

Neve

88C



Dual Desktop Dynamics

User Manual

Issue 1

Health & Safety Notice

**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 USB CORD
- USE ONLY ACCESSORIES SPECIFIED BY THE MANUFACTURER
- UNPLUG USB WHEN UNUSED FOR LONG PERIODS OF TIME
- REFER ALL SERVICING TO QUALIFIED PERSONNEL ONLY
- NO USER SERVICEABLE PARTS INSIDE

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



Avertissements de Santé & Sécurité

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 USB
- N'UTILISER QUE LES ACCESSOIRES SPÉCIFIÉS PAR LE FABRICANT
- DÉBRANCHER PENDANT DE LONGUES PÉRIODES D'INACTIVITÉ
- CONFIER TOUTES LES OPÉRATIONS DE MAINTENANCE À DU PERSONNEL QUALIFIÉ UNIQUEMENT
- AUCUNE PIÈCE INTERNE N'EST RÉPARABLE PAR L'UTILISATEUR

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



Important Safety Instructions

For your own Safety and for the protection of others, please observe the following safety precautions:

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) **WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture**
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Protect the USB cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 10) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 11) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when 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.

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Instructions Importantes sur la Sécurité:

Pour votre sécurité et celle des autres merci de respecter les instructions de santé et sécurité suivantes :

- 1) Lisez ces instructions.
- 2) Gardez ces instructions.
- 3) Tenez compte de tous les avertissements.
- 4) Suivez toutes les instructions.
- 5) **ATTENTION:** afin de réduire les risques d'incendie ou de choc électrique, n'exposez pas cet appareil à la pluie ou à l'humidité
- 6) Nettoyez uniquement avec un chiffon sec
- 7) Ne pas bloquer les bouches d'aération
- 8) 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)
- 9) Protégez le cordon USB 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)
- 10) Débranchez cet appareil pendant les orages ou de longues périodes d'inactivité.
- 11) 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.



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VCA Legacy

Neve designed VCA (Voltage Controlled Amplifier) compressors, were first installed in the early 1970s in the 50 Series consoles. Offering more precise and flexible compression than the classic, gentle, and coloured compression of the Neve Diode Bridge design, VCA compressors have remained a staple in Neve consoles for decades, including the legendary VR and 88R series.

Iconic Sound Quality

Building on this rich legacy, the Neve 88R dynamics section is renowned for its warm, smooth, and musical compression. It delivers a signature sound that enhances clarity and punch, all while preserving the natural tone of your recordings.

Versatile Control

With adaptive attack, release, and ratio settings, the dynamics section provides precise control over transient response and overall dynamics. This versatility makes it an ideal choice for a wide range of musical genres and recording scenarios.

Legendary Character

The 88R's dynamics processor imparts a subtle yet distinctive character to your tracks, offering a professional, polished finish that is highly sought after in high-end studios. This makes it an essential tool for achieving a polished mix.

Desktop Design

Now, the legendary 88R dynamics section is available in a dual, compact, portable desktop format. This allows home studio engineers, producers, and artists to access premier Neve console sound, bringing professional-quality dynamics processing to any studio.

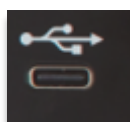




The 88C, delivered in premium packaging, contains the following-

- **88C Dual Desktop Dynamics unit**
- **USB C > USB C Cable (Black)**
- **Quick Start Guide**
- **Neve Outboard Product Brochure**
- **Neve Sticker**

Power Connections



The 88C unit is USB-powered. Power can be provided from any USB3 Power compliant device and can connect directly to an available USB3 or Thunderbolt 3+ port of your studio computer. Alternatively, a USB 3 powered hub can be used to provide power to the unit from an AC power outlet in your studio.

Note: Ensure any USB hubs are specified at 5V 900mA power output.

Note: This connector is used only for power transfer, USB serial data communication is not provided.



Once connected, the rear-mounted On/Off power switch can be used to activate the unit. The 88C will power up in an 'as-was' state, remembering the units last activated switch settings.

K LOCK



The K Lock is a connection port to secure the unit to a desktop.



Audio Connections

The 88C Compressor/Limiter accepts 2x Balanced line level inputs/outputs on the rear of the unit via 1/4" TRS jack connections. These connections should be used to connect the 88C to your existing studio equipment.

If connecting the 88C to your audio interface, the audio interface outputs should be connected to the 88C CH1, CH2 TRS Input connections.

The 88C CH1, CH2 TRS output connections can then connect into your audio interface inputs.

Signals can then be sent from the DAW via the selected audio interface outputs, through the 88C, into the audio interface inputs to return to the DAW.

This connection loop can be applied as either a mono, dual mono, or stereo hardware insert in your selected DAW, or as a send/return from/to specific tracks or DAW busses.

If the 88C is to be used with external analogue equipment, such as a console, summing mixer, or with the Neve 88M, the 88C TRS inputs can be connected to the insert sends of external analogue equipment, and the 88C TRS Outputs can be connected to the insert returns of external analogue equipment. The unit can then function as either a mono, dual mono, or stereo insert into the selected external equipment.



Compressor Controls



Input Signal Metering

The **I/P LED** indicator uses a true analogue LED system to display incoming audio signals visually. The I/P LEDs are fed directly from the input signal before the Compressor's controls.



SIG shows that signal is present and detected.

0, +14, +20 (dBu) LEDs are lit when the signal reaches their respective levels.

+20 (dBu) LED is used to indicate when the unit is approaching its maximum input level.

Threshold

The '**THRESHOLD**' potentiometer (pot) selects the level at which compression begins to take place.

The threshold pot has a range of **+18** to **-30dBu**.

The maximum threshold of **+18dBu** is indicated at the 7 O'clock position.



0dBu is indicated at the 11 O'clock position.



The maximum threshold of **-30dBu** is indicated at the 5 o'clock position.



Ratio/Limiting



The **RATIO** pot determines the amount which the compressor will act upon (reduce) the signal above the Threshold. These two controls are used to form the overall gain reduction of the input signal.

Ratios of **1, 1.5, 2, 4, 8 :1** and **lim** (limiting) can be selected via the indication surrounding the pot.

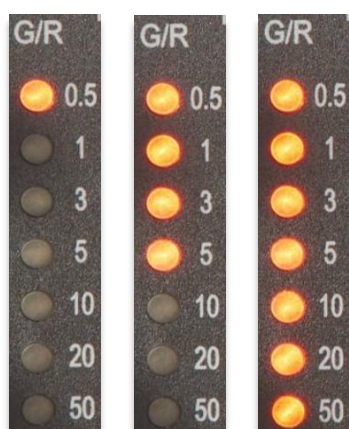
A Ratio of 1:1 would mean no compression is applied to the input signal, regardless of the threshold setting.

A ratio of 2:1 would mean that any signal above the threshold setting is halved.

Turning the pot completely clockwise to 'Lim' (limiting) would mean that the audio above the threshold is completely reduced.

For signals requiring gentle compression such as Mix Bus signals, setting the ratio to 1.5 or 2 may be ideal.

For more aggressive compression for instruments, higher ratios of 4 or 8 may be required for complete transient control.



G/R Metering

The gain reduction meters display the total amount of **G/R** (Gain Reduction) applied to the signal due to the threshold and ratio settings.

The G/R meter uses an optimised scaling for gentle to heavy compression settings, providing a finer resolution at the lower end of the scale.

LEDs display G/R in dB of **0.5, 1, 3, 5, 10, 20** to a maximum of **50dB** of gain reduction.



Attack

The 88C follows the core topology of the 88RS console’s compressor/limiter, utilising its **Adaptive Attack** technology.

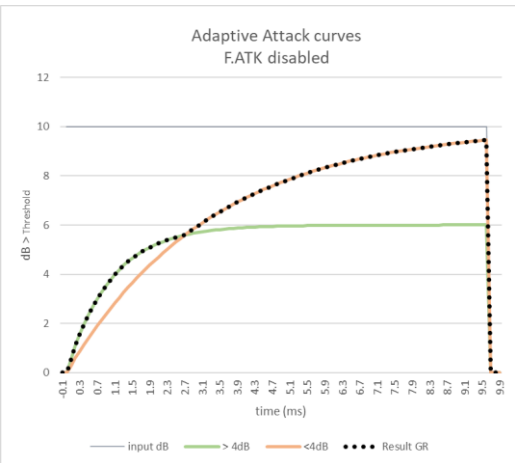
Adaptive attack is program-dependant. The circuitry allows the compressor attack to adapt to the input signal transients.

Without **F.Atk** (Fast-Attack) selected, levels that surpass the threshold by 4dB or less, will have an attack time of **5ms** applied. For levels greater than 4dB above the threshold setting, a program dependent attack time is applied, ranging from **1.5 to 5ms**.



This adaptive attack mode allows louder transients to receive a faster attack time, and quieter transients to receive a slower attack time.

The total combined attack time for any transient falls within the 1.5-5ms range. This design provides an organic, musical response to a variety of program material.



F.Atk (Fast Attack)

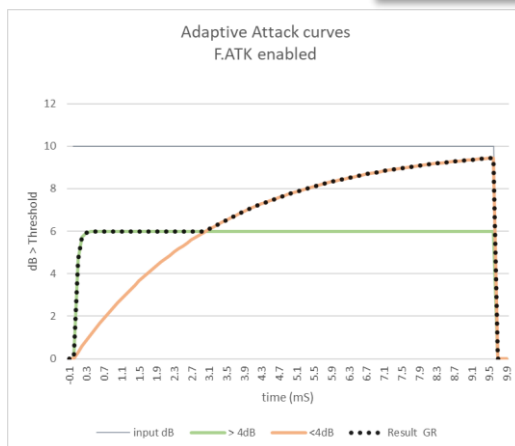
The 88RS compressor Fast attack mode is one of the fastest analogue compressor attack times available at 0.1ms (100µs) and is included as a key feature of the 88C.

F.Atk (Fast Attack) is activated by pressing the **RATIO** pot. A **BLUE** LED will illuminate once engaged.



Once activated, **F.Atk** increases the range of combined adaptive attack time to provide an even faster response to the louder transients.

Levels that surpass the threshold by 4dB or less, will have an attack time of **5ms** applied. For levels greater than 4dB above the threshold setting, a program dependent attack time is applied, ranging from **0.1 to 5ms**.



Level above Threshold	Fast Attack Off	Fast Attack On
>4 dB	1.5ms	0.1ms
<4 dB	5ms	5ms

Release

The compressor release time determines the rate at which the gain reduction is removed once the input level above the threshold begins to decrease.



The release pot is used to manually adjust this rate and can be set within a 0.03s and 3s range.

For example, if the unit is set as a limiter with the threshold at 0dBu and fast attack, a sudden +10dBu input transient followed by a quiet level would result in 10dB of gain reduction being applied to the signal.

In this situation, if a release time of 3 seconds is selected, the gain reduction amount would decay gradually for 3 seconds until no G/R is present, or until a new input level above the threshold appears. This means that audio elements that are not above the threshold but that are present within this 3 second window will still be affected by compression.

If a setting of 0.03s is selected, the gain reduction would decay quickly for 0.03 seconds until no G/R is present, or until a new input level above the threshold appears.

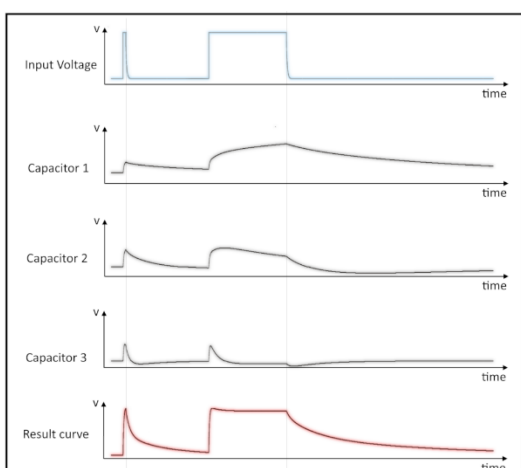
Auto Release

In some cases, and depending on the program material, manually applied release times, in particular fast release times can result in audible compression artifacts, such as 'breathing' effects. This can be useful as a creative tool, however if completely transparent compression is required, the 88C Auto Release feature can be employed.



AUTO (Auto Release) can be activated by pressing the **RELEASE** pot. A **BLUE** LED will illuminate once engaged.

When activated, the manual release pot is removed from the release circuit and release times are controlled automatically.



Much like the 'adaptive attack' feature, **Auto Release** is program dependant. This unique design utilizes a stack of three capacitors that are optimised for short, medium, and long, time constants. Their combination means that the faster the input transient, the faster the release time. The longer a signal remains above the threshold, the longer the resulting release time.

The resulting effect of the auto release feature produces an organic response to the signal, ideal for a variety of instrument sources or complete program material.

Anti-Breathe Technology

The 88RS console utilises anti-breathe technology in its compressor circuit which is included in the release circuitry of the 88C. This feature is automatically activated when there is a sudden drop in audio, 30dB or more below the threshold.

Enabled only at extreme level drops, this feature prevents 'breathing' recovery effects produced by other compressors, producing a natural response.

Makeup Gain

Once compression has been applied, the **MAKEUP GAIN** pot can be used to increase the output signal of the unit, allowing for a balance of input and output levels.



The Makeup gain pot ranges from **0** to **30dB**.

Note: aggressive use of the Makeup gain pot can result in analogue distortion of the output signal.

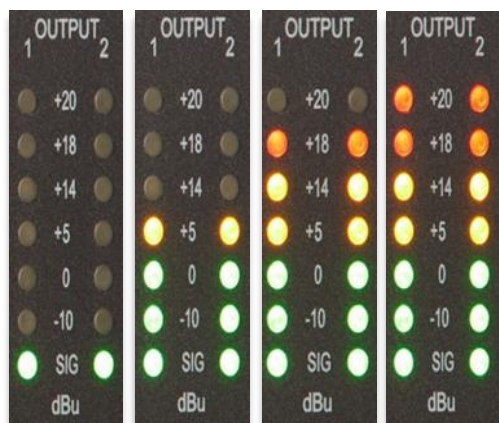
Output Metering

The **OUTPUT LED** meters display the overall output signal of the unit, post makeup gain control.

SIG shows that signal is present at -30dBu.

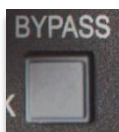
-10, 0, +5, +14, +18, +20 (dBu) LED's are lit when the signal reaches their respective levels.

The **+20 (dBu)** Clip LED is used to indicate when the unit is approaching its maximum output level.



Bypass

Each channel includes a **Bypass** button.



This is a 'true' bypass, meaning that once pressed, the input signal passes directly to the output of the unit and is completely unaffected by the compressor.

When engaged, the output meters will change from their 'traffic light' colours to pure white. This gives a clear indication when either or both channels are in bypass.

When in Bypass, the output meters display the input level, unaffected by the compressor controls.

Engaging and disengaging the **Bypass** button allows for A/B referencing of the compressed output signal against the uncompressed input signal, allowing for accurate output level matching.



LINK

The gain reduction of the two channels can be linked together using the **LINK** button. This feature is ideal for linking the channels for use on stereo sources.

This button links the resulting gain reduction of both channels so each channel's gain is reduced by the same, linked amount.

In this mode, neither channel is the 'master', the channel with the highest gain reduction applied to its incoming signal at any given moment, triggers the gain reduction of the adjacent channel.



Additional Features

The 88R compressor circuit was optimized for use in the 88RS console channel strip. The 88C, designed for mono or stereo desktop use includes several additional features optimised for standalone use.

Sidechain HPF

Sidechain filters can be employed on a variety of signal sources to adjust the response of the compressor to specific frequency bandwidths.

The Sidechain **HPF** (High Pass Filter) can be activated by pressing the **MAKEUP GAIN** pot.

Pressing the pot will cycle through the following LED colours which indicate the cut off frequency of the HPF:



- **BLUE** LED: 80Hz



- **Yellow** LED: 125Hz



- **RED** LED: 300Hz

When HPF is engaged, a second order high pass filter is applied to the compressor sidechain, before VCA compression is applied. This feature can be used to prevent sonic material below the frequencies of 80, 125, and 300Hz from triggering the compressor.

For example, when applying mix bus compression, sub frequencies from kick drums etc can cause the compressor to activate heavily on the overall signal, which may produce unwanted compression artifacts such as breathing or heavy compression. By setting the HPF to 80Hz, sub signals below this cut off frequency will not trigger the compressor, allowing for the VCA compression to be focused on the remaining frequency range of 80Hz-20kHz. Further filtering of low signals can be applied by setting the HPF to 125 or 300Hz, allowing for a tighter focus of compression to the higher frequency band.

Sidechain filter's may also be used to highlight the low frequency content of an instrument or mix. By using the HPF to exclude the low-end content from the compressed signal (e.g. the bass drum), the low frequency content of the signal becomes more prominent. This can be helpful if a punchier, fuller bass sound in a mix is desired.



Sidechain Key Input

A common use of compressors is to trigger the compression externally by an independent signal source. In this case, the compressed signal is not triggered by its own transients, rather by the transients of the external signal.



KEY (Sidechain Key) can be activated by pressing the **THRESHOLD** pot. A **BLUE** LED will illuminate once engaged.



The 88C features two KEY inputs that enable external signals to be used to 'trigger' the compression of channel 1 and channel 2 independently.

Each channel accepts balanced line level signal via the rear 1/4" TRS jack connection.

Sidechain compression or 'sidechaining' is a creative mode that produces a 'pumping and breathing' effect that can be used musically. Used often in EDM, the compression of an instrument, or group of instruments such as strings, can be triggered externally via the KEY input by an entirely different signal source, such as a kick drum or another rhythmic element in the song.



Dimensions & Power Requirements

Height	76mm / 3 inches
Width	182mm / 7.2 inches
Depth	203mm / 8 inches
Weight	1.32Kg / 2.91Lbs
Heat Dissipation	<5 watts
Voltage	USB3
Current	<900mA



Audio Specification

General Specifications	
Headroom	+21.6dBu @ 1kHz (<0.5% THD)
Distortion (THD+N)	0.004% @ 1kHz (measured at +10dBu, 20Hz to 40kHz filter)
General Noise	-89dBu (<-117dBu Bypassed)
Frequency Response 20Hz to 20kHz	+/- 0.02dB
Dynamic Range	>110dB
Maximum Input Level	+21dBu
Input Impedance	≈24kΩ
Output Impedance	≈50Ω
Input/Output Metering	
Signal	-30dBu
Clip	+20dBu
Crosstalk	
Inter-channel crosstalk	>-100dBr

Unit Connection Tables

Power	USB3 Type-C
2x Channel Inputs	¼" TRS Jack sockets
2x Channel Outputs	¼" TRS Jack sockets
2x Key Inputs	¼" TRS Jack sockets

¼" Inputs and Outputs

All ¼" Line Inputs & Outputs on the unit have the same wiring

Tip	Hot
Ring	Cold
Sleeve	Ground



Dimensions & Exigences Alimentation

Hauteur	76mm / 3 inches
Largeur	182mm / 7.2 inches
Profondeur	203mm / 8 inches
Poids	1.32Kg / 2.91Lbs
Dissipation de chaleur	<5 watts
Voltage	USB3
Courant	<900mA



Spécifications Audio

Spécifications Générales	
Marge de sécurité	+21.6dBu @ 1kHz (<0.5% THD)
Distortion (THD+N)	0.004% @ 1kHz (mesuré à +10dBu, filtre 20Hz à 40kHz)
Bruit général	-89dBu (<-117dBu en bypass)
Réponse de fréquence 20Hz à 20kHz	+/- 0.02dB
Plage Dynamique	>110dB
Niveau Maximum Entrée	+21dBu
Impédance d'entrée	≈24kΩ
Output Impedance	≈50Ω
Mesure Entrée/Sortie	
Signal	-30dBu
Clip	+20dBu
Diaphonie	
Diaphonie entre canaux	>-100dBr

Table de connexion de l'unité

Alimentation	USB3 Type-C
Entrées Canal (2x)	¼" (6.35mm) TRS Jack
Sorties Canal (2x)	¼" (6.35mm) TRS Jack
Entrées Clé (2x)	¼" (6.35mm) TRS Jack

¼ "Entrées et Sorties

Toutes les entrées et sorties ligne ¼" (6.35mm) sur l'unité ont le même câblage

Pointe	Chaud
Bague	Froid
Corps	Masse