



**User Manual** 

Issue 5.3

FOR YOUR OWN SAFETY AND FOR THE PROTECTION OF OTHERS PLEASE OBSERVE THE FOLLOWING HEALTH AND SAFETY INSTRUCTIONS



- READ THESE INSTRUCTIONS AND KEEP THEM HANDY
- HEED ALL SAFETY WARNINGS
- DO NOT USE NEAR WATER
- CLEAN ONLY WITH A DRY CLOTH
- DO NOT INSTALL NEAR HEAT SOURCES
- DO NOT BLOCK VENTILATION OPENINGS
- PROTECT THE POWER CORD
- USE ONLY ACCESSORIES SPECIFIED BY THE MANUFACTURER
- UNPLUG WHEN UNUSED FOR LONG PERIODS OF TIME
- MODULES OR CARDS SHOULD NOT BE INSERTED OR REMOVED WITH THE POWER ON
- REFER ALL SERVICING TO QUALIFIED PERSONNEL ONLY
- NO USER SERVICEABLE PARTS INSIDE
- PLEASE OBSERVE THE RECOMMENDED 'POWER UP' & 'POWER DOWN' PROCEDURES

### FAILURE TO OBSERVE THESE PROCEDURES AND RECOMMENDATIONS WILL INVALIDATE THE MANUFACTURER'S WARRANTY



POUR VOTRE SECURITE ET CELLE DES AUTRES MERCI DE RESPECTER LES INSTRUCTIONS DE SANTE ET SECURITE SUIVANTES



- LISEZ CES INSTRUCTIONS ET GARDEZ-LES À PORTÉE DE MAIN
- TENEZ COMPTE DE TOUS LES AVERTISSEMENTS DE SÉCURITÉ
- NE PAS UTILISER PRÈS D'UNE SOURCE D'EAU
- NETTOYER UNIQUEMENT AVEC UN CHIFFON SEC
- NE PAS INSTALLER PRÈS D'UNE SOURCE DE CHALEUR
- NE PAS BLOQUER LES BOUCHES D'AÉRATION
- PROTÉGER LE CORDON D'ALIMENTATION
- N'UTILISER QUE LES ACCESSOIRES SPÉCIFIÉS PAR LE FABRICANT
- DÉBRANCHER PENDANT DE LONGUES PÉRIODES D'INACTIVITÉ
- NE PAS INSÉRER OU RETIRER D'EVENTUELLES CARTES OPTIONNELLES ALORS QUE L'APPAREIL EST SOUS TENSION
- CONFIER TOUTES LES OPÉRATIONS DE MAINTENANCE À DU PERSONNEL QUALIFIÉ UNIQUEMENT
- AUCUNE PIÈCE INTERNE N'EST RÉPARABLE PAR L'UTILISATEUR
- MERCI DE RESPECTER LES PROCEDURES DE MISES HORS ET SOUS TENSION.

### LE NON-RESPECT DE CES PROCÉDURES ET RECOMMANDATIONS INVALIDERA LA GARANTIE DU FABRICANT



## **Important Safety Instructions**



- Read these instructions
- Keep these instructions
- Heed all warnings
- Follow all instructions
- **Do not use this apparatus near water**
- Clean only with a dry cloth
- Do not block any ventilation openings.

► Install in accordance with the manufacturer's instructions.

► Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.

• Do not defeat the safety purpose of the polarized or grounding-type plug.

A polarized plug has two blades and a third grounding prong.

The wide blade or the third prong are provided for your safety.

If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

As this apparatus is constructed to Class I, it shall be connected to a MAINS socket outlet with protective earthing connection.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit the apparatus.

Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

• Only use attachments / accessories specified by the manufacturer.

► CAUTION Use only with the optional 8424 cart/stand specified by AMS Neve, or sold with the apparatus. When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over. Use with other equipment may result in instability causing injury.

Unplug this apparatus during lightning storms or when unused for long periods of time.



Refer all servicing to qualified service personnel.

Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled, or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.

### WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

### WARNING:

THIS APPARATUS HAS CLASS I CONSTRUCTION AND SHALL BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE EARYTHING CONNECTION.

### WARNING:

WHERE THE MAINS PLUG OR AN APPLIANCE COUPLER IS USED AS THE DISCONNECT DEVICE, THE DISCONNECT DEVICE SHALL REMAIN READILY OPERABLE.



## Instructions Importantes de Sécurité



- Lisez ces instructions
- Gardez ces instructions
- Tenez compte des avertissements
- Suivez toutes les instructions
- N'utilisez pas cet appareil près d'une source d'eau
- Nettoyer uniquement avec un ciffon sec
- Ne pas bloquer les bouches d'aération
- Installez conformément aux instructions du fabricant.

▶ Ne pas installer à proximité d'une source de chaleur telle qu'un radiateur, une bouche d'air chaud, des plaques de cuisson (ou cuisinière), ou n'importe quel autre appareil producteur de chaleur (y compris un amplificateur)

• Ne pas contourner l'objectif de sécurité de la fiche polarisée ou de mise à la terre.

Une fiche polarisée a deux lames et une troisième broche de mise à la terre.

La lame large ou la troisième broche sont prévues pour votre sécurité.

Si la fiche fournie n'entre pas dans votre bloc d'alimentation externe, consultez un électricien pour remplacer la prise obsolète.

Cet appareil étant de classe I, il doit être connecté à la prise de courant externe secteur avec une connexion de mise à la terre de protection.

Protégez le cordon d'alimentation afin d'éviter les piétinements et pincements, et plus particulièrement à proximité des prises de courant ou tout autre élément de branchement, ainsi qu'au point de sortie de l'appareil

► Lorsque la fiche secteur ou un coupleur d'appareil est utilisé comme dispositif de débranchement, celui-ci doit rester facilement accessible

N'utiliser que les accessoires spécifiés par le fabricant

► ATTENTION Utilisez uniquement le support optionnel du 8424 spécifié par AMS Neve, ou celui vendu avec l'appareil. Quand un support est utilisé, déplacez l'ensemble appareil/support avec précaution, afin d'éviter les blessures occasionnées par un éventuel basculement. Utiliser un autre support que celui prévu à l'origine peut causer une dangereuse instabilité.



Débranchez cet appareil pendant les orages ou de longues périodes d'inactivité.

Confiez toutes les opérations de maintenance à un technicien qualifié. Un entretien est nécessaire lorsque l'appareil a été endommagé de quelque manière que ce soit, comme par exemple si le cordon d'alimentation ou la fiche sont endommagés, du liquide a été renversé ou des objets sont tombés dans l'appareil, si l'appareil a été exposé à la pluie ou à l'humidité, s'il ne fonctionne pas correctement ou a subi une chute de hauteur.

### **ATTENTION:**

AFIN DE RÉDUIRE LES RISQUES D'INCENDIE OU DE CHOC ÉLECTRIQUE, N'EXPOSEZ PAS CET APPAREIL À LA PLUIE OU À L'HUMIDITÉ

### **ATTENTION:**

CET APPAREIL CORRESPOND A UNE CONSTRUCTION DE CLASSE I ET DOIT ÊTRE RACCORDÉ À UNE PRISE SECTEUR DOTÉE D'UNE PROTECTION PAR MISE À LA TERRE.

### **ATTENTION:**

LORSQU'UNE PRISE SECTEUR OU UN PROLONGATEUR EST UTILISÉ COMME DISPOSITIF DE DÉBRANCHEMENT, CELUI-CI DOIT RESTER FACILEMENT ACCESSIBLE.



## **Warning Symbols**



Please refer to the manual before operating



Danger of electric shock Disconnect from the MAINS before opening cover



No user serviceable parts inside

## **Environmental considerations**

<b>T</b>		500 to 2000
Temperature	operating	5°C to 30°C
		(41°F to 86°F)
	Non-operating	-20°C to 50°C
		(-2°F to 122°F)
	Max Gradient	15°C/Hour
		(59°F/Hour)
Relative Humidity	/ Operating	20% to 80%
	Non-operating	5% to 90%
	Max wet bulb	28°C non-condensing
		(or 57°F non-condensing)
Altitude	Operating	0 to 2,000m
	Non-operating	0 to 12,000m

### Cooling



Care must be taken not to place any accessories that could block the ventilation above or below the heat sinks at the rear of the console.

All PSU's will operate over an ambient temperature range of -10°C to +30°C (14°F to 86°F).

The console must not be powered up or operated with the dust cover still in place.



## Symboles d'avertissement



Veuillez vous référer au manuel avant utilisation



Risque de choc électrique Débranchez du réseau avant d'ouvrir le couvercle



## **Considérations Environnementales**

Température	En fonctionnement	5°C	à 30°C
		(41	L°F à 86°F)
	Hors fonctionnement	-20	°C à 50°C
		(-2	°F à 122°F)
	Augmentation	-	-
	Graduelle max	15°C	C/Heure
		(59)	°F/Heure)
Humidité relativ	e En fonctionnement	20%	⁄/ à 80%
	Hors fonctionnement Humidité	5%	à 90%
	d'ampoule max	28°C	sans condensation
		(ou 57	°F sans condensation)
Altitude	En fonctionne	ment	0 à 2,000m
	Hors fonctior	nemen	t 0 à 12,000m

## **Refroidissement**



Des précautions doivent être prises pour ne pas placer d'accessoires qui pourraient bloquer la ventilation audessus ou en dessous du bloc d'alimentation externe de l'unité ou du système de ventilation de cette dernière.

Tous les blocs d'alimentation fonctionnent sur une plage de température ambiante de -10°C à +30°C (14°F à 86°F).

La console ne doit pas être mise sous tension ou être utilisée tant que la protection plastique n'a pas été retirée.

## **Important Safety Instructions**



FOR YOUR OWN SAFETY AND THE PROTECTION OF OTHERS, PLEASE OBSERVE THE FOLLOWING SAFETY HEALTH AND SAFETY INSTRUCTIONS

- READ THESE INSTRUCTIONS AND KEEP THEM HANDY
- HEED ALL SAFETY WARNINGS
- THE CONSOLE MUST BE EARTHED WHEN OPERATED
- **DO NOT USE NEAR WATER**
- CLEAN ONLY WITH A DRY CLOTH
- DO NOT INSTALL NEAR HEAT SOURCES
- DO NOT BLOCK VENTILATION OPENINGS
- THE AMBIENT ROOM TEMPERATURE SHOULD BE NO GREATER THAN 30°C / 86°F
- PROTECT THE POWER CORDS
- ► USE ONLY ACCESSORIES SPECIFIED BY THE MANUFACTURER
- UNPLUG WHEN UNUSED FOR LONG PERIODS OF TIME OR DURING LIGHTNING STORMS
- MODULES AND CARDS SHOULD NOT BE INSERTED OR REMOVED WITH THE POWER ON
- REFER ALL SERVICING TO QUALIFIED PERSONNEL ONLY
- ► THE CONSOLE MUST ONLY BE MOVED BY AT LEAST TWO

PEOPLE

► NO USER SERVICEABLE PARTS INSIDE



## **IMPORTANT POWER NOTICE**



THE 8424 CONSOLE IS SUPPLIED WITH A 3-CORE AC POWER CABLE APPLICABLE TO THE REGION IT IS TO BE OPERATED IN, AND MUST BE CONNECTED TO A 3-PIN EARTHED SUPPLY.

IF A REPLACEMENT CABLE IS USED, THEN THE EARTH FROM THE MAINS SOCKET OR TECHNICAL EARTH TO THE CONSOLE MUST BE MAINTAINED.

IF ONLY A 2-PIN (NO EARTH) SUPPLY IS AVAILABLE, THEN THE 8424 CONSOLE MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN TO ENSURE THAT THE CONSOLE METALWORK IS PERMANENTLY EARTHED.

THE CONSOLE SHOULD ONLY BE POWERED FROM A SINGLE-PHASE SUPPLY WITH THE NEUTRAL CONDUCTOR AT EARTH POTENTIAL.

FAILURE TO FOLLOW THESE PROCEDURES AND RECOMMENDATIONS COULD INVALIDATE THE MANUFACTURER'S WARRANTY



## **AVERTISSEMENT IMPORTANT SUR L'ALIMENTATION**



LA CONSOLE 8424 EST FOURNIE AVEC UN CÂBLE D'ALIMENTATION À 3 BROCHES APPLICABLE À LA RÉGION DANS LAQUELLE ELLE DOIT ÊTRE UTILISÉE ET DOIT ÊTRE CONNECTÉE À UNE ALIMENTATION À LA TERRE À 3 BROCHES.

SI UN CÂBLE DE REMPLACEMENT EST UTILISÉ, ALORS LA TERRE DE LA PRISE PRINCIPALE OU LA TERRE TECHNIQUE RELIÉE À LA CONSOLE DOIT ÊTRE MAINTENUE.

SI SEULE UNE ALIMENTATION À 2 BROCHES (PAS DE TERRE) EST DISPONIBLE, L'ALIMENTATION EXTERNE DOIT ÊTRE INSTALLÉE PAR UN ÉLECTRICIEN QUALIFIÉ POUR S'ASSURER QUE LA PARTIE MÉTALLIQUE DES UNITÉS EST MISE À LA TERRE EN PERMANENCE.

LA CONSOLE NE DOIT ÊTRE ALIMENTÉE QUE PAR UNE ALIMENTATION MONOPHASE AVEC LE CONDUCTEUR NEUTRE AU POTENTIEL DE TERRE.

LE NON-RESPECT DE CES PROCÉDURES ET RECOMMANDATIONS INVALIDERA LA GARANTIE DU FABRICANT



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1073 Instr	S Preamps 3   Overview 3   Gain Control 3   Trim Control 3   Preamp Controls 3   500 series Routing 3   ument DI Inputs 3   Overview 3   Instrument DI Controls 3   500 series Routing 3   Series Slots 3   Overview 3   Direct Input/Output 3	<b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>37</b> <b>37</b> <b>37</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b>
1073 Instr	S Preamps3Overview3Gain Control3Trim Control3Preamp Controls3500 series Routing3cument DI Inputs3Overview3Instrument DI Controls3500 series Routing3Series Slots3Overview3500 Series Routing3Direct Input/Output3	<b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>37</b> <b>37</b> <b>37</b> <b>37</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b>
1073 Instr 500 3	S Preamps3Overview3Gain Control3Trim Control3Preamp Controls3500 series Routing3strument DI Inputs3Overview3Instrument DI Controls3500 series Routing3Series Slots3Overview3500 Series Routing3Solo Series Routing3Series Slots3Direct Input/Output3Brest Returns3	<b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>37</b> <b>37</b> <b>37</b> <b>37</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>39</b> <b>39</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b>
1073 Instr 500 s	S Preamps3Overview3Gain Control3Trim Control3Preamp Controls3500 series Routing3cument DI Inputs3Overview3Instrument DI Controls3500 series Routing3Series Slots3Overview3500 Series Routing3Series Slots3Overview3Direct Input/Output3Overview3Overview3Overview3500 Series Routing3Direct Input/Output3Overview<	<b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>37</b> <b>37</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>38</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b> <b>31</b>
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1073 Instr 500 S	S Preamps3Overview3Gain Control3Trim Control3Preamp Controls3500 series Routing3overview3Instrument DI Inputs3Soo series Routing3500 series Routing3Soo series Routing3500 Series Routing3Overview33Overview33Prester Returns333Reverb Return Controls333 </td <td><b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>37</b> <b>37</b> <b>38</b> <b>38</b> <b>38</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> 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1073 Instr 500 s	S Preamps3Overview3Gain Control3Trim Control3Preamp Controls3500 series Routing3cument DI Inputs3Overview3Instrument DI Controls3500 series Routing3Series Slots3Overview3500 Series Routing3Series Slots3Overview3Direct Input/Output3Prob Returns3Reverb Return Controls3Reverb Return Routing3	<b>36</b> <b>36</b> <b>36</b> <b>36</b> <b>37</b> <b>37</b> <b>37</b> <b>38</b> <b>38</b> <b>38</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>39</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b>
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1073 Instr 500 S Reve	S Preamps3Overview3Gain Control3Trim Control3Preamp Controls3500 series Routing3overview3Instrument DI Inputs3Overview3500 series Routing3500 series Routing3Series Slots3Solo Series Routing3500 Series Routing3500 Series Routing3500 Series Routing3500 Series Routing3Overview33Overview33birect Input/Output3Prob Returns3Reverb Return Controls3Reverb Return Routing3& Cue Masters4Overview4	<b>16</b> <b>16</b> <b>16</b> <b>16</b> <b>16</b> <b>17</b> <b>17</b> <b>17</b> <b>18</b> <b>18</b> <b>18</b> <b>19</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b>
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Logic

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## Introduction

For almost 60 years, the designers and engineers at Neve have worked uncompromisingly to produce the world's premier audio recording and mixing equipment. As a result, our products have long exceeded the most stringent requirements for sound quality and musicality – from countless classic albums to the vast majority of each year's blockbuster films. This technical expertise and industry-led design is taken forward into every new Neve console, combining with modern enhancements to meet the needs of today's studios. **Introducing the 8424 Console....** 

### Legendary 80-series Neve sound, 4 groups, 24 channel faders

The 8424 console is designed to fit the needs of the modern hybrid studio where the speed of in-the-box workflow is enhanced with the ultimate sound quality of analogue outboard gear. The 8424 provides a centralised platform with unparalleled connectivity, facilitating an ergonomic link between the linear analogue processing world of outboard gear, analogue synths, and instruments, to the digital world of DAW workflow, software plugins and session recall.

The 8424's Marinair<sup>®</sup> transformer-coupled Stereo Mix bus delivers legendary Neve<sup>®</sup> sound, derived from the iconic 80-series consoles. 24 channels, 4 groups and 48-mix capability give this small footprint console huge routing and summing potential. Dual on board 1073<sup>®</sup> preamps, Instrument DI's and headphone amplifiers provide a comprehensive recording platform, with a fast, efficient workflow that keeps the creativity flowing in the studio.

The 8424 has an on-board Recall system with computer remote app control which further integrates the console into the modern hybrid studio workflow. This unique feature enables this pure analogue console to save, load, and recall all settings, faders and pot positions from the DAW computer on a session-by-session basis. With this unrestricted workflow, engineers can take advantage of all analogue features without the added worry of losing console settings and wasting valuable studio time.

The 8424 can be configured with manual or automatic, motorized faders, enabling complete control over multiple DAWs simultaneously. This modern system is designed to function with the latest and greatest DAWs, providing transport control and accurate fader positioning with flexible VPOT control over DAW sends, pans and plugin parameters. In addition to the powerful DAW control, the Active Fader mode allows for automation of real analogue fader levels for true post-processing automation, all controlled from a single DAW session.

As with all Neve products, the 8424 offers sound and build quality beyond reproach. All the audio connections on the 8424 are balanced and +4dBu with the exception of the iMon input and engineers' headphones.

The 8424 is designed to be straightforward and accessible to all. this versatile and powerful desk provides a central, creative hub where analogue outboard gear, synthesisers and a host of instruments combine with the digital world of DAW workflow, software plugins, and session recall. Every piece of studio magic can now be connected through the ultimate creative platform – **The 8424 console**.

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## **Console Overview**

	Channels 1 – 16 Master Section Channels 17-24	

### **8424 Console Features**

- 24 Mono channels with source selections and 100mm faders
- 24 Channel Direct Outputs
- 4 Groups with 100mm faders
- 3 Mono Auxiliary sends
- 1 Stereo Cue send
- 2 Stereo Reverb Returns
- Marinair<sup>®</sup> Transformer coupled Stereo Mix bus
- 2 1073<sup>®</sup> Microphone Pre-amplifiers
- 2 Hi-z DI inputs
- 2 500 Series Slots
- 4 Mono, 1 Stereo 2-band shelving EQ
- 1 Stereo Width control
- 2 stereo External inputs
- 3 Loudspeaker Outputs
- 2 engineers headphone outputs
- 30 Balanced Inserts on Channels, Groups & Stereo mix
- 48 Input Capability
- 8 Stage LED Channel Input Meters
- Assignable Backlit VU meters
- Global channel A/B input switch
- Oscillator
- Smart routing
- Comprehensive connectivity on console rear
- Internal Power Supply

## **Channel Strip Overview**



## **Master Section Overview**





## About this manual

This manual consists of:

- A section-by-section operational overview of all parts of the console surface
- Technical & physical specifications including power consumption, dimensions, weight and other relevant information
- Schematics and reference drawings of D-Type pinouts

There is a Heading Index at the start.

There is also a table explaining the Acronyms and Abbreviations of the most commonly used buttons and functions on page 58 of this document.

Many rotary controls on the 8424 have a push-activation ON/OFF function. Simply push the pot to switch the control ON or OFF.

Where relevant, the ON/OFF state of the control is displayed by an adjacent LED.





All button names / rotary controls are shown in **BOLD CAPITALS**.

Additional Global controls and notes for set parameters are shown in bold grey italics.

Click <u>Blue Hyperlinks</u> to jump to sections of the User Manual

Important warnings are shown in Bold text with - Caution:

An arrow-shaped bullet-point indicates you should do this action.

### TIP:

Quick shortcuts & workflow improvements will appear in a black box with white text.

### Console surface colour coding

The knobs and buttons on the Channel Strip and master sections of the console are colour-coded for ease of operation.

Туре	Control	Colour
	Level Control	Dark Grey
	Pan	Dark Blue
Rotary	Gain/Trim	Dark Red
	High Shelf EQ	Light Blue
	Low Shelf EQ	Black
	Monitor level	Bright Red





## **Power Procedure**

### **Safety Notice**

Before plugging the 8424 into the mains supply, please make sure of the following safety precautions:

▶ The amplifier connected to the speakers is turned off and the volume controls are turned fully down (or if using active speakers, ensure they are turned down and turned off).

- Ensure the 8424 Control Room Monitor level is fully turned down.
- ▶ All faders (including the Main Output faders) are at the bottom of their run at the **CUT** (∞) position.

### **Power-up procedure**

- Turn on the power to 8424 using the power switch on the rear of the console.
- Switch the amplifier on (or the speakers if you are using active speakers).
- Turn the amp (or speakers) to the desired level.

• On the 8424, ensure that the Control Room level is turned down and un-cut the monitoring (as a safety feature, the monitoring system will always be **CUT** when first switching the system on).

- Move the Channel faders to the desired levels and put the Main mix fader up to 0dB.
- Turn the Control Room Monitoring level up.

In this state, the console is ready to start recording from the A or B inputs with the Direct Outputs feeding the DAW (or tape Machine)

### **Power Down Procedure**

- Ensure your work is saved to the relevant medium.
- Turn the Control Room Monitoring down as far as it will go and press the master **CUT** button for the speakers.
- Turn the output level on the speaker's amplifier down to **CUT**, then turn the power off (if using active speakers, turn each speaker down before removing the power).
- Safely remove the power to 8424.

## Failure to follow this procedure correctly could invalidate the manufacturer warranty



### **Cabling Requirements**

- DAW Interface Outputs (Input A) 25-Pin D-Sub > D-Sub loom x3
- Line Inputs (Input B) ¼" TRS Jack 1-24
- Direct outputs 25-Pin D-Sub > D-Sub Loom x 3
- Insert send/Return ¼" TRS Jack 1-24
- Group insert Send/Return ¼" TRS Jack 1-4
- Mix/Aux/Cue/Group output XLR x9
- loudspeaker Outputs XLR x6
- Reverb returns/EXT/500 series/1073 inputs XLR x10

### Boot Mode

Upon start-up, the 8424 is configured with all channel inputs on **Input B.** This can be changed by switching the inputs individually on each channel, or by pressing the global **A/B CH IP** switch in the master select section of the console. **Green** LED's indicate **Input A** state, **Yellow** indicate **Input B.** 

To protect the system from feedback, the direct outputs from the channels are fed from Input B by default. This can be changed in the services screen by selecting MAST><u>IPA>DIR [Y]</u>

The console will always boot up in safe mode. This state ensures that no damage incurs to loudspeakers or additional studio equipment on start-up. In safe mode all feeds to speakers will be **CUT** (speaker outs will illuminate **RED** to indicate **CUT** state). The control room monitor level should also be turned fully down automatically to further protect studio equipment.

### Connecting the console

- Connect DAW interface outputs into the 8424 channel Inputs A via the three D-sub connectors 1>8 9>16 17>24.
- Connect line level instruments or external preamps into the 8424 channel inputs B where required. 1>24 ¼" Jack.
- Connect channel Direct Outputs 1-24 to DAW interface inputs via the D-sub connector 1>8 9>16 17>24.
- Connect MIX O/P L and MIX O/P R into your DAW interface to record your Stereo Mix back into the DAW.
- Connect group 1-4 outputs GRP1 OUTPUT 1-4 into your DAW interface if required.
- Connect Aux outputs **AUX O/P** 1-3 to external FX units.
- Connect external FX returns to Reverb Returns **REV1** and **REV2 L+R**.
- Connect Headphones to EHP1 and EHP2
- Connect headphone amplifiers to **CUE O/P L+R** if required.
- Connect studio speakers to A LS O/P Left and Right XLR.
- Connect additional studio Speakers to M1 LS O/P Left and Right XLR.
- Connect any analogue hardware inserts to each channel or group using the ¼" jack connectors at the rear of the console.
- Connect analogue hardware inserts to the master channels using the XLR connectors at the rear of the console MIX INS SEND and MIX INS RETURN.



## **Studio Setup**



## **Channel Strip**



### **Overview**

One of the core design concepts of the 8424 is that each channel can select its input from two alternative line input sources. This enables the 8424 to be used for Mixing, Recording and Overdubbing. The **A/B CH IP** switch on every channel will select either channel **Input A** (DAW Interface Outputs) or channel **Input B** for line level instruments or external preamps. Each channel trim pot will function independently for both **Input A** and **Input B**. The Input trim LEDs will indicate the trim level for each input **A** or **B**. When switching between inputs, the **TRIM** level will swap between **Input A** and **Input B** levels. The **I/P LED** will indicate the current selected input - **Green** for **Input A** trim or **Yellow** for **Input B** trim. Each trim level is separate, this allows for precise and independent trim control of both channel input levels.

### A/B Channel Input

This function selects the input source for each channel and will light **Green** for **Input A** or **Yellow** for **Input B**.

**Input A** is fed by a 25-way D-Type connector on the rear of each fader bank in sets of 8.

**Input A** should be used to connect your DAW interface outputs to the console.

To protect the system from feedback, the direct outputs from the channels are fed from Input B by default. This can be changed in the services screen by selecting MAST> <u>IPA>DIR [Y]</u>

Input B is fed by ¼" TRS connectors to the rear of each individual channel.Input B can be used for any line level input such as external pre-amp outputs or line level instruments to be directly tracked through the console.

The Global A/B CH I/P switch can be found in the centre of the console.

#### **Direct Pre**

The **DIR PRE** button will route the channel direct output as pre-fader. This can be used to create DAW stem tracks un-affected by the current control room fader levels. When **DIR PRE** is inactive, the direct outputs are post-fader, any channel fader motions will affect the direct out signal. This can be used to record audio adjustments directly onto the DAW stem tracks, creating manual level changes on certain mix elements. Pre or Post fader Direct Outs are sent post-channel insert, allowing for outboard hardware processing to be added into the signal chain and recorded into the DAW.

The Global DIR PRE switch is activated from the services screen in MAST>DIR PRE

### **Direct Output Signal Path**

DIR PRE selected	DIR PRE not selected
Channel Input A/B	Channel Input A/B
Input Trim	Input Trim
Insert	Insert
Direct Output Trim	CUT
Direct output D-Sub	Fader
CUT	Direct Output Trim
Fader	Direct Output D-Sub

Direct outputs are post fader in their default state.







### Trim Encoder

Each channel features a digitally controlled stepped Trim Encoder. This encoder can be set to control Input A and Input B trim levels, Set the Direct Output levels from each channel, and set as a remote rotary controller for external equipment.

The Trim encoder has a red LED display which gives an at-a-glance indication of the currently selected trim level position for Input A, Input B, Direct Output and FNC Remote 1073OPX gain levels.

The input trim encoder and can be pressed to toggle between three states of action-

 I/P sets the encoder to act as a +/- 20dB trim pot for all incoming line levels. I/P Trim functions for both Input A and Input B with each independent trim level stored digitally within the console's internal memory. When selecting channel inputs via the A/B CH IP button, the I/P LED will toggle between both inputs displaying Green for Input A and Yellow for Input B.

The Global A/B CH I/P switch can be found in the centre of the console.

- DIR sets the level of the direct output as pre/post fade/cut for the selected channel; the channel direct out has +10dB gain in hand to boost signals into your DAW interface if necessary.
  - Direct Outs are set to OdB by default, turn the stepped Trim Encoder clockwise to increase the Direct Out level. OdB is at the 2-o clock position, each following step increases the Direct Out level 1dB up to the maximum +10dB at the 4-o clock position.
  - Direct outputs send from Input B by default. Input A can be sent to the Direct Output via the services screen in the centre of the console by selecting MASTER>IPA>DIR [Y]
- **FNC** (function) mode allows the Trim encoder to function as a remote gain control for connected 1073OPX preamps or for VPOT control of DAW parameters. When in **FNC** mode, the trim encoder is no longer controlling internal 8424 signal levels, but purely working as a remote control for external hardware/software.

For Further Information see **FNC Gain Control** 





### Services Screen Trim Display

When making adjustments to any of the consoles 24 trim encoders, the Services Screen will display the exact Trim Encoder increments as they are being adjusted. This ensures total accuracy for all Trim Encoder settings for selected Input A/B trim levels, Direct Out levels, and FNC remote 1073OPX Gain levels.

The channel number is displayed on the left of the screen in brackets - (16) The parameter name is displayed the middle of the screen - **TRIM A** The parameter increments are displayed on the right of the screen - **0.00dB**.



- When I/P mode is selected and the Trim Encoder is adjusted, the services screen will indicate the trim level for the selected A or B channel input. When switching between A/B CH IP the screen will change to indicate TRIM A or TRIM B.
- When **DIR** mode is selected and the Trim Encoder is adjusted, Direct Output levels are displayed on the Services Screen.
- When FNC mode is selected and the Trim Encoder is adjusted, 1073OPX gain levels will be displayed, along with OPX channel number and selected input type (Line/Mic/DI)

To interrogate the current Trim encoder setting without adjusting the level-

Press and hold the ST CUE PAN pot and press the Trim encoder together

Following shutdown and restart of the console all channel trim settings are reset to the default setting of OdB. To save and load the trim settings for your session, use the services screen in the centre of the console and choose the **SYSTEM SAVE** or **LOAD**.

More information on SAVE/LOAD can be found at **<u>Recall Store System</u>** 

Caution: Loading a saved state will overwrite all Trim A/B/Direct out levels.



### **Global Input Trim Reset**

Channel Input A and B Trim levels can both be globally reset to zero from the console services screen. To globally reset **Input B** trim levels from the services screen, select **MAST>ZERO IP B** To globally reset DAW returns **Input A** select **MAST>ZERO IP A** 

### Channel Meter

Each Channel on the 8424 has its own 8 stage **PPM** input level meter which displays input signal levels from -30dB through to +24dB. Levels below 0dB illuminate green and levels above 0dB will illuminate yellow. The **Red** LED will indicate clipping at +24dB.





### Stereo Cue

Each Channel on the 8424 has a stereo cue send which can send audio from channel input **A** or **B** (depending which input is selected on the top of the channel strip) to performers in the live/control room. The **CUE** send can also be used as a stereo FX send. The **ST CUE** also has a third input option - **Input C.** This input allows for an additional 24 inputs into the 8424 from the DAW.

The **CUE** rotary send runs from -inf to 0dB and has push activation. Pressing the Rotary level control will activate the cue send. The **ON** light will illuminate **green** to indicate that the **CUE** is active. Each cue has its own L/R Pan control which can be activated by pressing the **ST CUE PAN** control.

The CUE can be set Pre or Post fader via simple button combinations listed below. The **CUE** sends signal from the channels selected input A or B but can also be fed from **Input A** independently when using ILM/Parallel Processing mode or can be fed from an additional **Input C** when using 48 Mix Mode.

### Further information at In-Line Mode / Parallel Processing / 48 Mix Mode

To toggle between PRE/POST fader-

Press and hold the CUE PAN and then press the CUE level controller. The PRE LED will indicate the sends pre-fader state.

To select Input C as the Stereo cue source-

Press and hold the CUE PAN and then press the CUE controller twice. I/P C I/P A LED will illuminate Yellow to indicate that Input C is the CUE source.

To toggle between I/P C or I/P A Cue send source-

When the I/P C, I/P A LED is illuminated, press and hold A/B CH IP at the top of the channel strip then press the CUE level control, The I/P A I/P C LED will illuminate Green to show that Input A is the signal stereo cue source or will illuminate Yellow to indicate that Input C is the signal source for the stereo cue send.

To Globally select Input C for all CUE inputs-

- Press **48 MIX** in the Master section of the console.
  - 48 mix is explained in greater detail at <u>48 Mix Mode</u>

To Globally select Input A for all CUE inputs-

- Press 48 MIX in the Master section of the console
- From the services screen press MASTER then select ILM [Y] ILM is explained in greater detail at <u>In-Line Mode</u>

The **CUE** pre-fade send works differently channel input A/B is selected. This is to ensure that when recording, the channel cut does not cut the cue send. Similarly, when mixing, the channel cut will cut the cue send.

Recording - If channel Input B is selected – cue sends are pre-fade pre-cut

Mixing - If channel Input A is selected – cue sends are pre-fade post-cut

**Overdubbing** – The pre fader send can be changed so that **Input A** and Input **B sends** are both pre-cut, this is ideal when overdubbing.

Further information at AU/CU PC [Y]

Global Stereo cue sends pre/post state can controlled by interlocking the Aux On/Pre button and ST CUE master knob in the centre of the console. Further information at <u>Global Aux Controls</u>





## IN I/P C INSERT



### AUX Sends 1-3

There are three mono aux sends per channel. Each rotary control sends level from -inf to 0dB and has push activation. The **ON** light will illuminate **Green** once the send is active. Each Aux send 1-3 is set to Post-Fade by default. To switch to **PRE**-Fade-

- Press and hold the **AUX** pot for 2 seconds.
- ► The **PRE** light will illuminate **Yellow** to indicate pre-fader state.
- To return to Post, press and hold the **AUX** pot again for 2 seconds.

AUX 2 and AUX 3 can also be used as a second stereo cue. AUX 2 becomes the right signal and AUX 3 becomes the left signal of the second stereo cue mix.

Further information on additional stereo cue mixes can be found at <u>AUX</u> <u>2&3 as CUE Mix 2</u>

The aux send pre-fade option will function differently depending on which channel input **A/B** is selected. This is to ensure that when recording or overdubbing, the channel cut does not affect the aux send. Similarly, when mixing, the channel cut will also cut the aux send appropriately.

If channel Input B is selected – AUX sends are pre-fade pre-cut.

If channel Input A is selected – AUX sends are pre-fade post-cut.

Global Aux On/Pre fade state can be set by interlocking the Aux On/Pre button and Aux master knobs in the centre of the console.

Further information at Global Aux Controls

### Insert/Input C

Just below the aux sends on the channel are the **Insert IN** and **Insert to Input (I/P C)** switches. When illuminated, the insert **IN** switch will activate the channels insert signal path from the Insert send and Insert return ¼" TRS connector at the rear of the console. When **I/P C** is selected and illuminated, the channel insert will be assigned to the signal path for the third channel input **(Input C)** DAW interface outputs 25-48 and fed to the **ST CUE** input.

Further information about inputs 25-48 can be found at 48 Mix Mode

Global INSERT IN and INSERT I/P C can be activated from the services screen in MAST><u>INS IN</u> and MAST><u>INS I/P C</u>

Note: Channel insert sends are always active, if not using the channel inserts, they can be used as a second pre-fade direct out from each channel Pan

## The 8424 pan-pot runs from OdBu hard left, - 4.5dBu centre to OdBu hard right positions. The channel Pan-Pot functions for both **Input A** or **Input B** depending on the selected channel input.

The Pan-Pot has push-activation and is switched on when the **IN** light is illuminated.

All channel pans can be activated globally from the services screen in MAST>MIX PAN

### GRP PAN

**GRP Pan** or 'channel pan to group' assigns the channel pan position to the group routing. When selected, the position of the Pan control is reflected in the channels group assignments. I.E when the channel is routed to groups 1 and 2, panning hard left will send the channel signal to group 1 only, panning hard right will send the signal to group 2 only and centre panning will send the signal in equal amounts to both groups 1 & 2.

Global GRP PAN can be activated from the services screen in MAST><u>GRP</u>





### Channel Routing

Channels can be routed using the buttons below the pan. Channel signal can be sent either to the Stereo Mix via the **MIX** button or to groups 1-4 via the **GRP 1-4** buttons. Any combination of channel routing is possible by pressing multiple routing buttons. Each routing path is active when the button is lit. *Global channel routing is accessed from the services screen in MAST*>MIX,

### GRP 1 GRP 2 GRP 3 GRP 4

In addition to the channel routing, the cue bus can also be routed to groups 3 & 4, this feature is useful when using the 8424's In-Line monitoring mode. Any DAW output sent to the channel cue **I/P A** or **I/P C** can rerouted from the master **CUE** bus to groups 3 and 4 which will now act as the master faders for cue channels routed to the groups, taking advantage Group processing. The **CUE LED** indicator displays group to cue routing status. To route the Cue bus into groups 3 & 4

- Press and hold **CUE PAN** then press **GRP 3** or **GRP 4** routing buttons
- The GRP 3 and GRP 4 button will now illuminate RED to indicate Cue to Group routing.

Global Cue to Group 3+4 routing is accessed from the services screen in MAST>CUE GRP

### **Channel Solo**

The channel **SOLO** button will isolate the selected channel into the stereo master bus. The channel solo is destructive by default (**SIP**) but can be set to non-destructive modes - Pre-fader (**PFL**) or After-fader (**AFL**). **AFL** is the default setting when activating **SOLO SAFE** button in the Master Section of the console. This can be switched to **PFL** in the control room monitor section of the console by pressing the **AFL/PFL** level control.

Further information on solo modes can be found at Solo Modes

Solo is latching by default but can be switched to Momentary via the Services Screen under MAST>SOLO: [LATCH]/[MOM]-

### Channel Isolate

**ISO** Isolates the channel path from the default **SIP** (solo-in-place) system and activates the channels non-destructive solo **AFL/PFL** bus. The isolated channels are also **SOLO SAFE.** When any other channel solo is active, a **CUT** will not be applied to any channel/group that has been isolated.

Any channel that is isolated can now be soloed without activating the **CUT** on all other channels/groups. The channel solo bus is now routed either prefader (**PFL**) or after-fader (**AFL**) and routed to the engineer headphones and control room monitor path via the **PFL/AFL** bus.

To isolate a Channel-

- Press and hold the CUT button on the selected channel, then press the SOLO button on the selected channel at the same time.
- The ISO light will illuminate to indicate that the channel is now protected from destructive solo.

### Channel Cut

**CUT** will remove the selected channels audio from the mix bus audio path, the channels audio is muted when the **CUT** light is illuminated. **CUT** will also mute the channels **AUX** or **CUE** Post-fade bus sends, **Input A** pre-fade bus send, and will cut the assigned group routing.

### Channel Fader

Each channel has a 100mm fader for precise level control from -inf to +10dB.

## Groups 1-4



### **Overview**

The 8424 features 4 mono Groups with 100mm Faders located in the centre of the console. These groups can be used for a variety of functions such as sub-mixing instrument groups, using group processing on selected instruments, balancing large amounts of instruments or as separate masters for the cue mix bus when using the consoles in-line mixing mode.

### Further information on ILM mode can be found at <u>In-Line Mode</u> Group EQ

Each mono group has its own analogue 2-band shelving EQ that can be used to treat groups of instruments or individual instruments depending on which channels are assigned the group. The high shelf centre frequency of 10kHz can both be boosted or cut by + or – 15dB. and low shelf centre frequency of 220Hz can both be boosted or cut by + or – 12dB. The low shelf knob has push-activation. When pressed, the Group EQ is active and the **EQ IN** LED will illuminate.

### Pan

Each mono group has its own pan control which has push-activation. This allows the mono groups to be accurately positioned in the Stereo Mix, with individual channels being assigned to either the left or right depending on the stereo image.

### Group Routing

The Group routing buttons above the fader can be used to send the group output to the Stereo Mix bus by pressing **MIX L** or **MIX R** (or both). The **500-1** & **500-2** buttons will activate the 500 series slots as group inserts. The routing buttons will illuminate to indicate the current routing setup. Beneath the routing buttons, the **INS IN** switch activates the groups insert post EQ/Pre-Fade.

Note: Group insert sends are always active. This can be used as a second pre-fade direct out from each Group.

PRE- sets the Group hardware insertion point to pre fader (see table below)			
Group Output Signal Path			
If DDC colocted	If DDC not colocted		

If PRE selected	If PRE not selected
500 series units (when activated)	500 series units (when activated)
2 band EQ	2 band EQ
Hardware insert	Group Cut
Group Cut	Group Fader
Group Fader	Hardware insert
Mix or Direct out routing	Mix or Direct Out routing

### Group 1-4 Direct Output Pre

Each mono group has its own direct output on the rear of the console which can be used to feed into the DAW or external recorder. Direct outs are Post-Fade by default, the service screen option MAST>GRP 1 PRE [Y], GRP 2 PRE [Y], GRP 3 PRE [Y]GRP 4 PRE [Y] will set individual group direct outputs to Pre-Fade.





### Group Solo

The **SOLO** button will isolate the selected Group channel into the Stereo Mix bus and group outputs. The Group solo is destructive by default (**SIP**) but can be set to non-destructive modes; Pre-fader **PFL** or After-fader **AFL** which is set in the control room monitor section of the console by pressing the **AFL/PFL** level control or by Isolating on a channel-by-channel basis.

### More information on solo modes can be found at Solo Modes

### Group Isolate

**ISO** Removes the selected Group channel from the default **SIP** (solo-inplace) system and activates the groups non-destructive solo **AFL/PFL** bus. The isolated groups are **SOLO SAFE.** When any other solo is active on the console A **CUT** will not be applied to any group that has been isolated. Similarly, any group that is isolated can now be soloed without activating the **CUT** on all other channels/groups. The group solo bus is now routed either pre-fader (**PFL**) or after-fader (**AFL**) to the engineer headphones and monitor path via the **PFL/AFL** bus.

PFL or AFL is selected in the control room monitor section of the console by pressing the AFL/PFL level knob.

To isolate a Group-

- Press and hold the CUT button on the selected group, then press the SOLO button.
- The ISO light will illuminate Green to indicate that the group is now protected from destructive solo. And will not cut any channels that are in destructive solo (SIP) mode.

### Group Cut

**CUT** will remove the selected groups audio from the Stereo Mix bus and group output audio paths. The groups audio is muted when the **CUT** light is illuminated.

### Group Fader

Each Group has a 100mm precision fader for precise level control which runs from -inf to +10dB.



## **Stereo Mix Processing**



### **Overview**

The 8424 Stereo Mix bus features two Neve classic Marinair<sup>®</sup> transformers for high-headroom, voltage mixing. Two XLR outputs labelled **MIX O/P** on the rear of the console allow for recording the consoles final Stereo Mix by patching into the DAW, tape Machine or external recording device. **E.Q** 

The Stereo Mix fader has its own 2 band shelving EQ. The high shelf centre frequency of 10kHz and low shelf centre frequency of 220Hz can both be boosted or cut by + or - 12dB. The low shelf push-activation knob can be pressed to activate the EQ circuitry onto the Stereo Mix bus. **EQ IN** will illuminate when the EQ is active.

### Stereo Width

The 8424 console features Neve's proprietary stereo width control function on the Stereo Mix bus. This function uses phase to widen the stereo image. This push-activation pot can be pressed to activate the stereo width function and the **IN** light will illuminate to indicate if the circuitry is active.

The pot will select between a narrow mono image when turned fully counter-clockwise **(N)**, stereo at the 12 o-clock position and a wide, enhanced stereo image when turned fully clockwise **(W)**. This feature is very useful to enhance and add width to minimal, acoustic mixes with limited signal sources.



## **Stereo Mix Routing**



## CUT



### **Overview**

The Stereo Mix routing buttons activate insert points and routing paths for the Stereo Mix bus.

### M BUS INJ L/R

Allows an external signal to be independently blended into the master Left and right bus via XLR connectors on the rear of the console.

### 500 1/2

This function routes the 500 series modules as pre-fade, pre-processing inserts into the Stereo Mix Bus.

### CUE BUS

Routes the cue bus into the Stereo Mix bus. This function allows for 48 inputs to be mixed simultaneously into the Stereo Mix output. (1-24 channel **Inputs A/B** and 24-48 **Input C** to **ST Cue** bus). This button is automatically activated when **48 MIX** is pressed.

### Further information can be found at <u>48 Mix Mode</u>

### INS IN

Activates the Stereo Mix insert circuit, the stereo insert is routed via two XLR sockets on the rear of the console labelled **MIX INS SEND** and **MIS INS RET**.

Note – The Mix insert send is always active, this can be used as a second pre-fade (if PRE is selected) or post-fade (is PRE is not selected) Stereo Mix output from the 8424.

**PRE-** sets the Master mix hardware insertion point to pre fader (see table below)

### Stereo Mix Output Signal Path

If PRE is selected	If PRE not selected
500 series units	500 series units
Hardware insert	2 band EQ
2 band stereo EQ	Stereo Width Control
Stereo width control	Master Cut
Master Cut	Master Fader
Master Fader	Hardware insert
Mix O/P L/R XLR	Mix O/P L/R XLR

### Master Fader

The 8424 Stereo Mix fader is a 100mm precision stereo fader that controls both the Left and Right outputs of the console.

The master **CUT** will mute the master mix bus from the control room monitor audio path.

### Bypass LED (Motorized faders only)

For customers using the Motorized fader upgrade, you will notice a yellow **'Bypass'** LED above the stereo master fader, this is used to indicate that the MDAC is bypassed when the fader is set at Zero and audio is running only through the analogue circuitry. This MDAC Technology will be utilized in future firmware updates.

## 1073 Preamps



### **Overview**

The 8424 console has two Neve 1073<sup>®</sup> preamps which are produced to the exact specifications of the original modules and feature Marinair<sup>®</sup> input and output stage transformers. Considerable resources have been devoted to the acquisition of the original components to ensure the sound remains true to that of the classic units. The 8424 1073's have Smart Routing, enabling them to be routed to console channels 17 & 18 at the push of a button with no patching required. By default, the preamps are routed to the XLR outputs at the rear of the console. This XLR output is active even if the 1073 is routed to 500 series slots or to channels 17/18, splitting the signal to record two outputs from the same source. The 1073 preamps can be hardpatched to any channel **Input B** by using an XLR> ¼" TRS cable from the two 1073 XLR outputs and into any channel **Input B** at the rear of the console.

### Gain Control

The two 1073s on the master section of the console feature the same classic stepped attenuator which cycles through the dual amplifier gain settings for either Microphone +20dB to +80dB or Line levels -10dB to +20dB in 5dB steps. The **SIG** light at the top of each 1073 preamp illuminates **Green** at -30dB to show level coming into the preamp. The **SIG** light will illuminate **Red** at +26dB to indicate overload.

#### Trim Control

Beneath the stepped gain control is the rotary gain trim pot which can adjust the preamp gain from -20dB to +5dB. The trim pot is especially useful for precise preamp gain control and allows signals to benefit from 1073 harmonic distortion by dialling in high gain levels on the main gain control then trimming back the final preamp output with the trim pot. The trim pot smart routing push-function can be pressed to assign the output of each preamp to channels 17 and 18 **Input B** respectively. **TO CH 17/18** light will illuminate **Green** to indicate that the 1073 outputs are routed to channel 17 and 18.

1073 Trim is not included in the Save/Load Recall feature.

#### Preamp controls

Ø = 180° Phase flip

**Lo Z** = Impedance switch changes signal impedance from  $1.2k\Omega$  (HI-Z) to  $300\Omega$  (Lo-Z). Useful for ribbon microphones with lower impedance requirements.

+48v = phantom power for condenser microphones. Phantom power can only be selected and activated when the 1073 preamp is set to mic gain.

### 500 series routing

Each of the two 1073 preamps can use the 500 series slots 1 or 2 as inserts before the **TO CH** routing. The **500-1 500-2** switches at the bottom of the 1073 section activate the 500 slots as inserts.

Note: the 1073 output XLR at the rear of the console will not be affected by the 500 series insert.


# Instrument DI Inputs



# **Overview**

In addition to the two 1073 microphone preamp inputs, the 8424 has two 760 k $\Omega$  Instrument DI channels that can be routed to various points on the console. The Instrument DI inputs are '4'' Jack connectors (balanced or unbalanced) that are located conveniently underneath the front of the console. This allows for instrument tracking directly from the studio control room. The 8424 Instrument DI's have Smart Routing, enabling them to be routed to console channels 19 & 20 at the push of a button with no patching required.



## Instrument D.I Controls

Each Instrument D.I channel has a level control which runs from -20dB to +5dB. The **SIG** light at the top of each level control illuminates **Green** at -30dB and will illuminate **Red** at +17dB to indicate Overload.

The instrument D.I channels have no default routing, this must be assigned using the 500 series slots or the smart routing **TO CH** switches.

The level pot has smart routing, this push-function pot can be pressed to assign the output of each preamp to channels 19 and 20 **Input B** respectively. **TO CH 19/20** light will illuminate **Green** to indicate that the DI outputs are routed to channel 19 and 20.

-25 pad reduces the incoming signal by 25dB

### 500 series routing

Each of the two Instrument DI inputs can use the 500 series slots 1 or 2 as inserts before the **TO CH** routing. The **500-1 500-2** switches at the bottom of the Instrument DI section activate the 500 slots inserts.

Each of the two instrument D.I preamps can be routed to the 500 series slots 1 or 2 by using the **500-1 500-2** routing switches at the bottom of the instrument DI section.

Instrument DI Level is not included in the Save/Load Recall feature.



# 500 series slots



# **Overview**

500-series is a module size that AMS-Neve and many other pro audio companies manufacture modules for. All 500 series modules that are VPR Alliance approved will work perfectly in the 8424 500 series slots. The 8424 console has 2 empty slot that can be filled with any 500 series outboard units and used on a variety of console signals.

# 500 Series Routing

The two 500 series units can be routed as inserts to any of the following-

- 4 mono sub-group Inserts (pre-processing)
  - Press the **500-1** or **500-2** button above the selected group fader to use the 500 series module as a group insert.
- Stereo Master Inserts (pre-processing)
  - Press the 500-1/2 button above the stereo master fader to use both of the 500 series modules as a stereo Master Insert.
  - 2 built in 1073 microphone/line preamp inserts. (Post gain & trim)
    - Press the **500-1** or **500-2** button at the bottom of the 1073 preamp section to use as an insert for the selected preamp channel (before smart routing to channels 17/18)
- 2 built in Instrument D.I inputs. (Post-level control)
  - Press the 500-1 or 500-2 button at the bottom of the Instrument DI section to use as an insert for the selected Instrument D.I. (before smart routing to channels 19/20)

# **Direct Input/Output**

In addition to the group, mix, preamp and DI routing options, the 8424 500 series units can be used as standalone hardware units by using the XLR in/out connections on the rear of the console. This allows the 500 series slots to function as a separate hardware rack, independent of the console. The outputs of the standalone 500 series units can also be routed to any channel on the console by using a physical XLR><sup>1</sup>/<sub>4</sub>" TRS Line connection.

Caution: if additional 500 series preamplifiers are housed in the 8424 500 series slots, do not activate group, Stereo Mix, 1073 or Instrument DI 500 1/2 buttons.



# **Reverb Returns**



# Overview

The 8424 console features two dedicated stereo reverb returns which are fed by the XLR inputs on the rear of the console. The reverb returns can be used to return stereo effect unit outputs into the console or as additional stereo line level inputs should you require more line inputs. Signals using the reverb return channels can be routed to the 500 series slots via the group 1-4 routing buttons.

# **Reverb Return Controls**

Each reverb return has a push-activation level trim pot that runs from Inf to OdB and can be pressed to activate the reverb return. When activated the **ON** light will illuminate **Green**.

To isolate the reverb from the solo and cue solo path-

- Press and hold the Rev return LEVEL Pot.
- the ISO light will illuminate Green to indicate the reverb return isolation status.

Each reverb return has an independent **TO CUE** level pot which runs from inf to 0dB. This pot is push-activation and sends the reverb return signal to the Cue bus, when activated the **ON** light will illuminate **Green**.

The reverb returns also have a balance pot which will balance the left and right levels by + or -6dB. The balance pot has push-activation and can be pressed to activate the balance control. the **IN** light will illuminate **Green** to indicate that the balance function is active.

# **Reverb Return Routing**

Reverb return signals can be routed to the Stereo Mix bus by pressing the MIX button, group 1 and 2 by pressing the **GRP 1/2** button or Group 3 and 4 by using the **GRP 3/4** button. Any combination or routing is also possible by selecting multiple routing buttons. Each button will illuminate to indicate the reverb return routing.

The reverb returns can also be soloed by pressing the **AFL** button which illuminates when active.



# Aux & Cue Masters



# **Overview**

The Three mono **AUX** master and stereo **CUE** master controls are located above the control room monitor section of the console. Each pot runs from inf to 0dB and has push-activation. When pressed, the **AUX/CUE** master bus is active and the **ON** light will illuminate **Green**.

Each aux master and cue master can be soloed by pressing the **AFL** button which illuminates **Yellow** when active.

## **Global Aux Controls**

The **AUX** and **CUE** masters have several global functions that are accessed by pressing the **AUX ON/PRE** button and then pressing the **AUX/CUE** master pot.

To switch all associated channel AUX/CUE sends ON/OFF-

- Press the master AUX/CUE ON/PRE button once, this will now illuminate Green.
- Press the master AUX/CUE pot. The associated channel 1-24 AUX/CUE sends will now toggle between ON/OFF status.

To switch all associated channel AUX/CUE sends to PRE/POST fade

- Press the AUX/CUE ON/PRE button twice, this will now illuminate Yellow
- Press the master Aux pot. The associated channel 1-24 AUX/CUE sends will now toggle between PRE/POST status.

## AUX 2&3 as CUE Mix 2

An additional cue mix can be created by using **AUX2** and **AUX3** bus sends. In this mode, **AUX 2** becomes the Right stereo cue mix signal, and **AUX 3** becomes the Left stereo signal.

The cabling into the second artist foldback system must reflect the AUX 3-Left and AUX 2-Right signal path.

To monitor the second foldback mix through the solo bus-

- Press AUX 2 Master AFL
- Press AUX 3 Master AFL

By default, Aux busses will monitor in MONO unless both AUX 2 and AUX 3 AFL are illuminated.

To display the second foldback mix on the VU meters-

- Press the AUX 1/2 meter select button
- Press the AUX 3 meter select button

Talkback must be activated to AUX2/3 via the Services screen TB><u>TB AUX2</u> [Y] & <u>TB AUX3 [Y]</u>

VU Meters will display AUX busses in MONO unless both AUX 1/2 and AUX 3 meter select buttons are illuminated, the second Cue mix right signal will appear on the left VU, the second cue mix left signal will appear on the Right VU.



# **Engineer Headphones**



# **Overview**

The 8424 engineer's headphone system (EHP) has been designed to help & enhance the modern recording session for the engineer, the producer and the artist. Artist and engineer can track in the control room with their own stereo headphones, featuring independent level controls and source selections. There are 2 engineers stereo headphone output jack sockets located just under the front console armrest. EHP 1 and EHP 2 are both stereo quarter inch jacks.

### <u>EHP 1</u>

Engineer Headphone mix 1 takes its signal from the main monitor source selector in the control room monitor section of the console. If any console source **AFL** or **PFL** solo is selected, such as the stereo cue mix, the headphones will follow this selection. **EHP 1**'s level is controlled by the main monitor volume control in the centre of the console.

# <u>EHP 2</u>

Engineer headphone mix 2 has a five-way source selector switch located in the centre of the console labelled **HEADPHONE 2.** Engineer Headphone mix 2 has its own independent level control and source selection

### **EHP 2 Source selection**

MIX – listens to the console main mix bus post-fader.

EXT – listens to any wired external source.

**MON** – listens to the control room monitor source selection.

CUE – listens to the CUE mix bus post-master level.

AUX 2/3 – Listens to AUX 2 or AUX 3 post AUX Master level controls.





# Talkback





The talkback function on the 8424 enables three-way communication between the engineer, producer and the performers. The 8424-talkback microphone and talkback master level control are located at the top of the console, in between the two VU meters. When talkback is engaged, the monitors in the control room are dimmed to allow for clear communication. The **DIM** level is set by the **TB DIM** control above the Control Room Monitor Level controller.

# Talkback controls

The talkback buttons are located beneath the control room monitor section of the console. The **CUE TB** and **SLATE TB** switches are momentary and must be held to enable talkback. **RTB** is latching and must be switched on or off.

Talkback dim is controlled by the **TB DIM** trim pot in-between the **AFL/PFL** and **DIM** pots. This trim pot runs from 0 to -35dB and will affect the **CUE** bus level when talkback is engaged, similarly it will affect the **AUX 2** and **AUX 3** bus if talkback to **AUX 2** and **AUX 3** is engaged via the services screen.

# **Talkback Trim Pots**

Talkback level to all destinations can be adjusted by using the TB trim level pots with a small flat-head screwdriver. The top left hole labelled **TB** adjusts the external talkback feed to the XLR at the rear of the console. This connection can be used to feed external talkback systems, if signal into the external system is too hot, the TB trim can reduce talkback output accordingly. The next hole adjusts the talkback level to the cue bus followed by the slate talkback level trim. The final hole to the far right-hand side is used to trim the return talkback signal. The trim pots are the final level attenuators for talkback to the associated destination Post **TB LEVEL** master.

## CUE Talkback

The **CUE TB** Routes the talkback microphone signal into the cue mix bus. When engaged, the **ST CUE** mix level will be dimmed by -21db to enable clear communication between the engineer and the performers. This Talkback dim level can be adjusted by using the **TB DIM** trim pot next to the master **DIM** pot. The **DIM** button will flash to indicate **TB DIM** active. The cue talkback level can be adjusted with the trim level control to the top right of the **CUE TB** button and the talkback master control.

# Slate Talkback

**SLATE TB** can route the talkback microphone signal to channel Direct Outputs, Group 1-4 Direct outs and Stereo Mix bus outputs depending on which services screen option is selected. This function can be used to identify takes by recording the engineers voice directly to tape/DAW. The slate talkback level can be adjusted with the trim level control to the top right of the **SLATE TB** button and the talkback master control.

Slate to Direct outputs, Group outputs and Mix outputs must be activated independently from the services screen in TB><u>SL DIR OP [Y]</u>, <u>SL GRP OP [Y]</u>, & <u>SL MIX OP [Y]</u>



SLATE TB

RTB

CUE TB



# Return Talkback

The **RTB** switch activates the signal path of the studio live room return talkback microphone. **RTB** is latching and can remain on throughout the session. This function enables two-way communication between the engineer and instrumentalists who may not have a vocal microphone in the studio live room. Return talkback is connected via an XLR connector on the rear of the console. The return talkback level to both **M2 LS** outputs and the **RTB O/P** XLR can be adjusted with the trim level control to the top right of the **RTB** button.

# Further information on Return Talkback Options can be found at <u>Return</u> <u>Talkback Options</u>

In order for the RTB button to function, Return Talkback must be activated from the services screen under TB><u>RTB ENABLE [Y]</u>

# Talkback Footswitch

The 8424 Console also has a talkback on/off footswitch control that is accessed via the **DC REMOTES** D-sub connection on the back of the console (Pin 4). Once connected the footswitch will run parallel to the **CUE TB** on the console surface. **CUE TB** and **DIM** will flash to indicate engineer external talkback active.

Further information on DC Remote pin outs can be found at <u>DC remote Pin</u> <u>Out Functions</u>



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**N**<sup>®</sup>

The 8424 console has three solo modes, each solo system offers professional signal isolation derived from Neves large-format studio consoles. Each solo mode works differently, while allowing users to listen to console signal sources in isolation.

## **SIP Solo-in-Place**

Solo in place is the 8424's default solo mode. **SIP** is destructive, any channel solo will mute all other console channels. **SIP** sends the soloed channel signal through the stereo mix bus. All 24 channels 4 mono groups can be soloed-in-place as well as console inputs 25-48 when in 48-Mix mode. Solo in place is useful when mixing, as it allows engineers to hear exactly how a signal sounds in-place within the stereo field, including channel processing, Pan, Fader Level, Aux, Cue sends and Routing assignments. Since Solo in place is routed through the Stereo Mix bus, all stereo mix processing is active and retained while soloing.

# **AFL After Fader Listen**

After fader listen is activated by pressing **SOLO SAFE** in the global console controls section of the 8424 or on a channel-by-channel basis by activating **ISO. AFL** is Non-destructive, meaning that any soloed signal does not mute other console signals. **AFL** uses its own stereo bus, separate from the stereo mix bus, the **AFL** bus also uses voltage mixing through Marinair<sup>®</sup> transformers allowing for accurate soloing. The master **AFL** Level control located in the control room monitor section of the console and sets the master **AFL** level to be fed to the headphones and Control Room Monitor path. **AFL** is useful when recording, as any **AFL** soloed signal does not mute other channel signals, therefore not affecting the recording Direct Outputs or **AUX/CUE** sends. **AFL** signals are routed to the **AFL** bus after the channel fader and pan, allowing for accurate stereo imaging and level when soloing.

# PFL Pre Fader Listen

Pre fader listen is Activated by pressing **SOLO SAFE** in the global console controls section of the 8424 and then pressing the **ALF/PFL** level pot. (or on a channel by channel basis by activating **ISO**). **PFL** is Non-destructive, meaning that any soloed signal does not mute other console signals. **PFL** signals are routed thorough the **AFL** bus in the same way as **AFL** solos but with the key difference of not including fader level and pan position. Any **PFL** signal will be heard in Mono and at the incoming channel signal level set by the Trim Pot. Since **PFL** listens to the consoles incoming signal before it is processed by any channel inserts and attenuated by the channel faders it is very useful for preparing to record by auditioning incoming signal levels, adjusting channel strip trim levels and preamp/DI gain levels. PFL is also very useful for quickly identifying problem signals within a mix session such as feedback or distortion.











# Solo Switching Behaviour

All three solo modes can be switched between Latching or Momentary modes globally from the console Services Screen.

## Latch Mode

### Selected from the services screen MAST>SOLO [MOM]

Affects **SIP/AFL/PFL** and is the 8424-default solo switch setting. This setting allows for multiple console signals to be pressed and soloed at the same time. Solos will remain on until the engineer deselects the solo switch on each soloed channel or by pressing the **RESET** button in the global console controls section of the 8424.

# Momentary Mode

# Selected from the services screen MAST>SOLO [LATCH]

Momentary mode affects **SIP/AFL/PFL**. In Momentary mode, when a solo is pressed, it must be held to remain soloed, when the operator lets go of the solo button, the solo is automatically cancelled.



# **Master Controls**



The 8424 Master controls enable global switching of channel, solo and channel/cue input settings.

# SOLO SAFE

Globally switches all channels and groups from **SIP** (Solo-In-Place) to nondestructive **AFL/PFL** (After-fader Listen or Pre-fader listen) mode. When solo safe is Illuminated, any solo button on the channels and groups becomes non-destructive **AFL/PFL**.

# **RESET**

Wipes any active console solo, resetting the console to a non-solo state. Does not affect channels that are isolated (**ISO**).

# <u>48 MIX</u>

A unique 8424 function that enables 48 individual inputs to be mixed through the console simultaneously. Pressing **48 MIX** changes several routing options on the console.

- All channel CUE inputs are set to I/P C
- All CUE sends are switched ON
- The **SIP** Solo system is linked to the **CUE** along with the channel faders.
- **CUE BUS** is selected, routing all channel **CUES** to the Stereo Mix bus.

The console is now set to receive and mix up to 48 DAW interface outputs through its Stereo Mix bus with inputs 1-24 appearing on the channel faders and pan controls and inputs 25-48 appearing on the **CUE** level and pan controls.

# Further information can be found at **<u>48 Mix Mode</u>**

# AUX ON/PRE

When illuminated **Green**, pressing each AUX master knob now globally toggles all channel **AUX**'s **1**, **2**, **3** or **ST CUE** on or off. When illuminated **yellow**, pressing each AUX master knob now globally toggles the selected channel **AUX's 1**, **2**, **3** or **ST CUE** between Post-fader and Pre-fader state.

# IPC MTR

This function allows for accurate metering of all Input C (DAW inputs 25-48). **IPC MTR** Globally switches the 8424 channels 8-stage LED Meters to display Input C DAW Interface Outputs 25-48 incoming levels.

# A/B CH IP

This function globally selects the channel inputs from either **Input A** (DAW interface outputs 1-24 or **Input B** channel Line inputs. Global switching functions in the same way as local **A/B** switching.



# **Control Room Monitor**



## **Overview**

The Control Room Monitor section of the 8424 gives total control of the Stereo Mix monitoring outputs and is the loudspeaker output attenuation control for the 8424 console. The monitor section of the console is positioned in the centre to allow easy access to the essential controls.

Monitor source selection buttons can be found at the top of the control room source section. **AFL/PFL** solo level control, **DIM** level and monitor level knobs are also located here along with monitor output selectors, **CUT**, **DIM** and **MONO** buttons.

There are three possible stereo loudspeaker outputs from the console; **A**, **M1** and **M2**. The **M1** and **M2** monitor output levels can be independently calibrated to match the **A LS** output level by using the trim screw points next to **M1** and **M2** speaker selection buttons.

# **Control Room Source**

**MIX** selects the main Stereo Mix bus, post-master fader as the control room audio source.

**EXT** selects the external stereo input as the control room audio source, used for listening to reference tracks or monitoring any external audio sources.

**i-MON** selects the 3.5mm Jack input as the control room audio source. The minijack can be found underneath the console armrest, next to **DI I/P 1**.

## **Monitor Level Controls**

**MONITOR LEVEL** - A precision rotary controller to attenuate the console loudspeaker outputs. Perfectly tracks the stereo image at any listening level.

**AFL/PFL** - Uses Marinair<sup>®</sup> Transformers to give accurate AFL voltage soloing and can be boosted by 10dB. **ALF/PFL** sets the level for the non-destructive solo bus of the console. Both **AFL** and **PFL** solo modes are activated either on a channel-by-channel basis by Isolating selected channels or by pressing the **SOLO SAFE** global function. Once pressed, any channel solo button will now be **AFL**, unless the **AFL/PFL** pot is pressed and the **PFL** light is lit. Reverb returns and **AUX** masters are **AFL** by default.

**TB DIM** - Sets the amount that the **CUE** bus and optional **AUX** 2 & 3 busses are reduced by when **CUE TB** or producer return talkback is active.

**DIM POT** - Sets the amount the Control Room Monitor level is reduced by when the **DIM** button is pressed.

CUT - Mutes the console LS outputs.

**DIM** - Reduces the loudspeaker output of the console by the amount set by the **DIM POT**, displays as a solid light when dim is pressed, flashes if **CUE TB**, Producer **RTB** or the talkback footswitch is pressed.

**MONO** - Sums the left and right loudspeaker outputs of the console into a mono signal which is then fed to both the Left and Right speaker outputs equally.



**A** - Routes the control room monitor audio path to the speaker output **A LS O/P** XLRs on the rear of the console.

**M1** - routes the control room monitor audio path to the speaker output **M1 LS O/P** XLRs on the rear of the console.

**M2/RTB** - routes the control room monitor audio path to the **M2 LS O/P** speaker output XLRs on the rear of the console. **M2** has the added feature of having Return Talkback capability, the **RTB** signal from the live room can be routed through the console into the **M2** XLR outputs. When **RTB** is engaged, the signal is fed directly into **M2** monitors, this allows for quick communication between the live and control room.

**TB DIM** - Trim calibration point allows for setting attenuation of the cue mixes when talkback is engaged. It runs from 0 to - 35dB. If **DIM** is also engaged, the attenuation levels are multiplied together.





### **Overview**

The 8424 console features 2 large backlit VU meters which display level in Volume Units. The VU meters can be used to monitor a number of different console signal sources.

### Meter Select

MIX - Selects the Stereo Mix output as the VU meter signal.

G1/2 - Selects Group 1 (Left) and 2 output (Right) as the VU meter signal.

G3/4 - Selects Group 3 (Left) and 4 output (Right) as the VU meter signal.

AUX 1/2 - Selects AUX 1 (Left) and Aux 2 (right) bus as the VU meter signal.

AUX 3 - Selects AUX 3 (Left) mix bus as the VU meter signal

Aux 1/2 and AUX 3 - together shows the Left (AUX 3) and right (AUX 2) Cue Mix 2 signal.

**MON** - Selects the control room monitor Left and Right output as the VU Meter signal.

CUE - Selects the Left and Right cue Mix bus output as the VU Meter signal.

**REV 1** - Selects stereo reverb return 1 as the VU Meter signal.

**REV 2** - Selects stereo reverb return 2 as the VU Meter signal.



# Services

The 8424 Services screen allows users to globally select master controls, engage Talkback and reverse talkback options controls and access and assign the oscillator functions.

The services screen is a 16-character digital display that shows the top menu titles **MAST, TALK, OSC, SYSTEM**. The buttons either side of the screen are for service screen navigation.

- Returns to the top title menu.
  - Scrolls forwards through menu options one at a time.
  - Scrolls backwards through menu options one at a time.
- Enters the four main menu tabs and activates selected parameters.

**CTRL** - Enables secondary functions. **Pressing CTRL** + **will jump to the beginning or end of the selected menu options.** 

### Master Options

**MIX** – Globally routes channels to the stereo mix bus.

MIX PAN – Globally activates channel PANS.

**GRP 1** – Globally routes channels to group 1.

**GRP 2** – Globally routes channels to group 2.

**GRP 3** – Globally routes channels to group 3.

**GRP 4** – Globally routes channels to group 4.

**ZERO IP A** – Globally resets all channel Input A DAW Interface outputs to unity gain.

ZERO IP B - Globally resets all channel Input B Line Inputs to unity gain.

**SOLO:** [LATCH]/[MOM] – Switches the console solo system from latch to momentary. Console default is LATCH

ILM: [Y]/[N] – IN Line Mode – Globally selects Input A to return on console Input C via the ST CUE controls.

## More information can be found at In-Line Mode

**INS IN –** Globally activates channel inserts.

**INS I/P C** – Globally assigns channel inserts to Input C.

**CUE PAN** – Globally activates channel ST Cue Pans.

**GRP PAN** – Globally activates channel Pan to Groups.

DIR PRE – Globally routes channel Direct Outputs as pre-fader.

CUE GRP – Globally routes channel Cue stereo outputs to group 3&4.

**GRP 1 PRE [Y]/[N]** – Routes Group 1 Direct Output as pre-fader.

**GRP 2 PRE [Y]/[N]** – Routes Group 2 Direct Output as pre-fader.

**GRP 3 PRE [Y]/[N]** – Routes Group 3 Direct Output as pre-fader.



**GRP 4 PRE [Y]/[N]** – Routes Group 4 Direct Output as pre-fader.

**IPA>DIR [Y]/[N]** – Routes channel 1-24 Direct Output from the Input A DAW Interface outputs. This is useful for printing stem tracks back into the DAW. The default channel Direct Output is Input B.

**AU/CU PC [Y]/[N]** – Aux Cue Pre-Cut. Globally alters the behaviour of the AUX and CUE sends when Input A is selected. When the **Y** option is selected, AUX and CUE sends are routed as pre-cut, matching the behaviour of AUX and CUE send when input B is selected.

# This option is designed for optimum behaviour when overdubbing

**SET ZERO** –Sets the zero point for the **ZERO FADERS** option. Manually move faders 1-24 to their 0 location, then press **CTRL + Enter** on the **SET ZERO** setting. This zero-fader position is now the location that faders will jump to when **ZERO FADERS** is pressed.

# See <u>Set Zero</u> for further information.

**ZERO FADERS** – Pressing Enter on this setting will reset channels 1-24 faders to zero, the zero point can be calibrated using the following **SET ZERO** option.

# See Zero Faders for further information.

# By default, this setting is calibrated in the Neve factory, however, the SET ZERO function can be used if you wish to set zero manually.

**DIS BYPASS [Y]/[N]** – Disables the default MDAC Bypass behaviour of the stereo mix fader for motorized fader consoles. When **[Y]** is selected, the MDAC will be in-circuit at all fader positions, removing the automatic bypass switching when the fader is moved to the zero position.

# See **<u>BYPASS</u>** for further information

# Talkback Options

TB AUX2 [Y]/[N] – Routes Talkback into AUX 2 buss.

**TB AUX3 [Y]/[N]** – Routes Talkback into AUX 3 buss.

**RTB COMP [Y]/[N]** – Activates the Return Talkback Compressor.

**RTB +48 [Y]/[N] –** Activates the Return Talkback Phantom power.

**RTB ENABLE [Y]/[N] -** Activates Return Talkback.

**SL DIR OP [Y]/[N] –** Routes Slate to all Channel Direct Outputs.

**SL GRP OP [Y]/[N]** – Routes Slate to all Group Direct Outputs.

SL MIX OP [Y]/[N] – Routes Slate to the Stereo Mix Output.

# **Oscillator Functions**

**OSC DIR** [Y]/[N] – Routes the Oscillator to the Channel Direct Outputs.

**OSC GP [Y]/[N]** – Routes the Oscillator to the Group Outputs.

**OSC MIX [Y]/[N]** – Routes the Oscillator to the Stereo Mix Output.

**OSC SL TB [Y]/[N]** – Routes the Oscillator to the Slate TB Output.



# TIP:

To quickly access ZERO FADERS

Enter the MAST submenu on the Services Screen

Press CTRL + to jump to ZERO FADERS at the end of the menu SAVE –Saves current console state to the 8424 internal memory. See Save

LOAD – Loads a console store from the 8424 internal memory. See Load

**NETWORK** – Opens the networking submenu. Options shown below

**DHCP: [Y/N]** – For use with the 8424 and Neve Updater Apps. Selecting **[Y]** will allow a connected network DHCP server to assign an **automatic IP address** to the 8424 console.

**SET IP:** for use with the 8424 and Neve Updater Apps. First, select **DHCP [N]** to enter a **manual IP address**.



Manual addresses are entered using the  $\P$ ,  $\blacktriangleright$ , **ENTER** and **CTRL** buttons. Addresses are entered 3 digits at a time.

ENTER toggles through plus 1 digit at a time

ENTER + CTRL toggles through minus 1 digit at a time

**CTRL+** toggles through plus 10 digits at a time



Once the entire address has been entered, select **YES** to enter the Manual IP address.

**F3 DAW** – Selects between **[CUBASE/NU] / [ABLETON] / [STUDIO ONE] / [LUNA]** as the default daw for the **F3** key.

Cubase/Nuendo information - Cubase/Nuendo DAW Controller Operation

Ableton information - Ableton

Studio One information - PreSonus Studio One

UA LUNA information- Universal Audio LUNA

**RESET DESK CONFIRM [OK]** – This software reset option resets the console back to its factory default start up setting, wiping any solo, routing and input trim setting. This option gives a five second countdown before reset is enacted. Pressing any key during this countdown will cancel the reset procedure.



# **Overview**

One of the main drawbacks of analogue console workflow is the long and arduous process of recalling console settings, fader positions and pot positions. On larger consoles, this process can take a very long time and can slow down the creative process. The 8424's internal Recall feature allows operators to save and load console switch settings, fader positions and hard pots within the 8424 internal memory. 8424 settings can be saved and recalled on a session-by-session basis enabling a fast, analogue console workflow that takes advantage of all features while remaining creative, efficient and productive.

## Save

The console save option scans all console settings and stores them in the 8424's internal memory. There are 99 available console stores that can be used to save console settings for different projects. Each store is numbered **[1]** to **[99]**.

### To save a Recall Store -

Enter SYSTEM menu and select [SAVE]



## The following window will appear -



- Choose a Console store [1] to [99] clicking ENTER or to toggle 10 at a time press CTRL + ENTER.
- Use the navigation arrows to select [OK]





# TIP:

The 8424 Save and Backup feature is available for console firmware versions 5.0 and above.

This feature is available via the 8424 App (version 2.0 and above) and enables saving of console stores directly to the DAW computer.

See The 8424 App – Snapshot Backup for more information. Once pressed, a 5 second countdown will begin while the console panels are preparing to save settings.



If you do not wish to save over the selected store, either press the HOME button or select CANCEL



Once the save process is complete, switch settings, channel trims, pot positions, and fader levels are now stored, along with the master section switch settings, pot positions and fader levels.

8424 settings exempt from the console store -

- Talkback Level
- Solo Settings
- Control room Monitor CUT
- 1073 1 Trim
- 1073 2 Trim
- Instrument DI 1 Level
- Instrument DI 2 Level
- Master menu settings (except IPA> DIR, ILM, SOLO [LATCH/MOMN], GRP 1 PRE, GRP 2 PRE, GRP 3 PRE, GRP 4 PRE)
- TB menu options
- OCS Menu Options

Once saved, the services screen will revert to the top title menu.

## Load

The load option allows users to select any of the 99 Recall Stores to recall. Loading a Recall store will overwrite the current console switch settings automatically, the user can then choose to recall the hard pots and fader settings or to leave them in their current state. Stores can only be loaded from an active recall save file, if there is no data stored on the selected store number, the load process will not begin.

For consoles with motorized faders, the faders will automatically move to their correct recall positions. Only the hard pots will need to be recalled.

As a safety feature, the MONITOR CUT will always activate after loading a console snapshot.

# TIP:

The 8424 Load and Restore feature is available for console firmware versions 5.0 and above.

This feature is available via the 8424 App (version 2.0 and above) and enables saving of console stores directly to the DAW computer.

See The 8424 App – Snapshot Backup for more information. To load a Recall Store -

• Enter SYSTEM menu and select [LOAD]



The following window will appear -

Choose a Recall Store from [1] to [99], toggle through stores by pressing ENTER, or to toggle 10 at a time press CTRL + ENTER.



 Once the selected store is found, use the navigation arrows to select [OK]



Once pressed, a 5 second countdown will begin while the console panels are preparing to load settings.



 If you do not wish to save over the selected store, either press the HOME button or select CANCEL



Once the countdown is complete, the console snapshot will be automatically loaded, this includes all console soft-switch settings such as mutes, routing, aux on/off pre/post state and input trim settings.



Once the Snapshot loads (following a 2 second delay), the Recall store load process will prompt the user to begin the recall procedure.

Select [OK] to begin the recall procedure. If hard pot/fader recall is not required, select [CANCEL]



## Auto Scan

The Recall auto scan starts once OK has been pressed. This procedure automatically scans all console pots and faders from channel 1 to 24. Settings are read from the top of each channel strip downwards, scanning from **ST CUE PAN** down to the channel **FADER**.



Each channel strip **SOLO** will light up as the channel strip settings are automatically scanned.



This process is repeated for all 24 channels and then the master section is scanned. All four group **SOLOS** will illuminate as the master section is being automatically scanned.

The auto scan procedure scans the entire console 3 times, this ensures total accuracy and compensates for any manual pot/fader motions entered by the operator during the auto scan process.

## Pot Recall

When the auto scan process finds a pot that is out of position from the Recall Store saved position, the service window will display the channel number **(1)** first, followed by the parameter name (in this example – **PAN**) on the left side of the screen. The right side of the screen will display a horizontal line with two attached vertical lines. L and R represent the Left and Right pan pot directions.

The Top vertical line represents the current pot position.

The bottom vertical line represents the Console Store Saved pot position





# **Saved Pot Position**

In the above example, **Channel 1 PAN** needs to be turned clockwise (Right) in order to match the saved pot position. As the pot is turned, the top vertical line will sweep across until it matches the saved pan pot position.

Once the pot is in the correct position **<MATCHED>** will momentarily appear on the screen.



The pot position now matches the console store. The auto scan process will continue until it discovers another pot or fader position out of place from the saved Recall store.

# Fader Recall

The example below shows a that auto scan has found a fader out of position on channel (1). - and + represent fader level down or fader level up.



vertical line will sweep across until it matches the saved fader position.

For users with the motorized fader upgrade, faders will automatically move to their saved recall positions.

Once the fader is in the correct position **<MATCHED>** will momentarily appear on the screen.



The fader position now matches the Recall store. The auto scan process will continue until it discovers another pot or fader position out of place from the saved console store.

Please take extra care when adjusting fader positions, due to the high resolution of logarithmic-scale faders, fast motions can cause the auto scan to skip this fader setting until the next auto scan cycle.

Press HOME at any time to stop the auto scan and exit recall.



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# Manual Recall

At any point during the auto scan process users can enter manual recall mode. This mode of operation allows users to manually recall individual channel settings or master section settings without having to auto scan and recall the entire console.



To manually recall a selected channel, simply press the channel **SOLO** button during the auto scan process. When pressed, the auto scan is stopped, and the recall program is focused only on the selected channel.

The display will now show and remain focused on the topmost channel setting (**ST CUE PAN**)

Use the ◀ and ▶ to toggle through settings in the following order – **ST Cue Pan> ST Cue Level> AUX 3 > AUX 2 > AUX 1 > PAN > Fader** 

If settings match, the saved setting from the console store **<MATCHED>** will show on the display.



if the setting does not match, the horizontal line will appear until the pot/fader has been reset.



In Manual mode, the operator must toggle through each selected channel strip setting manually by pressing the  $\triangleleft$  and  $\triangleright$  keys.

To select adjacent channels in manual mode press and hold **CTRL** and press the **d** and **b** or press the adjacent channel solo button.

To manually recall a master section setting, press any of the 4 group solo buttons.

The display will now show and remain focused on the topmost master section setting (**REV RETURN 1 LEVEL**).

Use the  $\triangleleft$  and  $\blacktriangleright$  to toggle through master section settings and adjust as required. Settings will appear as **<MATCHED>** or the horizontal line will appear if settings do not match the Console Store.

To exit manual mode, press the selected channel **SOLO** button again. This will return the recall procedure to auto scan mode.

Press HOME at any time to stop the auto scan and exit recall.



# **Return Talkback Options**



RTB Activation, Compression Threshold, Gain level and Phantom Power are accessed from the services screen

### **Overview**

The 8424 includes a Return Talkback feature that can be used in three different ways depending on your studio requirements.

The Return Talkback system has its own microphone controls, Gain, Phantom power and Compressor circuit. The Mic Gain level is controlled from the **RTB GAIN** trim controller at the rear of the console. At the factory this level is set to 40dB but can be adjusted with a small flat head screwdriver counter clockwise to reduce gain, or clockwise to increase the Return Talkback Mic Gain.

The Return Talkback system has +48v Phantom power which can be activated via the services screen option **TALK>**<u>RTB +48 [Y]</u>

The return talkback system has its own compressor circuit which is activated from the Services screen under TALK>RTB COMP [Y] The Threshold of the compressor can be adjusted with a small flat head screwdriver via the RTB THR controller at the rear of the console. From the factory, the threshold is set to OdB and can be adjusted counter clockwise to reduce the threshold, or clockwise to raise the threshold.

Once the **RTB GAIN** and **RTB THR** are set, adjust the **RTB TRIM** pot at the right of the **RTB** button on the console surface to set the final return talkback microphone gain levels.

### Live room Return Talkback

Live room return talkback enables seamless two-way communication between the studio live room and the studio control room. This function is particularly useful when not every performer in the live room has a microphone. With live room return talkback every performer can communicate effectively with the producer and studio engineer.

The live room Return Talkback microphone must be connected via the **RTB** XLR on the rear of the console.

This default Return Talkback mode routes the **RTB** signal into the **M2** Loudspeaker outputs. When the **RTB** button is pressed and illuminated, the return talkback signal can be monitored through any loudspeaker system connected to the **M2 LS O/P XLR LEFT & RIGHT** outputs at the rear of the console.

M2 speakers are used to listen to the studio live room independently of the control room mix on outputs A or M1. If the control room monitor signal is sent to the M2 speaker set, RTB will be cancelled. RTB can only be activated if A or M1 is selected as the control room monitor loudspeakers.

**RTB** must be enabled by switching the RTB system on in the services screen via **TALK>RTB ENABLE [Y]** 

The RTB switch will only function once this step is completed.



# Producers Sofa Mic

As an alternative, the 8424 return talkback can be used to create a second talkback feed from the control room into the live room. In this mode, the **RTB** signal is not sent to **M2**, (as is the case for the Live Room Return Talkback mode) but instead is sent to the **CUE** bus. This allows a producer at the back of the room to talk to performers by using a switchable producer microphone connected to the **RTB MIC** input along with a remote switching device connected to the **DC REMOTES** 15-Pin connection at the rear of the console. Producer Talkback mic gain and compressor settings are adjusted at the rear of the console, Phantom power is set in the services screen at **TB>RTB +48V: [Y]** 

## Producer talkback is unaffected by RTB TB trim.

When the Producer Mic is in use, the **CUE TB** button will flash to indicate that the producer **RTB** is active. The engineer can override the **RTB** producer mic by pressing and holding the **CUE TB** button. Producer talkback is automatically patched to the same aux and cue busses as the 8424's internal **CUE TB**, no additional patching is required. The Producer talkback will also activate the **TB DIM** in the same way as the engineer talkback system. **CUE TB** and **DIM** will flash indicating Producer return talkback active.

Engineer talkback is always the Master Talkback system.

# Additional Recording Input

The Return Talkback system also has the ability of becoming an additional recording input from the live room. The Return Talkback mic in the live room is connected to the console **RTB MIC** XLR input connector on the rear of the console. This signal passes through the adjustable internal **RTB** microphone preamp and compressor circuit within the console and is routed out of the **RTB O/P** XLR connector at the rear of the console. This can then be patched manually with an XLR>¼"TRS cable back into any console channel **Input B** and mixed along with the other console channel inputs, alternatively this can be patched directly into the audio interface and recorded into the DAW.

In this mode the **RTB** circuit does not need to be activated either from the services screen or from the **RTB** button on the console surface. The mic simply needs to be patched to wherever it is required, with the phantom power, gain, compressor and **RTB TRIM** settings set appropriately.



# Service Outputs (DC Remotes)



The 8424 console has a 15-Pin, 5 Channel D-Type connector on the rear of the console, Labelled as **DC Remotes.** These service outputs allow for several external control options and can be controlled by a number of custom-built remote switches or connected footswitches.

Pin 1 provides the on/off switch for producer RTB.

Pin 2 provides an external control for remotely activating the Monitor DIM.

Pin 3 provides an external control for remotely activating the monitor CUT.

**Pin 4** provides an external control for remotely activating Engineer Talkback.

Pin 5 provides an external control for remotely activating Return Talkback.

**Pin 6** provides a 5v supply for the producer talkback switch.

Pin 8 ground pin (Digital).

Pin 7, 9, 10, 11, 12, 13, 14, 15 not in use.

Service Pin outs are available at DC remote Pin Out Functions



# **2T VU MTR OSC & TB**



The 8424 15-pin connector labelled as **2T VU MTR OSC & TB** output provides console outputs external devices such as VU meters, external talkback systems as well as providing an external Oscillator output for use when calibrating connected audio equipment.

**Channels 1 and 2** are for External VU meter outputs, these can be connected to any external Large VU or Linear phase VU meter. The VU trim pot located at the rear of the console allows for calibration of this external send.

Channel 3 is not in use.

**Channel 4** is used as an external Talkback send, this is always active and post talkback master level control. This can be used to feed any external talkback system.

Channel 5 is used as an external Oscillator send and is set at +4dBu.

2T VU outs are available at 2T VU MTR Pin Out Functions



# **Example Application - Mixing**

The primary input for mixing is **Input A**. This is fed via D-type connections directly into the console from the DAW Audio Interface. When 24 DAW outputs are connected via the consoles three **Input A** D-type connectors, 24 separate channels of audio can be mixed through the consoles Stereo Mix Bus, through the 4 Mono Group busses through the Group direct outputs or bounced as individual stems back into the DAW by using the channel Direct Outputs. The 8424 has Marinair<sup>®</sup> Transformers on its Stereo Mix bus for true Voltage mixing. The processing on the master section of the console (*Group/Stereo Mix EQ's, Stereo width control, Channel, Group or master hardware inserts, 500 series inserts*) allow for versatile tone shaping of Group signals and the main Stereo Mix signal. If your session requires more than 24 mix channels, there is no need to sum multiple DAW channels into console stereo pairs. The consoles **48 MIX** mode gives the capability of mixing 48 separate channels simultaneously through the console. DAW interface Outputs 25-48 can be fed from the Audio Interface into the **Input C** D-Type connectors on the rear of the console.

## Further information at **<u>48 Mix Mode</u>**



# **Example Application – Recording**

When recording through the 8424 console, **Input B** allows individual line-level signals to be patched directly into the channel inputs via the ¼" balanced jack connections at the rear of the console. Any external Preamp line outputs can also be patched into the console via **Input B**, allowing multiple microphone sources to be recorded through the console surface. Up to 24 channel signals are then fed through the Direct Output trim control (either pre or post-fader), through the D-Type connector on the rear of the console and back into the DAW interface inputs. Instruments in the control room can be patched directly into the consoles two Instrument D.I inputs under the front armrest, through any optional 500 series processing and into channels 19-20 via smart routing which can then be sent via the Direct Output Trim control (pre or post-fader), through the D-Type connector on the rear of the console can be connected to the two 1073 preamps and fed to channels 17 & 18 via smart routing which can then be sent through the Direct Output Trim control (pre or post-fader), through the Direct Output Trim control (pre or post-fader), through the Direct Output Trim control (pre or post-fader), through the Direct Output Trim control (pre or post-fader), through the Direct Output Trim control (pre or post-fader), through the Direct Output Trim control (pre or post-fader), through the Direct Output Trim control (pre or post-fader), through the Direct Output Trim control (pre or post-fader), through the Direct Output Trim control (pre or post-fader), through the Direct Output Trim control (pre or post-fader).



# **Example Application – Overdubbing**

The channel **IPA/IPB** button enables fast input selection for individual channels, allowing for overdubs to be quickly performed and recorded alongside DAW return channels. Globally select **Input A** to return your previously recorded DAW tracks back through the 8424's 24 channels. Overdubs can be recorded on any chosen channel 1 to 24 by selecting **Input B** as its channel input source. The selected channel will be setup to feed the channel Direct output into the DAW ready to record an overdub track. DAW return and live overdub tracks can be monitored in the control room at the same time through the Stereo mix bus and can both be sent to the **ST CUE** output to feed performer headphones. The recorded track can be monitored In-line on the same channel strip by activating **ILM** mode or manually applying **IP/A** to the selected channels **ST CUE** bus. This allows you to check your overdub in the mix without sacrificing channels or switching from your recording Input B. In-Line mode also allows you to record with DAW plugins active, simply deselect **MIX** on the selected overdub channel and monitor the recorded signal coming back from the DAW through the **ST CUE Input A**.



Further information at In-Line Mode

# 48 Mix Mode







This mode of operation doubles the channel count of the 8424 console and enables 48 separate mono DAW inputs to be mixed simultaneously. This mode splits the console into two layers - The channel faders (**I/P A**) will input DAW interface outputs 1-24 and the **ST CUE** bus uses Input (**I/P C**) to input DAW interface outputs 25-48. Additional DAW outputs can be patched from your audio interface and into **Input C** D-Type connectors at the rear of the console.

To enter **48 MIX** mode simply press the **48 MIX** button in the console master controls section. Pressing **48 MIX** activates several routing options:

- All previous **ST CUE ON** switches, **PRE/POST** state and Input selection (I/P C, I/P A) are overridden.
- All channel ST CUE inputs are set to I/P C.
- All ST CUE channel sends are switched ON.
- The **SIP** Solo system is linked to the **ST CUE** along with the channel faders.
- **CUE BUS** is selected, routing the **ST CUES** to the Stereo Mix fader.

In **48 MIX** mode, the Cue Master bus now becomes the master fader for all **I/P C** DAW Interface Outputs 25-48. The Cue Master bus must be switched **ON** by pressing the **CUE** master pot in the master section of the console.

Channels 1-24 **ST CUE** now become level and pan controls for DAW returns 25-48 **(I/P C).** These inputs run in-line alongside the DAW monitor returns 1-24 **(I/P A)** which are controlled by the channel fader and pan at the bottom of the channel strip.

The insert on the channel strip can be assigned to either **A** or **C** input by selecting or deselecting the **INSERT I/P C** button.

To solo DAW returns 25-48, press the **CUE** level pot, this function now no longer acts as an **ON** switch. In **48 MIX** mode pressing the Cue level pot will **SOLO** the signal and the **ON** LED will flash to indicate solo active.

Channels can be removed from **48 MIX** mode on an individual basis one at a time by pressing and holding the **ST CUE PAN** then pressing the **ST CUE** level control simultaneously. When removed, the **ST CUE** will once again function as a traditional Cue send.

Pressing **48 MIX** a second time exits **48 MIX** mode and the channel **ST CUE** sends are switched off and **Input C** is de-selected. Any channel **ST CUE**s that were individually removed from **48 MIX** mode will remain on and function as Cue sends.

As an alternative to the Cue Master bus, the cue outputs can be sent to Group masters 3&4. This option gives a second pair of master faders for DAW Interface outputs 25-48 which can be processed independently of inputs 1-24. To send 25-48 to Groups 3 & 4 globally select **MAST><u>CUE GRP</u>** from the services screen.

# In-Line Mode (ILM)



The 8424 is capable of functioning as an In-line studio console, with the **ST CUE** level control becoming the monitor return 'Small Fader'. This allows for simultaneous mixing of both recording line inputs (**I/P B**) on the channel faders and monitor return inputs (**I/P A**) on the **ST CUE** controls. These inline monitor returns can either be routed to the mix via the cue bus, or to groups 3+4 which then become the master fader for any selected monitor returns.

**ILM** works in a similar way to **48 MIX** mode, each channel **ST CUE** can select either **Input A** for DAW returns 1-24 (In Line mode) or **Input C** for DAW returns 24-48 (48-Mix mode)

To select Input A as the Stereo cue source-

Press and hold the CUE PAN and then press the ST CUE controller twice. I/P C I/P A LED will illuminate Green to indicate that Input A is the ST CUE source.

To toggle between I/P C or I/P A Cue send source-

When the I/P C, I/P A LED is illuminated, press and hold A/B CH IP at the top of the channel strip then press the ST CUE controller, The I/P A I/P C LED will illuminate Green to show that Input A is the signal stereo cue source or will illuminate Yellow to indicate that Input C is the signal source for the stereo cue send.

# To globally set ILM mode

- Press 48 MIX
- ► In the services menu go to MASTER>ILM: [Y]
- ► This will globally select Input A as channel 1-24 ST CUE input source.

When using the console in this mode, **Input A** is routed into the channel **ST CUE** Via **Input C**. Inserts can be assigned to recording channel path (**Input B**) or to the Monitor return input path (**Input A**) via the **IP C** and **INS** buttons.

The channel **ST CUE** Level and **PAN**s now control the DAW Monitor Returns, and the channel faders and pan pots will control the recording inputs.

The monitor returns and recording inputs can be monitored through the Stereo Mix bus at the same time by pressing the **CUS BUS** button above the Master Fader. The **CUE** Master pot will now be the main level control for the monitor returns and must be pressed and switched ON.

If separate control or processing is required for the Recording or Monitor Return inputs; the monitor returns (Input A) can be routed through Group 3+4 by pressing and holding each ST CUE pan pot, then pressing the channel GRP 3 or GRP 4 routing button. The CUE LED in-between group 3 and 4 routing buttons will illuminate RED to indicate that the channel ST CUE is routed to the group rather than the channel. The GRP 3 + GRP 4 routing buttons themselves will also illuminate RED when pressed in this mode. Recording inputs (Input B) can then be routed to groups 1+2 by pressing the GRP 1 + GRP 2 buttons or into the Stereo Mix. Pressing GRP PAN will allow the channel and ST CUE pan pots to assign to the group routing.

Global Cue to group routing can be activated from the services screen by selecting MAST>CUE GRP





# **Parallel Processing**



The 8424 has the capability of sending Input A (DAW interface Outputs 1-24) to two locations on the same channel strip. Both into the main channel input and into each channel **CUE** Input. This is the same function that enables In-Line Mode **(ILM)**.

Since this function splits the DAW signal into each channel and sends it to both the Channel fader and to the **CUE** controls, this allows for parallel processing of mix signals by adding a hardware insert onto one of the signal paths Channel - **INS** or Cue - **INS I/P C** and leaving the other signal unprocessed. Both processed and unprocessed signals can be blended into the Stereo Mix bus independently.







# To enable this function-

- Select channel Input A on the top of the channel strip via the A/B
  CH IP button. Alternatively, this can be globally selected by pressing the A/B CH IP button in the master section of the console.
- Select Cue Input A for each channel by Pressing and holding the CUE PAN and then press the ST CUE controller twice. Alternatively, this can be globally selected by selecting ILM from Services>MASTER>ILM: [Y]

The signal for each selected channel fader and **CUE** is now being fed from the same DAW interface output simultaneously. Depending on how you wish to process this, hardware inserts can be added to either the channel fader by pressing **INS**, or to the **CUE** controls by pressing **INS** and **I/P C**.

The CUE signals for the selected channels can be blended into the Stereo Mix fader signal by pressing the **CUE BUS** button above the stereo master fader.

Alternatively, the cue signals can be routed to the groups by pressing and holding the **ST CUE** Pan pot and then pressing **GRP 3** or **GRP 4** button. Group 3+4 buttons will illuminate **Red** to indicate Cue to group routing.

Unprocessed Channel and Processed Cue signals can now be blended together using both the channel faders and the **ST CUE LEVEL** controls for all 24 DAW returns. Cue to group routing can be used to parallel process large groups of DAW return signals by using the Group Insert points.

# Audio Interface Setup

Interface Type & Size	Interface I/O	Console I/O
8 x I/O Audio Interface	8 DAW Outputs	8 Channels - Input A
(Minimum I/O required)	8 MIX Inputs	2 Stereo MIX, 4 Group, 2 x 1073
		O/Ps
16 x I/O Audio Interface	16 DAW Outputs	16 Channels - Input A
(Capable of using most console	8 DAW MIX Inputs	2 Stereo Mix, 4 Group, 2 1073
features)	8 DAW Channel Inputs	Outputs
		8 Channels - Direct Out
32 x I/O Audio Interface	32 DAW Outputs	24 Channels - Input A
(Recommended I/O to enable full		8 Channels - Input C
console functionality and use of	8 DAW MIX Inputs	2 Stereo Mix, 4 Group, 2 1073
all features)	24 DAW Channel Inputs	Outputs
		24 Channels - Direct Out

# 8x I/O Audio Interface

An 8 in 8 out AD/DA audio interface will allow for 8 DAW Interface Outputs patched into 8 channel inputs via Input A, as well as 8 mix outputs from the console such as main Left and Right Stereo Mix, Group 1-4 outputs and 2x Direct Outputs either from the 1073 outputs or D.I channels 19-20 direct outputs. The remaining console channels can be used as recording inputs via Input B which can be mixed through the master section along with the DAW returns and recorded back into the DAW. This simple setup will allow mixing of 8 mono or 4x stereo pairs of groups or individual DAW signals through the consoles master section and recorded back into the DAW from the Stereo mix bus or group outputs, benefiting from any channel inserts, 500 series or master section processing. The outputs from the 1073 preamps or the DI channels can also be patched directly into the interface to be recorded by the DAW.

# 16x I/O Audio Interface

A 16 in 16 out AD/DA audio interface will allow for 16 DAW returns into 16 channel inputs via Input A, as well as 8 mix outputs from the console such as main Left and Right Stereo Mix, Group 1-4 outputs and 2x direct outputs either from the 1073 outputs or D.I channels 19-20 direct outputs, plus 8x direct outputs from any selected channel. The remaining console channels can be used as recording inputs via Input B which can be mixed through the master section along with the DAW returns and recorded back into the DAW or sent as pre/post fader stems via the channel Direct Outputs. This setup will allow mixing of up to 16 DAW channels along with any live instruments patched into the console via channel Input B through the consoles master section. The overdub inputs can be recorded into the DAW from the mix bus or group outputs, benefiting from any channel inserts, 500 series or master section processing. 8 stem tracks can also be sent directly from the Input B channels via the channel Direct Outputs. The outputs from the 1073 preamps or the D.I channels can also be patched directly into the interface to be recorded by the DAW.

# 32x I/O Audio Interface

A 32 in 32 out AD/DA audio interface allows for full functionality of the 8424 console. with this setup, 24 DAW returns can be patched into all channel inputs via Input A, and a further 8 can be patched into Input C. This enables simultaneous summing of up to 32 individual audio channels through the console using 48 MIX mode. (a 48-output interface is required to use all 48 summing inputs). The 8 mix outputs from the console such as main Left and Right Stereo Mix, Group 1-4 outputs and 2x direct outputs from the 1073 outputs can be patched into the interface. The direct outputs from the consoles full 24 channels can now be patched into the audio interface giving full functionality as an In-line mixing and recording console. This flexible setup allows every channel to be used as either Input A DAW returns or Input B recording inputs. Users can record, mix and overdub through any of the consoles 24 channels. A choice of mixing methods is now available, such as creating individual DAW stems from any of the consoles 24 channels or using a multitude of mix bus paths to mix audio through the console surface and back into the DAW. Input C can be used to return additional DAW signals through the channel ST CUE bus.

# Firmware Updater App



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Control Panel Home

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💺 > Control Panel

The Neve Firmware Updater app is used to check your unit's current firmware version and to perform firmware updates if required. The windows application is 32-bit software supported by windows 10. The Mac 64-bit software supports OSX Mojave & Catalina 10.14/10.15 only.

### Installation instructions

The Neve firmware update software can be found at www.neve.com, 8424 product page, under 'Support Docs'. Run the installer package on your PC/Mac and follow the on-screen steps. Once installed, the computer is ready to be connected to your 8424 Console via ethernet.

### **Physical Connection Instructions**

The console can be connected to the computer in one of two ways.

- Making a direct Mac/PC>Ethernet cable>8424 console connection. When connecting this way, manual IP addresses must be assigned on both computer and 8424 console.
- Connecting via a network switch. Mac/PC>Ethernet cable>Network Switch (the switch must also be connected to a valid network server)>8424 console. This method can use auto assigned DHCP IP addresses on both 8424 and computer.

If using DHCP mode on a valid Network, skip the following manual IP address setup instructions.

### Manual IP address setup - Windows PC

- Open control panel>Network&Internet>Network and Sharing Centre
- ► Click Change Adapter Settings

Highlight the Ethernet connection and click Properties ►





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Language & Region Security & Privacy

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- Click Internet Protocol version 4 (TCP/IPv4) ►
  - Click Properties

- Click use the following IP address
- Enter a manual IP address 10.10.251.005
- Enter Subnet Mask 255.0.0.0
- Alternative address 192.168.99.005
- ► Alternative Subnet Mask 255.255.255.0

# Manual IP address setup Mac

Open System Preferences Click Network

Network Location: Automatic 0 Status: Cable Unplugged Either the cable for Thum not plugged in or the dev is not responding. derbolt Ethernet is rice at the other end Configure IPv4: Manually

.

Time

Advanced... ?

Revert Apply

- Alternative address 192.168.99.005
- Alternative subnet Mask 255.255.255.0 ►

Once a manual IP address has been selected on the computer, the 8424 manual IP address must be assigned within the same IP range

- Select the ethernet connection on the left Click the Configure IPv4 dropdown box Select Manually
  - Enter a manual IP address 10.10.251.005
  - Enter Subnet Mask 255.0.0.0

## Manual IP address setup 8424 Console

On the console services screen, select the **SYSTEM**> tab and navigate to **NETWORK**>**SET IP**. Follow the Instructions to enter a manual IP of-



Alternative address – 192.168.99.004



Once the IP Address is entered, select YES and press the enter key. The console must now be power cycled to enter the manual IP address.

# Firmware Update Software

Once connected the software can scan for the connected 8424 and will prompt the user to begin firmware update if required.

## Mac OSX Notes

For some Mac user accounts certain applications may be quarantined upon installation, this is a security setting on Apple's operating system and if the Neve Updater app is quarantined it may not work correctly. If when updating firmware, the message **'Update Firmware File Missing'** appears please ensure that the Neve updater app is not quarantined and follow the steps below-

- Open Terminal from Applications/Utilities/Terminal
- Enter the following command: xattr -d -r -s com.apple.quarantine "/Applications/Neve/"
- Enter your user/admin password when prompted
- Close Terminal window

# Performing a Firmware Update

- Set the 8424 IP address via the services screen, instructions found on page 48 under System
- If using an automatically assigned DHCP IP address Connect the unit via the COMMS ethernet connection to your Network and connect the computer to the same network
- If using a manually assigned address, connect the unit directly to the computer with a CAT5/CAT6 ethernet cable
- Run the update software program
- Click 'scan network'
- Discovered units will appear in the Neve Products dropdown box.
- Product type, Name, IP address and Mac address will be displayed underneath
- Select the unit to update from the drop-down menu



Type: 8424 Console | 8424 Console Type: 8424 Console Name: 8424 Console IP: 1.1.1.201 MAC: 04:91:62:1F:72:DB Status: OK


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- Click Auto Update
- The panels requiring firmware updates will appear on the app screen and the update process will begin.

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The software will update the firmware in three stages which is indicated on the progress bar.

- 1<sup>st</sup> grey progress indicator is entering boot mode then another is shown to indicate erasing memory status.
- 2<sup>nd</sup> blue indicates update progress.
- 3<sup>rd</sup> grey indicates exiting program mode.
- Lower thin grey progress indicator is overall progress.

The 8424 front panel will enter boot mode when programming, please do not press any buttons on the unit during this process.

Units can be renamed by clicking rename (Max 21 characters)





To identify your hardware units, select the unit from the dropdown menu then click **'Identify'**. The 8424 consoles **CTRL** button will flash to identify the console.





**Advanced** is reserved for the use of AMS Neve engineers when manually uploading firmware.

It is not recommended for end-users to enter this mode.

The About window displays the software system information and the available firmware versions.

## The 8424 App - Remote OPX Control

#### Introduction

The 8424 app facilitates a software link between the 8424 console, DAW computer, and up to three 1073OPX units. The app is run on your DAW computer which must be connected via ethernet to the same network as the 8424 and 1073OPX units. Once links are made, the 8424's Trim encoders (set to FNC mode) can remotely control the Gains of the connected 1073OPX('s).

#### Installation instructions

The 8424 app is installed as part of the firmware updater package, **follow steps at** <u>Firmware Installation instructions</u>

When installed, the application - **Neve 8424** - will appear in the 'Neve' folder on your computer.

#### **Physical Connection Instructions**

There are two ways to connect the 1073OPX, 8424 console, and computer together. Both methods require the creation of a local area network (LAN). Ethernet connections from the 8424, OPX('s) and computer can link together by using an unmanaged network switch.

#### **Connection Diagram**





#### IP Address Setup

Once the physical connections are made, each connected unit (8424, OPX, and Computer) must be set on IP addresses within the same range.

#### Automatic IP address setup (DHCP)

If the LAN network is also connected to a valid DHCP server via the studio ethernet connection (red arrow in connection diagram) the 8424 console can be set to DHCP. This can be assigned on the 8424 console from the services screen under **SYSTEM>DHCP:** [Y/N] Once set, power cycle the 8424 console to set the console as DHCP.

The 1073OPX('s) must also be set to DHCP, this is achieved by pressing and holding OPX gain 1+8 together, then selecting DHCP by pressing channel 1 +48v.

More information can be found on page 17 of the Neve 1073OPX user manual.

The DAW computer IP address must also be set to automatic DHCP.

Mac- open preferences>network settings and select the LAN Ethernet connection then choose DHCP.

PC – Open Control Panel>Network and Internet>Network connections. Then right click the LAN ethernet connection, select internet Protocol Version 4 (TCP/IPc4) and click Properties. In the general tab, select 'Obtain an IP address automatically'.

#### Manual IP Address Setup

When not connected to a valid DHCP server via the studio ethernet connection, manual IP addresses must be assigned on all LAN devices.

#### Manual IP address setup - 8424 Console

On the console services screen, select the SYSTEM tab and navigate to SET IP. Follow the steps on **page 48** to enter a manual IP of-

#### 10.10.251.004



Alternative address – 192.168.99.004



Once the IP Address is entered, select YES and press the enter key. The console must now be power cycled to enter the manual IP address.

#### Manual IP address setup - DAW Computer

To set a manual IP address for your connected DAW computer See pages 63 and 64 of this User Manual.

Follow the steps on Manual IP address setup to enter a manual IP of-

- 10.10.251.005
- Alternative address 192.168.99.005



#### Manual IP address setup - 1073OPX('s)

To set a manual IP address for the connected 1073OPX's **see page 17 & 19** of the 1073OPX User Manual.

Follow the steps on page 17-19 to enter a manual IP for each OPX of-

OPX 1

 10.10.251.001 Alternative address – 192.168.99.001
 OPX 2
 10.10.251.002 Alternative address – 192.168.99.002
 OPX 3
 10.10.251.003 Alternative address – 192.168.99.003

#### 1073OPX console channel assignment

Before assigning the 1073OPX, ensure that the latest firmware version is installed on the device using the Neve Updater App version 3 or higher.

The 1073 OPX can be assigned to the console channels 1-8, 9-16 or 17-24. This is assigned from the IP Config menu on each 1073OPX device. To access IP Config more on the 1073OPX, press and hold gain pot 1 and 8 together.

When in IP config mode, channels 1, 2, and 3 high pass filter buttons are used to assign the 1073OPX to the 8424 console channel banks



HPF button 1 assigns the 1073OPX to console channels 1-8

HPF button 2 assigns the 1073OPX to console channels 9-16

#### HPF button 3 assigns the 1073OPX to console channels 17-24

When pressed, the 1073OPX units gain display will show the 8424 channel assignments.



#### 8424 App OPX Gain Control



The 8424 app works by scanning your computer ethernet ports, finding connected 8424 and 1073OPX units, and facilitating a software link between the hardware devices. The top bar of the 8424 app contains the control buttons listed below.





To identify your hardware units, select the unit from the dropdown menu then click **'Identify'**. A 1073OPX's **MONO** button will flash to identify the unit. An 8424 consoles **CTRL** button will flash to identify the console.

Type: Name: IP: MAC:	1073 OF OPX 1 S 192.168 54:10:E	PX STUDIO 3.99.145 C:D9:A4	2 :D0
ID: 8424 Cha	annels:	1 1 - 8	

When a 1073OPX unit is selected from the dropdown menu, the unit information will be displayed below.

Type: Product Name

Name: Can be changed by the user via the rename feature

IP: Network address set from the front controls of the OPX

MAC: Unique hard-coded identification of the hardware unit

The OPX 8424 channel assignment is displayed at the bottom of the information box.

Once your units are found by the 8424 app, clicking **Start Control** makes the final link between the 8424 and 1073OPX units.

While OPX control is running, a grey progress bar will appear at the bottom of the screen and will remain in continual motion.



O FNC

Start Control

**FNC** allows you to switch the selected console OPX control channels over to FNC mode automatically, this time saving feature allows instant control of the connected 1073OPX unit from the console FNC encoders.





**Auto Control** is another time saving feature that allows for fast connection to OPX units. When activated, the next time you open the app, it will automatically begin control of the connected 1073OPX units after scan and link.

**Set IP** allows you to speed up the scan and link process by focusing the scan onto only the IP addresses of the connected units. Clicking this window opens the below menu. In this menu you can enter the current IP addresses of your connected units.

	Set Manual 1	Ps	-	×
ĺ	Neve 8424 - 10	73 OPX Control	Manual IP Addresses	
	Neve 8424	010.010.251.004		
	1073 OPX 1	010.010.251.001	✓ Use Manual	
	1073 OPX 2	010.010.251.002	IP Addresses	
	1073 OPX 3	010.010.251.003		

If using DHCP, these IP addresses can be found when selecting the units from the main dropdown menu as shown below.

Neve 842	4 - 1073 OPX [Linked Devices] 24 Console   8424 Console 15100-12
Type: 10	73 OPX   OPX 1 STUDIO 2
Type: Name: IP:	1073 OPX OPX 1 STUDIO 2 192.168.99.145
MAC:	54:10:EC:D9:A4:D0
ID: 8424 Ch	1 nannels: 1 - 8

Once the IP addresses are entered into this menu, Click the Use Manual IP addresses tick box.

٨	🖌 Set Manual I	Ps	– ×	C
	Neve 8424 - 10	73 OPX Control	Manual IP Addresses	
	Neve 8424	010.010.251.004		
	1073 OPX 1	010.010.251.001	🗾 Use Manual	
	1073 OPX 2	010.010.251.002	IP Addresses	
	1073 OPX 3	010.010.251.003		

Once this process is complete, Scan & Link is achieved in less time.



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Start Control

About displays firmware information for the updater app



The 8424 app '**Start Control'** feature needs to be activated and the app must remain running in the background of your DAW computer in order for the OPX('s) and 8424 to remain connected.

#### **FNC Gain Control Operation**

Once setup is complete and the 8424 Start Control feature is running, the console trim pots can be used to control connected 1073OPX gain levels.

Each pot must be set to FNC mode.

#### 8424 console Channels 1-8



Moving the trim pot remotely adjusts the 1073 OPX gain level.

#### Service Screen OPX Gain Display

For additional accuracy, the service screen display is used to display remote 1073OPX Gain levels.



The 8424 channel number is displayed on the left of the screen in brackets - **(01)** The OPX parameter name (OPX Mic, Line or DI) is displayed the middle of the screen – **OPX MIC.** The OPX gain settings are displayed on the right of the screen - **70dB.** 

To interrogate the current OPX gain setting without adjusting the level Press and hold the ST CUE PAN pot then press the Trim encoder.



## The 8424 App – Snapshot Backup

#### Introduction

The 8424 app version 3 and above includes the offline snapshot backup and restore feature. This feature allows users to save and load an infinite number of internal recall stores onto the DAW computer. These stores can be archived and renamed from within the 8424 app, stored alongside the DAW mix session and backed up onto external USB storage if required.

#### Installation instructions

The 8424 app is installed as part of the firmware updater package, **follow Installation instructions** to install the software.

#### **Physical Connection Instructions**

The snapshot backup feature requires LAN or direct ethernet connection between the DAW computer and the 8424 console, in the same way as the 8424>OPX link. Follow the steps on pages 69-71 to setup this connection.

#### Scan & Link

Scan & Link must be performed in order for the 8424 and DAW computer to communicate. Once the process is complete, the 8424 Snapshot Backup tab window can be accessed.

#### 8424 Snapshot Backup Tab

To begin snapshot backup, first click **Stop Control**, Snapshot recall will not function while OPX control is running.











Open the Snapshot Backup Tab



#### <u>Refresh</u>

The **Refresh** button at the top of the Snapshot Backup tab searches the DAW computer documents folder for saved 8424 recall stores, if stores are found in the correct archive, the snapshot window will be repopulated.



#### Saving an Offline Store

The 8424 app Snapshot Backup option works by scanning the console's internal memory of 99 stores, providing an offline storage system to backup these stores into the DAW computer.

#### Backup

Backup is **non-destructive**. This option simply backs up the selected store from the 8424 internal store memory onto the DAW computer.

Choose one of the 99 stores you wish to back up to the DAW computer by using the up and down arrows.



Press **Backup** to save the selected store onto the DAW computer through the 8424 App.



The Enter Snapshot Name pop out window will appear.

Enter Snapshot Nam	e	
Backup Snapshot Name:		
8424_Console_MAC_04916229E0B1_StoreNo1_	15062021_114	959
	Cancel	ОК

The default naming convention is as follows

8424\_Console\_MAC\_04916229E0B1\_StoreNo1\_15062021\_114959

- **8424\_Console:** Name of console
- MAC\_04916229E0B1: MAC address to distinguish stores from different desks
- StoreNo1: The selected 8424 internal store (1 of 99)
- 15062021: Date snapshot was backed up (15/06/2021)
- 114959: Time snapshot was backed up (11:49, 50 secs)

Snapshot names can be changed from the Enter Snapshot Name window



Once entered, the snapshot will appear in the 8424 snapshot Backup window



#### **Backup All Stores**

Backup All Stores scans the consoles internal 99 stores and saves all of them into the DAW computer archive in one go. This feature is ideal when using the 8424 app for the first time after upgrading your console.

Press **Backup All Stores** to save all 99 internal stores into the DAW computer through the 8424 app.



Once the process is complete, the consoles stores will be saved to a subdirectory within the 8424 snapshots folder which can be accessed via the 8424 app



#### Save & Backup

Save & Backup is **destructive.** This option saves the consoles current state to both an internal 8424 store location (1-99) and to the DAW computer via the 8424 Snapshot backup app at the same time.

Press **Save & Backup** to Save the console's current state to the chosen store location and back up to the DAW computer at the same time



When saving using Save & Backup, the console's current state will overwrite the selected store number (1-99) in the console's internal memory

This will overwrite the selected store. Are you sure?
<u>N</u> o <u>Y</u> es

Pressing Save & Backup triggers the 8424's internal save system



Once pressed, a 5 second countdown will begin while the console panels are preparing to save settings.



This store is now saved on the console's internal memory, and backed up to the DAW computer via the 8424 app.

#### **Restore**

The restore function is **destructive**. This option copies the currently selected 8424 Snapshot backup store onto the selected store location (1-99) within the console's internal memory.

Highlight the offline store you would like to restore from the 8424 snapshot window



Choose one of the 99 stores you wish to restore the offline snapshot to using the **up** and **down** arrows.



Press **Restore** to save the offline snapshot onto the consoles internal memory

Otoro No.		•	Backup	Backup	Restore
Store No:	1		All Stores	Save & Backup	Restore & Load

Restore will overwrite the selected store number (1-99) in the console's internal memory





#### Load OPX Store

The 8424 App version 4.3 and above includes a powerful OPX snapshot linking feature. If OPX units are linked to the console via the scan & Link feature, their settings are included in the 8424 snapshot store file. When loading a store containing OPX snapshot data, a pop out window will open to ask the user if they wish to also load the OPX snapshot data.



When the snapshot loads, the OPX(s) settings will be loaded simultaneously.

#### **Restore & Load**

Restore & Load is destructive. This option restores the selected offline store onto the console's internal memory and loads the snapshot at the same time.

Highlight the offline store you would like to restore & load from the 8424 snapshot window



Press Restore & Load to restore the highlighted offline store to the console's internal memory



When saving using Restore & Load, the selected offline store will overwrite the selected store number (1-99) in the console's internal memory

?	This will or Are you su	verwrite the s ire?	elected store.	
		<u>N</u> o	Yes	



Pressing Restore & Load triggers the 8424's internal load system

Once pressed, a 5 second countdown will begin while the console panels are preparing to load settings.



This offline store is now loaded on the console's internal memory

#### Additional Archiving Options

Right(ctrl) + click the snapshot to open additional archiving options



#### Rename - renames the snapshot



#### Delete – Deletes the snapshot from the Snapshot folder



Open Snapshots Folder – Opens default snapshot storage location

Sn	apshots		
	🖞 🖸 Q Search		
Name ^	Date Modified	Size	Kind
📄 8424_Console21_144554.xml	7 Jun 2021 at 14:46	111 KB	XML

#### The default folder is located in Documents>Neve>8424>Snapshots

Stores can be moved or copied to the DAW session folder from the PC/Mac menus for further backup.



## **Motorized Faders**

# SOLO CUT



#### Introduction

The upgraded motorized faders the 8424 console differ in appearance to the faders previously mentioned in this User Manual. This section details the mechanical differences between manual and motorized faders. Further information on DAW control and fader functionality can be found at <u>DAW</u> <u>Control Setup</u>

#### Digital Scribble Strip Display

Motorized faders have the addition of the digital scribble strip. This display's main function is to show multiple layers of DAW information. In its default state the faders are in analogue mode and the scribble strip will show the analogue channel number (1-24).

#### Additional Keys

The **SEL** and **REC** keys are reserved for DAW control, their functionality depends on the current DAW in use.

Further information can be found at - <u>Pro Tools DAW Controller Operation</u>, <u>Logic DAW Controller Operation</u> & <u>Cubase/Nuendo DAW Controller</u> <u>Operation</u>

#### Fader Level Parking

When flipping the faders into **DAW MODE**, the analogue positions of the faders must be 'parked' so that the analogue audio level is retained while using console faders to mix In-The-Box. This is achieved by using MDAC technology. Channel 1-24 MDAC's are used to read the current fader output level and store it the when the fader is in **DAW MODE**. This output level is then restored when exiting **DAW MODE** by moving the fader accurately to its previously stored position.

#### Fader & MDAC Calibration

Just underneath the **SEL** and **REC** keys are two calibration points used to calibrate the fader analogue output level when in analogue mode or when in DAW mode. These levels are carefully calibrated in the factory by Neve engineers and will not need to be altered.

# Warning! Do not attempt to calibrate the 8424 fader & MDAC yourself!

If you suspect that your fader levels require calibration, please contact www.AMS-Neve.com/support







#### **Motorized Master Fader**

The 8424 Master fader includes a **BYPASS** LED. This LED is activated when the master fader is at the zero position.

This function bypasses the stereo MDAC when the master fader level is at zero, ensuring that the pure analogue signal path is maintained while mixing through the stereo mix bus.

#### Zero Faders

Motorized channel faders 1-24 can be automatically set to Zero via the services screen option **MAST>ZERO FADERS** This function is useful for quickly returning fader levels to their zero position mid-session without affecting console routing etc.

To reset all 24 channel fader positions to zero-

- Select [ZERO FADERS] from the services screen
- Press CTRL + ENTER



All 24 channel faders will immediately move from their current positions to the current zero position.



#### Set Zero

Although each console has its zero-fader position set in the factory by the Neve engineers, a services screen option is included should users need to alter the stored zero position of the faders themselves.

This option is included in the services screen under MAST>SET ZERO

To set the zero position of the faders-

- Manually move each channel fader to its zero position
- Select [SET ZERO] in the Services screen
- Press CTRL + ENTER



This new zero position is the place faders will jump to when **ZERO FADERS** is next pressed. Note that the position can be anywhere in the fader range, not just at the zero position.



### **DAW Control Setup**

#### Introduction

The 8424 Motorised fader option allows the 8424 console to perform as a DAW controller for multiple workstations at the push of a button. This section of the user manual will detail setup and operational instructions for using the 8424 console with multiple DAW's.

#### **Physical Connection Instructions**

The DAW control required a physical ethernet connection between the consoles ethernet port and the DAW computer.

There are two ways to connect the 8424 console and computer for DAW communication. All connections must be made using CAT5e/CAT6 cables (non-crossover)

#### **Direct Connection**

A direct connection can be made from the computer ethernet port to the 8424's rear mounted ethernet port.



This method is ideal for small setups that do not require remote comms connection to OPX units.

Connecting Directly requires manual IP assignment on both the 8424 console and the connected DAW computer.

#### Manual IP address setup - 8424 Console

On the console services screen, select the SYSTEM tab and navigate to SET IP. Follow the steps at Manual IP address setup to enter a manual IP of-



Once the IP Address is entered, select YES and press the enter key. The console must now be power cycled to enter the manual IP address.



#### Manual IP address setup - DAW Computer

To set a manual IP address for your connected DAW computer See <u>Manual</u> IP address setup

Enter a manual IP of-



**10.10.251.005** Alternative address – **192.168.99.005** 

#### **DHCP Connection**

The 8424 can connect to the DAW computer through a network switch using the studios wired internet connection.



By connecting this way, both the DAW computer and the 8424 console can be set to automatic DHCP IP assignment - *see page 70 for 8424 DHCP assignment instructions*.

The connection to optional 1073OPX units can also make use of this LAN connection – See <u>Remote OPX Control</u> for more information.

It is recommended while using a DHCP connection, to set Manual IP addresses for all devices on the LAN network to ensure a stable & continuous connection.



#### IP Midi

Once the physical connection is made, the third-party software program IP MIDI must be installed and run on the DAW computer.

IP MIDI can be downloaded from www.nerds.de

The software has a free 60 min trial version is available, after the trial expires, the software is \$79 for perpetual use.

#### ipMIDI Prices may differ on the nerdz.de webpage

#### Mac Instructions

ipMIDI is a native Mac driver, once installed it can be accessed and configured from Apple's Audio Midi Setup menu.

ipMIDI is accessed via Applications>Utilities>Audio MIDI Setup

Once opened, use the top toolbar to click Window>Show MIDI Studio

Audio MIDI Setup	Edit	View	Window	Help							
			Hide Au	Hide Audio Devices Show MIDI Studio Show Network Device Browser Close Minimise Zoom Tile Window to Left of Screen Tile Window to Right of Screen							
			Show M	Window Help Hide Audio Devices Show MIDI Studio Show Network Device Browser Close Minimise Zoom Tile Window to Left of Screen Tile Window to Right of Screen Bring All to Front Audio Devices							
			Show N	etwork Device Browser	ЖЗ						
			Close		жw						
			Minimis	e	ЖМ						
			Zoom	Zoom							
			Tile Wir	ndow to Left of Screen							
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			Bring A	Bring All to Front							
			✓ Audio D	Devices							
	Contraction of the local division of the loc	650	And the second state	and the second se	States and						

When the MIDI Studio window appears, click the **ipMIDI** icon.



The ipMIDI Setup window will appear. Use the arrows to set **Number of Ports to 20** Ensure that the **Loop Back** box is **Not Ticked** 



#### Mac Script information

Mac multicast default network behaviour sends all data to all available ports, this behaviour can cause conflict between ipMIDI and regular internet traffic.

To alter this default Mac behaviour a command must be entered in the Terminal Utility found at - **Applications>Utilities>Terminal** 

This section assumes that the IP settings on both Mac and 8424 are set as per <u>Manual IP address setup</u> at fixed IP addresses of 10.10.251.004 (8424 console) and 10.10.251.005 (DAW computer), with the subnet mask set at 255.255.255.0

The quick-fix for this issue is to enter the following command into Terminal-

#### sudo route -n add -net 225.0.0 -interface 10.10.251.005

This will work for your current session and your computer Wi-Fi can be enabled while using HUI data. However, once you shut down your computer, depending on your Mac settings, you may have to enter this command once again.

#### Further information can be found at <u>Appendix A – ipMIDI Information</u>

Once this step is complete, internet traffic will be directed away from the ipMIDI ethernet port, enabling stable communication between the DAW and the Console.

#### Windows Instructions

ipMIDI is installed by default to the PC C: drive and can be accessed from the PC's **Start menu>Programs>ipMIDI Monitor** 

Open the program to view the ipMIDI monitor application.

ipMIDI Trial - Ethern	et MIDI Ports
Mute Ports	3 4 5
6 7	8 9 10
Mute All	Mute None
11 12	13 14 15
16 17	18 19 20
Loop back	
Ports after Rel	ooot: 20 ▲
Change	ОК

Use the arrows to select **Ports after Reboot: 20** (you may need administrator privileges to do this)

Ensure that all of the Mute Ports boxes are Unticked

Ensure that the Loop Back box is Not Ticked



#### **DAW Setup**

The 8424 console uses an embedded system to code the ipMIDI ports to the console fader buckets. Each DAW will use three ports across buckets 1-8, 9-16, and 17-24. The group and maser faders are not currently implemented for DAW control.



The Function keys F1, F2, and F3 are hard coded to three different DAWs, switching between DAWs is as simple as pushing a button. Each DAW uses specific ipMIDI ports.

- F1 Hard coded for Pro Tools HUI DAW control ports 1, 2, 3
- F2 Hard coded for Logic DAW control ports 4, 5, 6
- F3 Hard coded for Cubase/Nuendo DAW control -ports 5, 6, 7

#### **DAW Fader Selection**



By default, the 8424 console DAW MODE function button, flips all 24 console faders over to DAW controllers. Leaving the analogue layer of the console 'parked' until DAW MODE is pressed again.

The 8424 has a unique feature allowing users to select which console faders to use as DAW faders in groups of 8. The DAW faders can make up 24, 16, or just 8 faders depending on the user requirements.

#### Channels 1-24



To enable this feature, firstly ensure that the console is not in DAW MODE, then press the SHIFT Key. Once pressed, the F keys will illuminate, showing which sections of the console are being used as DAW faders.



By default, F1, F2, and F3 will be illuminated. When DAW MODE is pressed and illuminated, all 24 console channel faders will work as DAW faders.



#### DAW Faders 17-24

Multiple combinations of DAW fader banks can be active at any time depending on your console requirements. One fader bank must always be active, it is not possible to deselect all F keys.

#### Channels 1-8



To configure DAW mode for the first fader bank 1-8, press shift, and deselect the **F2** and **F3** keys until only the **F1** key is illuminated.

In this configuration, when **DAW MODE** is pressed, only channels 1-8 will function as DAW faders. Channels 9-16 and 17-24 will remain in analogue fader mode.

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38 40 ∞	89.8		240 40 70	30 42 10	34 40 60	30 40 50	30 40 70	30 40 ∞	30 40 ee	38 40 20	33 42 60	>3 40 ∞	82 8	:a #0 ∞	9.9.0	97 97 97 98 98	301 40 00	20 40 60	30 40 70	89.6	40 60 70		2608L -		30 40 ∞	8 2 8	38 40 ∞	9.58	31 42 50	30 42 00	38 49 80	30 40 ∞
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**DAW Faders 1-8** 

FUNCTION -



#### Channels 9-16

To configure DAW mode for the second fader bank 9-16, press shift, and deselect the **F1** and **F3** keys until only the **F2** key is illuminated



In this configuration, when **DAW MODE** is pressed, only channels 9-16 will function as DAW faders. Channels 1-8 and 17-24 will remain in analogue fader mode.



DAW Faders 9-16



#### Channels 17-24

To configure DAW mode for the third fader bank 17-24, press shift, and deselect the **F1** and **F2** keys until only the **F3** key is illuminated



In this configuration, when **DAW MODE** is pressed, only channels 17-24 will function as DAW faders. Channels 1-8 and 9-16 will remain in analogue fader mode.



## Pro Tools DAW Control Setup

#### Introduction

The 8424 Motorized faders work with Pro Tools as a HUI device, sending and receiving MIDI data via ipMIDI over ethernet connection.

#### Pro Tools HUI Setup

First ensure that ipMIDI is installed and configured correctly on your Mac/PC by following the steps on page 77-78.

## To configure Pro Tools to send and receive HUI navigate to **Setup>Peripherals>Midi Controllers**

There are four available HUI ports in Pro Tools, each port controls 8 console faders. To setup all 24 faders as HUI Setup as follows

	Туре	<b>Receive From</b>	Send To	# Ch's
#1	HUI	ipMIDI, Port 1	ipMIDI, Port 1	8
#2	HUI	ipMIDI, Port 2	ipMIDI, Port 2	8
#3	HUI	ipMIDI, Port 3	ipMIDI, Port 3	8
#4	None			



Once the ports are set, press **OK** to exit the peripherals window.

If using only one or two 8424 console fader banks for DAW control, the Pro Tools peripherals screen must be configured accordingly to match the 8424 consoles selected DAW fader bank. The first HUI port in Pro Tools must match with the first fader bank selected on the 8424 console.



#### Example 1 - DAW Faders 1-16

In this example, only faders 1-16 are set as DAW faders, fader bank 17-24 is excluded from **DAW MODE**.

The faders have been setup using the *SHIFT* + F keys (See page 79-80) so that faders 1-8 and 9-16 are included in DAW Mode. Faders 17-24 are excluded and remain in analogue mode when **DAW MODE** is active.



Since this setup uses faders 1-8 and 9-16 as the first HUI ports, the peripherals screen must be set as below to exclude faders 17-18.

	Туре	Receive From	Send To	# Ch's
#1	HUI	ipMIDI, Port 1	ipMIDI, Port 1	8
<b>#2</b>	HUI	ipMIDI, Port 2	ipMIDI, Port 2	8
#3	None			
#4	None			

			Peripherals						
Synchronization Machine Control	MIDI Co	ontrollers	Ethernet Controllers	Mic P	Preamps	Satellites	VENU	E	
		Туре	e Receive Fro	m	Send To	# C	h's		
	#1	HUI	ipMIDI, Port 1	T ipl	MIDI, Port 1	* 8			
	#2	HUI	ipMIDI, Port 2	• ipl	MIDI, Port 2	▼ 8			
	#3	none	none						
	#4	none	none						



#### Example 2 - DAW Faders 17-24

In this example, only faders 17-24 are set as DAW faders, fader banks 1-8 and 9-16 are excluded from **DAW MODE**.

The faders have been setup using the *SHIFT* + F keys (See page 79-80) so that faders 17-24 are included in DAW Mode. Fader banks 1-8 and 9-16 are excluded and remain in analogue mode when **DAW MODE** is active.



Since this setup uses faders 17-24 as the only DAW port, the Pro Tools Peripherals screen must be configured to reflect this. The first HUI port **(#1)** Must be set to send/receive from **ipMIDI port 3 (DAW Faders 17-24)** The remaining HUI ports can be left empty, excluding faders 1-8 and 9-16 from DAW control.

	Туре	Receive From	Send To	# Ch's
#1	HUI	ipMIDI, Port 3	ipMIDI, Port 3	8
#2	None			
#3	None			
#4	None			

			Peripherals					
Synchronization Machine	e Control MIDI C	ontrollers Eth	hernet Controllers	Mie	c Preamps	Sate	llites	VEN
		Туре	Receive From		Send To		# Ch	's
	#1	HUI	ipMIDI, Port 3		ipMIDI, Port 3	•	8	•
	#2	none	none					
	#3	none	none					
	#4	none	none					



## Pro Tools DAW Controller Operation

#### **Pro Tools DAW Operation**

When DAW MODE is active, the console faders will flip into DAW mode and the faders will move to the DAW fader positions. The channel scribble strips will also change to display the DAW track name, abbreviated to four characters.

#### **Channel Strip Functions**

The 8424 **SOLO** and **CUT** buttons now function as Pro Tools Solo and Cut, following settings selected within Pro Tools such as solo safe, solo link, and group settings.



**SEL** - The select button has multiple functions depending on which key modifier is pressed in the centre section.

Its default function is to highlight and select the particular DAW channel within Pro Tools. When highlighted, the SEL button will also illuminate.



Double tap **SEL** to quickly open up the Pro Tools Track renaming window.



**REC** - The record button is used to record arm tracks in Pro Tools.



The 8424 motorised faders are touch sensitive. When a touch is registered, the scribble strip display name will brighten.



#### **Transport Control Keys**

The transport control keys located in the centre of the console enable control of the Pro Tools transport bar.



Several keys have a dual function activated by pressing and holding the *SHIFT* key before pressing.



Rewinds the session from the current playback cursor position







Sets the playback cursor to the beginning of the session



REW / RTZ





Fast-forwards the session from the current playback cursor position







Sets the playback cursor to the end of the session





Stops playback or recording



Shortcut to open the Pro Tool Session Setup window





Begins playback from the current cursor position



Transport Window Shortcut

(		•								
	Ø	K	•	₩	M			0	GEN MTC	0
	P Po F	re-roll ost-roll ade-in	0:0 0:0	06.826 07.000 00.250	Start End Length	3:02 3:02 0:00	2.333 2.333 0.000			

Opens the Pro Tools Transport window





Arms Pro Tools for recording



**QP** – Quick punch



Toggles Quickpunch recording mode in the Pro Tools Transport window





#### Marker Keys

The Marker keys located underneath the Transport Control keys in the centre section of the console are used to set and navigate to marker points on the Pro Tools timeline.

The Left marker key (<) navigates to the marker to the left of the current playback cursor position on the Pro Tools timeline.

In the example below, pressing < will move the playback cursor from its current position (Marker Location 4) to Marker Location 3



The modifier *SHIFT* key can be pressed at the same time as the < key to navigate the playback cursor to the first Marker in the session. In this case Location 1.









The Right marker key (>) navigates to the marker to the right of the current playback cursor position on the Pro Tools timeline.

In the example below, pressing > will move the playback cursor from its current position (Marker Location 1) to Marker Location 2





The modifier **SHIFT** key can be pressed at the same time as the > key to navigate the playback cursor up by ten marker locations. In this case from Location 1 to Location 10



When navigating between marker locations, the Services screen will momentarily change to display the current selected marker location number.









The **MARKER MODE** key is used to add new markers to the Pro Tools timeline.

Pressing this key once opens the New Memory location window within Pro Tools.

New Memory Location	
Number: 11 Name: Location 11	
Time Properties Marker Selection None	
General Properties <ul> <li>Zoom Settings</li> <li>Pre/Post Roll Times</li> <li>Track Visibility</li> <li>Track Heights</li> <li>Group Enables</li> <li>Window Configuration (none)</li> </ul>	T
Comments	
Cancel	ок

From this window, users can name marker locations and configure their properties.



Pressing **MARKER MODE** again exits this window and adds the marker location to the session.



Pressing *SHIFT* + MARKER MODE Opens the Memory Locations window within Pro Tools.

•		Memory Locat	ion	s			
#		Name			Q	21	•
1	Location						
2	Location	2					
3	Location	3					
4	Location	4					
5	Location	5					
6	Location	6					
7	Location	7					
8	Location	8					
9	Location	9	0				
10	Location	10					



Note: Certain Pro Tools 2020 versions contain a bug that has disabled HUI Marker Mode, Avid are aware of this and will be issuing a fix. Pro Tools 10 versions and below do not contain this bug.

#### **Functions/Utilities**

The Function/Utility keys are used to access multiple DAW functions.



#### Mix/Edit Window Toggle

SHIFT + AUD toggles between the Mix and Edit windows in Pro Tools.

#### Audition keys

The **AUD** (Audition) switch is used in conjunction with **PRE/IN/OUT/POST** switches to play sections of the currently selected audio. Playback continues until **AUD** is pressed again, or until another transport button is pressed.

Audition Pre-roll - Plays the audio starting from the pre-roll up to the beginning of the edit selection.

**Audition Post-roll -** Plays the audio starting at the end of the edit selection lasting the length of the selected post-roll amount.

Audition In - Plays the audio starting at the beginning of the edit selection and lasting the length of the post-roll amount.

**Audition Out -** Plays the audio starting before the edit selection end point for the length set by the pre-roll amount.

#### Pre/Post Standalone Functions

**Pre-Roll** - Toggles pre-roll activation/deactivation in the Pro Tools Transport window.

Pre-roll	0:12.000
Post-roll	0:07.000
Fade-in	0:00.250

**Post-Roll -** Toggles post-roll activation/deactivation in the Pro Tools Transport window.

Pre-roll	0:12.000
Post-roll	0:07.000
Fade-in	0:00.250













PRE R/GHT



#### **IN/OUT Standalone Functions**



**Edit selection IN point** - During playback, **IN** can be pressed to select the starting point of an edit selection.

The playback cursor will continue to move through the session, and the edit selection will be set at the last point when the **IN** button was pressed.



 **Edit Selection OUT point** - During playback, the **OUT** button can be pressed to select the end of the edit selection.

The playback cursor will continue to move through the session and the edit selection will be set at the last point when the **OUT** button was pressed.



By using the **IN** and **OUT** buttons, users can quickly make edit selections along the timeline, adding edit points during playback without pausing session audio.





ONLINE SUSPEND

#### <u>Online</u>

The **ONLINE** button activates the Pro Tools transport Online button. This is used to activate Pro Tools external synchronisation to MTC/LTC. The button will flash green when online is active, this is matched by the Pro Tools Transport Online button flashing.



#### **Suspend**

Pressing **SHIFT** + **ONLINE** together activates Automation **SUSPEND**. This globally suspends all active automation in the current session during recording and playback. The **SUSPEND** button will flash red when automation is suspended.

When *SUSPEND* is active, all Pro Tools track automation buttons will be greyed out but will keep their Read, Write, Touch, Latch, Off status intact.



To suspend automation, the Pro Tools transport must be stopped.

Session automation can be activated again by pressing *SHIFT* + ONLINE together.

#### **Automation**

The **AUTOMATION** button is used as a modifier key in conjunction with channel **SEL** buttons.



When **AUTOMATION** is pressed and illuminated Green, the DAW channel **SEL** button can be pressed to toggle through the available Pro Tools automation modes for that channel.



Each press of **SEL** toggles one option at a time on the selected channel through Pro Tools **off**, **read**, **touch**, **latch**, and **write** automation modes.

To globally toggle automation modes for all Pro Tools channels, press and hold the keyboard **ALT/Option** button then follow the steps above.







#### **Inactive Function/Utility Keys**

The 8424 console is setup to work with multiple DAW's, using both HUI and MCU protocol. This setup leaves certain switches redundant for HUI/Pro Tools operation. The **PUNCH** and **FLIP** buttons are inactive during Pro Tools operation.

#### **Active Faders**

The **ACTIVE FADERS** button is used to automate the consoles analogue faders from within Pro Tools. See **Active Faders** for further information.

#### Fader Banking

The four buttons labelled **BANK** </> and **CHANNEL** </> are used to bank and scroll through pro tools channels. Banking and scrolling behaviour is mirrored in Pro Tools.



In the image below, Pro Tools

channels 1-24 are in focus on the 8424 channel faders. Each controller bank is represented by a colour around the track name.




#### Bank < >

The fader bank keys (**</>**) shift focus of the 8424 faders onto the next channel 'Bank' within the DAW session.



Each Bank is as large as the controller setup. If the 8424 is set to use all three Pro Tools Peripheral HUI banks, pressing **BANK** > will move the fader focus along to the next 24 DAW channels.

In the image below, the fader focus has shifted by 24 channels to channels 25-48.



The Pro Tools Mix and Edit windows will follow this bank selection, provided that 'Mix window Follows Bank Selection' and 'Edit Window Follows Bank Selection' are ticked in the Pro Tools Preferences window. (Setup>Preferences>Mixing>Controllers)

#### Controllers

- Edit Window Follows Bank Selection
- Mix Window Follows Bank Selection
- "Scroll to Track" Banks Controllers
- Always Fill Channel Strips when Banking





# Channel < >

The channel bank keys (</>) keys move the DAW fader focus along by one fader at a time either to the left or the right of the session mix/Edit window.

In the image below, channels 1-24 are in focus.



#### **Pro Tools Channels 1-24**

In the image below, **CHANNEL >** has been pressed once, banking the 8424 24 faders across by one channel. Now, channels 2-25 are in focus.



Pressing **Channel >** will continue to scroll the fader focus onto the next channel to the right within the Pro Tools Mix or channel down in the Edit window.

Pressing **Channel <** will scroll the fader focus onto the previous channel to the left within the Pro Tools Mix window or next channel up in the Edit window.





# Assignment Keys

The VPOT assignment keys are used to assign the consoles VPOTs to various DAW parameters including DAW pans, Aux sends and Plugins.

# Pro Tools Pan Control

To control Pro Tools Pans, press the **PAN** button, this assigns the console 24 VPOTs to work as rotary pan controllers within Pro Tools.

When PAN is lit, pan mode is effectively in standby until U1 is pressed

To assign console **VPOTs** to control Pro Tools Pan controls – press the **U1** button

All 24 consoles VPOTs can be used as PAN controllers for the 24 channels within the Pro Tools session. **VPOTS follow the fader bank selection.** 





# Mono Channel Panning





When **PAN** and **U1** are lit and active, the channel **TRIM VPOT** will now work as an encoder for Pro tools Pans.

The LED indicator on the Trim VPOT matches the current position of DAW channel pans.





To Pan left - turn the VPOT Encoder counter-clockwise





To Pan right - turn the VPOT encoder clockwise







# Stereo Channel Panning

To pan stereo channels the 8424 PAN button is dual function, allowing for left pan and right pan to be adjusted independently.



When the PAN button is illuminated solid, LEFT VPOT pan is active





PAN

When the PAN button is flashing, RIGHT VPOT Pan is active



# VPOT Fine/Course Adjustment

By default, Pan VPOT adjustment is set to fine increments, to increase the encoder speed to course adjustment (x5 speed) press and hold *SHIFT* while moving the VPOT encoder.

Note: In firmware versions 7.10+, Shift + VPOT motion functionality has flipped.

When running firmware 7.10 and above, the default Pan VPOT adjustment is set to coarse increments (x5 speed) and fine increments are adjusted by pressing *SHIFT* + VPOT

# TIP:

Firmware version 7.10+ flips SHIFT + VPOT functionality. The default VPOT motion is set to coarse increments (x5 speed) Fine increments are adjusted via SHIFT +VPOT motion

Visit <u>www.ams-neve.com/consoles/small-format-consoles/neve-</u> 8424/#Moreinfo to download the latest firmware and see <u>Firmware Updater app</u> for installation instructions.





U1

# **Pro Tools Send Control**

To control Pro Tools Sends, press the AUX/SEND button, this assigns the consoles 24 VPOTs to work as rotary controllers for Pro Tools Sends.

When AUX/SEND is lit, Aux Send mode is effectively in standby

To Assign VPOTs to Pro Tools pan control – press the **U1** button.

All 24 consoles VPOTs can be used as send controllers for 24 channels within the Pro Tools session. VPOTS follow the fader bank selection

SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E	SENDS A-E
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* Bus 3	* Bus 3	# Bus 3	▼ Bus 3	Bus 3	* Bus 3	Bus 3	# Bus 3	* Bus 3	♥ Bus 3	* Bus 3	* Bus 3	* Bus 3	♥ Bus 3	* Bus 3	* Bus 3	* Bus 3	* Bus 3	# Bus 3	T Bus 3	* Bus 3	* Bus 3	* Bus 3	* Bus 3
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# Configuring Pro Tools Sends.



When **AUX/SEND** and **U1** are lit and active, the channel **TRIM VPOT** will now work as an encoder for Pro tools **SENDS A to E**.

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The selected send is displayed on the channel scribble strip in (brackets) next to the Pro Tools channel name.

Sends (a) through (e) are available to control using the channel VPOTs

# Selecting Sends

To toggle through sends a, b, c, d, and e, press and hold *SHIFT*, then press AUX/SEND



AUX / SND

Pressing and holding the **AUX/SEND** button flips the 8424 scribble strips over from displaying the Pro Tools channel name to now display the send destination.



To display the Send Level within the Pro

Tools mix window Press and hold **Control/Command** then click the send icon



# Adjusting Send Levels

Once the selected send is chosen, the VPOTS can be used to make adjustments to the Pro Tools Send level

The LED indicator on the Trim VPOT matches the current position of DAW channel sends.

SENDS A-E Bus 1 M P -20.3

SENDS A-E

Bus 1



I/P

DIR FNC

TRIM

Turn the encoder clockwise to increase the send level





Turn the encoder counter-clockwise to decrease the send level



# VPOT Fine/Course Adjustment

As with Pans, by default, SEND VPOT adjustment is set to fine increments, to increase the encoder speed to course adjustment (x5 speed) press and hold SHIFT while moving the VPOT encoder.

# TIP:

Firmware version 7.10+ flips SHIFT + VPOT functionality. The default VPOT motion is set to coarse increments (x5 speed) Fine increments are adjusted via *SHIFT* +VPOT motion

Visit <u>www.ams-neve.com/consoles/small-format-consoles/neve-</u> <u>8424/#Moreinfo</u> to download the latest firmware and see <u>Firmware Updater app</u> for installation instructions.



# Send Pre/Post Toggle

In addition to controlling send levels using the 8424 VPOTs, each send pre/post fader button can be activated or deactivated in two unique ways depending on style of workflow.

# 

To toggle the send Pre/Post fade state press **SHIFT + SEL** on the selected channel.





Alternatively press and hold the selected channel **ST CUE PAN**, then press the selected channel VPOT



#### ASSIGNMENTS Pro Tools plugin parameters can be controlled from the 8424 console



PLUG-IN



PAN or AUX/SEND can be active across the whole console, then the PLUG-**IN** layer added over the top on channels 1-8.

VPOTs. Plugin control works differently to send and pan control. Instead of using all 24 VPOTs, HUI plugin protocol uses only the first 8. This allows two

'layers' of VPOT control to be available on the console at the same time.

When **PLUG-IN** is lit, plugin mode is effectively in standby until U1 is pressed

Press **U1** to assign the first 8 VPOTs to Plugin control

**Pro Tools Plugin Control** 

Only VPOTS 1-8 or the first DAW bank set in the peripherals window can be used as plugin controllers for plugins within the Pro Tools session.

PLUG-IN VPOTS do not follow the fader bank selection

In the image below, bank 1-8 is used to control the plugin on screen and banks 2 and 3 remain controlling Pans or Sends



When **PLUG-IN** and **U1** are first activated, the scribble strip for channels 1-8 will display as below.



Kick

Plugins must first be selected before they can be controlled from the console VPOTS.

There are two ways to select a plugin to control.

▶ If the plugin resides on track 1-8, press the channel **SEL** button.

This opens the Pro Tools plugin window and focuses the VPOT controls onto the plugin.

0r...

Use the computer mouse to open the plugin window within Pro Tools.

Once a plugin window is in focus within Pro Tools, the VPOTs will be able to control the plugin.



# Selecting Pro Tools Inserts

To toggle through Pro Tools Inserts, quickly double tap the channel **SEL** button.







# Scribble Strip Display

Once a plugin is selected the Scribble Strip for channels 1-8 will display the available plugin parameter names and values.



Scribble Strip Flip



There are two layers of information available to display on the scribble strips.

**SHIFT** + FLIP - flips the Scribble strip to display the second layer of information.





# Plugin Edit Mode

Once a plugin has been selected, its parameters are available to control on the first fader bank's VPOTS and switches using *SHIFT* + SEL.

VPOTS 1-4 are used to control four plugin parameters, VPOTs 5-8 are used for plugin parameter navigation and global plugin controls.

#### Plugin VPOT Control

Parameter 1 (VPOT 1)	– LF Q Bandwidth
Parameter 2 (VPOT 2)	<ul> <li>– LF Frequency selection</li> </ul>
Parameter 3 (VPOT 3)	– LF Gain
Parameter 4 (VPOT 4)	– Not in use for this plugin
Parameter 5 (VPOT 5)	- Page - See Plugin Page Navigation
Parameter 6 (VPOT 6)	– Not in use
Parameter 7 (SHIFT + SEL	– Compare - See <u>Global plugin Controls</u>

Parameter 8 (SHIFT + SEL) – Bypass - See Global plugin Controls





# Adjusting Plugin Parameters

Rotating the VPOTs adjusts the three LF parameters in focus. Each plugin works differently for VPOT control, for the EQ3 7-Band plugin, sets of three rotary parameters at a time can be controlled by VPOTs 1-3, VPOT 4 is not used for EQ3 7-Band.



Plugin parameters with VPOT control are highlighted with blue indicators if in **Read** automation mode.



Plugin Parameters with VPOT control are highlighted with Yellow indicators if in **Write, Touch or Latch** automation modes.



Turn the VPOT encoder clockwise to increase the plugin parameter value





Turn the VPOT encoder counter-clockwise to decrease the plugin parameter value





# VPOT Fine/Course Adjustment

By default, PLUG-IN VPOT adjustment is set to fine increments, to increase the encoder speed to course adjustment (x5 speed) press and hold SHIFT while moving the VPOT encoder.

# TIP:

Firmware version 7.10+ flips SHIFT + VPOT functionality. The default VPOT motion is set to coarse increments (x5 speed) Fine increments are adjusted via *SHIFT* +VPOT motion Visit <u>www.ams-neve.com/consoles/small-format-consoles/neve-</u> 8424/#Moreinfo to download the latest firmware and see <u>Firmware Updater app</u> for installation instructions.

# Plugin Switch Control

In addition to VPOT rotary control, certain plugin parameters can be switched on or off using the 8424 console controls; the parameters vary depending on the plugin in use.

# Note: Switches can be pressed at any time no matter which layer of information is shown on the scribble strip

Switch parameters are shown on layer 2 of the scribble strip information.

Press **SHIFT + FLIP** to view layer 2 0 Õ Ö Ö Õ Õ õ Õ SOLO CUT SOLO SOLO SOLO CUT SOLO CUT SOLO CUT CUT SOLO SOLO CUT CUT CUT LF In [Page] LF T She [Compare] [Bypass] SEI In the current example, the LF curve shape and LF IN are highlighted and are available as switch functions. Parameter 1 – Switch control not in use for this plugin

Parameter 2 – LF Shelf/Bell curve

Parameter 3 – LF band In/Out

Parameter 4 – Switch control not in use for this plugin

Parameter 5 – Page - See Plugin Page Navigation

Parameter 6 – Not in use

Parameter 7 – Compare - See Global plugin Controls

Parameter 8 – Bypass - See Global plugin Controls

Plugin switch settings can be adjusted in two ways.

Press **SHIFT** + **SEL** on the selected channel.

Alternatively press and hold the selected channel ST CUE PAN, then press the selected channel VPOT





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# **Plugin Page Navigation**

Plugins may have many pages of parameters to edit, navigation between plugin parameters is achieved by rotating VPOT 5.

in the example below, VPOT 5 [Page] has been rotated one click so that the LMF band controls are available on VPOTS 1-4.

# Switch controls (SHIFT +SEL) also follow page selection





Rotating VPOT 5 further will move VPOTs 1-4 to control to the next available plugin band and so forth.

As VPOT 5 is rotated, page and plugin information are temporarily displayed on the scribble strip for VPOTs 1-4.



C I/P

DIR FNC

TRIM

# **Global plugin Controls**

VPOTS 5-8 are reserved for global plugin controls, Page is always available for plugin navigation via VPOT 5 and plugin Compare and Bypass are available via switch control (SHIFT +SEL) 7 and 8.



Plugin global controls can be adjusted in two ways.

Press **SHIFT** + **SEL** on the selected channel.





[Bypass]

PRE ON I/P C ST CUE

Alternatively press and hold the selected channel ST CUE PAN, then press the selected channel VPOT

# Logic DAW Control Setup

#### **Introduction**

The 8424 Motorized faders work with Logic as an MCU device, sending and receiving MIDI data via ipMIDI over ethernet connection.

#### Logic MCU Setup

First ensure that ipMIDI is installed and configured correctly on your Mac by following the steps on page 77-78.

To configure Logic to send and receive MCU, navigate to

## Logic Preferences>Control Surface>Setup

In the Control Surface Setup window click the **New** dropdown menu and disable the Automatic Installation option (unticked)

Edit 🗸	New 🗸
▼ Device:	Install Scan All Models
▼ CS Gro	Automatic Installation
	Elin Marday O

In the event that logic has automatically installed control surfaces, highlight the current control surfaces, and press the **delete key** on your keyboard.



#### Quick Setup (24 DAW Faders)

Once the Control Surface Setup window is empty, click **New > Scan All Models** 

Edit 🗸	New 🗸					
▼ Device:	Install					
· Domos	Scan All Models					
		oMIDI Port 4				
	Automatic Installation	pMIDI Port 4	0	22222222222	200000000	
	Module:	Logic Control				
	Model:	Mackie Control		1 A 1 A 1		
	Version:	2.12				
	Color:					
	Transport Button Click:	✓				
	Touchless movable faders:			Mackie Control	📕 Mackie Control	🧧 Mackie Control
	Ender Touch Consitivity	9				

This should automatically assign the 8424 console 24 faders in the correct configuration for DAW control. In the event that the setup is incorrect, complete the steps on the following pages.

# Manual Setup (24 DAW Faders)

Once the Control Surface Setup window is empty, click New v Install...



# Scroll down and select - Mackie Designs > Mackie Control > Logic Control

		Install	
	Manufacturer ^	Model	Module
-	M-Audio	USB Trigger Finger	
	M-Audio (Midiman)	iControl	iControl
	Mackie Designs	Baby HUI	HUI
0	Mackie Designs	HUI	HUI
	Mackie Designs	HUI Channel Strips only	HUI
	Mackie Designs	MCU Pro	Logic Control
	Mackie Designs	Mackie Control	Logic Control
	Mackie Designs	Mackie Control C4	Logic Control
	Mackie Designs	Mackie Control Extender	Logic Control
	Mackie Designs	Mackie Control Extender Pro	Logic Control
	Monome	Monome 64	
	Native Instruments	KOMPLETE KONTROL \$61	
	Nektar	IMPACT LX49	
	Novation	Nocturn Keyboard	
	Novation	SL Mkll	
			Add Scan
			Add

## Click Scan 📹

Logic should automatically detect and assign channels 1-8 to ipMIDI port4, in the event that it does not, In the Device dropdown menu, Select

- Output ipMIDI Port 4
- ► Input ipMIDI Port 4

Edit ~ New ~		
▼ Device: Mackie Control		
Output Por Input P Mod Vers Cc	t: ipMIDI Port 4 / Any ipMIDI Port 1 ipMIDI Port 2 ipMIDI Port 3 ipMIDI Port 4 ipMIDI Port 5	
Transport Button Cl Touchless movable fad	ipMIDI Port 6 ipMIDI Port 7 ipMIDI Port 8	Mackie Control

The next step adds channels 9-16 and 17-24 as DAW controllers.



#### Module Manufacturer Model M-Audio (Midiman) iControl iControl Mackie Designs Baby HUI HUI Mackie Designs HUI HUI Mackie Designs HUI Channel Strips only HUI Mackie Designs MCU Pro Logic Control Mackie Designs Mackie Control Logic Control Mackie Designs Mackie Control C4 Logic Control Mackie Designs Mackie Control Extender Logic Control Mackie Designs Mackie Control Extender Pro Logic Control Monome Monome 64 KOMPLETE KONTROL S61 Native Instruments IMPACT LX49 Nektar Novation Nocturn Kevboard Novation SL Mkll ReMOTE SL Novation DMS Add Scan

Select - Mackie Designs > Mackie Control Extender> Logic Control

Click Scan

Logic should automatically detect and assign channels 9-16 to ipMIDI port 5 and channels 17-24 to ipMIDI port 6, in the event that it does not, In the Device dropdown menu, choose Mackie Control Extender 1 and select



Next Select Mackie Control Extender 2 and select

<ul> <li>Output -</li> <li>Input - i</li> </ul>	- ipMIDI Port 6 pMIDI Port 6				
Edit ~ New ~	ipMIDI Port 1 inMIDI Port 2				
▼ Device: Mackie Control Exte	ipMIDI Port 3 ipMIDI Port 4				
Output P	ipMIDI Port 5				
Input P	✓ ipMIDI Port 6	0	2222222222	100000000	
Mod	ipMIDI Port 7				
Мо	ipMIDI Port 8			100000000000	
Vers	IPMIDI Port 9				
Co	ipMIDI Port 10		O		
Touchless movable fad	ipMIDI Port 12				
Fader Touch Sensitiv	ipMIDI Port 13 ipMIDI Port 14		Mackie Control	Mackie Control	Mackie Control

The setup detailed above will assign all 24 console channels to DAW control, as shown below



If using only one or two 8424 console fader banks for DAW control, the Logic Controller Setup must be configured accordingly to match the 8424 consoles selected DAW fader bank. The first Logic MCU device Pro must match with the first fader bank selected on the 8424 console.

# Example 1 - DAW Faders 1-16

In this example, only faders 1-16 are set as DAW faders, fader bank 17-24 is excluded from **DAW MODE**.

The faders have been setup using the *SHIFT* + F keys (See page 79-80) so that faders 1-8 and 9-16 are included in DAW Mode. Faders 17-24 are excluded and remain in analogue mode when **DAW MODE** is active.



Since this setup uses faders 1-8 and 9-16 as the first MCU ports, the Control Surface Setup screen must be set as below to exclude faders 17-24. Only one Mackie Control device will be added for faders 1-8 (Port 4) and one Mackie Control Extender for faders 9-16 (Port 5)





In this example, only faders 17-24 are set as DAW faders, fader banks 1-8 and 9-16 are excluded from **DAW MODE**.

The faders have been setup using the *SHIFT* + F keys (See page 79-80) so that faders 17-24 are included in DAW Mode. Fader banks 1-8 and 9-16 are excluded and remain in analogue mode when **DAW MODE** is active.



Since this setup uses faders 17-24 as the only DAW port, the Logic Control Surface Setup screen must be configured to reflect this. The first MCU Mackie Logic Controller must be set as port **(#6)** 

No Mackie Control Extenders are required in this example.

Clicking Scan automatically assigns the Mackie Logic Controller to Port 4, this must be changed manually to -







# Logic DAW Controller Operation

# 0 SOLO CUT Kick SEL REC 10 5 0 5 10 15 20 30 40 $\infty$

# Logic DAW Operation

When DAW MODE is active, the console faders will flip into DAW mode and the faders will move to the DAW fader positions. The channel scribble strips will also change to display the DAW name, abbreviated to seven characters.

# **Channel Strip Functions**

The **SOLO** and **CUT** buttons now function as Logic Mute and Solo, following settings selected within Logic such as solo safe, solo link, and group settings.



**SEL** - The select button has multiple functions depending on which key modifier is pressed in the centre section.

Its default function is to highlight and select the DAW channel within Logic.

-64	+63	-64
-9.4	-5.1	0.0
0 3 5 9 12 15 15 12 15 12 12 15 12 12 15 12 12 12 15 12 12 12 15 12 12 12 12 12 12 12 12 12 12		0 3 6 3 12 15 18 12 4 3 6 15 4 4 5 8 6 7 <b>R</b> S
Audio 1	Audio 2	Audio 3

**REC** - The record button is used to record arm tracks in Logic.



The 8424 motorised faders are touch sensitive. When a touch is registered, the scribble strip LCD display will brighten.



# **Transport Control Keys**

The transport control keys located in the centre of the console enable control of the Logic transport bar, these keys function outside of DAW mode, allowing for session navigation at all times.



Several keys have a dual function activated by pressing and holding the *SHIFT* key befor e pressing.



**REW** – Rewind

Rewinds the session from the current playback cursor position

Repeated presses accelerate the rewind speed



**FFW** – Fast Forward



Fast-forwards the session from the current playback cursor position

Repeated presses accelerate the fast forward speed





Stops playback or recording



**RTZ** – Return to Zero



When playback is stopped, the **STOP** key switches to RTZ mode, pressing **STOP** now returns the timeline cursor to the beginning of the session





Begins playback from the current cursor position

REC – Record



Begins recording from the current cursor position



LOOP - Loop playback/record



Toggles loop playback/record mode

# Marker Keys



The Marker keys located underneath the Transport Control keys in the centre section of the console are used to set and navigate to marker points on the Logic timeline.

The Left marker key (<) navigates to the marker to the left of the current playback cursor position on the Logic timeline.

In the example below, pressing < will move the playback cursor from its current position (Marker Location 4) to Marker Location 3

61	63	65	67	69	
Marker 1	Marker 2	Marker 3		Marker 4	
<u></u>	<u>  14   ben þir þir þir þir þir þ</u> ir den				
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The Right marker key (>) navigates to the marker to the right of the current playback cursor position on the Logic timeline.

In the example below, pressing > will move the playback cursor from its current position (Marker Location 1) to Marker Location 2







**MARKER MODE + >** adds a new marker to the current Logic timeline cursor position.

The **MARKER MODE** key is used to add new markers to the Logic timeline.



**MARKER MODE + <** deletes the current selected marker from the Logic timeline.

# **Functions/Utilities**

The Function/Utility keys are used to access multiple DAW functions.



# Solo/Click/Replace/Punch Functions





**SOLO** - Toggles Logic's solo region function, when SOLO is active, regions in the session can be selected and will be heard in solo during playback





CLICK - Toggles the Logic metronome click track on or off





**REPLACE** – Toggles Logic replace recording mode. When active, newly recorded regions will replace the original audio file on disk







# **Automation**



The **AUTOMATION** button is used as a modifier key in conjunction with channel VPOTs.



When **AUTOMATION** is pressed and illuminated Green, the DAW channel **VPOT** button can be turned to cycle through the available Logic automation modes for that channel.

Read	
Read	
Touch	
Latch	
Write	
T-Touch	
T-Latch	
R-Touch	
R-Latch	
R-Write	

Each stepped turn of the VPOT toggles one automation option at a time through off, read, touch, latch, write , T-Touch, T-Latch, R-Touch, R-Latch, and R-Write automation modes.







LĖF

# Inactive Function/Utility Keys

The 8424 console is setup to work with multiple DAW's, using both HUI and MCU protocol. This setup leaves certain switches redundant for MCU/Logic operation. The **ONLINE/SUSPEND**, **PRE/RIGHT**, and **AUD/LEFT** buttons are inactive during Logic operation.



# **Active Faders**

The **ACTIVE FADERS** button is used to automate the consoles analogue faders from within Logic. See **Active Faders** for further information.

# Fader banking

The four buttons labelled BANK </> and CHANNEL </> are used to bank and scroll through Logic channels. Banking and scrolling behaviours are mirrored in Logic.



In the image below, Logic channels 1-24 are in focus on the 8424 channel faders. Each controller bank is represented by a coloured bar underneath the track name.



Channels 1-8

Channels 9-16

Channels 17-24



Fader bank colours are also displayed in the Logic Control Surface Setup window.

#### Bank < >



The fader bank keys (**</>**) shift focus of the 8424 faders onto the next channel 'Bank' within the DAW session.

Each Bank is as large as the controller setup. If the 8424 is set to use all three Pro Tools Peripheral HUI banks, pressing **BANK** > will move the fader focus along to the next 24 DAW channels.

In the image below, the fader focus has shifted by 24 channels to channels 25-48.



_							
ľ	25		Μ	S	R	Τ	Audio 25
	26		Μ	S	R	Т	Audio 26
	27	**	Μ	S	R	Ι	Audio 27
	28		Μ	S	R	Т	Audio 28
	29		Μ	S	R	T	Audio 29
ľ	30		Μ	S	R	I	Audio 30
	31		Μ	S	R	Т	Audio 31
	32		Μ	S	R	Т	Audio 32
	33		Μ	S	R	T	Audio 33
	34		Μ	S	R	I	Audio 34
	35		Μ	S	R	Т	Audio 35
	36		Μ	S	R	T	Audio 36
	37		Μ	S	R	I	Audio 37
	38		Μ	S	R	T	Audio 38
	39		Μ	S	R	T	Audio 39
	40	-	Μ	S	R	T	Audio 40

The Logic Edit window also follows bank selection. Scrolling up or down in the edit window to display the currently active tracks.



# Channel < >

The channel bank keys (</>) keys move the DAW fader focus along by one fader at a time either to the left or the right of the session mix/Edit window.

In the image below, channels 1-24 are in focus.



Logic Channels 1-24

In the image below, **CHANNEL** > has been pressed once, banking the 8424 24 faders across by one channel. Now, channels **2-25** are in focus.

Pressing **Channel** > will continue to scroll the fader focus onto the next channel to the right within the Mix window or to the next channel down in the Edit window.



Logic Channels 2-25

Pressing **Channel <** will scroll the fader focus onto the previous channel to the left within the Mix window or to the next channel up in the Edit window.



# Assignment Keys

The VPOT assignment keys are used to assign the consoles VPOTs to various DAW parameters including DAW pans, Aux sends and Plugins.

# Logic Pan Control

To control Logic Pans, press the **PAN** button, this assigns the console 24 VPOTs to work as rotary pan controllers within Logic.

When PAN is lit, pan mode is effectively in standby until U1 is pressed

To assign console **VPOTs** to control Logic Pan controls – press the **U1** button

All 24 consoles VPOTs can be used as PAN controllers for the 24 channels within the Logic session. **VPOTS follow the fader bank selection.** 

-64		33)	-64	+63	6	4	$( \cdot )$	(-64			-64	+63		-64	+63	6		+63	-64	) (	+63	(-64)	+63	(-64	(+		-64	+63	-64	) (+63)
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# Standard Logic Panning





When **PAN** and **U1** are lit and active, the channel **TRIM VPOT** will now work as an encoder for Logic Pans.

The LED indicator on the Trim VPOT matches the current position of DAW channel pans.





To Pan left - turn the VPOT Encoder counter-clockwise





To Pan right - turn the VPOT encoder clockwise





# VPOT fine/course adjustment

By default, Pan VPOT adjustment is set to fine increments, to increase the encoder speed to course adjustment (x5 speed) press and hold *SHIFT* while moving the VPOT encoder.

# TIP:

Firmware version 7.10+ flips SHIFT + VPOT functionality. The default VPOT motion is set to coarse increments (x5 speed) Fine increments are adjusted via *SHIFT* +VPOT motion Visit <u>www.ams-neve.com/consoles/small-format-consoles/neve-</u> 8424/#Moreinfo to download the latest firmware and see <u>Firmware Updater app</u> for installation instructions.

# Pan Centre

A quick shortcut is included to reset send pan positions to the centre

Press SHIFT + Channel SEL

Alternatively press and hold the selected channel  $\ensuremath{\text{ST CUE PAN}}$  , then press the selected channel VPOT

# Flip Mode

Logic supports fader flip mode for VPOT functions, in **PAN** mode, this allows for the Logic pan positions to be controlled by the 8424 console faders.

When Fader Flip is active, the 8424 faders will move to represent the current logic pan positions

- Moving the fader up will move the Logic pan position to the right
- Moving the fader down will move the Logic pan position to the left

# Scribble Strip Display Options

There are several modifier shortcuts that 'flip' the scribble strip display to show various Pan parameters listed below.

# Scribble Strip Flip

**SHIFT** + FLIP - flips the Scribble strip to display Pan parameters rather than Logic track name.

# Toggle Display

When the send parameter is displayed, pressing **SHIFT + PAN** toggles the scribble strip display between pan name and current +/- pan value









0

REC



Alternatively press and hold the selected ch

# Surround/Binaural Panning

When Logic channels are assigned to Surround output, the Surround panner becomes available for that channel.

In Surround Pan mode, there are multiple control options available, the VPOT can be used to control each of these parameters.



# Scribble Strip Flip

Press **SHIFT** + **FLIP** to display the current parameter on the channel Scribble strip.

### **Toggle Display**

When the send parameter is displayed, pressing **SHIFT + PAN** toggles the scribble strip display between pan name and current +/- pan value





# Selecting Surround Parameters

Available parameters can be cycled through by using SHIFT + CHANNEL <>

# Fader Flip for Surround Panning

Press **FLIP** to use the faders to control surround parameters instead of the VPOTs

SurAng - Assigns the VPOT to the Surround panner angle setting

Rotating the VPOT in either direction will adjust the surround angle



**SurRad** - Assigns the VPOT to the surround radius (Diversity) Rotating the VPOT in either direction will adjust the radius (Diversity)






The next available parameter is not used and appears blank -



SrndX - Assigns the VPOT to the control the surround X-axis

Rotating the VPOT in either direction will move the position of the logic surround object in the horizontal plane, adjusting both angle and diversity together





SrndY - Assigns the VPOT to the control the surround Y-axis

Rotating the VPOT in either direction will move the position of the logic surround object in the horizontal plane, adjusting both angle and diversity together





**SurCen -** Assigns the VPOT to the surround Center Level Rotating the VPOT in either direction will adjust the Center Level



# Logic Send Control



U1

To control Logic Sends, press the AUX/SND button, this assigns the console 24 VPOTs to work as rotary Send controllers within Logic.

When **AUX/SND** is lit, send mode is effectively in standby until U1 is pressed.

To assign the VPOTs to control Logic sends – press the **U1** button.

All 24 consoles VPOTs can be used as send controllers for 24 channels within the Logic session.

## VPOT Sends follow the fader bank selection



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# **Configuring Logic Sends**

When **AUX/SEND** and **U1** are lit and active, the channel **TRIM VPOT** will now work as an encoder for Logic sends 1 to 8.



The selected send is displayed on the channel scribble strip in **[brackets]** next to the Logic channel name.

Sends [1] through [8] are available to control using the channel VPOTs

#### Flip Mode

Logic supports fader flip mode for VPOT functions, in Send mode, this allows for the Logic send levels to be controlled by the 8424 console faders.

When Fader Flip is active, the 8424 faders will move to represent the current logic send positions

- Moving the fader up will increase the selected send level
- Moving the fader down will decrease the selected send level

## Scribble Strip Display Options

There are several modifier shortcuts that flip the scribble strip display to show various Send information and parameters listed below.

## Scribble Strip Flip

**SHIFT** + FLIP - flips the Scribble strip to display Send parameters rather than Logic track name.

## Toggle Display

When the send parameter is displayed, pressing **SHIFT** + AUX/SND toggles the scribble strip display between send name and send level.



#### Selecting Sends

To toggle through sends 1-8, press and hold SHIFT, then press Bank < or >



## Selecting Send Parameters

To toggle through send parameters, press and hold *SHIFT*, then press CHANNEL < or >

Parameter controls are detailed on the following pages.





BANK

Once the selected send is chosen, the VPOTS can be used to adjust the Logic Send level

The default parameter when first pressing AUX/SEND is the send level.

The LED indicator on the Trim VPOT matches the current position of DAW channel sends.





I/P

DIR

TRIM

FNC

## Turn the encoder clockwise to increase the seed level







Turn the encoder counter-clockwise to decrease the send level







## VPOT Fine/Course Adjustment

By default, VPOT adjustment is set to fine increments, to increase the encoder speed to course adjustment (x5 speed) press and hold *SHIFT* while moving the VPOT encoder.

#### TIP:

Firmware version 7.10+ flips SHIFT + VPOT functionality. The default VPOT motion is set to coarse increments (x5 speed) Fine increments are adjusted via *SHIFT* +VPOT motion Visit <u>www.ams-neve.com/consoles/small-format-consoles/neve-</u> 8424/#Moreinfo to download the latest firmware and see Firmware Updater app for installation instructions.



# Send Default level

Send Destination.

A quick shortcut is included to reset send levels to OdB

Press SHIFT + Channel SEL



Alternatively press and hold the selected channel **ST CUE PAN**, then press the selected channel VPOT





It is possible to assign send destinations from the console VPOTs.

Send destinations are accessed by pressing SHIFT + CHANNEL <



Turn the VPOT encoder to cycle through the available send destinations The scribble strip will flash while cycling through send destinations



Once a destination is chosen, press **SHIFT** + SEL to confirm the send destination



Alternatively press and hold the selected channel **ST CUE PAN**, then press the selected channel VPOT

It is not recommended to enter FLIP mode when choosing send destinations

# 150



# Send Pre/Post Toggle

Send pre/post fader option can be activated or deactivated using the VPOTS.

Access pre/post using SHIFT + CHANNEL <>





Turn the VPOT to cycle through the available send states - Pre, Post and Post-Pan.





· CHANNEL -

#### Send Mute

The next available parameter is send mute, displayed on the scribble strip as either **active** or **muted**.





# Turn the VPOT to cycle through the two options active/muted





Alternatively, press SHIFT +Channel SEL to toggle between active/muted

# Logic Plugin Control

Logic plugin parameters can be controlled from the 8424 console VPOTs. MCU allows for all 24 VPOTs to be utilized for plugin control.



When PLUG-IN is lit, plugin mode is effectively in standby until U1 is pressed

To assign the VPOTs to control Logic plugins – press the U1 button

PLUG-IN VPOTS do not follow the fader bank selection

#### Flip Mode

Logic supports fader flip mode for VPOT functions. In plugin mode, this allows for the Logic plugin parameters to be controlled by the 8424 console faders.

**Updating Firmware 35**When Fader Flip is active, the 8424 faders will move to represent the current logic plugin parameters

- Moving the fader up will increase the selected parameter value
- Moving the fader down will decrease the selected parameter value

# Scribble Strip Display Options

There are several modifier shortcuts that flip the scribble strip display to show various pages of plugin parameter information listed below.

## Scribble Strip Flip

**SHIFT** + FLIP - flips the Scribble strip to display plugin parameter values rather than Logic track name.

## Toggle Display

When plugin parameter values are displayed, pressing **SHIFT** + **Plugin** toggles the scribble strip display between parameter name and parameter value.



#### Selecting Logic Inserts

To toggle through Inserts 1-8, press and hold SHIFT, then press Bank < or >

## Selecting Plugin Parameters

To toggle through pages of send parameters (when necessary), press and hold *SHIFT*, then press **CHANNEL < or >** 

Parameter controls are detailed on the following pages.







15 20

> 30 40

#### Plugin Select Mode

It is possible to add plugins using the console VPOTs.

Pressing PLUG-IN and U1 fist opens plugin select mode





Use **SHIFT + BANK < >** to select the insert point from 1-8



If a plugin is already inserted on the insert slot, the plugin name will appear in the scribble strip



If there is no plugin inserted onto the insert slot, the scribble strip will appear **blank** -



#### Adding a New Plugin

Turn the VPOT encoder to cycle through available plugins

The scribble strip will flash while cycling through possible send destinations



Once a plugin is chosen, press **SHIFT** + **SEL** to add the plugin to the selected channel insert slot



Alternatively press and hold the selected channel **ST CUE PAN**, then press the selected channel VPOT

It is not recommended to enter FLIP mode in plugin select mode



### Plugin Edit Mode

Once the plugin has been selected, press **SHIFT + Channel SEL** to open plugin edit mode.

CHANNEL — The num + D parame

In Plugin Edit mode, the scribble strips will change to display available parameters or parameter names by using the Toggle Display feature.

The number of parameters varies between plugins. If there are more parameters available than console VPOTS/Faders **SHIFT +Channel < >** can be used to scroll through plugin parameter pages

The VPOTS can be used to adjust the Logic plugin parameters

In the example below the Logic channel EQ has 24 available parameters spread across all 24 VPOTS or faders when in Flip mode.



#### Adjusting Plugin Parameters

The LED indicator on the Trim VPOT matches the current position of the plugin parameter value







Turn the encoder clockwise to increase the parameter







Turn the encoder counter-clockwise to decrease the parameter value







#### **VPOT fine/course adjustment**

By default, VPOT adjustment is set to fine increments, to increase the encoder speed to course adjustment (x5 speed) press and hold *SHIFT* while moving the VPOT encoder.

#### TIP:

Firmware version 7.10+ flips SHIFT + VPOT functionality. The default VPOT motion is set to coarse increments (x5 speed) Fine increments are adjusted via *SHIFT* +VPOT motion Visit <u>www.ams-neve.com/consoles/small-format-consoles/neve-</u> 8424/#Moreinfo to download the latest firmware and see Firmware Updater app for installation instructions.

# Cubase/Nuendo DAW Control Setup

#### Introduction

The 8424 Motorized faders work with Cubase/Nuendo as an MCU device, sending and receiving MIDI data via ipMIDI over ethernet connection.

#### Cubase/Nuendo MCU Setup

First ensure that ipMIDI is installed and configured correctly on your Mac by following the steps on page 77-78.

To configure Cubase/Nuendo to send and receive MCU, navigate to

#### Studio>Studio Setup

	Studio Setup	
Devices  + Add Device		
E Chord Pads MIDI MIDI Port Setup Remote Devices		
Track Quick Controls Track Quick Controls Transport		
C Record Time Max C Time Display Video		
VST System Link	Reset Apply	
		< )

#### Manual Setup (24 DAW Faders)

In the Studio Setup window click the **Add Device** under the Devices dropdown menu dropdown menu and choose Mackie Control

Devices		· ·
+ Add Device	•	1
Note Expression	n Input De	vice
Time Display		
EuCon		
Generic Remote	1	
JLCooper CS-10	0	
JLCooper MCS-	3000	
Mackie Baby HL	JI	
Mackie Control		
Mackie Control		



In Cubase/Nuendo, Ports must be assigned in reverse order. For the first Mackie Control device, choose

- MIDI Input Port 9
- MIDI Output Port 9

Mackie Control	
MIDI Input	ipMIDI Port 9 ▼
MIDI Output	ipMIDI Port 9 🔻

Configure the options at the bottom of the page to match the image below

	Smart Switch Delay Enable Auto Select Relay Click	– Short – Off – Off		
Smar	rt Switch Delay		Short	
	Enable Auto Select			
<b>ا</b>	Relay Click			

# Add a Second Mackie Control device



For the second Mackie Control device, choose

MIDI Input - Port 8
 MIDI Output - Port 8





Configure the options at the bottom of the page to match the image below

Smart Switch Delay – Short
 Enable Auto Select – Off
 Relay Click – Off
 Smart Switch Delay Short
 Enable Auto Select
 Relay Click

## Add a third Mackie Control device



For the third Mackie Control device, choose

•	MIDI Input MIDI Outpu	- <b>Port 7</b> t - <b>Port 7</b>	
Mackie	Control 3		
	out		inM

	IPINIDI Port 7	<u> </u>
AIDI Output	ipMIDI Port 7	▼

Configure the options at the bottom of the page to match the image below

- Smart Switch Delay Short
- Enable Auto Select Off
- ► Relay Click Off





▼

This process sets up three Mackie devices visible within the Studio Setup window.



Once three devices are added and configured, press Device Reset



Device reset must also be pressed when switching to Cubase/Nuendo from another active DAW

The setup detailed above will assign all 24 console channels to DAW control, as shown below



If using only one or two 8424 console fader banks for DAW control, the Studio Controller Setup must be configured accordingly to match the 8424 consoles selected DAW fader bank. The first MCU device Pro must match with the first fader bank selected on the 8424 console.



#### Example 1 DAW Faders 1-16

In this example, only faders 1-16 are set as DAW faders, fader bank 17-24 is excluded from **DAW MODE**.

The faders have been setup using the *SHIFT* + F keys (See page 79-80) so that faders 1-8 and 9-16 are included in DAW Mode. Faders 17-24 are excluded and remain in analogue mode when **DAW MODE** is active.



Since this setup uses faders 1-8 and 9-16 as the first MCU ports, the Studio Setup screen must be set as below to exclude faders 17-24. Two Mackie Control devices will be added for faders 1-8 (**Port 7**) and for faders 9-16 (**Port 8**)





#### Example 2 DAW Faders 17-24

In this example, only faders 17-24 are set as DAW faders, fader banks 1-8 and 9-16 are excluded from **DAW MODE**.

The faders have been setup using the *SHIFT* + F keys (See page 79-80) so that faders 17-24 are included in DAW Mode. Fader banks 1-8 and 9-16 are excluded and remain in analogue mode when **DAW MODE** is active.



Since this setup uses faders 17-24 as the only DAW port, the Studio Setup screen must be configured to reflect this. The first MCU Mackie Controller must be added for faders 17-24 (**Port 9**)

Remote Devices		
III Mackie Control		
Mackie Control		
MIDI Input	ipMIDI Port 9	
MIDI Output	ipMIDI Port 9	-



# Cubase/Nuendo DAW Controller Operation

#### Channel Strip Functions

When DAW MODE is active, the console faders will flip into DAW mode and the faders will move to the DAW fader positions.



The channel scribble strips will also change to display the DAW name, abbreviated to six characters.



The **SOLO** and **CUT** buttons now function as Cubase/Nuendo Mute and Solo, following settings selected within Cubase/Nuendo such as solo safe, solo link, and group settings.





**SEL** - The select button has multiple functions depending on which key modifier is pressed in the centre section.

Its default function is to highlight and select the particular DAW channel within Cubase/Nuendo.

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м	S	м	S	м	S		
Le		L	e	L	e		
	- 0 - 6 - 12 - 18 - 24 - 30 - 40	- 6 - 0 - 5 - 10 - 15 - 20 - 30 - 40	- 0 - - 6 - - 12 - - 18 - - 24 - - 30 - - 40 -	0 5 10 15 20 30 40	- 0 - - 6 - - 12 - - 18 - - 24 - - 30 - - 40 -		
	- 50 -		- 50 -		_ 50 _		
-84.8		5.82		6.02			
R	w	R	W	R	w		
-	•	-	•		•		
ß	1	ß	2	CO 3			
Audio (	01	Audio (	02	Audio 03			





## SHIFT + Channel SEL – toggles channel monitor on/off







The 8424 motorised faders are touch sensitive. When a touch is registered, the scribble strip LCD display will brighten.

#### **Transport Control Keys**

The transport control keys located in the centre of the console enable control of the Cubase/Nuendo transport bar, these keys function outside of DAW mode, allowing for session navigation at all times.



Several keys have a dual function activated by pressing and holding the SHIFT key before pressing.



Rewinds the session from the current playback cursor position

The RWD button is momentary and will stop rewinding when released



Fast-forwards the session from the current playback cursor position

The FFW button is momentary and will stop rewinding when released







RTZ – Return to Zero

end

PLAY

FFW / END



Returns the timeline cursor to the beginning of the session



Moves the timeline cursor to the end of the project



Begins playback from the current cursor position



REC-Record



Begins recording from the current cursor position





Toggles loop playback/record mode

#### Marker Keys



The Marker keys located underneath the Transport Control keys in the centre section of the console are used to set and navigate to marker points on the Cubase/Nuendo timeline.

The Left marker key (<) navigates to the marker to the left of the current playback cursor position on the Cubase/Nuendo timeline.

In the example below, pressing < will move the playback cursor from its current position (Marker Location 4) to Marker Location 3





The Right marker key (>) navigates to the marker to the right of the current playback cursor position on the Cubase/Nuendo timeline.

In the example below, pressing > will move the playback cursor from its current position (Marker Location 1) to Marker Location 2







The **MARKER MODE** key is used to add new markers to the Cubase/Nuendo timeline.



**MARKER MODE + >** adds a new marker to the current Cubase/Nuendo timeline cursor position.

#### **Functions/Utilities**

The Function/Utility keys are used to access multiple DAW functions.





LEFT – moves the cursor to the beginning of a selected Loop

49	-	51	53	55	57	59	61
$\gg$	Jundan Magan		Hundred	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-	whater the second	the second
huh	Num	hand	Mondam	mandar	unhum	and had been a	www.
~n	**~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	and the second	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	**************************************



Right – Moves the timeline cursor to the end of a selected loop







## SHIFT + AUD - Opens the channel settings window

		Channel Settin	igs : Audio 01 [stereo]			
	Stereo In 🔻 🗧	Audio 01	→ Stereo Out 🔻	No Track Press	e 10	• 0 0
			Stereo Out      Feature      Equator      Total      Total		e int	
Liserts Routing	free a G G G G	800.0HE T 2 140 T 2 5.0HE 100.0HE 1.0			strations Perring	-84.8 -00 M W 4 • CO • Audio 01



IN – Sets the beginning loop point from the current timeline cursor position





# OUT - Sets the end loop point from the current timeline cursor position

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**			hand	<u>here and a second s</u>	hadram	helleddar Ar yr yrnau	hartan h	000



#### **ONLINE** – Toggles MixConsole/Project windows



PUNCH – Activates autopunch record mode



#### **Automation**

The **AUTOMATION** button is used as a modifier key in conjunction **SHIFT** and Channel **SEL** keys to toggle between Read and Write automation modes.



REC

First, select a channel using the Channel SEL key



SEL

Once selected, press **SHIFT** + **AUTOMATION** to toggle through the tracks **Read**, **Write**, **and Off** automation modes.



#### **Inactive Function/Utility buttons**



The 8424 console is setup to work with multiple DAW's, using both HUI and MCU protocol. This setup leaves certain switches redundant for Cubase/Nuendo operation. The **POST/REPLACE** button is inactive during Cubase/Nuendo operation.



#### **Active Faders**

The **ACTIVE FADERS** button is used to automate the consoles analogue faders from within Cubase. See **Active Faders** for further information.

#### Fader banking

The four buttons labelled **BANK** </> and **CHANNEL** </> are used to bank and scroll through Cubase/Nuendo channels. Banking and scrolling behaviours are mirrored in Cubase/Nuendo.



In the image below, Cubase/Nuendo channels 1-24 are in focus on the 8424 channel faders.





#### Bank < >.



The fader bank keys (**</>**) shift focus of the 8424 faders onto the next channel 'Bank' within the DAW session.

Each Bank is 8 channels wide. Pressing **BANK >** will move the fader focus along by 8 DAW channels

In the image below, the fader focus has shifted by 8 channels to Cubase/Nuendo channels 9-32.







#### <u>Channel < ></u>

The channel bank keys (</>) keys move the DAW fader focus along by one fader at a time either to the left or the right of the session MixConsole window.

In the image below, channels 1-24 are in focus.



Cubase/Nuendo Channels 1-24

In the image below, **CHANNEL >** has been pressed once, banking the 8424 24 faders across by one channel. Now, channels **2-25** are in focus.

Pressing **Channel** > will continue to scroll the fader focus onto the next channel to the right within the MixConsole window or to the next channel down in the Project window.



Cubase/Nuendo Channels 2-25

Pressing **Channel <** will scroll the fader focus onto the previous channel to the left within the MixConsole window or to the next channel up in the Project window.



#### Assignment Keys

The VPOT assignment keys are used to assign the consoles VPOTs to various DAW parameters including DAW pans, Aux sends and Plugins.

#### Cubase/Nuendo Pan Control

To control Cubase/Nuendo Pans, press the **PAN** button, this assigns the console 24 VPOTs to work as rotary pan controllers within Cubase/Nuendo.

When **PAN** is lit, pan mode is effectively in standby until U1 is pressed.

To assign console **VPOTs** to control Cubase/Nuendo Pan controls – press the **U1** button.

All 24 consoles VPOTs can be used as PAN controllers for 24 channels within the session. **VPOTS follow the fader bank selection.** 











1.49

When **PAN** and **U1** are lit and active, the channel **VPOT** will now work as an encoder for Cubase/Nuendo Pans.

The LED indicator on the Trim VPOT matches the current position of DAW channel pans.

To Pan left - turn the VPOT Encoder counter-clockwise



TRIM

To Pan right - turn the VPOT encoder clockwise



## Flip Mode

Cubase/Nuendo supports fader flip mode for VPOT functions, in **PAN** mode, this allows for the pan positions to be controlled by the 8424 console faders.

When Fader Flip is active, the 8424 faders will move to represent the current Cubase/Nuendo pan positions

- Moving the fader up will move the Cubase/Nuendo pan position to the right
- Moving the fader down will move the Cubase/Nuendo pan position to the left

In Cubase/Nuendo, when in flip mode, the fader function flips to the VPOT allowing the VPOT will control the Cubase/Nuendo channel fader

#### **Scribble Strip Display Options**

There are several modifier shortcuts that 'flip' the scribble strip display to show various Pan parameters listed below.

#### Scribble Strip Flip

SHIFT + FLIP

**SHIFT** + FLIP - flips the Scribble strip to display Pan positions rather than Cubase/Nuendo track name.

#### **Toggle Display**

When the send parameter is displayed, pressing **SHIFT + PAN** toggles the scribble strip display between pan name and current +/- pan value







#### VPOT fine/course adjustment

By default, VPOT adjustment is set to fine increments, to increase the encoder speed to course adjustment (x5 speed) press and hold *SHIFT* while moving the VPOT encoder.

# TIP:

Firmware version 7.10+ flips SHIFT + VPOT functionality. The default VPOT motion is set to coarse increments (x5 speed) Fine increments are adjusted via *SHIFT* +VPOT motion Visit <u>www.ams-neve.com/consoles/small-format-consoles/neve-</u> 8424/#Moreinfo to download the latest firmware and see Firmware Updater app for installation instructions.



#### Cubase/Nuendo Send Control





To control Cubase/Nuendo Sends, press the **AUX/SND** button, this assigns the console 24 VPOTs to work as rotary Send controllers for various send parameters within Cubase/Nuendo.

When **AUX/SND** is lit, send mode is effectively in standby until U1 is pressed. To assign the VPOTs to control Cubase/Nuendo sends – press the **U1** button.





#### Flip Mode

Cubase/Nuendo supports fader flip mode for VPOT functions, in Send mode, this allows for the Cubase/Nuendo send levels to be controlled by the 8424 console faders.

When Fader Flip is active, the 8424 faders will move to represent the current Cubase/Nuendo send positions

- Moving the fader up will increase the selected send level
- Moving the fader down will decrease the selected send level

In Cubase/Nuendo, when in flip mode, the fader function flips to the VPOT allowing the VPOT will control the Cubase channel fader



#### Configuring Cubase/Nuendo Sends

When **AUX/SEND** and **U1** are lit and active, all 24 VPOTs work as encoders for Cubase/Nuendo sends 1 to 8.

Cubase/Nuendo send control functions differently from Pro Tools and Logic, rather than locking VPOTs to selected channels, each VPOT works as a control for up to 8 sends for a selected Cubase/Nuendo channel.

Each Cubase/Nuendo channel has 8 available send slots.

Sends [1] through [8] are available to control using the channel VPOTs

#### Selecting Sends

To configure sends, first select a Cubase/Nuendo channel by using the 8424 **Channel Sel** key



Once selected, send parameters for the channels 8 sends are spread across the 8424's available VPOTs.

If using all 24 faders for DAW control, Cubase/Nuendo will make use of the three available banks as shown below.

#### Send levels 1-8 are assigned to channel VPOTs 1-8

#### Send On/off 1-8 are assigned to channel VPOTs 9-16

## Send Pre/Post 1-8 are assigned to channel VPOTs 17-24



## **Scribble Strip Display Options**



When first entering **AUX/SND** mode, the scribble strips will appear blank until a **Channel Sel** button has been pressed, this activates the AUX/SND mode, assigning VPOTs to control the channels 8nsend parameters and the scribble strips flip to display these parameters.

The Scribble strip must be flipped to display the send parameters.

#### Scribble Strip Flip



**SHIFT** + FLIP - flips the Scribble strip to display Send parameters or Send Page information

Faders 1-8 Display Level

Faders 9-16 Display On-Off

Faders 17-24 display Pre-Post

# Toggle Display

When the send parameter is displayed, pressing *SHIFT* + AUX/SND toggles the scribble strip display between send name and send level.

For Faders 1-8 the scribble strip flips to display send level



For Faders 9-16 the scribble strip flips to display **On/Off** status



For Faders 17-24 the scribble strip flips to display Pre On or Off (post fader)











**VPOT** mode

# Adjusting Send Levels

Once the selected send is chosen, the VPOTS for console channels 1-8 can be used to adjust the selected channel send 1-8 levels.



Flip mode Send 1-8 Levels



Bus 1

Turn the encoder clockwise to increase the send level

2.17

The LED indicator on the Trim VPOT matches the current position of DAW

Bus 1

channel sends.





**FLIP** Mode



Turn the encoder counter-clockwise to decrease the send level

-9.82

Bus 1

FLIP Mode





# VPOT fine/course adjustment

By default, VPOT adjustment is set to fine increments, to increase the encoder speed to course adjustment (x5 speed) press and hold *SHIFT* while moving the VPOT encoder.

# TIP:

Firmware version 7.10+ flips SHIFT + VPOT functionality. The default VPOT motion is set to coarse increments (x5 speed) Fine increments are adjusted via *SHIFT* +VPOT motion Visit <u>www.ams-neve.com/consoles/small-format-consoles/neve-</u> 8424/#Moreinfo to download the latest firmware and see Firmware Updater app for installation instructions.



On

:02/04

# Send On/Off Toggle

Page

The 8424 console channel 9-16 VPOTS (or faders when in flip mode) control sends 1-8 on/off function.

Send On/Off is located on page 2 of 4

## VPOT Mode Send 1-8 On/Off



# Turn the VPOT to cycle through the two options







:03/04

Page

# Send Pre/Post Toggle

The 8424 console channel 17-24 VPOTs (or faders when in flip mode) control sends 1-8 Pre/Post function.

Send Pre/Post is located on page 3 of 4











Flip mode Send 1-8 Levels



Turn the VPOT encoder to cycle through the available send destinations.





The scribble strip will update to show send destinations

It is not recommended to enter FLIP mode when choosing send destinations
### Single/Dual Fader Bucket Considerations

SHIFT + CHANNEL < or >

Cubase/Nuendo uses four, 8-fader wide pages of parameters to control its sends, if using less than the 8424s full 24 faders for DAW mode, send parameters will be laid out across multiple pages.

If using only one fader bucket for DAW control, four pages of send information will be available to control with the 8 selected console faders.

Scroll ages to assign the selected DAW faders to parameter banks by using





- CHANNEL -

### Cubase/Nuendo Plugin Control

Cubase/Nuendo plugin parameters can be controlled from the 8424 console VPOTs. MCU allows for all 24 VPOTs to be utilized for plugin control.



When  $\ensuremath{\text{PLUG-IN}}$  is lit, plugin mode is effectively in standby until U1 is pressed



To assign the **VPOTs** to control Cubase/Nuendo plugins – press the **U1** button

### PLUG-IN VPOTS do not follow the fader bank selection

#### Flip Mode



Cubase/Nuendo supports fader flip mode for VPOT functions. In plugin mode, this allows for the Cubase/Nuendo plugin parameters to be controlled by the 8424 console faders.

When Fader Flip is active, the 8424 faders will move to represent the current plugin parameters

- Moving the fader up will increase the selected parameter value
- Moving the fader down will decrease the selected parameter value

### Scribble Strip Display Options

When entering plugin mode, fader bank 17-24 scribble strip displays are used to show the plugin information of the selected Cubase/Nuendo track.



There are several modifier shortcuts that flip the scribble strip display to show various pages of plugin parameter information listed below.

### Scribble Strip Flip

**SHIFT** + FLIP - flips the Scribble strip to display plugin Page number information rather than parameter names.

### **Toggle Display**

When plugin parameter names are displayed, pressing **SHIFT** + **Plugin** toggles the scribble strip display between parameter name and parameter value.













To select or add a plugin to a Cubase/Nuendo track, the first three VPOTs of fader bank 3 (VPOTs 17, 18 & 19) can be used to navigate through insert slots, assign and activate plugins.

Fader bank 3 scribble strip (channels 17-24) shows the available options.





### Plugin Edit Mode.

once a plugin has been selected or added using the steps above, press **SHIFT** + **Channel** > to navigate to the plugin edit pages 2-4.

In Plugin Edit mode, the scribble strips will change to display available parameter names

Plugin parameter values can be displayed by using the Toggle Display feature.



1.4dB

The number of parameters varies between plugins. If there are more parameters available than available console VPOTS/Faders, **SHIFT +Channel** < > can be used to scroll through plugin parameter pages

In the example below the Cubase Studio EQ has 21 available parameters spread across 21 VPOTS or faders when in Flip mode.



The LED indicator on the Trim VPOT matches the current position of the plugin parameter value







Turn the encoder clockwise to increase the parameter







Turn the encoder counter-clockwise to decrease the parameter value







### VPOT fine/course adjustment

By default, VPOT adjustment is set to fine increments, to increase the encoder speed to course adjustment (x5 speed) press and hold *SHIFT* while moving the VPOT encoder.

### TIP:

Firmware version 7.10+ flips SHIFT + VPOT functionality. The default VPOT motion is set to coarse increments (x5 speed) Fine increments are adjusted via *SHIFT* +VPOT motion Visit <u>www.ams-neve.com/consoles/small-format-consoles/neve-</u> 8424/#Moreinfo to download the latest firmware and see Firmware Updater app for installation instructions.

### **Active Faders**



#### Introduction

Active Faders is an automation system that provides the capability of automating the 24 channel analogue fader levels directly from within the DAW. This feature functions in the same way as a standalone flying fader system such as Neve Encore automation, but has the benefits of direct DAW control, meaning that all automation lanes are contained within the associated DAW session.

#### This feature is activated on console firmware versions 7.9 and above

#### Supported DAWs

Active Faders will be functional for all supported DAW's including pro Tools, Logic, Cubase, Nuendo, Ableton, Studio One, and UA Luna.

For the purposes of this user manual, all examples will use Pro Tools and will assume a full 24 DAW channel count.

#### **Session Setup**

Active Faders transposes the fader positions from the DAW onto the analogue layer of the console, it is not recommended to enter active fader mode before setting up your session correctly.

In order to preserve correct gain staging between the DAW and 8424 console, a **pre-fade send** must be added to each DAW channel, The send must be set as an audio interface **output** rather than a bus.

Set the **send to pre-fade and the level to 0**. The send bypasses the DAW fader, carrying the audio through the audio interface output and into the 8424 channel.

Since audio is routed from the DAW channel via the send, the DAW channel output can now be set to **'no output'** 

The DAW fader will appear **greyed out** as it is no longer controlling DAW channel output levels. Instead, it will now be used to control the 8424 fader positions for automation.

Any plugin processing applied to the channel will be included in the signal chain and sent through the pre-fade send.





no output







### **Entering Active Fader Mode**

Once the DAW session has been set up following the steps above, Active Fader mode can be engaged.

Upon first pressing Active Faders, all 24 8424 console faders will jump to match the positions of the DAW faders.

**Active Faders** will flash for 3 seconds, during this time you cannot exit Active Fader mode.

When working on large sessions, it is possible that the DAW fader focus has banked to adjacent DAW channels before entering Active Fader mode. To ensure that the correct DAW faders are in focus for the 8424 Active Fader mode, see <u>Fader Banking</u>

#### Fader Snap

Depending on your workflow, the current DAW fader positions may be a where you want to begin your mix, however, you may wish to preserve your 8424 fader positions and analogue levels.

The fader snap feature takes a snapshot of the consoles fader positions just before entering Active Fader mode. This quick shortcut refreshes the faders to their previous positions and the DAW faders will lock to the new position.

Press **SHIFT** + **ACTIVE FADERS** to activate Fader Snap.

This shortcut can be pressed at any time while Active Faders is engaged, providing an 'undo' feature to return the faders to previously set levels.

#### Automatable features

In addition to the linked DAW>Console faders in Active Fader mode console cut and DAW Mute are also linked. This allows for fader movements and console cuts to follow DAW timeline automation.

### Non-Automatable Features



Channel solos are **not linked to DAW solos** in Active Fader mode. Pressing a console solo will activate solo as before, but will not engage the DAW solo, DAW solo is not automatable from the console surface.

It is not recommended to press DAW solos when in Active Fader mode, this will cause the console CUTs to activate intermittently.

#### Writing automation

When Active Fader mode is engaged, analogue fader automation is achieved in the same way as writing DAW fader automation from the console faders.

The **AUTOMATION** button is used as a modifier key in conjunction with channel **SEL** buttons.

When **AUTOMATION** is pressed and illuminated Green, the DAW channel **SEL** button can be pressed to toggle through the available Pro Tools automation modes for that channel.

Each press of **SEL** toggles one option at a time on the selected channel through Pro Tools **off**, **read**, **touch**, **latch**, and **write** automation modes.

Once selected press Play on the console transport bar to write automation moves from the console faders.





shift		Z	X	С
	alt			
control	ontion	com	mand X	

Kick	
volume * dyn read •	blocks playlists analysis warp
	waveform
	✓ volume
	mute
	pan

BANK

To globally toggle automation modes for all Pro Tools channels, press and hold the keyboard **ALT/Option** button then follow the steps above.

Once automation modes are engaged, pressing Play on the transport bar will allow automation moves to be recorded from the console faders into the DAW timeline.

#### **Editing automation**

Automation information will appear within the edit window on the DAW channel 'volume' timeline.

Once Automation has been written onto the timeline, edits can be made using the DAW's powerful automation tools. Automation can be manually drawn or trimmed using the available edit window tools.



The DAW is now the host session for the 8424 console analogue fader automation. Each time the session is loaded, and Active Faders is engaged, automation moves from the DAW timeline will affect analogue fader positions.

For further information on automation controls consult your DAW User Manual.

#### Fader Grouping

In Active Fader mode, analogue fader positions are linked to the DAW positions, this allows for fader grouping of analogue levels by using the DAW fader grouping features. Channels can be stereo linked or grouped easily, with relative fader positions maintained within each group. Fader groups are setup through the DAW group activation window.

For further information on fader grouping consult your DAW User Manual

Note: Fader grouping interferes with the Fader Snap feature, if fader groups are active, fader snap may not function correctly.

#### Fader Banking

CHANNEL -

In active Fader mode, fader banking **(Bank or Channel)** is disabled. This prevents accidental fader jumps.

Fader banking is generally destructive during Active Fader mode, however, if fader banking is required to shift fader focus to the correct DAW channels, a shortcut is provided to enable the banking feature.

**CTRL + BANK/CHANNEL </>** will temporarily override the banking lockout and allow for fader banking during Active Fader mode.

# Abbreviations & Acronyms

48 MIX	48 Mix Mode
500 1/2	500 series slots 1/2
500-1	500 series Slot 1
500-2	500 series Slot 2
AD	Analogue to Digital Converter
AFL	After Fader Listen
СН	Channel
CUE	Cue send
CUE O/P L+R	Cue Output Left and Right
CUE TB	Cue Talkback
DA	Digital to Analogue Converter
DAW	Digital Audio Workstation
DIR	Direct output
DIR PRE	Direct output pre fader
ЕНР	Engineer Headphones
EXT	External
FNC	Function
GRP	Group
I MON	Ipod External 3.5mm minijack
I/P	Input
MTR	Meter
ILM	In Line Mode
INS	Insert
ISO	Isolate
INJ	Inject
L/S	Loudspeaker
M1	Monitor 1
M2	Monitor 2
O/P	Output
PFL	Pre-Fader Listen
REV	Reverb
RTB	Return Talkback
SIP	Solo in Place
ST CUE	Stereo Cue
тв	Talkback
THR	Threshold

# **Dimensions & Power Requirements**

## **Console Physical / Technical Information**

<b>Height</b> To top of LS Shelf (No Stand)	500mm/19.68 inches		
<b>Height</b> To Top of LS Shelf (With Stand)	990mm/38.98 inches		
Width (24 Channel)	1190mm/46.85 inches		
Depth (24 Channel)	850mm/33.46 inches		
Weight (no stand)	53kg		
Weight (with stand)	64kg		
Console Weight (with packaging)	84kg		
Stand weight (with packaging)	12kg		
Heat Dissipation	225 watts		
Power factor	>0.87		
Voltage	Input Voltage Range 90-240v AC Only		
Current Amps RMS 240v	1.1A		
Current Amps RMS 90v	2.3A		
Current	Switch-On surge current - 4 amps for 7ms (average)		

## **Fuse Ratings**

AC Fuses	
Main IEC input fuse	T4.0A H250v
DC Fuses	
+16V	T6.3A 250v
-16V	T6.3A 250v
+5V	T16A 250v
+48V	T500mA 250v



# **Console Rear Connections**



### **Power Unit**



### **Channel Inputs**



### **Master Outs**



## **Monitor connections**



## Main

Console AC Mains, fused @ 4 amps	IEC males
Channel Line Inputs B	%" TRS Jack sockets
Channel DAW Return Input A	25-way D-Type, Tascam convention
Channel Input C	25-way D-Type, Tascam convention
Channel Insert Send	1/2" TRS jack sockets
Channel Insert Return	1/2" TRS jack sockets
Channel Direct Output	25-way D-Type, Tascam convention
Main Mix A LS Output	XLR 3-pin plug male
Main Mix M1 LS Output	XLR 3-pin plug male
Main Mix M2 LS Output	XLR 3-pin plug male
500 Series Input 1 + 2	XLR 3-pin plug female
500 Series Output 1 + 2	XLR 3-pin plug male
External monitor L/R	XLR 3-pin plug female
Mix Buss INJ L/R	XLR 3-pin plug female
1073 Mic Input 1 + 2	XLR 3-pin plug female
1073 Line Input 1 + 2	XLR 3-pin plug female
1073 Output 1 + 2	XLR 3-pin plug male
Reverb Returns 1+2 L/R	XLR 3-pin plug female
Return Talkback Mic	XLR 3-pin plug female
DC Remotes	15-way D-type
2T VU MTR	15-way D-type
Cue output L/R	XLR 3-pin plug male
Aux 1-3 output	XLR 3-pin plug male
Return Talkback Output	XLR 3-pin plug male
Mix output L/R	XLR 3-pin plug male
Mix Insert Send L/R	XLR 3-pin plug male
Mix Insert Return L/R	XLR 3-pin plug female
Group 1-4 outputs	XLR 3-pin plug male
Group 1-4 Insert Sends	۶/۲ TRS jack sockets
Group 1-4 Insert Returns	۶/۲۳ TRS jack sockets
Computer Connection 1	Cat 5/6 ethernet Socket
Computer Connection 2	USB A Socket

## Channel Input A/DAW Returns 1-24 D-Type 25-Way Pin Outs

CH DAW RET I/P A 1-8 (25-way D-type)

Signal	Name		Pin	
Jighta		Hi	Lo	Screen
1	I/P A Input 1/DAW Return 1	24	12	25
2	I/P A Input 2/DAW Return 2	10	23	11
3	I/P A Input 3/DAW Return 3	21	9	22
4	I/P A Input 4/DAW Return 4	7	20	8
5	I/P A Input 5/DAW Return 5	18	6	19
6	I/P A Input 6/DAW Return 6	4	17	5
7	I/P A Input 7/DAW Return 7	15	3	16
8	I/P A Input 8/DAW Return 8	1	14	2

### CH DAW RET I/P A 9-16 (25-way D-type)

Signal	Name		Pin	
Jighta	Name	Hi	Lo	Screen
1	I/P A Input 9/DAW Return 9	24	12	25
2	I/P A Input 10/DAW Return 10	10	23	11
3	I/P A Input 11/DAW Return 11	21	9	22
4	I/P A Input 12/DAW Return 12	7	20	8
5	I/P A Input 13/DAW Return 13	18	6	19
6	I/P A Input 14/DAW Return 14	4	17	5
7	I/P A Input 15/DAW Return 15	15	3	16
8	I/P A Input 16/DAW Return 16	1	14	2

### CH DAW RET I/P A 17-24 (25-way D-type)

Signal	al Name		Pin	
Signal	Nume	Hi	Lo	Screen
1	I/P A Input 17/DAW Return 17	24	12	25
2	I/P A Input 18/DAW Return 18	10	23	11
3	I/P A Input 19/DAW Return 19	21	9	22
4	I/P A Input 20/DAW Return 20	7	20	8
5	I/P A Input 21/DAW Return 21	18	6	19
6	I/P A Input 22/DAW Return 22	4	17	5
7	I/P A Input 23/DAW Return 23	15	3	16
8	I/P A Input 24/DAW Return 24	1	14	2

## Channel Input C/DAW Returns 16-48 D-Type 25-Way Pin Outs

Input C 1-8 (25-way D-type)

Signal	Name		Pin	
Jighta		Hi	Lo	Screen
1	I/P C Input 1/DAW return 25	24	12	25
2	I/P C Input 2/DAW return 26	10	23	11
3	I/P C Input 3/DAW return 27	21	9	22
4	I/P C Input 4/DAW return 28	7	20	8
5	I/P C Input 5/DAW return 29	18	6	19
6	I/P C Input 6/DAW return 30	4	17	5
7	I/P C Input 7/DAW return 31	15	3	16
8	I/P C Input 8/DAW return 32	1	14	2

### Input C 9-16 (25-way D-type)

Signal	gnal Name		Pin	
Jighta		Hi	Lo	Screen
1	I/P C Input 9/DAW return 33	24	12	25
2	I/P C Input 10/DAW return 34	10	23	11
3	I/P C Input 11/DAW return 35	21	9	22
4	I/P C Input 12/DAW return 36	7	20	8
5	I/P C Input 13/DAW return 37	18	6	19
6	I/P C Input 14/DAW return 38	4	17	5
7	I/P C Input 15/DAW return 39	15	3	16
8	I/P C Input 16/DAW return 40	1	14	2

### Input C 17-24 (25-way D-type)

	Signal	gnal Name		Pin	
	Signal		Hi	Lo	Screen
	1	I/P C Input 17/DAW return 41	24	12	25
	2	I/P C Input 18/DAW return 42	10	23	11
	3	I/P C Input 19/DAW return 43	21	9	22
	4	I/P C Input 20/DAW return 44	7	20	8
	5	/P C Input 21/DAW return 45	18	6	19
0	6	I/P C Input 22/DAW return 46	4	17	5
	7	I/P C Input 23/DAW return 47	15	3	16
	8	I/P C Input 24/DAW return 48	1	14	2

## Channel 1-24 Direct Outputs D-Type 25-way Pin Outs

Direct outputs 1-8 (25-way D-type)

Signal	Name		Pin	
Jighta	Name	Hi	Lo	Screen
1	Direct Out Channel 1	24	12	25
2	Direct Out Channel 2	10	23	11
3	Direct Out Channel 3	21	9	22
4	Direct Out Channel 4	7	20	8
5	Direct Out Channel 5	18	6	19
6	Direct Out Channel 6	4	17	5
7	Direct Out Channel 7	15	3	16
8	Direct Out Channel 8	1	14	2

### Direct outputs 9-16 (25-way D-type)

Signal	Namo		Pin	
Signal	Name	Hi	Lo	Screen
1	Direct Out Channel 9	24	12	25
2	Direct Out Channel 10	10	23	11
3	Direct Out Channel 11	21	9	22
4	Direct Out Channel 12	7	20	8
5	Direct Out Channel 13	18	6	19
6	Direct Out Channel 14	4	17	5
7	Direct Out Channel 15	15	3	16
8	Direct Out Channel 16	1	14	2

### Direct outputs 17-24 (25-way D-type)

	Signal	Name		Pin	
	Signal	Nunc	Hi	Lo	Screen
	1	Direct Out Channel 17	24	12	25
	2	Direct Out Channel 18	10	23	11
	3	Direct Out Channel 19	21	9	22
	4	Direct Out Channel 20	7	20	8
	5	Direct Out Channel 21	18	6	19
1	6	Direct Out Channel 22	4	17	5
	7	Direct Out Channel 23	15	3	16
	8	Direct Out Channel 24	1	14	2

### Line Inputs & Outputs

Тір	Hot
Ring	Cold
Sleeve	Ground

### **XLR Inputs & Outputs**

All XLR Inputs & Outputs on the Console have the same wiring

Pin 2	Hot
Pin 3	Cold
Pin 1	Ground

### **DC remote Pin Out Functions**

(15-way D-type)

Pin 1	Producers Sofa Mic Remote Talkback Switch	
Pin 2	Remote Loudspeaker Dim	
Pin 3	Remote Loudspeaker Cut	These pins require closure
Pin 4	Engineers Talkback Footswitch	to pin 8 to operate
Pin 5	External Return Talkback Switch	
Pin 6	5v Supply for Producer talkback switch	
Pin 8	Ground (Digital)	
Pin 7, 9, 10, 11, 12, 13, 14, 15	Not in Use	

### **2T VU MTR Pin Out Functions**

(15-way D-type)

Signal	Name		Pin	
Jighta	Nume	Hi	Lo	Screen
1	VU Meter 1	7	15	8
2	VU Meter 2	13	6	14
3	Not in Use	5	4	12
4	Talkback Output	1	9	2
5	+4dB Oscillator Output	10	3	11



# 8424 Audio Specification

Line Input B to Direct Output		
Headroom	+27.7dBu @ 1kHz (<0.5% THD+N)	
Frequency Response	Typically +/- 0.1dBu, 20Hz to 20kHz	
Distortion (THD+N)	Typically 0.004% @ 1kHz (measured at +10dBu 10Hz to 80kHz filter)	
Noise	<-88dBu (20Hz to 22kHz filter)	
	Input C to Cue Bus Output	
Headroom	+27.6dBu @ 1kHz (<0.5% THD+N)	
Frequency Response	Typically +/- 0.1dBu, 20Hz to 20kHz	
Distortion (THD+N)	Typically 0.005% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)	
Noise	<-86dBu (20Hz to 22kHz filter)	
	1073 Input to 1073 Output	
Headroom	+28.8dBu @ 1kHz (<0.5% THD+N)	
Frequency Response	Typically +/- 0.1dB, 20Hz to 20kHz	
Distortion (THD+N)	Typically 0.005% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)	
Noise (EIN)	<-125.5dBu (20Hz to 22kHz filter, 60dB gain, input terminated 150 $\Omega$ R)	
	Line B to Mix Output	
Headroom	+27.4dBu @ 1kHz (<0.5% THD+N)	
Frequency Response	Typically +/- 0.1dBu, 20Hz to 20kHz	
Distortion (THD+N)	Typically 0.004% @ 1kHz (measured at +10dBu, 10Hz to 80kHz filter)	
	<-85dBu (20Hz to 20kHz filter, no channel routed)	
Noise	<-84dBu (20Hz to 22kHz filter, 1 channel routed)	
	<-80dBu (20Hz to 22kHz filter, 24 channels routed)	
	Line B to Group Mix Output	
Headroom	+27.8dBu @ 1kHz (<0.5% THD+N)	
Frequency Response	Typically +/- 0.1dBu, 20Hz to 20kHz	
Distortion (THD+N)	Typically 0.005% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)	
	<-90dBu (20Hz to 22kHz filter, no channel routed)	
Noise	<-87dBu (20Hz to 22kHz filter, 1 channel routed)	
	Line B to Aux Mix Output	
Headroom	+27.8dBu @ 1kHz (<0.5% THD+N)	
Frequency Response	Typically +/- 0.1dBu, 20Hz to 20kHz	
Distortion (THD+N)	Typically 0.003% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)	
Neire	<-92dBu (20Hz to 22kHz filter, no channel routed)	
NOISE	<-88dBu (20Hz to 22kHz filter, 1 channel routed)	

# **General Specifications**

	1073 to Channels 17 & 18
Headroom	+27.7dBu @ 1kHz (<0.5% THD+N)
Frequency Response	Typically +/- 0.1dBu, 20Hz to 20kHz
Distortion (THD+N)	Typically 0.003% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)
Noise	<-87dBu (20Hz to 22kHz filter)

	DI to Channels 19 & 20
Headroom	>+27.7dBu @ 1kHz (<0.5% THD+N)
Frequency Response	Typically +/- 0.1dBu, 20Hz to 20kHz
Distortion (THD+N)	Typically 0.004% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)
Noise	<-87dBu (20Hz to 22kHz filter)

	Control Room Output feed from Main Mix
Headroom	>+26.5dBu @ 1kHz (<0.5% THD+N)
Frequency Response	Typically +/- 0.1dBu, 20Hz to 20kHz
Distortion (THD+N)	Typically 0.002% @ 1kHz (measured at +20dBu, 10Hz to 80kHz filter)
Noise	<-87dBu (20Hz to 22kHz filter)

Crosstalk		
Inter-channel crosstalk	<100dBu @ 1kHz	
Mix bus Crosstalk	<100dBu @ 1kHz	
Group bus Crosstalk	<100dBu @ 1kHz	
Aux Mix bus Crosstalk	<100dBu @ 1kHz	



## Informations Physiques/Techniques de la Console

Hauteur Jusqu'en haut du plateau pour HP (Sans Support)	500mm/19.68 pouces
Hauteur Jusqu'en haut du plateau pour HP (Avec Support)	990mm/38.98 pouces
Largeur (24 Canaux)	1190mm/46.85 pouces
Profondeur (24 Canaux)	850mm/33.46 pouces
Poids (Sans Support)	53kg
Poids (Avec Support)	64kg
Poids de la Console (avec emballage)	84kg
Poids du Support (avec emballage)	12kg
Dissipation de Chaleur	225 watts
Facteur de Puissance	>0.87
Voltage	Voltage Entrée 90-240v CA Uniquement
Intensité Ampères RMS 240v	1.1A
Intensité Ampères RMS 90v	2.3A
Intensité	Pic à l'allumage – 4A pendant 7ms (environ)

### Fusibles

Fusibles CA	
Fusible Prise Principale IEC	T4.0A H250v
Fusibles CC	
+16V	T6.3A 250v
-16V	T6.3A 250v
+5V	T16A 250v
+48V	T500mA 250v



# **Console : Connexions Arrières**



### Alimentation



### Canaux d'entrée



### **Sorties Principales**



## Connexions de Contrôle



# Console : Table de Connexions

# Principale

Alimentation Principale Console, fusible @ 4A	IEC mâles
Channel Line Inputs B (Canaux Entrées Ligne B)	Jack TRS 6.35mm
Channel DAW Return Input A (Retour Entrée Canal DAW A)	Type D 25 broches, convention Tascam
Channel Input C (Canal Entrée C)	Type D 25 broches, convention Tascam
Channel Insert Send (Canal Emission)	Jack TRS 6.35mm
Channel Insert Return (Canal Retour)	Jack TRS 6.35mm
Channel Direct Output (Canal Sortie Directe)	Type D 25 broches, convention Tascam
Main Mix A LS Output (Sortie Principale Mix A LS)	XLR fiche 3 broches mâle
Main Mix M1 LS Output (Sortie Principale M1 LS)	XLR fiche 3 broches mâle
Main Mix M2 LS Output (Sortie Principale M2 LS)	XLR fiche 3 broches mâle
500 Series Input 1 + 2 (Série 500 Entrée 1 + 2)	XLR fiche 3 broches femelle
500 Series Output 1 + 2 (Série 500 Sortie 1 + 2)	XLR fiche 3 broches mâle
External monitor L/R (Contrôle Externe G/D)	XLR fiche 3 broches femelle
Mix Buss INJ L/R (Bus Mix INJ G/D)	XLR fiche 3 broches femelle
1073 Mic Input 1 + 2 (1073 Entrée Micro 1 + 2)	XLR fiche 3 broches femelle
1073 Line Input 1 + 2 (1073 Entrée Ligne 1 + 2)	XLR fiche 3 broches femelle
1073 Output 1 + 2 (1073 Sortie 1 + 2)	XLR fiche 3 broches mâle
Reverb Returns 1+2 L/R (Retours de Réverb 1+2 G/D)	XLR fiche 3 broches femelle
Return Talkback Mic (Retour de Talkback Micro)	XLR fiche 3 broches femelle
DC Remotes (Interrupteur Alimentation CC Distante)	Type D 15 broches
2T VU MTR (2T VUmètre)	Type D 15 broches

Cue output L/R (Sortie Artiste G/D)	XLR fiche 3 broches mâle
Aux 1-3 output (Sortie Aux. 1-3)	XLR fiche 3 broches mâle
Return Talkback Output (Sortie de Retour Talkback)	XLR fiche 3 broches mâle
Mix output L/R (Sortie Mix G/D)	XLR fiche 3 broches mâle
Mix Insert Send L/R (Envoi Insertion Mix G/D)	XLR fiche 3 broches mâle
Mix Insert Return L/R (Retour Insertion Mix G/D)	XLR fiche 3 broches femelle
Group 1-4 outputs (Sorties Groupe 1-4)	XLR fiche 3 broches mâle
Group 1-4 Insert Sends (Envois Insertion Groupe 1-4)	Jack TRS 6.35mm
Group 1-4 Insert Returns (Retours Insertion Groupe 1-4)	Jack TRS 6.35mm
Computer Connection 1 (Connexion Ordinateur 1)	Port Ethernet Cat 5/6 ethernet
Computer Connection 2 (Connexion Ordinateur 2)	Port USB A

# Canaux d'entrée A/DAW Retours 1-24 (Type D 25 Broches) : Brochages

CH DAW RET I/P A 1-8 (Type D 25 Broches)

Signal	Nom		Broche	
Jighta	Nom	Pointe	Bague	Corps
1	I/P A Entrée 1/DAW Retour 1	24	12	25
2	I/P A Entrée 2/DAW Retour 2	10	23	11
3	I/P A Entrée 3/DAW Retour 3	21	9	22
4	I/P A Entrée 4/DAW Retour 4	7	20	8
5	I/P A Entrée 5/DAW Retour 5	18	6	19
6	I/P A Entrée 6/DAW Retour 6	4	17	5
7	I/P A Entrée 7/DAW Retour 7	15	3	16
8	I/P A Entrée 8/DAW Retour 8	1	14	2

### CH DAW RET I/P A 9-16 (Type D 25 Broches)

Signal		Broche		
Signal	Nom	Pointe	Bague	Corps
1	I/P A Entrée 9/DAW Retour 9	24	12	25
2	I/P A Entrée 10/DAW Retour 10	10	23	11
3	I/P A Entrée 11/DAW Retour 11	21	9	22
4	I/P A Entrée 12/DAW Retour 12	7	20	8
5	I/P A Entrée 13/DAW Retour 13	18	6	19
6	I/P A Entrée 14/DAW Retour 14	4	17	5
7	I/P A Entrée 15/DAW Retour 15	15	3	16
8	I/P A Entrée 16/DAW Retour 16	1	14	2

### CH DAW RET I/P A 17-24 (Type D 25 Broches)

Signal	Signal		Broche	
Signai	Nom	Pointe	Bague	Corps
1	I/P A Entrée 17/DAW Retour 17	24	12	25
2	I/P A Entrée 18/DAW Retour 18	10	23	11
3	I/P A Entrée 19/DAW Retour 19	21	9	22
4	I/P A Entrée 20/DAW Retour 20	7	20	8
5	I/P A Entrée 21/DAW Retour 21	18	6	19
6	I/P A Entrée 22/DAW Retour 22	4	17	5
7	I/P A Entrée 23/DAW Retour 23	15	3	16
8	I/P A Entrée 24/DAW Retour 24	1	14	2

# Canaux d'entrée C/DAW Retours 16-48 (Type D 25 Broches) : Brochages

Input C 1-8 (Type D 25 Broches)

Signal	ignal Nom		Broche	
Jighta	Nom	Pointe	Bague	Corps
1	I/P C Entrée 1/DAW Retour 25	24	12	25
2	I/P C Entrée 2/DAW Retour 26	10	23	11
3	I/P C Entrée 3/DAW Retour 27	21	9	22
4	I/P C Entrée 4/DAW Retour 28	7	20	8
5	I/P C Entrée 5/DAW Retour 29	18	6	19
6	I/P C Entrée 6/DAW Retour 30	4	17	5
7	I/P C Entrée 7/DAW Retour 31	15	3	16
8	I/P C Entrée 8/DAW Retour 32	1	14	2

#### Input C 9-16 (Type D 25 Broches)

Signal	Nom		Broche	
Jigilai	Nom	Pointe	Bague	Corps
1	I/P C Entrée 9/DAW Retour 33	24	12	25
2	I/P C Entrée 10/DAW Retour 34	10	23	11
3	I/P C Entrée 11/DAW Retour 35	21	9	22
4	I/P C Entrée 12/DAW Retour 36	7	20	8
5	I/P C Entrée 13/DAW Retour 37	18	6	19
6	I/P C Entrée 14/DAW Retour 38	4	17	5
7	I/P C Entrée 15/DAW Retour 39	15	3	16
8	I/P C Entrée 16/DAW Retour 40	1	14	2

### Input C 17-24 (Type D 25 Broches)

Signal	Nom		Broche	
Jigilai	Nom	Pointe	Bague	Corps
1	I/P C Entrée 17/DAW Retour 41	24	12	25
2	I/P C Entrée 18/DAW Retour 42	10	23	11
3	I/P C Entrée 19/DAW Retour 43	21	9	22
4	I/P C Entrée 20/DAW Retour 44	7	20	8
5	I/P C Entrée 21/DAW Retour 45	18	6	19
6	I/P C Entrée 22/DAW Retour 46	4	17	5
7	I/P C Entrée 23/DAW Retour 47	15	3	16
8	I/P C Entrée 24/DAW Retour 48	1	14	2

## Canaux 1-24 Sorties Directes (Direct Outputs) (D Type D 25 Broches) : Brochages

Direct outputs 1-8 (Type D 25 Broches)

Signal	Nom		Broche	
Jighta	Nom	Pointe	Bague	Corps
1	Sortie Directe Canal 1	24	12	25
2	Sortie Directe Canal 2	10	23	11
3	Sortie Directe Canal 3	21	9	22
4	Sortie Directe Canal 4	7	20	8
5	Sortie Directe Canal 5	18	6	19
6	Sortie Directe Canal 6	4	17	5
7	Sortie Directe Canal 7	15	3	16
8	Sortie Directe Canal 8	1	14	2

#### Direct outputs 9-16 (Type D 25 Broches)

Signal		Broche		
Jightai	Nom	Pointe	Bague	Corps
1	Sortie Directe Canal 9	24	12	25
2	Sortie Directe Canal 10	10	23	11
3	Sortie Directe Canal 11	21	9	22
4	Sortie Directe Canal 12	7	20	8
5	Sortie Directe Canal 13	18	6	19
6	Sortie Directe Canal 14	4	17	5
7	Sortie Directe Canal 15	15	3	16
8	Sortie Directe Canal 16	1	14	2

### Direct outputs 17-24 (Type D 25 Broches)

Signal	Nom		Broche	
Signal	NOIT	Pointe	Bague	Corps
1	Sortie Directe Canal 17	24	12	25
2	Sortie Directe Canal 18	10	23	11
3	Sortie Directe Canal 19	21	9	22
4	Sortie Directe Canal 20	7	20	8
5	Sortie Directe Canal 21	18	6	19
6	Sortie Directe Canal 22	4	17	5
7	Sortie Directe Canal 23	15	3	16
8	Sortie Directe Canal 24	1	14	2

# Entrées et Sortie Ligne

Toutes les entrées & sorties 6.35mm de l'unité ont le même câblage

Pointe	Chaud
Bague	Froid
Corps	Masse

### **Entrées & Sorties XLR**

Toutes les entrées & sorties XLR de l'unité ont le même câblage

Point 2	Chaud
Point 3	Froid
Point 1	Masse

## **Commande Alimentation à Distance : Brochages**

(Type D 15 Broches)

Broche 1	Interrupteur TalkBack distant pour Micro Producteur	
Broche 2	Estompage hauts-parleurs distants	
Broche 3	Coupure hauts-parleurs distants	Ces broches nécessitent une liaison à la broche 8 pour fonctionner
Broche 4	Pédale de TalkBack techniciens	
Broche 5	Interrupteur de retour externe TalkBack	
Broche 6	Alimentation 5v pour interrupteur de TalkBack Producteur	
Broche 8	Masse (Digitale)	
Broches 7, 9, 10, 11, 12, 13, 14, 15	Non utilisées	

## 2T Vmètre : Brochages

(Type D 15 Broches)

Signal	Nom		Broche	
Signai	Nom	Pointe	Bague	Corps
1	VUmètre 1	7	15	8
2	VUmètre 2	13	6	14
3	Non utilisé	5	4	12
4	Sortie Talkback	1	9	2
5	+4dB Sortie Oscillateur	10	3	11



# 8424 Spécifications Audio

	Entrée Ligne B vers Direct Output (sortie directe)
Marge de sécurité	+27.7dBu @ 1kHz (<0.5% THD+N)
Réponse de Fréquence	Généralement +/- 0.1dBu, 20Hz à 20kHz
Distortion (THD+N)	Généralement 0.004% @ 1kHz (mesuré à +10dBu, filtre 10Hz à 80kHz)
Bruit de fond	<-88dBu (filtre 20Hz à 22kHz)
	Entrée C vers Cue Bus Output (Sortie Bus Artiste)
Marge de sécurité	+27.6dBu @ 1kHz (<0.5% THD+N)
Réponse de Fréquence	Généralement +/- 0.1dBu, 20Hz à 20kHz
Distortion (THD+N)	Généralement 0.005% @ 1kHz (mesuré à +20dBu, filtre 10Hz à 80kHz)
Bruit de fond	<-86dBu (filtre 20Hz à 22kHz)
	Entrée 1073 vers Sortie 1073
Marge de sécurité	+28.8dBu @ 1kHz (<0.5% THD+N)
Réponse de Fréquence	Généralement +/- 0.1dB, 20Hz à 20kHz
Distortion (THD+N)	Généralement 0.005% @ 1kHz (mesuré à +20dBu, filtre 10Hz à 80kHz)
Bruit de fond (EIN)	<-125.5dBu (filtre 20Hz à 22kHz, 60dB gain, entrée terminée 150Ω R)
	Ligne B vers Mix Output (Sortie Mix)
Marge de sécurité	+27.4dBu @ 1kHz (<0.5% THD+N)
Réponse de Fréquence	Généralement +/- 0.1dBu, 20Hz à 20kHz
Distortion (THD+N)	Généralement 0.004% @ 1kHz (mesuré à +10dBu, filtre 10Hz à 80kHz)
	<-85dBu (20Hz à 20kHz filter, aucun canal affecté)
Bruit de fond	<-84dBu (20Hz à 22kHz filter, 1 canal affecté)
	<-80dBu (20Hz à 22kHz filter, 24 canaux affectés)
	Ligne B vers Group Mix Output (Sortie Mix Groupe)
Marge de sécurité	+27.8dBu @ 1kHz (<0.5% THD+N)
Réponse de Fréquence	Généralement +/- 0.1dBu, 20Hz à 20kHz
Distortion (THD+N)	Généralement 0.005% @ 1kHz (mesuré à +20dBu, filtre 10Hz à 80kHz)
	<-90dBu (filtre 20Hz à 22kHz, aucun canal affecté)
Bruit de fond	<-87dBu (filtre 20Hz à 22kHz, 1 canal affecté)
	Ligne B vers Aux Mix Output (Sortie Mix Aux.)
Marge de sécurité	+27.8dBu @ 1kHz (<0.5% THD+N)
Rép <mark>onse d</mark> e Fréquence	Généralement +/- 0.1dBu, 20Hz à 20kHz
Distortion (THD+N)	Généralement 0.003% @ 1kHz (mesuré à +20dBu, filtre 10Hz à 80kHz)
Bruit de fond	<-92dBu (filtre 20Hz à 22kHz, aucun canal affecté)
	<-88dBu (filtre 20Hz à 22kHz, 1 canal affecté)

# **Spécifications Générales**

	1073 vers Canaux 17 & 18
Marge de sécurité	+27.7dBu @ 1kHz (<0.5% THD+N)
Réponse de Fréquence	Généralement +/- 0.1dBu, 20Hz à 20kHz
Distortion (THD+N)	Généralement 0.003% @ 1kHz (mesuré à +20dBu, filtre 10Hz à 80kHz)
Bruit de fond	<-87dBu (filtre 20Hz à 22kHz)

	DI (entrée directe) vers Canaux 19 & 20
Marge de sécurité	>+27.7dBu @ 1kHz (<0.5% THD+N)
Réponse de Fréquence	Généralement +/- 0.1dBu, 20Hz à 20kHz
Distortion (THD+N)	Généralement 0.004% @ 1kHz (mesuré à +20dBu, filtre 10Hz à 80kHz)
Bruit de fond	<-87dBu (filtre 20Hz à 22kHz)

	Control Room Output feed from Main Mix (Sortie Pièce de Contrôle alimentée via Mix Principal)
Marge de sécurité	>+26.5dBu @ 1kHz (<0.5% THD+N)
Réponse de Fréquence	Généralement +/- 0.1dBu, 20Hz à 20kHz

Diaphonie		
Diaphonie inter-canaux	<100dBu @ 1kHz	
Diaphone Mix bus	<100dBu @ 1kHz	
Diaphonie Group bus	<100dBu @ 1kHz	
Diaphonie Aux Mix bus	<100dBu @ 1kHz	



## Appendix A – ipMIDI Information

### **Terminal Script Instructions for 8424>MAC Manual Connection**

This page contains detailed instructions for 8424 console users connecting to Mac via a direct ethernet connection. This setup will allow Wi-Fi and other wired ethernet connections to work alongside console HUI data without creating a conflict.

This section assumes that the IP settings on both Mac and 8424 computer are set as per <u>Manual IP address</u> <u>setup</u> at fixed IP addresses of **10.10.251.004 (8424)** and **10.10.251.005 (Mac)**, both with the subnet mask set at 255.255.255.0

IP MIDI uses the default network route as every other application e.g. web browser, this behaviour can cause conflicts when using the console HUI and Wi-Fi at the same time. To change this default behaviour, a routing table entry for **IP Midi multicast address 225.0.0.37** must be made in the Terminal window.

### The quick-fix for this issue is to enter the following command into Terminal-

sudo route -n add -net 225.0.0 -interface 10.10.251.005

This will work for your current session and your computer Wi-Fi can be enabled while using HUI data. However, once you shut down your computer, you will have to enter this command once again. This is because Mac route table entries are flushed once the Mac shuts down.

The final fix for this is a longer process but only needs to be undertaken once. When completed, Wi-fi and HUI traffic will be able to send and receive simultaneously on your studio Mac without conflict, permanently.

Console users working from a networked computer using multiple accounts logins (Educational Facilities) may need to access the ROOT administrator to make permanent route table changes accessible by all student accounts to the studio DAW computer.

### To access the root account- Mac OS 12 (Monterey) or lower

### Enable or disable the root user

- 1. Choose Apple menu (2) > System Preferences, then click Users & Groups (or Accounts).
- 2. Click  $\stackrel{\frown}{=}$ , then enter an administrator name and password.
- 3. Click Login Options.
- 4. Click Join (or Edit).
- 5. Click Open Directory Utility.
- 6. Click in the Directory Utility window, then enter an administrator name and password.
- 7. From the menu bar in Directory Utility:
  - Choose Edit > Enable Root User, then enter the password that you want to use for the root user.
  - Or choose Edit > Disable Root User.

### Log in as the root user

When the root user is enabled, you have the privileges of the root user only while logged in as the root user.

- 1. Choose Apple menu > Log Out to log out of your current user account.
- At the login window, log in with the user name "root" and the password you created for the root user. Note: If the login window is a list of users, click Other, then log in.
   Remember to disable the root user after completing your task.

### To access the root account- Mac OS 13 (Ventura) +

### Enable or disable the root user

### **Access Directory Utility**

Use Spotlight to find and open Directory utility, or follow these steps:

- 1. From the menu bar in finder, choose Go>Go to Folder.
- 2. Type or paste /System/Library/CoreServices/Applications/, then press return.
- 3. Open Directory Utility from the window that opens.
- 4. Click in the Directory Utility window, then enter an administrator name and password.
- 5. From the menu bar in Directory Utility:
  - Choose Edit > Enable Root User, then enter the password that you want to use for the root user.
  - Or choose Edit > Disable Root User.

### Log in as the root user

When the root user is enabled, you have the privileges of the root user only while logged in as the root user.

- 1. Choose Apple menu > Log Out to log out of your current user account.
- At the login window, log in with the user name "root" and the password you created for the root user. Note: If the login window is a list of users, click Other, then log in.
   Remember to disable the root user after completing your task

The following instructions can be implemented from either a user admin account (ideal for studio use) or from the Root account (ideal for educational facility use)

### First you must discover the name and settings of your direct ethernet connection-Open Mac>Terminal

### Enter the command –

~ % networksetup -listallnetworkservices

### You should see something like this -

an asterisk (\*) denotes that a network service is disabled. STARTECH USB 10/100/1000 LAN Wi-Fi Bluetooth PAN Thunderbolt Bridge In the example above, the ethernet connection is named 'STARTECH'

# You now need to find the information from your interface, this is achieved by typing the following command-

networksetup -getinfo <name of your ethernet interface>

**Example:**neve@MacBook-Pro ~ % networksetup -getinfo STARTECH

### You should then see a similar info list to the one below-

Manual Configuration IP address: 10.10.251.005 Subnet mask: 255.255.255.0 Router: (null) IPv6: Automatic IPv6 IP address: none IPv6 Router: none Ethernet Address: (null)

Now we have this information, we can use it to create a persistent static IP route within the Mac routing table.

### We use the following command to do this

Networksetup -setadditionalroutes <name of your ethernet interface> <destination> <subnet mask> <gateway>

### The above command can now be executed by filling the information found from the previous step-

### In the above example-

<name of your ethernet interface> = STARTECH <destination> = 225.0.0.0 (this is the IP MIDI multicast address) <subnet mask> = 255.255.255.0 <gateway> = 10.10.251.005

### Therefore, the final command entered must be -

Networksetup -setadditionalroutes STARTECH 225.0.0.0 255.255.255.0 10.10.251.005

We have now set a new static IP entry to the routing table that will remain in place until reassigned from Terminal. This will ensure that the IP Midi data is sent from its own dedicated port and remains that way when your computer is shut down and rebooted. This data will not cause conflict with Wi-Fi or other ethernet signals, enabling Wi-Fi to be active on the DAW computer during mix sessions.



### Ableton

#### <u>Setup</u>

#### 8424 Console setup

- Enter Services Screen > System menu > F3 DAW
- Scroll to and select [ABLETON]
- Press F3 then DAW Mode to enter Studio One DAW Control

### **Ableton Setup**

- Open Preferences, click MIDI, select "MackieControl" for master port 7
- MackieControlXT" for 8
- MackieControlXT" for 9
- Takeover mode:None
- Only Track ticked on MIDI Ports list
- When switching from other DAWs, you must open Prefs, and untick 7/8/9 MIDI Ports Track tickbox, then re-tick to refresh desk. Ableton does not auto-send/refresh like PT/Logic.
- Alternatively, you can re-open the session/project.

#### **Operation**

- Transport, Solo/Mute/REC/SEL, Pan/Faders, Banking function similarly to Logic DAW Controller
   Operation
- FFW/REW are hold functionality
- SHIFT + FFW/REW go to start/end of timeline
- AUD toggles between arrangement/Session View toggle
- **IN/OUT** Punch-In/Out switch
- MARKER left/right moves cursor between session markers
- MARKER MODE + right adds a marker to the timeline, if there is already a marker, the same command will
  delete current marker at cursor position.
- U1 functions as per Logic DAW Controller Operation
- Fader Grouping is inactive
- Pans:
  - o Encoders control level (hold Shift for faster control)
  - SHIFT + SEL zero pan position
  - **FLIP** flips faders onto encoders, pan level on to faders.
  - SHIFT + FLIP toggles scribble strip track name/pan value
- Aux/Snd:
  - Encoders control level (hold Shift for faster control)
  - Per channel, press channel SEL to select send group for that channel
  - Max 12 sends/returns per channel
  - **FLIP** flips faders onto encoders, send level onto faders.
  - SHIFT + FLIP toggles scribble strip send name/send value
  - o In FLIP mode, display shows "Volume" (built-in), press SHIFT+FLIP to toggle to value
- Plugins:
  - Per channel, press channel SEL to select plugin group to control for that channel
  - Encoders control parameters (hold Shift for faster control)
  - SHIFT + SEL enters plugin edit mode, press PLUGIN again to return to main menu (selection)
  - **SHIFT + FLIP** toggles track name/plugin value
  - FLIP only works in plugin edit mode, not plugin selection (non-edit mode)
  - In FLIP, display shows "Volume" (built-in), press SHIFT+FLIP to toggle to value
  - SHIFT + CHANNEL <> selects page for larger plugins with more parameters, page numbers not available.

#### <u>Setup</u>

#### 8424 Console setup

- Enter Services Screen > System menu > F3 DAW
- Scroll to and select [STUDIO ONE]
- Press F3 then DAW Mode to enter Studio One DAW Control

### **Studio One Setup**

- Click Studio One in the top menu and select Preferences.
- Click External Devices.
- Select Mackie > Control. Select Receive From to ipMIDI port 7 and Send To ipMIDI port 7. Click OK.
  - Double click on the control just added. Change Device Name to 'Control 1-8'. Click OK.
    - Click Placement. Drag Control 1-8 to Group 1. Click Close.
- Select Mackie > Control Extender. Select Receive From to ipMIDI port 8 and Send To ipMIDI port 8. Click OK.
  - Double click on the control just added. Change Device Name to 'Control Extender 9-16'. Click OK.
  - Click Placement. Drag Control Extender 9-16 to right of Control 1-8 in Group 1. Click Close.
- Select Mackie > Control Extender. Select Receive From to ipMIDI port 9 and Send To ipMIDI port 9. Click OK.
  - Double click on the control just added. Change Device Name to 'Control Extender 17-24'. Click OK.
  - Click Placement. Drag Control Extender 17-24 to right of Control Extender 9-16 in Group 1. Click Close.
- Click OK.

### **Operation**

- Transport, Solo/Mute/REC/SEL, Pan/Faders, Banking function similarly to Logic DAW Controller Operation
- Press and Hold **Solo/Mute** for momentary control
- AUD toggles Mix/Timeline views
- PUNCH toggles Auto Punch record mode
- CLICK toggles Metronome
- Select a channel using SEL, hold SHIFT & press AUTOMATION to cycle through automation modes.
- Marker Mode creates a marker
- Marker left/right scrolls markers
- U1 functions as per Logic DAW Controller Operation
- Pans:
  - Encoders control level (hold Shift for faster control)
  - SHIFT + SEL zero pan position
  - FLIP flips faders onto encoders, pan position onto faders.
- Aux/Snd:
  - Encoders control level (hold Shift for faster control)
  - **SHIFT + SEL** resets level.
  - **FLIP** flips faders onto encoders, level on to faders.
  - Fader display shows Send name and control layer i.e. "Bus 1 [C]"
  - Pressing Aux/Snd steps through the Send layers [C], [1] to [8].
  - Layer [C] controls all sends per track/ch, i.e. encoders 1-8 control sends for the selected track. Press SEL to select different track.
  - Layers [1] to [8] sends are per track basis, i.e. encoder ch 1 controls send [1] on track 1, encoder 2 controls send [1] on track 2, or if send layer is [5] then encoder ch 1 controls send [5] on track 1, encoder 2 controls send [5] on track 2 and so on.
## • Plugins:

- Encoders control parameters (hold Shift for faster control)
- **SHIFT + SEL** resets parameter level.
- **FLIP** flips *pan position* onto encoders, parameter level on to faders.
- Hold *SHIFT* + press **Plugin** to show/hide plugin window.
- By default, no parameters are assigned to the VPots. These have to be assigned manually via the Studio One Control Link setup. To do this:
  - In the bottom-right corner of the screen there is a list of items; Input, Output, External, Instr. Click on External.
  - A side-panel will show, double-click on Control 1-8. The External Devices windows will popup.
  - There are 3 tabs, one for each DAW controller assigned earlier.
  - With the plugin window pop-up shown and on the Control 1-8 tab, click on the first display block (blue) in the External Devices window.
  - In the plugin window, right-click on a knob/switch and select the 'Assign "Parameter" to V-Pot 1 on Control 1-8'.
  - Now that parameter is controllable via the assigned VPot from the desk.
  - The same setup is applicable to assigning all other/any VPots to parameters on any of the controller tabs.
  - Pre-assigned parameters can be reassigned via the above method at any time.
- SHIFT + Bank < > Cycles through the plugins for the currently selected track (if more than plugin is assigned in a single track).
- **SHIFT + Channel < >** Selects previous and next preset in an open plugin editor.
  - If the above does not work, close the External Devices window, and using SHIFT + Plugin to close, then re-open the plugin window.
- If switching between DAWs or starting a new DAW session, then DAW control needs to be manually reestablished, unlike PT or Logic Pro where DAW control is auto-established.
  - Open the External Devices window as stated above.
  - For each controller tab in this window there is a drop-down box, click the first one and select **Reset.**
  - Do the same for 9-16 and 17-24.



# <u>Setup</u>

### 8424 Console setup

- Enter Services screen> System menu > F3 DAW
- Scroll to and select [UA LUNA]
- Press F3 then DAW Mode to enter LUNA DAW Control

# Studio One Setup

- Click LUNA menu > Preferences from the app menu
- Click Controllers
- Make sure the following is set:
  - Surface shows tracks from: Main Window
  - Bank to selected track: On
  - Scroll Luna when banking: On
  - Show Main track: Off
  - Use surface fader taper: On
- In the first MIDI Control Surface rows, click under Input Device and select ipMIDI Port 7, in Output Device select ipMIDI Port 7
  - $\circ$  ~ Click ON if it's not selected. Make sure Focus Module is Off and Extender is Off
- Next row, click under Input Device and select ipMIDI Port 8, in Output Device select ipMIDI Port 8
   Click ON if it's not selected. Make sure Focus Module is Off and Extender is On
- Next row, click under Input Device and select ipMIDI Port 9, in Output Device select ipMIDI Port 9

   Click ON if it's not selected. Make sure Focus Module is Off and Extender is On
- Click LUNA > Preferences from the app menu to exit

## Operation

- Transport, Solo/Mute/REC/SEL, Pan/Faders, Banking Function similarly to Logic DAW Controller Operation
- REW/FFW function as return to zero and go to end of LUNA timeline
- Select a channel using SEL, hold SHIFT & press Automation to cycle through auto modes
- AUD toggles mixer/timeline views
- CLICK toggles Click Enable
- Marker Mode opens marker browser to name a marker
- SHIFT + Marker Mode creates the marker
- Marker left/right scrolls markers
- U1 function as per Logic DAW Controller Operation
- Pans:
  - Encoders control level (hold Shift for faster control)
    - **SHIFT + SEL** resets level.
- LUNA does not currently support Sends/Plugins control
- If switching between DAWs or starting a new DAW session, then DAW control needs to be manually reestablished, unlike PT or Logic Pro where DAW control is auto-established.
  - Click LUNA menu > Preferences from the app menu.
  - Click Controllers.
  - For each midi port click the ON button to turn off then click to turn ON again.

Luna is a developing DAW, additional DAW control functionality will be added as the software progresses