and venue memories are locked and cannot be overwritten. If a set is active before entering this mode then the memories programmed into that set can be selected using the  $\tau$  cursor keys and recalled by pressing ENTER. If 'NO SET' is selected before entering this mode then memory recall is completely disabled. This lets you choose whether the operator has limited access to a chosen selection of the memories. Live mode is ideal for manual live mixing where accidental overwriting of the console settings is prevented.

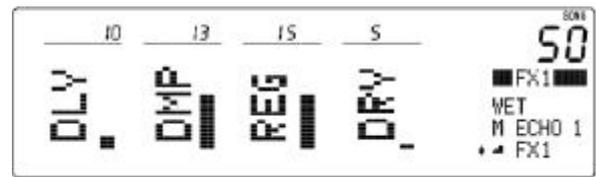
**BASIC MODE** = Setup controls locked + optional recall of memories using Set.

Only channel gain, faders, mutes and headphones monitoring are available to the operator. All other controls are locked to prevent preset parameters being overwritten. If a set is active before entering this mode then the memories programmed into that set can be selected using the  $\tau$  cursor keys and recalled by pressing ENTER. If 'NO SET' is selected before entering this mode then memory recall is completely disabled. This lets you choose whether the operator can recall a selection of the memories. Basic mode is ideal for installed sound where the installer presets the parameters for different mixing situations and the day to day operator has limited access to basic controls only.

**USERMODE SYMBOL** If live or basic mode is active a symbol is displayed on the left of the HOME screen. This identifies that the console is not in its default normal mode. Live mode = u 1  
Basic mode = u 2

If any locked key is pressed both the padlock and usermode symbols are briefly displayed.

## EFFECTS FX1 AND FX2



The original name and parameter screens have been combined into one. The effects type is displayed as the second menu item and can be changed using soft control 10 or the  $\tau$  cursor keys. The associated parameters are displayed and can be edited using soft controls 4, 5, 6 and 7 as before. You can now quickly view and hear the differences between parameters by scrolling through the effects names.

**MORE FX1 PRESETS** More effects have been added. These are based on existing effects types but provide additional presets to store your different parameter preferences:

- StECHO 5, 6
- BOUNCE 3, 4
- CHORUS 3
- DOUBLER 3
- M FLNGE 2
- StFLNGE 2
- PHUNNEL 3
- AUTOPAN 3

**IMPROVED REVERBS** The sound of the reverbs have been enhanced to better simulate natural acoustics. The original echo+reverb effects have been replaced with sixteen delay+reverb types which provide greater parameter control to set the balance between the delay (echo) and reverb.

**GREATER FOOTPEDAL CONTROL** The function of the foot pedals or switches can now be assigned to control any effects parameter or any channel volume. The third menu item displays the assigned function. Select this item and scroll through the options using soft stripcontrol 10 or the  $\tau$  cursor keys.

- FX VOLUME = FX1, FX2
- OUTPUT VOLUME = Aux, FB, LR
- INPUT VOLUME = CH1-8
- EFFECTS PARAMETER
- BYPASS
- OFF = Footswitch disabled

Note that this greater flexibility makes the foot controllers well suited to be used with remote wall plate volume controls in installed systems.

# EXTENDED MIDI CONTROL

**PARAMETER CONTROL** Every console parameter is now mapped for independent MIDI control. This is based on the NRPN system with the MSB selecting the channel number, and the LSB selecting the parameter number in that channel (channel type specific).

Channel selection message: **0xBm, 0x63, <Channel>**  
(Controller 99)

Where <Channel> is 0x00 = CH1 to 0x07 = CH8, 0x08 = FX1, 0x09 = FX2, and  
0x40 = GEQA, 0x41 = GEQB.

Parameter selection message: **0xBm, 0x62, <Param ID>**  
(Controller 98)

Where <Param ID> is shown below:

Parameter values are set using Data Entry MSB: **0xBm, 0x06, <Value>**  
All parameter values are 'normalised' from 0x00-0x7F

Device	Parameter	Parameter ID
PEQ	LF Gain	0x01
	LF Frequency	0x02
	LMF Gain	0x03
	LMF Frequency	0x04
	LMF Q	0x05
	HMF Gain	0x06
	HMF Frequency	0x07
	HMF Q	0x08
	HF Gain	0x09
	HF Frequency	0x0A
	In/Out	0x0B
Compressor	Drive	0x0C
	Attack	0x0D
	Release	0x0E
	Knee	0x0F
	In/Out	0x10
Gate	Level	0x11
	Attack	0x12
	Decay	0x13
	In/Out	0x14
Aux	Send Level	0x15
Foldback	Send Level	0x16
Trim	Level	0x17
Pan/Balance	Pan/Balance	0x18
FX1	Send Level	0x19
FX2	Send Level	0x1A
Fader Level	Level (transmit only, no receive)	0x1B
GEQ	Band Gain	0x00 Lowest Band 31Hz 0x09 Highest Band 16kHz
	In/Out	0x20
	Linking	0x21 <i>When linked, both GEQA&amp;B messages (for band gain &amp; in/out) are generated by the I-CON</i>

## AUTOMATION

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MIDI control is now extended to the VENUE memory recalls as well as SONG. These use the same program change messages as before but different banks. Refer also to the **icon** User Guide which details the original MIDI functions including MUTE note on/off messages and system exclusive data archive.

**SONG RECALL** Program change in Bank 1  
**0xBm, 0x00, 0x00, 0xCm, pp**  
Where m is MIDI channel number  
pp is 0x00 = SONG 1  
0x7E = SONG 127  
0x7F = PAUSE

**VENUE RECALL** Program change in Bank 2  
**0xBm, 0x00, 0x01, 0xCm, pp**  
Where m is MIDI channel number  
pp is 0x00 = VENUE 1  
0x12 = VENUE 19

## GLOBAL FUNCTIONS

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The following global functions are controlled using MIDI system exclusive messages.

Where MV is major version number 0... 127  
Mv is minor version number 0... 127  
m is MIDI channel number

**AMP MODE** Changes mix source to amplifier channels A and B:  
**0xF0,0x00,0x00,0x1A,0x50,0x07,MV,Mv,0x0m,0x03,Mode,0xF7**  
Where Mode is 0x00 for L R  
0x01 for FB M  
0x02 for Aux FB

**AUX PRE/POST** Switches all channel aux sends either pre or post fader:  
**0xF0,0x00,0x00,0x1A,0x50,0x07,MV,Mv,0x0m, 0x05, Pre/Post,0xF7**  
Where Pre is 0x00  
Post is 0x7F

**TRIM ON/OFF** Enables or disables the channel level trim parameter:  
**0xF0,0x00,0x00,0x1A,0x50,0x07,MV,Mv,0x0m, 0x04, Off/On,0xF7**  
Where Off is 0x00  
On is 0x7F

**FX PARAMETERS**

Param1	FX1	0xBn, 0x5B, <Value>	FX2	0xBn,0x46, <Value>
Param2		0xBn, 0x5C, <Value>		0xBn,0x47, <Value>
Param3		0xBn, 0x5D, <Value>		0xBn,0x48, <Value>
Param4		0xBn, 0x5E, <Value>		0xBn,0x49, <Value>
Type		0xBn, 0x5F, <Name>		0xBn, 0x4A, <Name>

Where <Name> is:

FX1 NAME		FX2 NAME	
"M ECHO 1"	0x00	"STAGE 1 "	0x00
"M ECHO 2"	0x01	"STAGE 2 "	0x01
"M ECHO 3"	0x02	"WOODRM 1"	0x02
"M ECHO 4"	0x03	"WOODRM 2"	0x03
"M ECHO 5"	0x04	"ROOM 1 "	0x04
"M ECHO 6"	0x05	"ROOM 2 "	0x05
"M ECHO 7"	0x06	"ROOM 3 "	0x06
"M ECHO 8"	0x07	"ROOM 4 "	0x07
"StECHO 1"	0x08	"HALL 1 "	0x08
"StECHO 2"	0x09	"HALL 2 "	0x09
"StECHO 3"	0x0A	"HALL 3 "	0x0A
"StECHO 4"	0x0B	"HALL 4 "	0x0B
"BOUNCE 1"	0x0C	"CHAMBER1"	0x0C
"BOUNCE 2"	0x0D	"CHAMBER2"	0x0D
"CHORUS 1"	0x0E	"CHURCH 1"	0x0E
"CHORUS 2"	0x0F	"CHURCH 2"	0x0F
"DOUBLER1"	0x10	"ARENA 1 "	0x10
"DOUBLER2"	0x11	"ARENA 2 "	0x11
"M FLNGE1"	0x12	"PLATE 1 "	0x12
"StFLNGE1"	0x13	"PLATE 2 "	0x13
"PHUNNEL1"	0x14	"VxPLATE1"	0x14
"PHUNNEL2"	0x15	"VxPLATE2"	0x15
"VIBRATO1"	0x16	"SPRING 1"	0x16
"VIBRATO2"	0x17	"SPRING 2"	0x17
"StVIBE 1"	0x18	"DLYSTGE1"	0x18
"StVIBE 2"	0x19	"DLYSTGE2"	0x19
"TREMOL01"	0x1A	"DLYROOM1"	0x1A
"TREMOL02"	0x1B	"DLYROOM2"	0x1B
"AUTOPAN1"	0x1C	"DLYROOM3"	0x1C
"AUTOPAN2"	0x1D	"DLYROOM4"	0x1D
"FOOT VOL"	0x1E	"DLYHALL1"	0x1E
"StECHO 5"	0x1F	"DLYHALL2"	0x1F
"StECHO 6"	0x20	"DLYHALL3"	0x20
"BOUNCE 3"	0x21	"DLYHALL4"	0x21
"BOUNCE 4"	0x22	"DLYCHRC1"	0x22
"CHORUS 3"	0x23	"DLYCHRC2"	0x23
"DOUBLER3"	0x24	"DLYPLTE1"	0x24
"M FLNGE2"	0x25	"DLYPLTE2"	0x25
"StFLNGE2"	0x26	"DLYSPRG1"	0x26
"PHUNNEL3"	0x27	"DLYSPRG2"	0x27
"AUTOPAN3"	0x28		

# icon THE ANALOGUE EQUIVALENT

It may be helpful to understand the full capability of **icon** by comparing it to its analogue equivalent. The following drawing shows the controls arranged in conventional format. Each function has its own control. However, a long channel strip results because of the amount of processing control available. Although it makes the full capability more obvious it is not necessarily easier to operate. In fact, just the opposite... The fewer controls presented on **icon** together with logical arrangement according to function and the informative graphical display make it easier and less daunting to operate than this analogue equivalent in a live situation. This demonstrates the advantage of the assignable control surface made possible using digital technology.

